

**CONTEXTUAL INFLUENCES ON FAMILY ROLE TRANSITIONS
IN SUB-SAHARAN AFRICA: THE CASE OF GHANA**

by

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ABSTRACT

This dissertation explores the cultural and socioeconomic factors that influence adult role transitions in Ghana. Guided by a life course theoretical framework, and using a nationally representative survey (2003-2008 Ghana Demographic and Health Surveys), I estimate accelerated failure-time (AFT) log-normal models that control for the potential effects of unobserved heterogeneity due to the possible omission of certain relevant covariates. The models reveal that when the most optimal hazard distribution function is specified in an event history model, the problem of unobserved heterogeneity becomes significantly reduced. Results from both non-parametric and parametric models suggest a convergence in marriage and parenthood timing among contemporary young women and young men in Ghana compared with their older cohort, highlighting the salience of sociocultural timing on individuals' life course decisions.

The study also utilizes qualitative data from 30 in-depth interviews conducted in Aburi in the Eastern Region of Ghana, during the summer of 2010. The qualitative approach complements the survey methods by uncovering the influential role of the religious institution, a growing sense of individualism, as well as an emerging consumerist culture on family formation decisions in Ghana. Overall, the findings from this study indicate that the spread of information technology in the rapidly globalizing world has had differential effects on two birth cohorts in Ghana.

DEDICATION

To my mother, Esther Owusu Peprah, whose sacrifices have brought me this far.

Also, to the memory of my late supervisor, Professor Stephen Obeng Gyimah, whose generosity, patience, understanding, love, and mentorship have helped produce this work.

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CHAPTER 1

INTRODUCTION

1.1 Research Context

Research over the past two decades in the developing world has documented significant changes in family formation processes. Notable among these changes are the rising age at first marriage and a parallel rising age at first birth, resulting in substantial declines in fertility rates (Harbison and Robinson 2003; Mensch, Singh, and Casterline 2005). In Ghana, for instance, the median age at first marriage among women increased from 18.1 years in 1988 to 19.8 years in 2008 [(Ghana Statistical Service (GSS), Noguchi Memorial Institute for Medical Research (NMIMR), and ORC Macro 2009)]. During the same twenty year period (1988-2008), there was a 40.3 percent reduction in Ghana's total fertility rate (TFR)¹ from 6.7 children per woman in 1988 to 4.0 children per woman in 2008 (GSS et al. 2009). Similar trends have been reported for other countries including Botswana, Kenya, Nigeria, and Zimbabwe (Mbamaonyekwu 2000; Rutenberg and Diamond 1993; Thomas and Muvandi 1994).

For several reasons, it has become important for social scientists to investigate the determinants of the timing of first marriage and first birth and to account for the changes that have occurred in these family formation processes. One reason for this scholarly interest is that the timing of these events has important social consequences. A growing

¹ Total fertility rate (TFR) is a measure of the average number of children per woman (estimated at the end of their child-bearing years on the basis of age-specific fertility rates).

number of studies suggest that marriage yields benefits for both men and women. In particular, married individuals are found to report higher levels of physical, psychological, and economic well-being than the unmarried (Korenmen and Neumark 1991; Mathematica Policy Research 2007; Nock 1998; Waite 1995). Changes in the age at entry into unions might also reflect broader structural transformations such as new educational and employment opportunities or shifts in local marriage markets (Sassler 1997).

It has also been argued that changes detected in the timing of marriage might provide important insight into individual life course transitions and preferences for family living (Elder and Rockwell 1976). Moreover, the age at which childbearing begins has important social, economic, and demographic consequences for society as a whole, as well as for the health and welfare of mother and child. Research demonstrates that the birth of the first child affects a woman's participation in the labour force, particularly among mothers with low educational attainment (Gaudet, Cooke, and Jacob 2011). From a demographic standpoint, early childbearing generally leads to a larger family size than later onset of childbearing. In effect, a rise in the median age at first birth signals a country's transition from high to low fertility (GSS et al. 2009).

An impressive amount of research undertaken in developing countries has documented a range of structural and individual determinants of changing family formation processes over the past couple of decades. These determinants include, among others, rising educational attainment (Gyimah 2003, 2009; Jejeebhoy 1995; Lloyd 2005;

Yabiku et al. 2002), urbanization (Mensch et al. 2005; Singh and Samara 1996), decline in arranged marriages and parental involvement (Ahearn 2001; Gage and Meekers 1995; Hull 2002; Lesthaeghe et al. 1989; Malhotra and Tsui 1996), rising cost of dowry (Abbasi et al. 2002; Mahmud and Amin 2006), squeeze in the marriage market (Ahearn 2001), changes in laws and norms (Amin 2000; Boye et al. 1991; National Research Council 1993; UNICEF 2001), and improvements in child survival (LeGrand and Barbieri 2002).

In spite of this list of determinants, it is striking that scholars have not yet investigated the extent to which the rapid growth of cultural networks and the increased volatility of certain occupational categories, spurred on by the forces of globalization, have affected the timing of marriage and parenthood among different birth cohorts in the developing world. In the West, for instance, mounting evidence suggests that the globalized economy has tended to diminish gender differences in the organization of the life course (Mason and Jensen 1995).

For example, Blossfeld et al. (2005) have investigated how the growing labour market uncertainties in the West, due to the increasing internationalization of economic activities, has influenced transitions to employment, first marriage, and first birth over the past twenty years in countries belonging to the Organization for Economic Cooperation and Development (OECD). The study revealed that the growing economic and employment uncertainties have tended to impede contemporary union formation and parenthood decisions in the West.

This dissertation seeks to extend the study by Blossfeld et al. (2005) by exploring the influence of the media and employment relations on the timing of first marriage and first birth within the context of a developing country of Ghana. To examine the extent to which these factors can account for the differentials in family formation processes among different birth cohorts in the developing world, I focus on the West African country of Ghana. The suitability of Ghana for this study is two-fold. First is the country's geographical position as a gateway country to West Africa (Konadu-Agyeman 2001; Yankson 2001) and as such its exposure to the forces of globalization (Mortimer and Larson 2002). Secondly, significant social change has occurred in Ghana in recent decades that may have influenced family formation processes for both men and women. In particular, political and socioeconomic changes over the last two decades in Ghana have altered the context in which individuals make and carry out family formation decisions. Also, the availability of new contraceptives and the presence of family planning clinics are among the changes in the local context, as are the constraints caused by economic restructuring. Further, basic schooling has seen significant expansion. Between 1999 and 2005, primary school enrollment increased from 76% to 94% and achieved near parity between boys and girls (UNESCO 2007).

Ghana also has a remarkably high economic participation among women in recent years (Lloyd 1991), an emerging peaceful democratic dispensation, and an economy that has been subjected to large-scale national and subnational deregulation and liberalization policies (Gyimah-Boadi 2008; Mortimer and Larson 2002; Ninsin 1998; Whitefield and

Jones 2008). These changes, in conjunction with the instantaneous flow of information through modern technologies in the global era, imply that the ecology of young people's lives in Ghana may no longer be circumscribed by local geographic boundaries. It is plausible that such societal changes may be bound up with the emergence of new dominant ways in which youth in Ghana experience their transitions into adulthood.

By way of policy relevance, this dissertation is also necessitated in large part by the recent unprecedented growth in the size of the youthful population in the developing world. This growth presents an enormous challenge for development (see for example, Makinwa-Adebusoye 2000; Ohadike 1996). For instance, while young people (15-24 years) constitute approximately 13 percent of the population of the developed world, they account for over 20 percent of the population in sub-Saharan Africa (United Nations 2007). In Ghana, young people aged 15-24 years account for 30 percent of the total population (GSS et al. 2009).

For sub-Saharan Africa as a whole, there is a general change in the situation of young people due to modernization, urbanization, migration, and formal education (Awusabo-Asare, Abane, and Kumi-Kyereme 2004). One outcome of these changes is the erosion of the responsibilities of the family, both nuclear and extended, and the community to socialize young people in the selection of marriage partners (Mensch et al. 1999). Institutions such as the media, schools, and religious bodies have emerged as socialization agents in addition to the family (Ahlberg 1994; Mann and Tarantola 1996). Therefore, young people growing up in sub-Saharan Africa are confronted with different

value systems of socialization, unlike the traditional system in which girls were married at menarche or after puberty rites (Awusabo-Asare and Anarfi 1999).

With the scourge of HIV/AIDS, adolescent pregnancy, and reproductive health challenges confronting most countries in sub-Saharan Africa, it has become imperative to focus more research attention on young people in an effort to address these problems. This growing realization is borne out of the fact that the critical decisions taken by this large cohort of young people (relating to their transitions into sexual relations, marriage, parenting, and general adult roles and responsibilities in households) have implications for reproductive health and other social policies and programmes (National Research Council 2005).

This recognition was made earlier at the International Conference on Population and Development in Cairo in 1994 when it was proclaimed that the health and social well-being of young people constitute the engine of socioeconomic prosperity for developing countries. The increasing international attention to the situation of young people living in the developing world has been reinforced in more recent years by the adoption of the United Nations' Millennium Development Goals (MDG) by the world community in 2000. Attaining many of these goals, including reductions in the incidence of extreme poverty, achievement of universal primary education, gender equity and women's empowerment, reductions in maternal mortality and HIV/AIDS, and the promotion of youth employment, requires that government policy emphasize an investment in young people (National Research Council 2005).

Building on prior quantitative studies that have investigated the changing transitions to adulthood in some developing countries (see for example, Behrman and Sengupta 2005; Hewett and Lloyd 2005; Kuate-Defo 2005; Lam and Marteleto 2005; Mensch et al. 2005), this dissertation introduces a mixed method approach to this area of research by complementing quantitative surveys with qualitative interviews, both focused on the transitional experiences of individuals in Ghana. Working within the mixed methods framework will enhance our understanding of how shifts over the past two decades in Ghana in certain contextual factors, such as labour market experiences, media exposure, religion, family structures, and residence, have differentially impacted on family formation processes, specifically marriage and parenthood.

1.2 Objectives of the Study

Young people across the world are experiencing significant changes in the transition to adult roles over the past two decades (Jejeebhoy and Halli 2005; Mensch et al. 2005). Within the context of the Western world, much of the discussion has centered on the impact of the creation of flexible forms of employment, and its attendant uncertainties as mechanisms for transforming the adulthood transition (Blossfeld et al. 2005). These studies find that labour market positions with high degrees of uncertainties impede union formation and parenthood decisions. The primary objective of this dissertation is to investigate whether these factors influence individuals' life course decisions, such as forming intimate partnerships and becoming parents, within the context of a developing world.

Even though developing countries are lagging in terms of industrialization and technological development as compared with their developed counterparts, an investigation of the extent to which media exposure and employment relations affect the timing of marriage and parenthood in the developing world is intended to contribute to the literature on globalization and adult life course transitions. To achieve this objective, this study will address two key questions. First, to what extent do media exposure and employment relations affect family formation processes in the context of a developing country like Ghana? Second, how do sociocultural dimensions explain the timing of marriage and parenthood among different birth cohorts in Ghana?

This dissertation examines the extent to which factors such as employment relations and media exposure impact the timing of marriage and parenthood across cohorts within the context of Ghana. As a country that has moved through four historical phases (precolonialism, colonialism, nationalism, and globalism), it is plausible that each phase will correspond with a definite family formation process. Such historical times are often dominated by watershed geopolitical and economic events, and therefore tend to have profound and differential impacts on individual and family behaviour (Elder 1974; Hareven 1982). It is argued that the impacts of these changing socioeconomic and cultural influences will be experienced differently by individuals belonging to different birth cohorts because each birth cohort is exposed to different temporal socioeconomic and cultural developments. Stated differently, these historical phases may be indicative of cultural, socioeconomic, and political contexts that shape the life course experiences of

individuals. While individuals have varying backgrounds, the prevailing socioeconomic and cultural contexts of individuals within a cohort may lead them to similar life experiences (Gyimah, Ezeh, and Fotso 2011).

This study therefore identifies two birth cohorts: (1) those born between 1950 and 1960 and (2) those born between 1980 and 1990. Judging from the time intervals, it is assumed in this study that those born between 1950 and 1960 could be parents to those born between 1980 and 1990. This study will, therefore, investigate in part the intergenerational differences between parents and their children in the timing of first marriage and first birth in Ghana.

Contextually, the younger cohort (1980-1990, aged 13-28 years at the time of the survey) came of age in a period of more egalitarian gender roles, efficient modes of information technology, as well as higher female enrollments in formal education and labour force participation compared with the older generation (1950-1960, aged 43-58 years at the time of the survey) who were exposed to well-defined gender roles and came of age at a time when there was a much lower female enrollment in formal education as well as lower female labour force participation (Gyimah 2002; Gyimah et al. 2011).

1.3 Overview of Data and Analytic Strategy

The study will utilize a mixed method approach to analyze the global as well as local factors that influence the timing of first marriage and first birth among two birth cohorts in Ghana. The first stage involves a quantitative analysis of multiple Ghana Demographic and Health Survey (GDHS) data sets. The 2003 and 2008 GDHS will be

pooled, yielding an effective sample size of 10,607 women aged 15-49 years and 9,583 men aged 15-59 years. In examining the influence of contextual factors on the timing of first marriage and first birth, event history models will be used. In event history analysis, the dependent variable is the length of time that elapses until a transition from one discrete life course state to another occurs (Blossfeld et al. 2005; Singer and Willett 2003; Yamaguchi 1991).

Studies have long shown that there is a reciprocal relationship between the age at first marriage and at first birth (Heckman, Hotz, and Walker 1985; Mills 2000). The explanation is that individuals who marry early have a greater risk of giving birth early than those who marry late. Similarly, pregnancies that occur outside of marriage tend to expedite the transition into marriage (Mills and Trovato 2000). Thus, in the estimation of the timing of first marriage, age at first birth will be introduced as a control variable. Similarly, the age at first marriage will be used as a control variable when estimating the timing to first birth. This study will operationalize marriage to mean any stable cohabitation between a man and a woman (ORC Macro 2005). Other theoretically relevant covariates, including educational attainment, religious affiliation, kinship type, place of residence, region of residence, and household wealth index, will be controlled for in the event history models of first marriage and first birth.

As widely discussed in the literature, one of the most pervasive problems in event history analysis involves the issue of unobserved heterogeneity (Box-Steffensmeier and Jones 2004; Gyimah et al. 2011; Hougaard 2000). Heterogeneity is induced in a model

when relevant covariates are not included in a model's specification because they are either unmeasurable, unobservable, or the researcher does not know about the importance of a particular covariate. Thus, while some individuals will be more at risk of experiencing early first marriage or first birth, it is unlikely the underlying reasons for this variability will be fully captured by the selected covariates alone. The motivation of introducing unobserved heterogeneity therefore stems from the assumption that in empirical applications it is never possible to include all relevant influences. When causally significant covariates are omitted from an event history model, hazard functions tend to spuriously decline with time (Blossfeld, Hamerle, and Mayer 1989; Garson 2009; Green 1997; Heckman and Singer 1984; Scheike and Jensen 1997). The extent to which unobserved heterogeneity can lead to 'spurious' results is perhaps best emphasized by Vermunt (1997:5):

Unobserved heterogeneity can seriously distort the results of hazard models. It may lead to spurious time dependence, spurious time-covariate interactions, spurious time-varying covariate effects, spurious dependence between different types of events, and spurious dependence between the events experienced by the same observational unit.

Log-normal Accelerated Failure Time (AFT) models with gamma frailty are therefore proposed in this dissertation as a modeling strategy that can help gain leverage on the problem of unobserved heterogeneity. These models introduce a random positive quantity, in the form of an error term, to correct the problem of unobserved heterogeneity. Detailed discussion of the data, sampling and interview procedures, and methods of analysis will be provided in Chapter Five.

The second stage of this dissertation will involve a qualitative analysis of 30 in-depth interviews conducted with parents (aged 43-65 years) and their resident children (aged 15-25 years) in Aburi in the Eastern Region of Ghana during the summer of 2010. The qualitative data are thematically analyzed along themes developed from the life course perspective. The life course perspective serves as the most ideal framework because it involves a contextual and dynamic approach to the study of change in the lives of individual family members over time and of families as social units as they change over historical periods (Bengtson and Allen 1993; Elder 1974; Hareven 1982). The organizing themes that emerge from the data help conceptualize the life course as a multidimensional phenomenon, ranging from structured pathways through social institutions and organizations to the social trajectories of individuals. Detailed discussion of the interview procedures, socioeconomic descriptions of the locality, and analysis of the qualitative data are provided in Chapter Seven.

1.4 The Researcher

It is important for me to locate myself as the researcher for this study. I am a Ghanaian man born in Ghana. I received my primary, secondary, as well as university education in Ghana. I affiliate with the Christian religion and belong to the Akan ethnic group. I am fluent in English and Akan (Twi) languages. Upon completing my master's degree in Population Studies at the University of Ghana in 2007, I moved to Canada to pursue further studies. I am currently a doctoral candidate in the Department of Sociology at Queen's University.

In addition to working toward the requirements for my doctoral degree, I have been involved in a wide range of research projects in Canada and sub-Saharan Africa. In Canada, I collaborated with faculty members from Geography, Education, and History at Queen's University, with inputs from Aboriginal Elders, in designing a framework to benchmark the extent to which tertiary students in Ontario are aware of the culture, history, and experiences of Aboriginal peoples in Canada. Our aim is to build on the work of the Coalition for the Advancement of Aboriginal Studies.² I have also been part of a Sociology research team that explores career diversity in the legal profession in Ontario, with funding from the Social Sciences and Humanities Research Council of Canada and the Law School Admission Council and with the cooperation of the Law Society of Upper Canada.

My research involvement in sub-Saharan Africa has examined primarily population and reproductive health outcomes, with a special focus on Ghana, Kenya and Nigeria. These projects investigated how socioeconomic and cultural factors influence demographic and health outcomes such as childhood morbidity and mortality, fertility, self-appraised health status, risky sexual behaviour, and HIV/AIDS. These studies have appeared in several refereed journal articles such as *Culture, Health and Sexuality*, *Journal of Biosocial Science*, *Canadian Journal of Development Studies*, *Journal of Motherhood Initiatives*, *Canadian Studies in Population*, and *Journal of Religion and Health*.

² This project can be found at <http://www.geog.queensu.ca/aware/about.html>.

Through participation in these projects, I have gained tremendous experience with the collection and analysis of both qualitative and quantitative data. I have expertise in the design and administration of semi-structured interviews, survey questionnaires, focus group discussions, participatory research methods, and also I am well versed in statistical analyses using such software programs as SPSS and STATA.

While my cultural background and language skills, and educational and professional training serve me well in terms of familiarity with both the site and research methodology employed in this study, my biography and experiences also offer a platform for introspection with regard to data interpretations. Positioning myself in this manner is important because my class, gender, assumptions, and values may impact my approach to research and interpretation of data – both statistical and interpretive. As argued by Conquergood (1991), the researcher is the main instrument through which findings are interpreted in a research enterprise. Hence, my identity as a Ghanaian man in my early thirties, a doctoral student in Canada, and a social demographer could influence my interpretations of study findings. As a scientist, it is important for me to recognize every source of possible bias and to be able to keep my subjectivity in check.

1.5 Organization of Dissertation

In addition to this introductory chapter, this dissertation contains seven more chapters. The next chapter (Chapter Two) examines the life course perspective as the theoretical framework for contextualizing adult role transition research within the context of globalization. This chapter traces the historical development of the life course

perspective as an intellectual and empirical agenda in the social sciences. The chapter outlines the core elements of the life course framework and how this framework guides the design and analysis of this dissertation. The chapter then surveys how the life course theoretical perspective has been applied to adulthood transition research in both developed and developing countries. Next, the chapter turns attention to the concept of globalization and outlines its different dimensions and influences on life course decisions. Emphasis is placed on the different types of uncertainties that are spurred by the globalization process in shaping life course decisions as widely discussed in the western literature. The chapter then concludes with an examination of the National Research Council (NRC) conceptual framework on transitions to adulthood in the developing world. The NRC framework provides a helpful synthesis of the life course perspective and the concept of globalization.

Chapter Three examines the two outcome variables of the study—marriage and fertility processes—as they pertain in the developing world. This chapter surveys the literature to outline contributions of various social science disciplines toward understanding factors that influence family formation processes. The chapter also investigates the socioeconomic and demographic factors that influence the timing of first marriage and first birth with particular reference to sub-Saharan Africa. Chapter Four profiles Ghana’s social structure, focusing primarily on some key social institutions that provide a helpful background to the discussions in this dissertation. These include the geography, demography, political economy, religion, and educational institutions.

A detailed description of the quantitative data and methods are presented in Chapter Five. This chapter describes the Ghana Demographic and Health Survey (GDHS) as the data source for the quantitative component of this study. It outlines the objectives of the survey, sampling, and data collection procedures. Because retrospective surveys conducted in most developing countries suffer from several recollection errors due to the lack of vital registration systems, standard demographic techniques are employed in this chapter to assess the quality of the GDHS data. The chapter then outlines how variables are conceptualized and operationalized for the analysis. Lastly, a case is made for the utilization of the Accelerated Failure Time (AFT) log-normal event history model for analyzing the transition to first marriages and first births in Ghana.

Chapter Six presents the empirical findings from the survey component of the study. The chapter begins by presenting the descriptive statistics of the variables used in the bivariate and multivariate models. Models examining the transition to first marriage and first birth are presented in sequential order. These sections are each divided into three separate parts, involving the Kaplan-Meier life table, bivariate, and multivariate analyses. Sections presenting multivariate results are further divided into sub-sections stratified by gender and birth cohort.

To help contextualize the results from the survey data, Chapter Seven presents the qualitative component of the study. The chapter outlines two research purposes for which qualitative data were especially useful in this study. It then provides a socioeconomic description of the research site, a detailed account of the interview procedure, and an

analysis of the data with an application of insights drawn from the life course perspective to understand how contextual and personal factors have shaped family formation decisions between the two generational groups.

The final chapter, Chapter Eight, summarizes the key findings of the study and discusses their methodological and policy implications. From a methodological standpoint, the chapter discusses the relevance of properly specifying the shape of the hazard function in event history models and its implications for unobserved heterogeneity on parameter estimates, with application to the analysis of first marriage and first birth timing in Ghana. The chapter also underscores the relevance of mixed methods research as uniquely situated in uncovering sociocultural nuances that influence family formation decisions in Ghana. The chapter makes specific recommendations for a reformulation of Ghana's youth policy to better reflect the structural constraints that impact greatly on individual and family lives in Ghana. It concludes with an acknowledgment of some study limitations and methodological recommendations for future research.

CHAPTER 2

THEORETICAL FRAMEWORK

2.1 Introduction

This chapter discusses the life course perspective as a theoretical framework for understanding the timing and determinants of family formation processes. This chapter seeks, in particular, to provide an orienting strategy for answering the core questions that scientists pose in the field of life course research (Hofmeister 2010): How does an individual construct a life within historical and social events and constraints? And to what degree can an individual actively construct a life, or are lives constrained mostly by outside forces such as institutions and government policies in society, wishes and expectations and requirements of others, or historical events? In general, however, the life course research attempts to bring all other kinds of social science research into a time and place dimension, yielding to what C. Wright Mills calls for in *The Sociological Imagination* (1959), the linking of individual human life with the social circumstances, history, and other features of the society.

To provide a context, in Sections 2.2 to 2.4, I trace the historical development of the life course perspective, touching on its key concepts and principles, and then relating these concepts and principles to adulthood transition research. Since contemporary life course decisions are shaped in a dramatic fashion by the processes of globalization, Sections 2.5 to 2.6 discuss the phenomenon of globalization, with special reference to sub-Saharan Africa. I conclude, in Section 2.7, by outlining the National Research

Council (NRC)'s conceptual framework on adulthood transitions in the developing world. This framework helps to synthesize themes from the life course perspective and globalization within the context of adulthood transition research in Ghana.

2.2 Life Course Perspective

The life course refers to the idea that the course of an individual's life is not just determined by a natural process of aging but is mainly shaped by social institutions and sociocultural values, as well as by decisions and unexpected events (Elder and Shanahan 2006; Hutchison 2008). As an interdisciplinary program of study, life course research synthesizes disciplines in the fields of microeconomics, demography, migration studies, sociology of the family, and status attainment research into a common explanatory framework (Blossfeld, Hamerle, and Mayer 1989).

Broadly defined, the life course consists of life stages (e.g., childhood, youth, adulthood and, parenthood), status passages or transitions (e.g., from youth to adulthood, from student to professional), and life events (e.g., leaving the parental home, marital formation and dissolution, births of children, job entry and exit, movement from one locale to another, and retirement) (Hutchison 2008). The observational plan involves mapping the flow of successive cohorts through institutionally defined events such as leaving home, marriage, birth of children, job entry and exit, or retirement (Blossfeld et al. 1989).

In pursuit of models of the life course that would reflect historical and biological context, a number of useful concepts have been developed (Elder, Johnson, and Crosnoe

2003). These concepts reflect the temporal nature of lives, thus conveying movements through historical and biological time, while serving as a way for thinking about how lives are socially organized. The first concept is transition, which often involves changes in status or identity, both personally and socially. Examples of transitions include leaving the parental home, completing school, forming partnerships, and becoming a parent.

Another common concept within the life course perspective is that of trajectory (sequences of roles and experiences, which are themselves made up of transitions, or changes in state or role). A special type of trajectory is termed “social pathways” which involve trajectories across social statuses within society. These pathways are shaped by historical forces and are often structured by social institutions. Individuals generally work out their own life course and trajectories in relation to institutionalized pathways and normative patterns. These trajectories are subject to change, both from the impact of the broader context in which they are embedded and from the impact of aggregation of lives that follow these pathways (Sampson and Laub 1996). Large-scale social forces can alter these pathways through planned interventions (e.g., funding for tertiary education) and unplanned changes (e.g., economic downturns). The last concept that is common in the life course literature which deserves a mention is that of “turning points.” These involve events that significantly redirect the path of an individual’s life (Teruya and Hser 2010).

From a historical perspective, research traditions and concepts relevant to the life course began to coalesce during the 1960s and 1970s following the results from the Oakland and Berkeley Growth Studies, and the Guidance Study at the University of

California. Studying the lives of children who were born in the 1920s, grew up in the Great Depression, and then entered service roles in World War II (Elder 1974), the central question concerned the effects of the Great Depression on the lives and development of two birth cohorts, the Oakland children born between 1920 and 1921, and the Berkeley children, born between 1928 and 1929. The differential effects of the Depression on the life outcomes of the different birth cohorts placed emphasis on the importance of social and historical contexts in understanding the individual life course.

2.3 Key Life Course Principles

Elder and colleagues suggest that four major components or axioms underlie the life course perspective (Elder, George, and Shanahan 1996; George 2003). These are: (1) interplay of human lives and historical time; (2) linked or interdependent lives; (3) human agency in making choices; and (4) timing of lives. The following section outlines these fundamental concepts of the life course perspective.

2.3.1 Interplay of Human Lives and Historical Time

Life course perspectives focus on the intersection of social context and personal biography. Thus, lives unfold in social contexts. Social context is examined at a variety of levels, ranging from the immediate social environment to the broad influences of history and culture (George 2003). Scholars who study individual and family life trajectories have noted that persons born in different years face different historical worlds, with different options and constraints. They suggest that historical time may produce cohort effects when distinctive formative experiences are shared at the same

point in the life course and have a lasting impact on a birth cohort (Alwin and McCammon 2003).

The same historical events may affect different age cohorts in different ways. For example, Elder's (1974) research on children and the Great Depression found that the life course trajectories of the cohort that were young children at the time of the economic downturn were differentially affected by family hardship than the cohort that were in middle childhood and late adolescence at the time. Those who were teenagers at the time felt responsible to assist with family finances and began life-long habits of frugality and concern about resources, whereas those who were young children during the Depression did not develop the same sense of urgency about money and security (Elder 1995).

Similarly, Gyimah (2009) has shown that changes that occur in a particular social institution impinge differently across cohorts of a particular age group. In his study on cohort differences and marriage timing among Ghanaian women, he found that although increase in educational attainment significantly delayed the timing of marriage, the effect was more pronounced among the younger cohort of women. Considering the enhanced social context and career opportunities for contemporary educated Ghanaian women, Gyimah (2009) challenged the tacit assumption of prior research on the time-invariant effect of women's educational attainment on family formation. This implies that the effects of institutional structures on individual behavioural patterns vary according to timing in terms of cohort experiences.

2.3.2 Human Agency

Life course perspectives emphasize the importance of human agency. Individual lives are not merely shaped by social institutions or the larger environment. Lives are also constructed through the choices and plans people make. Individuals' and groups' endeavour to meet their needs results in them actively making decisions and organizing their lives around goals (Giele and Elder 1998). Thus, individuals construct their own life course through the choices and actions they take within the opportunities and constraints of history and social circumstance. Hofmeister (2010) observes that people tend to match their attitudes to their actions, which shapes the actions they choose to take. For instance, attitudes about the proper roles of men and women influence whether people are willing to marry someone with a different level of socioeconomic status than their own. Those who believe that men should be primary breadwinners are likely to avoid partnerships where the woman's educational or earnings levels exceed that of the man, since the male breadwinner norm defines wives as secondary providers and a better-educated or higher-earning wife may out-earn her husband and be the primary provider (Blossfeld and Drobnic 2001; Blossfeld and Timm 2003).

Elder (1998) notes that the emphasis on human agency in the life course perspective has been aided by Bandura's (1986) work on two concepts of self-efficacy (sense of personal competence) and efficacy expectation (expectation that one can personally accomplish a goal). It is important to note, however, that Bandura (1986) makes specific mention about how social inequalities can result in low self efficacy and low efficacy expectations among members of oppressed groups. Bandura (2002) has

suggested that there are three types of human agency: (1) personal agency or use of personal power, (2) proxy agency or actions of some on behalf of others, and (3) collective agency accomplished through group action. According to Hutchison (2008), the concepts of proxy agency and collective agency both reflect the paradigmatic principle of linked and interdependent lives.

2.3.3 Linked or Interdependent Lives

Life course perspectives explicitly involve investigation of linked lives, recognizing the importance of social relationships in all areas of life (George 2003). The perspective emphasizes that lives are lived interdependently and hence sociohistorical influences are expressed through this network of shared relationships. The perspective, thus, includes investigations of both the effects of social relationships on individual lives and the effects of human agency on the structure and dynamics of those relationships.

Giele and Elder (1998) assert that all levels of social action (cultural, institutional, social, psychological, and sociobiological) interact and mutually influence each other, not only as parts of a whole but also as a result of contact with other persons who share similar experiences. As an individual's life is connected with the lives and decisions of many other people (including parents, a spouse, siblings, friends, coworkers, and community neighbours), the individual's development is influenced by these others, and at the same time, the individual also influences the others (Elder 1995). The influence is not always intentional, but it occurs because of the proximity of their lives and by the fact that human beings are gregarious by nature (Hofmeister 2010).

When this concept of linked lives is applied across time, there is the observation that people are affected by the choices and circumstances of their earlier generations (Hofmeister 2010). Decisions such as migration and career options made by parents affect their children and even their grandchildren. For example, much research on social capital has demonstrated how the life chances of young people are affected by the educational and occupational levels of their parents (Bowles, Gintis, and Groves 2005; Breen and Goldthorpe 2001; Erikson and Goldthorpe 1992, 2002; McIntosh and Munk 2009).

In addition to the economic connection between parents and children, parents provide social capital for their children in terms of role models and networks of social support (Cooksey, Menaghan, and Jekielek 1997). It has also been noted that parents' lives are influenced by the trajectories of their children's lives. Hareven (1996) has, for example, observed that parents may need to alter their work trajectories to respond to the needs of a terminally-ill child. Also, parents may forgo early retirement to assist their young adult children with higher education expenses.

Research has also shown that individual lives are not only linked to their immediate families, but also to their neighbourhood associations (Elder 1998; Furstenberg et al. 1999; Klebanov et al. 1997; Leventhal, Dupéré, and Brooks-Gunn 2009). There is evidence that the neighborhood effects may be greater for children living in high-poverty areas, which are often marked by violence and environmental health hazards, than for children living in affluent neighborhoods (Katz, Kling, and Liebman 2001; Rosenbaum

1991; Turrell et al. 2007). Differential exposure to adverse social and economic conditions in early life affects life courses. In a very recent study, Cooke (2013), for example, has observed that disruptive childhoods, accompanied by conditions of deprivation, were important factors accounting for the relatively early onset of childbearing among First Nations in Canada compared with their non-Aboriginal counterparts.

2.3.4 Timing of Lives

The fourth principle of the life course perspective is timing, which refers to the sequencing and duration of events within a given life. Giele and Elder (1998) portray the three preceding elements of the life course (human agency, linked lives, and context) as coming together through the funnel of timing. They argue that whatever a person's social location and cultural heritage, friendships and networks, and personal motivation all come together and are experienced through the individual's adaptation to concrete situations and events. Some life course scholars argue, however, that modernization has allowed the life course to become more flexibly structured (Guillemard and van Gunsteren 1991). Indeed, there is much diversity in the sequencing and timing of adult life course markers, such as completing an education, beginning work, leaving home, marrying, and becoming a parent (George and Gold 1991). Trajectories in the family domain may be more flexible than work and educational trajectories (Elder 1998; Settersten 2003; Settersten and Lovegreen 1998).

On the other hand, the landscape of work is changing, with less opportunity for continuous and stable employment, and this is creating greater diversity in work trajectories (Heinz 2003). In addition, while educational trajectories remain standardized for the most well-off, who generally move smoothly from secondary to higher education, they are less structured for other members of society (Pallas 2004). Life course trajectories also vary in significant ways by gender, race, ethnicity, and social class (Elder 1998; Settersten and Lovegreen 1998; Shanahan 2000). To gain a better understanding of regularities and irregularities in life course trajectories, researchers have studied the order in which life events and transitions occur (George 1993; Shanahan 2000). Most of the research has been on entrance into adulthood, focusing specifically on the completion of school, first full-time job, and first marriage (Shanahan, Miech, and Elder 1998).

Life course scholars are also interested in the length of time that an individual, family, or other collectivity spends in a particular state, and how that duration influences behaviour (George 1996). Finally, life course scholars study the pace of transitions. Transitions into adult roles in young adulthood (such as completing school, leaving home, getting the first job, getting married, having the first child) appear to be more rapidly timed than transitions in middle and late adulthood (such as retiring and losing parents) (Hareven 2000).

In spite of these theoretical and empirical research advances, it is instructive to note that the life course framework has been criticized heavily by Marini (1984) for assuming a normative life pattern and focusing on the role of norms in shaping the timing

and sequencing of major life event of individuals and families. This claim has, however, been countered strongly by White (1998), who argues that because there are specific constructs for the concept of social norms appropriate at each level of analysis, the life course framework remains the optimal organizing framework for understanding life events. The life course perspective has also been critiqued for its inability to successfully link the micro world of individual and family lives to the macro world of social institutions and formal organizations (George 1993). Although this framework places considerable emphasis on linked lives and interdependence as organizing themes, it does not seem to have clear evidence to demonstrate the link to macro systems. In spite of these conceptual challenges, life course scholars persist in underscoring the impact of social structure and the constraints imposed by institutions and social structures such as religion, region of residence, class, and ethnicity in shaping individual and family lives (Carr 2004; Hutchison 2005; Turrell et al. 2007).

The life course approach has become a general theoretical framework for the study of lives, human development, aging, and policy. The growing prominence of the life course perspective is evidenced by the publication of *Handbook of the Life Course* by Mortimer and Shanahan (2003), the incorporation of life course perspectives into policy planning (McDaniel and Bernard 2011), the increasing demand for longitudinal studies, journals focused on life course research, the emergence of new methods for the collection

and analysis of life history data, as well as the establishment of research institutes dedicated to life course studies.³

Indeed, contemporary demographic and family research continues to utilize perspectives from life course theory (see for example, Bauldry et al. 2012; Mortimer 2012; Zinn 2013). In a very recent demographic study, Cooke (2013), for example, draws insight from the life course framework to investigate the circumstances around early parenthood among First Nations living in Canadian cities. This study, among several others, points to the currency of the life course framework in understanding the timing and sequencing of life events.

2.4 The Life Course and Adulthood Transitions

Recent studies on young people's transition into adulthood in the developing world have been concerned primarily with analyzing the impact that social change has on their lives, while simultaneously documenting how routes from youth into adulthood are becoming increasingly diversified and uncertain (Langevang 2008). Using Cameroonian youth as a case, Johnson-Hanks (2002) shows that the key transitions, which might be seen as aspects of adulthood, do not occur at the same time or in the same order. The findings from these studies seem to be consistent with those observed from studies done in the advanced countries. Focusing on the West, for instance, Valentine (2003:48) remarks that the changes that have traditionally been associated with growing up, such as leaving school, finding a job, getting married, and becoming a parent, "may be or may

³ The Life Course Center at the University of Minnesota is a case in point. This center can be found at <http://www.soc.umn.edu/research/lcc.html>.

not be connected and may occur simultaneously, serially or not at all.” These observations have led some researchers to posit that the contexts surrounding the transition to adulthood in developing countries have been converging toward those in developed economies (Behrman and Sengupta 2005).

An ongoing debate among life course researchers is whether there has been a trend toward greater standardization in the transition to adulthood or whether this transition has been subject to increasing variability (Shanahan 2000). As Settersten and Mayer (1997) note, proponents of the so-called standardization thesis tend to emphasize life course transitions in the domains of education and work, placing great importance, for example, on the rising educational attainment of both men and women and on the increasing importance of education in the transition from school to work. From this perspective, the dictates of modern occupational systems and accompanying educational institutions are seen as standardizing the life course during the period of adolescence and early adulthood (Mayer and Muller 1986; Mayer and Schoepflin 1989).

By contrast, proponents of the so-called individualization thesis point to long-term secular developments, particularly in the areas of familial and intimate relationships, which they argue have caused life course trajectories to become more complex and diverse (see for example, Buchmann 1989). Other researchers argue that the complexity as well as fluidity of youth transitions imply that a focus on transitions per se may obscure the intricacies of young people’s lives (Langevang 2008). Wyn and White (1997:96), for instance, point out that the term ‘transition to adulthood’ draws on the idea

that young people make one transition to adulthood, and that adulthood is a clearly defined status — a destination at which one ‘arrives.’ In a similar vein, Thomson et al. (2002) note that youth research has been preoccupied with particular transitions without regard for the ways in which different strands of transitions interact.

These criticisms notwithstanding, Langevang (2008) maintains that youth transition should not be dismissed as an object of study altogether, neither should youth studies be merely concerned with the cultural experiences of the youth in the present. However, since youth transitions to adulthood are seen as processual and non-linear, it is instructive to shift attention from distinct life stages marked by specific events to the broader changing sociocultural and political-economic contexts, with reverberating implications for youth transitions to adulthood (Blum and Nelson-Mmari 2004; Furlong 2009; National Research Council 2005). Zabin and colleagues’ (2009) remarks concerning the changing multi-level influences on transitions to adulthood in the developing world offer perhaps the most succinct statement:

In most parts of the world today, that process is taking place on a shifting stage amid social and economic change, where young people are experiencing the transient realities of adolescence at many levels, from the intimate context of their families to their exposure through the media to the larger world (p. 1).

From a closely related perspective, Kumi-Kyereme et al. (2007) used a bio-ecological framework and found significant impacts of the roles of parents, other household members, friends, schools, and religious institutions in the lives of young people with respect to sexual behaviour in Ghana. The model, originally developed by

Bronfenbrenner (1979), defines multiple layers of influences that range from the micro-system (involving parents and other adults in the household, neighbourhood, school and friends) to the macro-system (comprising cultural values, customs, laws, and the political system within which young people live).

The foregoing discussion suggests that although human agency plays a fundamental role regarding youths' transitions, the exclusion of contextual variables could potentially cloud our understanding of the factors that shape youths' transitions to adulthood in the developing world. Based on these ideas, this dissertation proposes to build on prior studies (specifically, Kuate-Defo 2005) by formulating and estimating event history models that examine the influences of changing factors on various transition events. These events are hypothesized to be shaped by the contexts in which the lives of individuals are embedded.

This dissertation uses multiple Ghana Demographic and Health Survey (GDHS) data sets (GSS et al. 2009) to estimate accelerated failure-time models that take into account the potential effect of unobserved heterogeneity due to the possible omission of certain relevant covariates. A small sample of qualitative in-depth interviews is then analyzed to tease out those contextual factors that cannot be measured quantitatively. This mixed method approach further enhances our understanding of the changing contexts for adulthood transitions in the developing world.

2.5 Globalization and Adulthood Transitions

The concept of globalization, though not novel, is an inherently complex one (Eregare and Afolabi 2009; Guillén 2001; Held et al. 1999). According to Bilton (1997), globalization refers to the process whereby political, economic, and cultural relations increasingly take on a global scale with profound consequences for individual local experience and everyday lives. Albrow (1990) defined globalization as the process through which the entire human population is bonded in a single society; while O'Sullivan et al. (1996), saw globalization as the growth of economic and cultural networks through communications technology and media networks.

In more recent years, however, globalization has become a central point of reference for understanding social change (Blossfield et al. 2005). Within the context of life course research, two major facets of the globalization process are particularly salient. These are the economic and cultural components of globalization. The economic aspect, which has been the focus of globalization research in the West, stresses the general uncertainties associated with the diminishing market barriers, increasing global cross-national flows of goods and services, reductions in worker protection, rapid changes in the nature of work, and growing global competition, as factors that affect key adulthood decisions.

Focusing exclusively on developed economies, Blossfeld et al. (2005) identified four interrelated structural shifts that encapsulate the economic aspect of globalization and how it affects life courses in modern societies. These include: (1) the swift internationalization of markets; (2) the rapid intensification of competition based on

deregulation, privatization, and liberalization within nation states; (3) the accelerated diffusion of knowledge and the spread of global networks that are connecting all kinds of markets on the globe through new information and communication technologies (ICTs); and (4) the rising importance of markets and their dependence on random shocks. These global mechanisms together generate an unprecedented level of structural uncertainty that is experienced in the realms of economic, temporal, and employment in contemporary western societies.

Cultural globalization, which represents the force that blends the entire human population together into one global community, on the other hand, is perhaps more tangible in the developing world where western cultural ideals are rapidly eroding indigenous ones. The tenets of cultural globalization will therefore be discussed with reference to sub-Saharan Africa's contact with the globalizing world.

2.6 Globalization and Sub-Saharan Africa

The anthropological literature is replete with accounts of Africa's contact with the western world as far back as the early fourteenth century. Though much of the literature and media portray the continent as "dark" and the citadel of savagery (see Awoonor 1990 for details on this discourse), there is evidence that the people of Africa have long had exposure to globalizing forces. Smith's (1744) ethnographic description of the people of Cape Coast, Ghana's first capital, is exemplary of this narrative:

The Negroe Town of Cape *Coast* is very large and populous. The Inhabitants, tho' Pagans, are a very civiliz'd Sort of People, for which they are beholding to their

frequent Conversation with the *Europeans*. They are of a warlike Disposition, tho' in Time of Peace, their chief Employment is fishing, at which they are very dexterous (p. 123).

On the whole, four distinct phases characterize Africa's incorporation into the global economy. Africa's initial contact with the global world was made in the sixteenth century through trade relations with the various European imperial agents. This trade was conducted under the framework of unequal exchange and exploitation, leading Palmberg (1983:5) to characterize these relations as "the extension of [European] piracy that was going on along the Mediterranean coast." In essence, the Europeans traded inferior goods that were no longer marketable in Europe for high quality African goods⁴ (Kieh 2008). During the second phase, the Afro-European relations had become more formalized after the Berlin Conference (1884-1885) which culminated in the partition of Africa among the major European powers (French, British, Dutch, Belgian, German, Italian, Portuguese, and Spanish). Colonialism facilitated the plundering of Africa's human and material resources and was absolutist in character. Ake (1996) provides a comprehensive summation of the totalitarian nature of colonialism:

The colonial state redistributed land and determined who should produce what and how. It attended to the supply of labour, sometimes resorting to force labor; it churned out administrative instruments and legislative taxes to induce the breakup of traditional social relations of production, the

⁴ The Atlantic Slave Trade can be discussed in this context. The impact of the slave trade on West Africa is a subject of bitter debate among historians. For some historians, such as Fage (1969), Hopkins (1973) and Gate (2010), the slave trade was, on balance, a blessing because it helped stabilize Africa's growing population and even made some indigenous groups prosperous. For others, such as Boahen (2004), Rodney (1973) and Asante (2007), it was an unmitigated disaster for Africans because it deprived the continent of its active labour force and stifled its socioeconomic development.

atomization of society; and the process of proletarianization. It went into the business of education to ensure that workers could do the jobs they were required to perform and would remain steadfast in the performance of their often tedious and disagreeable tasks...indeed, it controlled every aspect of the colonial economy tight to maintain its power and domination to realize the economic objectives of colonization (p. 2).

The attainment of political independence during the early 1960s launched the third phase of globalization in Africa. Newly independent African states were formally incorporated into the global economy as peripheral players with the continued responsibility of providing the raw materials – agricultural, mineral and oil – to the industrial manufacturing complexes of the metropolitan powers. The latest, and fourth, phase of globalization in Africa coincided with the triumph of capitalism and the collapse of the Soviet block in 1990. The end of the Cold War and the subsequent absence of a global challenge to capitalist hegemony meant that African states could no longer maintain their hitherto non-aligned status. African states adopted the peripheral capitalist mode of production and its associated political economy (Kieh 2008). Due to a plethora of economic and political mismanagement, the peripheral states of sub-Saharan Africa have been plunged recently into a debt crisis, spending about US \$14 billion annually on debt servicing (Africa Action 2007). This situation has increased the vulnerability of sovereign states within the sub-Saharan region and has deepened their dependence on the core states such as the OECD countries and, quite recently, China. Much of this dependence goes beyond the transfer of economic, political and technological aid, to

include the cultural subjugation of the third world, in what has come to be referred to as cultural globalization.

The tenet of cultural globalization is to foster homogenization in consumption behaviours, thus creating a common global culture (Kieh 2008). This trend of cultural globalization takes great inspiration from Western, particularly American ideals. As noted by Wagnleitner and May (2000:7): “To almost any casual observer, it looks as though the popular culture of the United States has spread all over the world: here, there and everywhere.” Arguing from a critical perspective, Petras (2004) has noted that the current trend of cultural globalization represents U.S. imperialism which is aimed toward two major interlocking goals: (1) to capture markets for its commodities and (2) to establish hegemony in shaping popular consciousness.

Cultural globalization has several major elements, but is everywhere marked by the worldwide spread of a materialistic culture of consumption (Larson 2002). Major avenues through which the global culture is being homogenized are the standardization of food taste, clothing, movies, and music. Western consumer products such as Coca-Cola, jeans, baseball caps, Hollywood movies, and North American hip hop music are readily available in most sub-Saharan African countries. It has been argued that the export of American/Western consumption habits has implications for the developing world (Kieh 2008). One major consequence is the tendency to alter the consumption habits of the peoples in the various affected countries, which over the long run could result in the abandonment of the indigenous products thereby adversely impacting local businesses.

Often led by women, local communities have been resisting and challenging global corporations in Africa through the fight for land, water, and electricity resources in countries such as Kenya, and the struggle against environmental destruction and the big oil companies in the Niger Delta of Nigeria (Gibson 2004).

2.7 The National Research Council (NRC) Conceptual Framework and Adulthood Transitions in Ghana

The conceptual framework developed by the NRC Panel on Transitions to Adulthood in Developing Countries provides an additional guide for the conceptualization of this study. The framework considers different analytic levels of influence on youth transitions to adulthood. At the top of the hierarchy of influences is the global level, followed by the national, the community, the household, and then the individual-level factors. Central to this framework is the idea that the individual-level factors have both direct and indirect inter-linkages with the broader contextual factors. It therefore makes the implicit assumption that much of what happens to young people in the developing world, and indeed what constitutes their daily experiences, is shaped by the contexts in which their lives are embedded.

While highlighting the embeddedness of young people's lives in these hierarchical contexts, the NRC framework places greater emphasis on changes that occur over time in the composition of these contextual factors. In other words, the framework posits that these broader contextual influences are not static, but rather dynamic in nature. Further, the model postulates that the changes that occur at the macro context will have

different implications for young males and young females, as well as for young people from different family backgrounds.

Given its ethnic and regional diversity, its political and economic reforms over the past two decades, and the rapidly changing cultural landscape, Ghana seems to offer a suitable platform for examining the panel's assumption that context matters in young people's transition to adulthood. One of the most significant factors that might have impacted the lives of young people in Ghana during the past two decades could be discerned from the greater interaction between the national economy and other international economies. Following economic reforms that focused considerably on opening the local economy to the external market, globalization has become a major aspect of the Ghanaian economy and society. This influence has been observed not only in terms of capital flows, aid, cultural exchange, and technological transfer, but also in the area of international migration (Aryeetey 2005).

While globalization has the potential to make the Ghanaian economy more vibrant by creating opportunities for wealth creation, its debilitating impact on the Ghanaian youth can be quite considerable. As argued by Wade (2004), globalization has generally had a net negative effect across the sub-Saharan African region. In addition to creating new problems related to the clash of traditional and modern cultures, rising income inequality, and social polarization (Milanovic 2003; United Nations 2004; Wade 2004), the employment opportunities of young people, more than any other group, have

become vulnerable primarily because of their lack of labour market experience and the relative fragility of their tenure of employment (National Research Council 2005).

At the policy level also, Ghana has been a major signatory to a number of important international conventions that seek to create beneficial conditions for the advancement of the youthful segment of its population over the past two decade. Notable among these are the United Nations Conference on the Environment and Development (Rio, 1992), the World Conference on Human Rights (Vienna, 1993), the International Conference on Population and Development (Cairo, 1994), the World Summit for Social Development (Copenhagen, 1995), the Fourth World Conference on Women (Beijing, 1995), the Second UN Conference on Human Settlement (Istanbul, 1996), the Education for All Conference (Dakar, 2000), and the Millennium Summit (New York, 2000). These agreements have culminated in a number of domestic policies and action plans which specifically address the needs of the youth in Ghana. Among these are aspects of the Fourth Republican Constitution of 1992, the Vision 2020 Document, the National Population Policy (1994), the National HIV/AIDS policy (2004), the National Health Policy (2008), the National Youth Policy (2010) as well as some of the national laws and by laws passed by Districts and Metropolitan Assemblies, such as those addressing teenage pregnancies, early marriage, and child abuse.

Not only did most of these policies shape the 1990s, this era simultaneously witnessed a substantial change in Ghana's cultural landscape. The liberalization of the air waves opened the flood gates for an unprecedented screening and airing of foreign

movies, music and documentaries. Instantaneously, Ghana became tightly hooked with the global “hip-hop” movement. Traditional and authentic Ghanaian music styles such as the “hi-life” and other forms of afro beats subsided as hip-hop negotiated Ghana’s complex ethnic matrix of indigenous cultures, resulting in the creation of Ghana’s “hip-life” genre. This transition from hi-life to hip-life in the Ghanaian music scene is a testament to the impact of globalization on the Ghanaian culture from the early 1990s.

A comparison of adulthood transition-related outcomes among different birth cohorts in Ghana could help tease out the impact of globalization on the life course of individuals. As Macunovich (2000) maintained, the factors affecting social change tend to vary across cohorts. This is because each birth cohort has unique features based on the changing context of education, peer socialization, fashion dynamics, and historical experience (Oladosu 2001). Cohort identity has indeed been found to be evident in most African social organizations traditionally marked by rites of passage and the initiation into adulthood (Lesthaeghe 1989). This study will borrow from the cohort and social change approach to hypothesize that the Ghanaian youth who came of age in the 1990s (1980-1990 birth cohort) may have encountered different experiences with their transitions to adulthood than their earlier cohort born prior to 1990 (1950-1960 birth cohort).

Thus, by estimating different statistical models each for each birth cohort, this study seeks to identify the temporal differentials and similarities in the factors that influence youth transitions to adulthood in Ghana. Recent studies have indicated that

factors such as household wealth index, religious affiliation, family structure, place of residence, community development index, and other explanatory variables measured at the community and regional levels have significant influence on youth transitions to adulthood in sub-Saharan Africa (see for example, Kuate-Defo 2005; Kumi-Kyereme et al. 2007).

However, since the literature points to the fact that these explanatory factors have been undergoing significant changes over time as a result of globalization, their corresponding influence on the youth may also be changing. There is therefore the need to explore the extent to which each of these contextual factors has changed over time, specifically during the past twenty years, and to investigate the extent to which transitions into first marriage and first birth have varied with changing contextual factors.

2.8 Conclusion

This chapter sought to discuss the life course perspective as the guiding theoretical framework for understanding the timing and determinants of family formation processes. The life course perspective helps us to understand how individuals construct their life within historical and social constraints by viewing the course of an individual's life as not just determined by a natural process of aging, but as mainly shaped by social institutions and sociocultural values, as well as by decisions and unexpected events.

This chapter outlined the four major axioms that underlie the life course perspective: (1) interplay of human lives and historical time; (2) linked or interdependent lives; (3) human agency in making choices; and (4) timing of lives. Using these concepts,

an attempt was made to illustrate how complex and fluid the adulthood process in the developing world has become. The chapter then situated the discussion on the life course within the discourse on globalization to ascertain the extent to which the increasingly globalizing world might affect life course decisions of individuals in the developing world. While globalization processes shaping life courses in the developed world are primarily economic in nature, it has been argued that the cultural component of globalization is equally relevant in understanding adulthood transitions in the developing world.

The chapter concluded with an examination of the National Research Council (NRC) conceptual framework on adulthood transitions in the developing world, with specific reference to Ghana. This framework helped to synthesize the life course perspective, globalization, and adulthood transitions, by demonstrating that much of what happens to young people in the developing world is largely shaped by the contexts in which their lives are embedded. I now turn to an examination of the more substantive themes of this dissertation, namely marriage and fertility processes. This is the focus of the next chapter, Chapter Three.

CHAPTER 3

NUPTIALITY AND FERTILITY PROCESSES

3.1 Introduction

Because this dissertation has a strong demography leaning, I survey the theoretical and analytical literature on the timing of first marriage and first birth to identify how the different social science disciplines have explained these demographic processes. Also, this chapter will discuss some key demographic models with relevance to this dissertation. Demographers use modeling as a tool for several purposes (see for example, Newell 1988). First and foremost, demographic models are used to assess the quality of data, particularly data from developing countries where vital registration systems are not reliable. For example, age distributions reported in censuses and surveys in developing countries often show heavy clustering at numbers ending in zero and five (Halli and Rao 1992; Kpedekpo 1982). Demographic models are used to smooth such data to produce better estimates. Secondly, models are used to describe demographic processes such as fertility, nuptiality, mortality, and migration.

The first two sections of this chapter (Sections 3.2 and 3.3) examine the theoretical perspectives on the timing of first marriage and first birth, respectively. In Section 3.4, I outline the major demographic models for estimating first marriage (the Singulate Mean Age at Marriage [SMAM]) and for analyzing fertility differentials (the Proximate Fertility framework). This discussion will lead logically to the consideration of

the life table method as a special demographic modeling strategy for summarizing the sample distribution of the occurrence of both first marriage and first birth in a population.

3.2 Theoretical Perspectives on the Timing of First Marriage

Understanding the dynamics of the transition to first marriage is of interest to social scientists primarily because of their direct association to fertility. Indeed, the entry into sexual unions is regarded as one of the most important proximate determinants of human fertility (Bongaarts 1978, 1982; Davis and Blake 1956). The persistently high fertility in much of sub-Saharan Africa has been attributed, in part, to the region's early marriage patterns. Recent delays in the onset of first marriage have consequently stalled fertility in the region. Hardwood-Lejeune's (2001) study in Eastern and Southern Africa, for example, demonstrates the substantial effect of rising age at marriage on fertility decline.

Although several socioeconomic factors have been linked with the recent delays in marriage timing globally, increasing educational attainment has consistently been singled out as the most proximate factor influencing the rising age at first marriage (see for example, Becker 1981; Blossfeld 1995; Blossfeld et al. 2005; Dewit and Rajulton 1992; Gyimah 2009; Mills 2000; Oppenheimer 1997; Westoff 1992). Highly educated people enjoy expanded labour market opportunities and so are able to invest both time and effort in accruing economic and human capital, rather than securing such capital through marriage.

Educational expansion impacts entry into first union in several other ways. Blossfeld (1995) has argued that prolonged education requires that youth maintain the role of an economically dependent student for a longer period of time, which increases their level of economic uncertainty, and thus leads to postponement of partnership across cohorts. Also, it has been argued that highly educated individuals have different values and preferences such as independence, autonomy, and a higher attachment to career building and the labour force (Blossfeld et al. 2005; Mills 2000). Further, those with higher education are thus more likely not to succumb to normative pressures and also more willing and able to adopt flexible and innovative behaviour that leads to the pluralization of living arrangements such as cohabitation and voluntary childlessness, as has been observed in some Western countries (Blossfeld et al. 2005).

Culturally, higher education offers new perspectives in life which challenge traditional customs and ideals that tend to promote early marriages (Westoff 1992). The opportunities for paid wages imply that individuals are better able to plan for their old age through insurance and therefore would not have to rely on spouses as sources of social security. Also, by exposing individuals to non-traditional roles and providing them with the means to establish viable alternatives to parenthood, education expands their life choices. The primary effect of education on the timing of first marriage may thus relate to the development of value orientations that favour personal fulfillment over more traditional roles of marriage (Gyimah 2009).

Different social science disciplines have attempted to offer theoretical insights on the timing of first marriage among individuals in different social environments (Mensch et al. 2005). The contributions offered by historical demographers, sociologists, social anthropologists, and economics toward an understanding of the factors that influence the timing of marriage are outlined below.

3.2.1 Historical Demography

Using data from Western Europe, historical demographers have provided important insights into the dynamics of marriage timing over the past few hundred years. Though these demographic studies were undertaken within the European context, their contents are vital to an understanding of African marriage patterns, since they demonstrate how nuptiality trends tend to defy easy explanation (Mensch et al. 2005). While some schools of thought attribute the timing of marriage to either economic self-sufficiency or cultural values or both, others find no such association.

Among scholars examining the economic self-sufficiency hypothesis, Hajnal (1965) observed a pattern of late age at marriage and proportions of people remaining unmarried in much of Western and Northern Europe in the eighteenth century when the major determinants of marriage involved the acquisition of resources and skills, as well as the establishment of a new household. This view was supported by Wrigley et al. (1997) in their study of the history of English population from the end of the sixteenth century to the beginning of the nineteenth century. They noted that the pattern identified

by Hajnal (1965) was long standing in England, observing that the decision to marry hinged on the ability to set up an independent household.

Critics of the economic self-sufficiency theory, on the other hand, do not associate the timing of first marriage and material acquisition. Watkins (1986), in her investigation of marriage in Europe between 1870 and 1960, revealed the inadequacy of the economic self-sufficiency explanation, at least in understanding change at the level of geographic aggregates. Her examination of provincial data from the late nineteenth century revealed that nuptiality patterns were similar in neighbouring provinces that shared a common culture and language and not necessarily common occupational structures. She therefore suggested that societal conventions with regard to the timing of marriage existed independent of particular economic conditions. Furthermore, case studies from other areas in Europe do not show a strong association between occupational groups and age at marriage (Kertzer and Hogan 1991). Although age at marriage is likely to be sensitive to the economic environment, particular marriage patterns also appear to be shaped by the distinctiveness of individual family systems.

Other studies, however, suggest that the decision about when to marry may depend on both societal norms and economic realities. Examining the experience in cities in Northwest Europe, Lynch (1991) observed that the pattern of late age at marriage and high rates of celibacy that characterized rural areas also described more urbanized areas in the nineteenth century. Lynch (1991) claimed that although late age at marriage

represents a set of cultural values, it nonetheless emanates, in part, from economic realities.

There is yet another school of thought that sees no association between the timing of marriage, economic sufficiency, and cultural values. Several studies of individual countries reveal the inadequacy of an explanation linking household structure, the economic environment, and age at marriage. For example, an analysis by Kertzer and Hogan (1991), using data from an agricultural region of north-central Italy in the late nineteenth and early twentieth centuries, revealed that women married late, on average at around 24 to 25 years, even though multiple-family households were common and patrilocal residence was the norm. Further, Kertzer and Hogan (1991:34) observed that marriage age in the agricultural region of north-central Italy did not decline throughout “a period of dramatic social and economic changes,” when wage labour supplanted sharecropping.

Similarly, Guinnane (1991) observed in Ireland that even as incomes began to rise in the late nineteenth century, celibacy and late age at marriage continued to prevail. In eastern Belgium, Gutmann and LeBoutte (1984) noted that proto-industrialization, which provided wage-earning opportunities for young men and women, did not always lead to reduced age at marriage. They argued that land-ownership patterns, the speed with which industrial development took place, and the nature of that industry all played a role in determining the timing of marriage.

3.2.2 Sociology

Sociological accounts of the timing of marriage in the developing world have mainly been provided in the works of Lesthaeghe et al. (1989) on sub-Saharan Africa, and research by Fricke et al. (1986), Malhotra (1991, 1997), Malhotra and Tsui (1996), Yabiku et al. (2002); and Yabiku (2003) on South Asia. Though these studies provide important sociological insights on changes in marital patterns and social organizations in the developing world, Goode's (1963) classic volume, *World Revolution and Family Patterns* (1963), remains the key theoretical basis for understanding marriage patterns.

Operating within the framework of modernization theory, Goode (1963) presented an encompassing theory of the impact of industrialization and modernization more generally on family structure and conjugal relationships. His basic idea is that the nuclear family together with a set of associated attributes are more adapted to the high levels of geographic and social mobility of industrial society than are traditional family structures.

Goode (1963) maintained that the breakdown of traditional structures due to modernization has resulted in the establishment of new conjugal family systems based on the establishment of a new household at the time of marriage and a mutual attraction between spouses rather than on an alliance between families. When such a conjugal system begins to emerge in a society, the age at marriage is likely to change because the goals of marriage change. Many of the hypotheses that were explicit or implicit in Goode's theoretical formulation have found empirical support (see for example, Lee 1987). In particular, there is widespread evidence in many developing countries of trends

toward later age at marriage and more autonomy in the choice of marital partners (Durch 1980; Rindfuss and Morgan 1983).

Another variant of sociological theorizing on the timing of marriage, as found in the work of Keyfitz (1971), for example, views the onset of marriage as a product of the parity between men and women in a population. He maintained that the number of marriages between a female of age i and a male of age j in year t should depend at least on the number of males and the number of females present in year t . This therefore suggests that marriage timing is, by and large, a function of a population's sex ratio.

3.2.3 Social Anthropology

Among social anthropologists, cultural arrangements as well as kinship systems of production have traditionally been influential determinants in the timing of life course transitions. The theoretical literature suggests the general dimensions along which we might expect marriage timing to vary within societies. Writing in the tradition linking the culture and organization of families to demographic events, Macfarlane (1986), suggested that societies lie along a continuum from those in which familial interests dominate to those in which the interests of individuals prevail. Following on the work of Caldwell (1982), Macfarlane (1986) argued that marriage systems are tied to various other elements of domestic economy and demographic regime.

In general, within societies that are relatively unaffected by the capitalistic modes of production, the timing of marriage is largely influenced by community-shared values and expectations. In such societies, because the high familial levels of organization are

generally associated with wealth flows from children to senior kin, ages at marriage are relatively early, and fertility levels are high (Thornton and Fricke 1987). For instance within the relatively constrained social context of a Himalayan village of Nepal, Dahal, Fricke, and Thornton (1993) found the family context, such as access to kin and marriage partner networks, intergenerational control, and the prestige of natal groups, to be significant in explaining marriage timing. Other studies have also explored the differentiation of interests and their impact on marriage timing within societies that are in the early stages of incorporation into capitalistic modes of production (Kertzer and Hogan 1989).

3.2.4 Economic Analyses

Economic analyses on the timing of marriages have largely been couched within the context of social exchange theory (e.g., Becker 1981; Goldscheider and Waite 1986; Lichter et al. 1992). Homans (1961) defined social exchange as the exchange of activity, tangible or intangible, and more or less rewarding or costly, between at least two persons. Cost was viewed primarily in terms of alternative activities or opportunities foregone by the actors involved. Blau (1964) viewed social exchange as a process of central significance in social life and as underlying the relations between groups as well as between individuals. Within the context of union formation, Becker's (1981) gender specialization-and-trading model of marriage and Oppenheimer's (1997, 2003) "career-entry" theory of marriage remain the two major economic perspectives.

Becker (1981), the main exponent of the economic theory of the family, viewed unmarried men and women as trading partners who decide to marry if each partner has more to gain by marrying than by remaining single. As in all trading relationships, the economic gains from marriage are based on the fact that each partner has something different to offer, with the man traditionally specializing in income generating activities in exchange for the woman's household tasks. Becker (1981) proposed that the mutual economic dependence of the sexes provide the major incentive for partners to marry. He argued further that as women became more economically independent due to the upward trends of women's higher education and labour force participation, the economic gains from marriage are considerably reduced, and that explains why marriages are increasingly being delayed or even avoided in the contemporary developed world.

Although contemporary economic analysis of the family is widely credited to the seminal works of Gary Becker, it is important to note that his work has been severely criticized particularly by feminist economists. Bergmann (1995) has, for example, attacked Becker's model and dismissed his conclusions, arguing that Becker's assumptions are too simplistic and even preposterous. Besides these criticisms, it is also questionable whether Becker's model could be applied in societies such as Ghana where women have traditionally served as the economic backbone of households by actively engaging in economic activities ranging from subsistence agriculture to retail trading (see for example, Berry 1997; Clark 2010).

While Becker's (1981) "economic independence hypothesis" contends that women's socioeconomic independence reduces the propensity of marriage entry, given the diminished utility of marriage, Oppenheimer's (1997) "career-entry" theory of marriage, on the other hand, assumes a positive relationship, stating that women's higher income facilitates marriage entry in the long term. Presumably, women's better socioeconomic prospects augment family utility and therefore enhance the family's "competitive position" (Oppenheimer 1997:404).

International comparisons of marriage formation, however, suggest that the relationship between women's economic standings and marriage intensity differ according to the gender context in a society (Blossfeld 1995; Ono 2003). These studies found that women's higher earnings potential (as indicated by educational attainment or annual earnings) positively relate to marriage hazards in countries with higher gender equality, while they have negative effects on marriage hazards in countries with a relatively strong gender division in work and family life. On the whole, evidence from cross-sectional and aggregate-level analyses has bolstered Becker's model, whereas results drawn from longitudinal research have substantiated Oppenheimer's career-entry model of marriage (Bernard 1981; White and Rogers 2000).

3.3 Theoretical Perspectives on the Timing of First Birth

Prominent theories of fertility such as Caldwell's wealth flows theory (Caldwell 1982) and Becker's (1981) new home economics approach have been utilized in various ways in accounting for the differentials in fertility behaviour between and within

populations. However, these classic theories have tended to focus on completed fertility and do not provide explicit explanations for when during the life course it is optimal for individuals to begin their childbearing.

The timing of parenthood, defined in this dissertation as an individual's age at first birth, has been found to have important implications over the life course (Gyimah 2003; Mirowsky 2002; Mirowsky and Ross 2002). In regions such as Ghana where effective contraception is low, the total number of children a woman bears is principally a function of the age at which childbearing begins. The recent decline in fertility in parts of sub-Saharan Africa has been attributed, in part, to the rising median age at first birth (Kirk and Pillet 1998). Two major theoretical positions have been advanced in the literature to account for individuals' decision to begin childbearing within a particular trajectory of their life course. These theories range from an evolutionary perspective to a general human capital approach.

3.3.1 Evolutionary Perspective

From an evolutionary perspective, the timing at which individuals have their first birth is seen as a direct response to their mortality expectations. On the whole, individuals who perceive a shorter life expectation tend to reach reproductive maturity earlier while those who perceive longer life tend to delay their onset to parenthood. This hypothesis has received a number of empirical confirmations. In a recent study by Waynforth (2012) in Britain, it was observed that individuals with a chronic disease from childhood

were 1.6 times significantly more likely to have had a first child by age 30 compared with their counterparts with a low mortality risk.

Other researchers have also analyzed regional and national mortality statistics for correlations between age at first birth and mortality rates. In the Chicago area, Wilson and Daly (1997) compared neighbourhoods with different teenage birth rates, and observed that a substantial proportion of the difference in birth timing between neighbourhoods was due to differences in homicide rates. Teenage birth rates in the highest mortality neighbourhoods were much higher than in low-mortality areas. This pattern has been observed in other nations and in comparisons between nations and over time periods (Low et al. 2008; Nettle and Cockerill 2010; Quinlan 2010) and at the individual-level. This pattern implies that those who see or are aware of young adult deaths around them tend to discount the future and have children at a younger age (Waynforth 2012).

3.3.2 Socioeconomic Perspective

From a socioeconomic perspective, the timing of first birth associates with an individual's human capital accumulation, with specific reference to educational attainment and micro-economic rationality. The theoretical link between educational attainment and the timing of parenthood has been classified into proximate and economic factors (Gyimah 2003). With respect to the proximate factors, prolonged education invariably delays an individual's entrance into parenthood through the postponement of marriage, use of effective contraception, and induced abortion. In sub-Saharan Africa, for

example, Westoff (1992) has observed that higher education delays marriage and postpones childbearing among women. Recent statistics from the 2008 Ghana Demographic and Health Survey indicate that women with secondary or higher level of education on the average marry three years later than those with no education.

Education also affects the age at first birth indirectly through the use of more effective contraceptives. Results from several studies in the developing world have shown that the likelihood of contraception use is significantly higher among highly educated women (Addai 1999; Martin 1995; Oheneba-Sakyi 1992; Oheneba-Sakyi and Takyi 1997). This empirical regularity is due, in part, to greater access to information and greater specialized knowledge on the effectiveness of contraceptives. In Ghana, highly educated women have been found to be significantly more likely to have a terminated pregnancy and hence postpone childbearing, probably because they may not want to disrupt their educational career or that childbearing may not fit their formal employment situation (Adjei et al. 2011).

From an economic point of view, education affects the timing of the first birth through changes in the real and perceived costs and utilities of children (Kasarda, Billy, and West 1986; Maxwell 1987). Given the higher investment in education, the opportunity cost of leaving the labour market to become a mother is higher for educated women and this often results in the postponement of childbearing. Participation in the labour force, particularly in the modern sector, also has some implicit norms and values that are often incompatible with childbearing. With higher education, investment cost in

children may also increase given the higher socioeconomic and cultural aspirations for children of the better educated (Gyimah 2003). Where educated individuals perceive childbearing as incompatible with attaining personal goals and ambitions, childbearing is likely to be delayed or forgone altogether. Educational attainment and career aspirations thus exert influences that ultimately delay a person's entry into parenthood.

3.4 Demographic Models of Marriage and Fertility

Demographic models are commonly used to analyze transitions to marriage as well as variations in birth among and within populations. In this section, I discuss the Singulate Mean Age at Marriage (SMAM), the Proximate Fertility Model, and the life table technique.

3.4.1 Singulate Mean Age at Marriage (SMAM)

The United Nations Population Division monitors marriage trends using the singulate mean age at marriage (SMAM), first proposed by Hajnal (1953). SMAM is a synthetic cohort measure calculated from census or survey data on the proportions who are single by age (five-year age groups are normally used) over ages ranging from the youngest age at which marriage takes place to an age beyond which very few first marriages take place. Normally, this range is from 15 to 50 years, but other limits may be used based on the cultural nuances of a particular place. In Mali for instance where early marriage is normative due to the influence of the Islamic religion, Hinde (1998) proposes a range of 10-50 years when computing the SMAM for Mali.

Although this measure is referred to as the mean age at marriage, it is actually the mean age at first marriage among those who marry by age 50, or more precisely the average number of years spent single for those who marry before age 50 (United Nations 2004). Therefore, it follows that:

$$SMAM = \frac{\text{number of person - years lived in single state by those who marry before age 50}}{\text{number of persons marrying before age 50}}$$

The computational procedure is as follows:

- (1) sum the proportions single and multiply this sum by five (if the five-year age groups is used);
- (2) subtract the number of years lived by those who do not marry before age 50;
- (3) divide this total by the proportion who marry by age 50, which is one minus the average of the proportion single at ages 45–49 and 50–54; and
- (4) add 15, which is the number of years lived in the single state before age 15 (if we assume no marriages before age 15).

By restricting its scope to only first marriages, the model avoids the complications of divorce, widowhood, and remarriage. However, because the SMAM assumes stability (no change over time in the age-specific incidence of first marriage), it can be misleading when an increasing fraction of young people delay marriage or when marriage patterns are changing rapidly. Preston, Heuveline, and Guillot (2001), for example, caution

against using the SMAM when nuptiality patterns are changing, noting that the “SMAM is a hodge-podge of rates in the recent and distant past” (p. 89). Also, if the proportion of young people who ultimately marry is lower than the current proportion aged 50 who have married, the SMAM will be artificially inflated (Mensch et al. 2005).

3.4.2 Proximate Determinants of Fertility Framework

Following the pioneering work of Davis and Blake’s (1956) analysis of the biological and socioeconomic factors that affect fertility behaviour, Bongaarts (1978, 1982) and Bongaarts and Potter (1983) have argued that more insights could be gained if the specific mechanisms through which those intermediate factors operate are identified. Bongaarts and Potter (1983) identified four principally quantifiable proximate determinants of fertility, namely proportion married,⁵ contraception,⁶ induced abortion,⁷ and postpartum infecundability.⁸ These proximate determinants are the biological and behavioural factors through which social, economic, cultural, institutional, psychological, health, and environmental variables affect fertility. The principal characteristic of a proximate determinant is its direct influence on fertility, such that if one proximate variable changes then fertility necessarily changes also, on the assumption that the other proximate factors remain constant. In contrast, socioeconomic variables can affect

⁵ This variable measures the proportion of women of reproductive age who are sexually active. The model therefore makes the strong assumption that all child-birth occur within the context of marriage or consensual unions.

⁶ This indicates any deliberate attempt undertaken to prevent conception.

⁷ This includes any practices that deliberately interrupt the normal course of gestation.

⁸ The period following pregnancy when a woman is unable to conceive until the normal pattern of menstruation and ovulation is restored. This period is prolonged by the practices of breast-feeding and postpartum abstinence.

fertility only indirectly by modifying the proximate determinants. Thus, the onset, trends and differences in fertility among populations or population subgroups, can always be traced to variations in one or more of the proximate determinants.

The four principal proximate determinants are considered inhibitors of fertility because fertility is lowered than its theoretical maximum value as a result of delayed marriage and marital disruption, the use of contraception and induced abortion, and postpartum infecundability induced by breastfeeding and/or postpartum abstinence. The model therefore measures the fertility effects of these four proximate determinants by computing indices that take values between 0 and 1. Each index quantifies the proportionate reduction in fertility it causes. The total fertility rate (TFR), which is a product of the four indexes and the total fecundability (TF), can be written as:

$$TFR = TF \times C_m \times C_c \times C_a \times C_i$$

Where;

C_m = index of proportion married, which equal 1 if all women of reproductive age are married and 0 in the absence of marriage. The index is calculated as:

$$C_m = \frac{\sum m(a)g(a)}{\sum g(a)}$$

Where;

$m(a)$ = the weighted average of the age-specific proportions of females currently married;

$g(a)$ = the weights given by the age-specific marital fertility rates.

C_c = index of contraception, which equals 1 in the absence of contraception and 0 if all fecund women use 100 percent effective contraception. The index of contraception is specified as:

$$C_c = 1 - 1.08 \times \mu \times \ell$$

where,

1.08 = an adjustment factor designed to remove infecund women from the equation;

μ = proportion currently using contraception among married women of reproductive age (male methods, abstinence other than postpartum, and sterilizing operations are included);

ℓ = average use-effectiveness of contraception.

C_a = index of induced abortion, which equals 1 in the absence of induced abortion and 0 if all pregnancies are aborted. The equation for the index is calculated by recognizing that each abortion will avert somewhat less than one birth because it also shortens the interval between potential pregnancies. The calculation of the index of abortion (C_a) requires the estimation of the Total Fertility Rate (TFR) and the prevalence of contraceptive use among proportions currently married (u), in addition to the Total Abortion Rate (TA) which equals the average number of induced abortions per woman. The equation of the index of abortion is expressed as;

$$C_a = \frac{TFR}{[TFR + .4(1 + \mu) \times TA]}$$

C_i = index of postpartum non-susceptibility, which equals 1 in the absence of lactation and postpartum abstinence and 0 if the duration of non-susceptibility is infinite. The index is calculated as the average birth interval in the absence of breastfeeding or postpartum abstinence (whichever is longer) divided by the average length of the interval when breastfeeding/postpartum abstinence takes place;

$$C_i = \frac{20}{18.5 + i}$$

where;

20 = the average birth interval (in months) if no breast-feeding and postpartum abstinence are practiced.

18.5 = the average birth interval (in months) if breast-feeding and postpartum abstinence are practiced.

i = average duration of postpartum infecundability caused by breast-feeding or postpartum abstinence or whichever is longer.

The relative strength of each index is more or less tied to a society's level of socioeconomic development (Gyimah 2002). In developing societies, such as those in sub-Saharan Africa, where cultural taboos prohibit intercourse during breast-feeding, the

postpartum non-susceptibility period tends to be longer than in other areas (Caldwell and Caldwell 1977). As a result, the C_i fertility inhibiting effect is greater in sub-Saharan Africa, accounting for almost 60 per cent of the reduction in fertility from the biological maximum (Cochrane and Farid 1986), than it pertains elsewhere. Conversely, since contraceptive use is lowest in sub-Saharan Africa (Gyimah, Adjei, and Takyi 2011), the fertility inhibiting effect of contraception (C_c) is greatest in the more developed societies of the world.

The Bongaart's proximate fertility model has, however, been criticized for not accounting for the overall variation in fertility in sub-Saharan Africa due to its central assumption that all fertility occurs within the context of marriage. This assumption is particularly problematic in sub-Saharan Africa where substantial number of births occurs outside of marriage (see for example, Gage-Brandon and Meekers 1993; Gaisie 1984; Meekers 1993, 1994). To overcome this shortcoming, Stover (1998) has proposed a reformulation of the proximate fertility model by using sexual activity rather than marriage to indicate exposure to pregnancy.⁹

⁹ These refinements produce the following model:

$$TFR = C_x \times C_i \times C_a \times C_f \times C_u \times PF$$

Where;

$$C_x = s$$

$$C_i = 20 / (18.5 + i)$$

$$C_a = TFR / (TR + 0.4 * (1 + u * e) TAR)$$

$$C_f = 1 - f$$

$$C_u = 1 - u * e,$$

Where;

s = the proportion of women aged 15-49 who are sexually active;

i = the mean duration (in months) of postpartum insusceptibility;

u = the proportion of sexually active, fecund women using contraceptives that does not overlap with that experiencing postpartum amenorrhea;

Though both the SMAM and the proximate fertility framework remain important demographic models for explaining the differentials in marriage timing and fertility behaviour, they are applicable mostly to female population subgroups. Also, these models fail to provide any definitive answers to the central question pertaining to event occurrence data: whether and when do first marriages and first births occur? The life table technique is the most useful demographic model for presenting descriptive statistics on event history data such as the timing of first marriage and first birth. Because similar indicators are used for constructing male and female event histories, the life table technique enables a comparison of the life course transitions between men and women.

3.4.3 The Life Table

The life table is the primary tool used by demographers, actuaries, and public health scientists to describe event occurrence data (Namboodiri and Suchindran 1987). The life table tracks the event histories of a sample of individuals from the beginning of time (when no one has yet experienced the target event) through to the end of data collection. Though originally designed to present the mortality experience of a population, the life table technique is applicable to the analysis of many measurable events such as labour force entry and exit, marriage, parenthood, divorce, and retirement (Siegel 2002).

e = the average effectiveness of contraception;
TAR = the total abortion rate;
f= the proportion of sexually active women who are infecund; and
PF = the index of potential fertility

With particular application to the timing of first marriage and first birth, the life table provides information on the number of people likely to remain single or childless out of an initial group of people at a particular time interval, who are at risk to experience marriage or first birth within the interval, as well as those censored at the end of the interval. In a life table analysis, those who remain single or childless are said to have survived the interval, whereas those who married or gave birth are said to have experienced the event.

Essentially, the life table enables the calculation of two invaluable nonparametric estimates: the survivor function and the hazard function. These are two fundamental ways of describing the distribution of event occurrence over time. The survivor function assesses the probability that a randomly selected individual will not experience the event under consideration. Formally, the survivor function is denoted by $S(t_{ij})$ and defines the probability that individual i will survive past time period j . Thus, individual i must not yet experience the event as at the j^{th} time period, but at a later period such that T_i (a random variable for time), will always be greater than j . The survival probability for individual i in time period j can be stated as:

$$S(t_{ij}) = \Pr[T_i > j]$$

The hazard function, on the other hand, assesses the risk of event occurrence, and provides answers to the core questions framing event history analysis: whether and when events occur. Denoted by $h(t_{ij})$, the hazard function describes the conditional probability that individual i will experience the event in time period j , given that he or she did not

experience it in any earlier time period. This is algebraically equivalent to the probability that the event will occur in the current time period, given that it must occur now $\Pr[T_i = j]$ or sometime in the future $\Pr[T_i \geq j]$ as follows:

$$h(t_{ij}) = \Pr[T_i = j | T_i \geq j]$$

3.5 Conclusion

The objective of this chapter was to present a comprehensive review of the literature and demographic models on marriage and fertility processes. Following Mensch et al. (2005), this study reviewed the contributions of various social science disciplines (historical demography, sociology, social anthropology, and economic) to an understanding of timing of age at first marriage. The theoretical pathways for understanding timing of parenthood were explained through evolutionary and socioeconomic perspectives.

Prominent demographic models for estimating first marriage (the Singulate Mean Age at Marriage [SMAM]) and for analyzing fertility differentials (the Proximate Fertility framework) were outlined. These models were critiqued as being mostly applicable to female population subgroups, while failing to provide definitive answers on whether and when first marriages and first births occur. The life table technique was introduced as the most important tool for describing event occurrence data and as a means to undertake a comparison between the life courses of men and women.

Before any meaningful analyses and interpretations of results can be made, it is helpful to first provide a background to the study area. The next chapter, Chapter Four,

discusses Ghana's demography and geography as well as some key social institutions relevant to understanding the context of this study.

CHAPTER 4

THE SOCIAL STRUCTURE OF GHANA

4.1 Introduction

This chapter takes a cursory discussion of Ghana's social structure to provide the background context for examining the impact of globalization on family formation processes. In addition to a description of the country's geography and population, an attempt is made to sketch, briefly, some key social institutions in Ghana that are pertinent to the discussions in this dissertation. The social institutions to be considered include religion, political-economy, education, and marriage. These basic social institutions, termed as the *functional pre-requisites*¹⁰ of society, are recently undergoing substantial changes in Ghana and are major influences on family formation processes in the country. This chapter also serves as a launching pad for a discussion of the data and methods in the chapter to follow, and provides the context for the subsequent analyses and presentation of results.

4.2 Geography

Situated on the Greenwich meridian and lying between latitudes 5 and 11° N, Ghana is located on the west coast of Africa bordered by Burkina Faso on the north, Côte d'Ivoire on the west and on the east by Togo, occupying a total land area of 238,533 square kilometres. The Gulf of Guinea on the south forms a coastline extending 560

¹⁰ According to Aberle et al. (1950), the functional pre-requisites refer broadly to the things that must get done in any society if it is to continue as a going concern (i.e., the generalized conditions necessary for the maintenance of the system concerned).

kilometres. Administratively, the country is divided into ten regions: Western, Central, Greater Accra, Volta, Eastern, Ashanti, Brong Ahafo, Northern, Upper East, and Upper West (see Figure 4.1), which are further subdivided into 170 districts to ensure equitable resource allocation and efficient and effective administration at the local levels. Out of the 10 regions, the Greater Accra Region is the smallest in terms of land size yet the most densely populated, with the highest concentration of commercial and industrial activities. The country's administrative and political capital is Accra, which also doubles as the capital of the Greater Accra Region.

Ghana is a multi-ethnic country of about 24 million people. On the basis of language, geographical affinity or origin, and similarities of social systems and cultural practices, four main ethno-cultural groups can be identified as: Akan, Mole-Dagbani, Ewe, and Ga-Adangbe (Langer 2009; Takyi and Addai 2002). The Akans¹¹ are the largest ethnic group constituting about 49 percent of the population. They form the majority in five of Ghana's ten administrative regions in the southern part of the country (i.e., Western, Central, Eastern, Ashanti, and Brong-Ahafo). Though comprising several sub-groups, the Akans share a number of common cultural, social, and political institutions. One important cultural trait that differentiates the Akans from other ethnic groups is that most Akans define themselves culturally through their mothers. Thus, except for a few groups, all Akans are matrilineal.

¹¹ The Akans comprise the Akwapim, Akyem, Ashanti, Bono, Fante, Kwahu, and Nzema.

The Mole-Dagbanis¹² constitute the second largest ethno-cultural group in Ghana, forming about 17 percent of the total population. They are mostly found in the three northern regions in the northern part of the country (Upper East, Upper West, and Northern Regions). Though there are certain social institutions that they share in common, the differences in their history and cultural traditions make it difficult to consider the Mole-Dagbani as a homogenous group (Frempong 2001; Langer 2009).

The Ewes¹³ are the third largest ethnic group in the country forming about 13 percent of the population. They are predominantly found in the southern part of the Volta Region in the south-eastern part of the country. Due to the lack of sharp sub-divisions among them and the perceived single language, the Ewes are usually portrayed as the most homogenous ethnic group in Ghana (Langer 2009). The fourth largest ethnic group in Ghana is the Ga-Adangbe, forming 8 percent of the population. They mainly reside in the Greater Accra Region where they constitute approximately 30 percent.

Notwithstanding their regionally-based character, ethnicity in Ghana is also characterized by religion and the sharp north-south developmental divide of the country. For instance, while the three northern regions (northern Ghana) is predominantly Muslim and relatively deprived socioeconomically, southern Ghana is mainly Christian and disproportionately advantaged in terms of socioeconomic resources. Although these general patterns are highly noticeable, it is important to mention that there are some

¹² The Mole-Dagbanis are a loose ethno-cultural grouping consisting the Builsa, Dagaba, Dagomba, Gurense, Kusasi, Mamprusi, Nandom, Nankansi, Nanumba, and Wala.

¹³ The Ewes are largely made up of the Agave, Anlo, and Peki.

matrilineal Akans who practice Islam (popularly called Asante *Kremo*¹⁴), but the overwhelming majority of the Akans are Christians. Southern patrilineal groups such as the Ga-Adangbe and Ewes are also mostly Christians, though there is a minority of Muslim adherents among them. The patrilineal groups in the north (Mole-Dagbanis) are predominantly Islam, though there are pockets of Christians among them.

Ghana is a lowland country except for a range of hills, most prominent on its eastern borders. The country has a tropical climate with temperatures and rainfall varying according to distance from the coast and elevation, with an average annual temperature of about 26°C. There are two distinct rainy seasons in the southern part of the country, April to June and September to November. In the north, however, the rainy season begins in March and lasts until September. Annual rainfall ranges from about 1,015 millimetres in the north to about 2,030 millimetres in the southwest. Based on the rainfall distribution, Ghana can be divided into three ecological zones: the sandy and dry coastline on the southeast, the forested area in the southwest and middle belt, and the northern savannah (Dickson and Benneh 1995). About 77 percent of the total population lives in the coastal and forest (southern) half of the country (GSS et al. 2009).

¹⁴ *Kremo* is the Akan word for Islam.

Figure 4.1: Map of Ghana Showing Administrative Regions and their Capitals.



Courtesy: Owusu (2005)

4.3 Political Economy

Formerly a British colony known as the Gold Coast, Ghana became the first country south of the Sahara to gain its political independence from colonial rule. On March 6, 1957, Ghana gained its political independence from Great Britain, and became a republic in the British Commonwealth of Nations on July 1, 1960. The current constitution of Ghana was approved on 28th April, 1992. It declares Ghana as a unitary republic with sovereignty residing in the Ghanaian people.¹⁵ The constitution calls for a system of checks and balances, with powers shared between the executive (president), the legislature (parliament), and the judiciary.

As a means of achieving economic self-sufficiency to lend credence to its political autonomy, the country pursued a vigorous industrialization drive that resulted in significant growth and expansion, making Ghana an economic showpiece of Africa (Rimmer 1992). With the recognition that a highly educated population was the key to the country's future economic fortune, the 1961 *Education Act* was introduced to make basic education free. The quest for highly trained personnel to occupy managerial and technical positions culminated in the establishment of two additional universities (the

¹⁵ It should be noted that traditional authority structures form an integral part of Ghana's political institution. Ghana is not just a republic, but also contains political structures known as chieftaincies that existed before the colonial era, and currently run parallel with the central government and its decentralized agents. Centralized political systems in Ghana such as the Akan, Ga, Adangme, Ewe, and the many dynastic kingdoms of northern Ghana including the Gonja, Dagomba, and Mamprusi, among others (Nukunya 2003), are governed by kings, chiefs, and queenmothers. These traditional authorities continue to have significant powers to make decisions on customary judicial and land tenure matters. Thus, most Ghanaians consider themselves citizens of the state and subjects of their chief (Ray 2003).

Kwame Nkrumah University of Science and Technology in 1952 and the University of Cape Coast in 1962) to complement the University of Ghana (established in 1948).

The economic success during Ghana's early post independence era was quite impressive. Between 1960 and 1965, for instance, Gross Domestic Product (GDP) growth averaged more than 6 per cent per annum. During this period, Ghana's per capita income of £70.00 was higher than that of many developing countries such as Egypt (£56.00), Nigeria (£29.00), and India (£25.00) (Huq 1989). Indeed, its spending on education as a proportion of national income was the highest in the world (Caldwell and Sai 2007). With this relative prosperity, coupled with Ghana's liberal immigration policy given the first government's pan-Africanist ideological orientation (Dzorgbo 1998), Ghana attracted a significant number of immigrants from neighbouring countries such as Nigeria, the Upper Volta (now Burkina Faso), Ivory Coast, and Mali. By 1960, almost 12 percent (800,000) of Ghana's 6.7 million population were foreigner-born residents (Ghana Information Services 1960). As a result of the promulgation of the 1969 *Aliens Compliance Order*, which saw the expulsion of a large number of immigrants from neighbouring West African States, the foreign-born population dwindled considerably.

Due to a host of factors, some internal and others external to the state,¹⁶ Ghana's impressive economic gains made in the early post independence era, were substantially

¹⁶ Internally, one can list political instability, uncoordinated development policies, corruption, and inappropriate monetary policies which created inflationary pressures and distorted exchange rates. The external factors include unfavourable terms of trade, instability of commodity prices on the international market, and oil price hikes of the 1970s (Hanson 2003).

eroded.¹⁷ Like many sub-Saharan African countries, Ghana suffered a long period of political instability. Discounting the numerous unsuccessful coup d'états, there were five successful military coups during a period of 15 years (1966-1981). Through these coups, Ghana has had three constitutional regimes overthrown. This instability negatively affected Ghana's developmental efforts, as many projects that were initiated by previous governments were abandoned when new governments assumed power. A case in point was the suspension of the comprehensive 7-year development plan¹⁸ when the immediate post-independent government was overthrown by a military junta in 1966. Since 1981, however, Ghana has had a period of sustained political stability with the quasi-military Provisional National Defence Council (PNDC) government (1981-1992) and a constitutional democracy since 1992, ushering in the fourth republican constitution. For the first time in the country's history, there was a democratic transfer from one political party to the other on January 7, 2001. The general elections of December 2008 saw the second democratic transfer of power from an incumbent party to a party in opposition.

Besides the political instability, Ghana's inability to build a strong industrial base coupled with its over reliance on raw material export meant that the economy became vulnerable to external shocks. All these, in addition to other factors such as drought, fuel shortages, currency instability, loss of cocoa crops, and the sudden return of over one

¹⁷ Some have argued that Ghana's economic problems actually started with the exodus of foreign workers, due to the promulgation of the *Aliens Compliance Order* of 1969, as most of the labour needs of the mining and cocoa industries were dependent on labour from non-Ghanaians (see for example, Peil 1995).

¹⁸ The 7-year Development Plan (1963-1970) was a very comprehensive document drawn during the first republican administration. Among others, it sought to make Ghana self-sufficient in agriculture and manufacturing.

million Ghanaians expelled from Nigeria in the early 1980s, contributed to near economic collapse (Berry 1997).

In exchange for financial assistance, the Government of Ghana embarked on a programme of economic stabilization, under the guidance of the World Bank and the International Monetary Fund (IMF). Much of the macro-economic policies implemented during the past three decades have been geared toward stabilization of the local economy. Through much of the second half of the 1980s and the 1990s, Ghana was touted as the most successfully adjusting country in sub-Saharan Africa. The Economic Reform Program (1983-1991) focused on stabilizing the economy by reversing the long-term decline in production of goods and services, reducing the budget deficit and containing inflation, and promoting institutional reforms such as improving the efficiency of the public sector (Berry 1997; Mbaku 2008). Berry (1997) has, for example, shown that the overall performance of the Ghanaian economy improved markedly in the late 1980s and early 1990s as a result of the adjustment programmes.

These gains at the macro-economic level, however, did not trickle down to the individual and household level. Indeed, some of the policies implemented brought hardship to certain vulnerable groups in society (Geo-Jaja and Mangum 2004; Sowa 1993). For instance, the adjustment process which included the withdrawal of subsidies, retrenchment of labour, and devaluation of the local currency, had adverse effect on the lives of individuals and households. To qualify for loans, the government was usually required to devalue the local currency, a situation that made imported consumer and

industrial products very expensive. Structural adjustment programmes also called for cuts in support for “noncompetitive industries,” and for the reduction in public services such as health care and agricultural subsidies for the poor. Using the health sector as a case in point, hospitals and other health institutions were deprived of equipment, drugs, and qualified staff. With the introduction of the “cash and carry system”¹⁹ as a measure to cut back on public spending, many patients could not afford prescription drugs, and for those who could, the drugs were often unavailable (Institute of Statistical, Social and Economic Research 1994).

In addition, the long reliance on external loans created a heavy debt burden that could not be sustained by the end of the 1990s. As a result, Ghana had no recourse but to seek relief under the Highly Indebted Poor Countries (HIPC) Initiative. As a means of improving the living conditions of its citizenry, the Government of Ghana introduced the Livelihood Empowerment Against Poverty (LEAP) programme in 2007 as a national social protection strategy. After a year of its introduction, individuals identified as poor started receiving bimonthly allowances of GH ₵8.00 (about US \$8.00 as per the prevailing exchange rate at the time) which was expected to reach up to GH ₵15.00 depending on the number of beneficiaries in the family to a maximum of four (UNDP 2009).

¹⁹ Before the structural adjustment programmes, hospital consultation fees and prescription drugs at public health institutions were greatly subsidized by the central government. As part of the measures to cut public expenditures subsumed under SAPs, these subsidies were removed. Patients were then required to pay the full cost of medical treatment.

The economic activities in Ghana have seen marginal changes over the past couple of decades. Essentially, agriculture remains the most important area of economic activity, followed by the service sector, and then industry (GSS 2009). The agricultural sector contributes 34 percent of the country's gross domestic product (GDP) and employs about 50 percent of the population (GSS 2008). The service sector, comprising mainly wholesale and retail trade, is however the fastest growing sector of the Ghanaian economy, with a growth rate of 10 percent. The industrial sector, on the other hand, contributes a little over one-quarter (26 percent) to the country's GDP. The leading export commodities of the country are cocoa, gold, and timber. The diversification of the economy in recent times has led to the export of non-traditional commodities such as pineapples, bananas, yams, and cashew nuts. With the launch of Ghana's gateway project and the subsequent establishment of the Ministry of Tourism in 1993, tourism is fast gaining prominence as a major foreign exchange earner (Teye, Sonmez, and Sirakaya 2002).

Since political and economic developments thrive within the context of individual liberties and freedom, a discussion of Ghana's political-economy cannot be adequate unless the role of the media in shaping Ghana's fledgling democracy is taken into account. Since the early 1990s, the Ghanaian media landscape has witnessed significant changes, with an increase in the number of privately-own print and electronic media outlets, and an increasingly less 'henpecked' state-controlled media (Tettey 2003). The influence of these private media in promoting civic education in Ghana cannot be

overemphasized. Their presence has offered Ghanaians tremendous voice and space for contributing to matters of political, economic, and social interest.

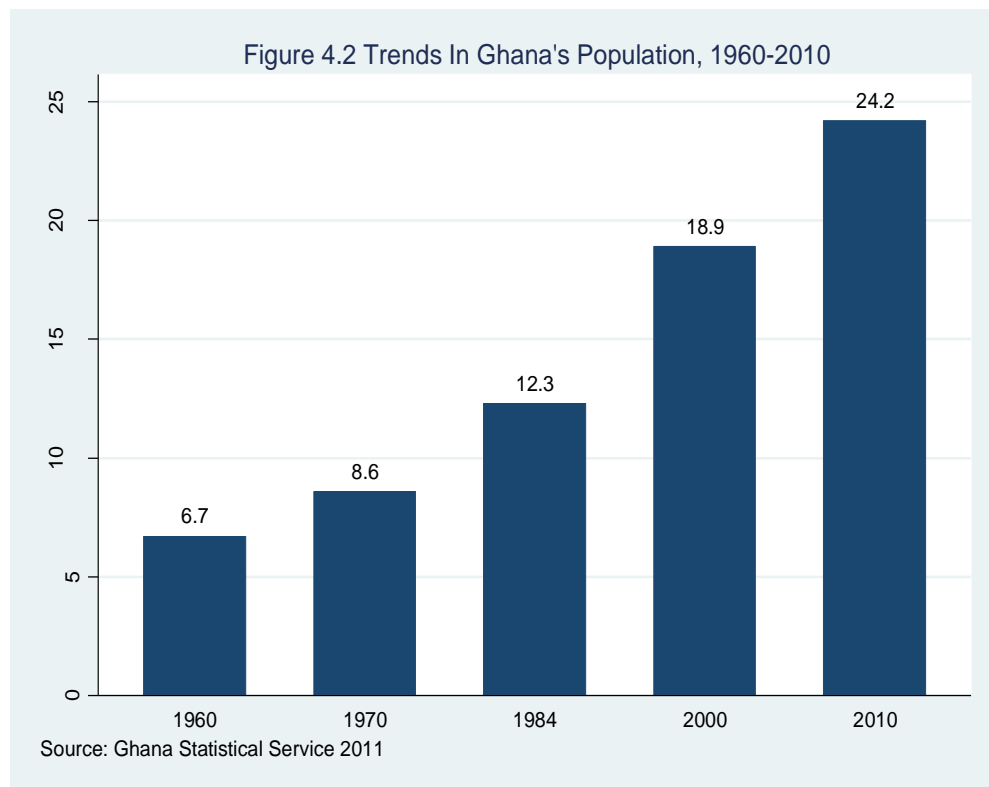
The role of radio stations in enhancing debate particularly during electioneering period has helped promote lively and constructive political competition and has brought transparency into the counting and declaration of election results (Debrah 2001; Gyimah-Boadi 2001; Tettey 2003). Though there are pockets of inter-ethnic conflicts (see for example, Jonsson 2009), the country has forged a stable political environment due largely to the activities of civil society organizations such as the Ghana Center for Democratic Development (CDD-Ghana), the IMANI Center for Policy and Education, and the National Commission for Civic Education (NCCE).

4.4 Population

Demographic information about Ghana can be obtained from a variety of sources. These include population censuses (1960, 1970, 1984, 2000, and 2010), administrative/routine data (such as birth and death registry, health systems, and education data), and surveys [(including the Post Enumeration Survey (1960), the Supplementary Enquiry (1970), the Ghana Fertility Survey (1979-80), three rounds of the Ghana Living Standards Survey (1987-88, 1988-89, and 1991-92), and five rounds of the Ghana Demographic and Health Survey (1988, 1993, 1998, 2003, and 2008)].

Population censuses, however, provide the most comprehensive demographic information. Ghana's population has been growing rapidly. During the 50-year period between the country's first population census (1960) and the most recent one (2010), the

country's population has almost quadrupled, expanding from 6.7 million to 24.2 million (see Figure 4.2). In 1970, the population of Ghana had reached 8.6 million, and, by 1984, it had increased to 12.3 million. The population continued to expand throughout the 1980s and 1990s. Between 2000 and 2010, Ghana's population increased by 28.1 per cent, with an intercensal growth rate of 2.4 percent. Between the same period (2000-2010), the population density per square kilometre increased from 79 persons to 102 persons.



The sex ratio over the last 10 years has fallen from 98 males per 100 females in 2000 to 95 males per 100 females in 2010. A regional analysis of Ghana's population

between 2000 and 2010 indicates that the population of the Northern Region increased by 35.6 per cent, while that of Greater Accra, Central, and Ashanti increased by 34.6, 32.2, and 30.8 percent, respectively (see Table 4.1). The intercensal growth rate in these four regions was greater than the national average of 2.4 percent. The lowest growth rate was recorded in the Upper East Region (1.1%) (see Table 4.2).

In terms of absolute size, the Ashanti Region has consistently been the most populous region in Ghana. In 2010, 19.5 percent of the total population was living in the Ashanti Region. The least populated region is the Upper West Region, accounting for only 2.8 percent of the country's population in 2010 (GSS 2011). Though Ghana's population is predominantly rural, urbanization is steadily altering Ghana's demographic composition. The distribution of Ghana's population by urban-rural residence shows that the proportion of the population living in urban areas has been increasing since 1960. In that year, only 23 percent of the population lived in urban areas. This proportion increased to 29 percent in 1970 and then 32 percent in 1984. In 2008, the proportion of the country's population living in urban areas had reached 44 percent (GSS et al. 2009).

Table 4.1 Population by Region and Sex, 1984-2010

Region	1984			2000			2010		
	Total	Male	Female	Total	Males	Female	Total	Males	Females
Ghana	12,296,081	6,063,848	6,232,233	18,912,079	9,357,382	9,554,697	24,223,431	11,801,661	12,421,770
Western	1,157,807	586,288	571,519	1,924,577	978,176	946,401	2,325,597	1,176,189	1,149,408
Central	1,142,335	559,312	583,023	1,593,823	760,221	833,602	2,107,209	998,409	1,108,800
Greater Accra	1,431,099	700,952	730,147	2,905,726	1,436,135	1,469,591	3,909,764	1,884,127	2,025,637
Volta	1,211,907	586,940	624,967	1,635,421	790,886	844,535	2,099,876	999,190	1,100,686
Eastern	1,680,890	834,962	845,928	2,106,696	1,036,371	1,070,325	2,596,046	1,252,688	1,343,325
Ashanti	2,090,100	1,028,904	1,061,196	3,612,950	1,818,216	1,794,734	4,725,046	2,288,325	2,436,721
Brong Ahafo	1,206,608	613,721	592,887	1,815,408	911,263	904,145	2,282,128	1,161,537	1,120,591
Northern	1,164,583	576,825	587,758	1,820,806	907,177	913,629	2,468,557	1,210,702	1,257,855
Upper East	772,744	368,192	404,552	920,089	442,492	477,597	1,031,478	497,139	534,339
Upper West	438,008	207,752	230,256	576,583	276,445	300,138	677,763	333,355	344,408

Source: Ghana Statistical Service, 2011

Table 4.2 Population Indicators by Region, 2000 and 2010

Region	2000				2010			
	Population share	Sex ratio	% increase over 1984	Intercensal growth rate	Population share	Sex ratio	% increase over 2000	Intercensal growth rate
Ghana	100	98	35	2.7	100	95	28.1	2.4
Western	10.2	103	39.8	3.2	9.6	102	20.8	1.8
Central	8.4	91	28.3	2.1	8.7	90	32.2	2.7
Greater Accra	15.4	98	50.7	4.4	16.1	93	34.6	2.8
Volta	8.6	94	25.2	1.9	8.7	91	28.4	2.4
Eastern	11.1	97	20.2	1.4	10.7	93	23.2	2.0
Ashanti	19.1	101	42.1	3.4	19.5	94	30.8	2.6
Brong Ahafo	9.6	101	33.5	2.5	9.4	104	25.7	2.2
Northern	9.6	99	36.0	2.8	10.2	96	35.6	2.9
Upper East	4.9	93	16.0	1.1	4.3	93	12.1	1.1
Upper West	3.0	92	24.0	1.7	2.8	97	17.5	1.5

Source: Ghana Statistical Service, 2011

4.4.1 Population Policy

Ghana is one of the first countries in sub-Saharan Africa to have adopted explicit and comprehensive population policies in 1969. The major objective of the 1969 policy was to stem the high rate of population growth in order to facilitate socioeconomic development. To achieve this policy objective, the National Family Planning Programme was launched in May 1970 as a coordinating department within the Ministry of Finance and Economic Planning. The programme, however, achieved limited success and its failure was attributed to the over-emphasis on the supply side of the family planning component, as well as poor institutional coordination among organizations engaged in population-related issues.

Against this backdrop, and coupled with other emerging issues such as HIV/AIDS, the proceedings of the 1986 National Conference on Population and National Reconstruction recognized the need for a revision of the 1969 policy. This culminated in a revised policy in 1994 and the establishment of the National Population Council (NPC) as the highest statutory body to advise the government on population issues. The revised policy emphasized a systematic integration of population into development planning with renewed emphasis on fertility reduction through family planning programmes (National Population Council 1994). The major goals of the revised policy included:

- Reducing the total fertility rate (TFR) from 5.5 in 1993 to 5.0 by the year 2000, 4.0 by 2010, and 3.0 by 2020. Accordingly, the policy aims at achieving a

contraceptive prevalence rate (CPR) of 15 percent for use of modern methods by the year 2000, 28 percent by 2010, and 50 percent by the year 2020;

- Reducing the population growth rate from about 3 percent per annum to 1.5 percent by the year 2020; and,
- Increasing life expectancy from a level of 58 years, to 65 years by 2010, and to 70 years by 2020 (National Population Council 1994).

On the basis of the above goals, various governmental and non-governmental organizations in Ghana have become actively involved in the promotion of family planning methods aimed at regulating fertility and enhancing reproductive health outcomes. Family planning programmes in Ghana have achieved some successes. Through the activities of vibrant social marketing programmes, such as the Ghana Social Marketing Foundation (GSMF) and the Planned Parenthood Association of Ghana (PPAG), family planning has virtually become a household name in Ghana. Evidence from the 2008 Ghana Demographic and Health Survey indicates that knowledge of any contraceptive method is almost universal in Ghana, with 98 percent of all women and 99 percent of all men knowing at least one method of contraception. Modern methods are more widely known in Ghana and these include the male and female condoms, male and female sterilization, the pill, the IUD, injectables, implants, diaphragm, foam tablets, and jelly (Gyimah et al. 2012).

Between 1988 and 2008, the use of any method of contraception almost doubled (from 13% to 24%), while the use of modern methods more than tripled (from 5% to 17%). During that same twenty year period, Ghana's total fertility rate (TFR) dropped from 6.4 to 4.0, thus making Ghana's TFR one of the lowest in sub-Saharan Africa. With a TFR of 4.0 in 2008, the country is clearly on course to achieve its fertility target set forth in the revised National Population Policy of 1994. Other indicators that can be used to assess the impact of family planning programmes in Ghana include reductions in the national HIV prevalence rates, rising age at first birth, and a growing interval between successive births. All these achievements are reflected in the recent improvements in maternal health outcomes as well as the reductions in early childhood (neonatal, infant and under-five) mortality rates.

There are, however, some stumbling blocks to the progress of family planning programmes in Ghana. While knowledge and awareness about family planning methods in Ghana are almost universal, patronage has, however, been less than desired (Gyimah et al. 2011). For instance, just about a third of married women are current users of contraception, although this is higher compared with those in many sub-Saharan African countries. Similarly, thirty-five percent of married women in Ghana have an unmet need for family planning. This refers to women who do not want any more children or want to wait two or more years before having another child and yet are not using contraception (GSS et al. 2009). Indeed, the country's remarkable fertility reduction between 1988 and 2008 vis-à-vis its contraceptive prevalence rate over the same period has led some to

argue that the fertility transition in the country could not be attributed to increased use of contraception. Numerous studies exist that examine the factors that constrain the adoption and use of family planning services in the country. The literature points to, among others, the complex interplay between gendered power and sexuality in Ghana²⁰ (Adamchak and Adebayo 1987; Bankole 1995; Bankole and Singh 1998; Bongaarts, Frank, and Lesthaeghe 1984; Bulatao and Lee 1983; Dodoo 1993; Dodoo and van Landewijk 1996; Ezeh 1993; Ohenaba-Sakyi and Takyi 1997).

The research demonstrates for example that the asymmetrical power distribution that favours men in patriarchal Ghana, resulting from the dominant role of men in the Ghanaian society which is partly attributable to past policies that proffered resources more readily to males, coupled with the traditional gender arrangements in the country that privileges men, have served to skew reproductive decision-making authority away from women, and thereby limiting women's ability to negotiate contraceptive use (see Bulatao and Lee 1983; Dodoo 1993; Manuh, Koku, and Akumatey 1992; Takyi and Dodoo 2005 for a detailed discussion on gender, lineage, and reproductive outcomes in Ghana). For example, Bakole and Singh (1998) reported that even in situations where women in the region are educated and motivated to practice contraception, they frequently do not because of opposition from their husbands.

²⁰ Other studies have outlined several other factors that hinder contraceptive adoption and use in Ghana. Among these are the extent of social networking (Bongaarts and Watkins 1996; Caldwell 1976; Kohler, Behrman, and Watkins 2001), fears and anxieties about contraception (Bawah et al. 1999), and high child mortality (Caldwell and Caldwell 1993; Caldwell, Orubuloye, and Caldwell 1992; Cleland 1995; Gyimah 2007; Gyimah and Fernando 2003, 2004).

4.4.2 HIV/AIDS

While Ghana's current HIV prevalence of 2.3% is not as grievous as those recorded for South Africa and Botswana (Gyimah et al. 2010; Tenkorang, Adjei, and Gyimah 2010; Tenkorang and Owusu 2010; UNAIDS 2008), the disease poses a major threat to Ghana's population structure and productive labour resources. A progress report by the Ghana AIDS Commission indicates that about 2.9% of the population in the 15–49 age group are infected with HIV, with the highest infection rate of 4% among those aged 40–44 years, although persons aged 15–24 infected with the virus are rapidly catching up (2.1%) (Ghana AIDS Commission 2010). Behaviours that predispose people to the risk of contracting the virus, however, remain widespread. For instance, there are high levels of transactional sex, high-risk sexual behaviour among youth, inaccurate perceptions of HIV risks, unequal gender relations, and misconceptions about how the disease is transmitted (Gyimah et al. 2010; Gyimah et al. 2012; Tenkorang et al. 2011; Tenkorang and Owusu 2010; USAID 2008).

After Ghana's first case of HIV was reported in 1986, the disease spread slowly but steadily until 2003, when prevalence peaked at 3.1 percent. While intravenous drug use and homosexual activities are becoming important factors, heterosexual relationships are the commonest mode of HIV transmission in Ghana, accounting for about 75–80% of infections (Akwara et al. 2005). The scare associated with the spread of HIV/AIDS has attracted considerable attention from the government and its development partners. The Government of Ghana established a National AIDS Control Programme (NACP) in 1987. The Ghana AIDS Commission was inaugurated in 2000, followed by the implementation

of the country's National Strategic Framework (NSF) on HIV/AIDS for 2001-2005. This collaborative effort culminated in the implementation of a national HIV/AIDS policy in 2007. This new policy framework recognizes the multi-faceted nature of the HIV/AIDS problem and draws largely on a multi-disciplinary response approach. The goals of the policy seek to ensure:

- A reduction of the risk of infection in the population;
- A reduction and mitigation of the socioeconomic, psychosocial, and other consequences of HIV infection on the infected as well as affected persons and the society as a whole; and,
- The promotion of a healthy life-style and strong family values.

While these goals and objectives revolve heavily around Ghanaian cultural and family values, the policy also emphasizes the importance of the promotion of safe sexual practices through the public and private media, with careful considerations to the socioeconomic environment and various cultural and religious sensitivities of Ghanaians (Ghana AIDS Commission 2004). The promotion of safe sexual practices in Ghana is based on the 'ABC' model of delayed sexual debut (Abstinence), reduced numbers of sexual partners (Being faithful), and the prevention of viral infection (Condom use) (Dako-Gyeke 2013). These activities are being pursued through social marketing programmes such as the Ghana Social Marketing Foundation (GSMF) and the Planned Parenthood Association of Ghana (PPAG).

4.5 Marriage and the Family

Notwithstanding the ethnic variations, marriages in Ghana are largely characterized as early and universal (Gyimah 2009; United Nations 1990). As indicated by recent data, almost 97 percent of men and women have ever married by the age of 40 years (GSS et al. 2009). Marriage is an important social institution in Ghana which not only marks the transition into adulthood but it also defines the socioculturally sanctioned context for childbearing (Gyimah 2009). Marriage is so important in Ghana to the extent that unmarried healthy adults, particularly women, are socially viewed less favourably and most often pressured to get married (Awusabo-Asare 1988). There are four types of marriages in Ghana: the customary, ordinance (Christian/civil), Islamic, and consensual marriages.

Although it has been more than a century since the first Marriage Ordinance was passed, an overwhelming majority of all marriages in Ghana are contracted under Customary Law (Awusabo-Asare 1990). Such marriages consist of a series of elaborate ceremonies, generally conceived as a union between families and not individuals *per se* (Nukunya 2003).

Marriages are certified with the payments made by the groom and his family to the bride and her family. The payments and the elaborateness of the ceremony vary, depending upon factors such as the educational attainment of the female and her lineage system (Oppong 1981). The payments tend to increase with increasing education of the female, and are generally higher among those who practice the patrilineal system of descent compared with their matrilineal counterparts (Caldwell et al. 1991; Hollos and

Leis 1986; Meekers 1992). One interesting feature of the customary marriage is that the man presents a ring to the woman to be worn on her left fourth finger as a symbol to set her apart as a married woman, and therefore out of the marriage market. The man does not have to be identified as such, probably because he is still in the marriage market. This perhaps testifies to why polygyny (a marriage form in which one man is simultaneously married to two or more women) is normative under the customary law. Though declining in frequency, polygyny accounts for about 20-50% of all marriages in sub-Saharan Africa, and Ghana is no exception (Caldwell and Caldwell 1990; Westoff 2003).

Islamic marriages are celebrated under the Marriage of Mohammedans Ordinance (Ollenu 1966). In accordance with Islamic Law, men are permitted to marry up to a maximum of four wives (Chamie 1986). Consensual marriages are without statutory recognition. In marriage under the Ordinance, including Church Marriage, monogamy is mandatory and without formal divorce any attempt towards a polygynous lifestyle constitutes a criminal charge of bigamy. A marriage can be contracted under one or more of these forms of marriage (Awusabo-Asare 1990). Indeed one of the requirements for the Church Marriage is that an individual had first performed the Customary Marriage. It is perhaps due to this precondition for ordinance marriage that in the local Ghanaian parlance, the customary marriage is often referred to as “engagement.” There is therefore a critical difference in the conception of the term engagement from the Ghanaian context and what pertains in the western world.

Given its pronatalist culture, the ultimate purpose of marriage in Ghana is procreation – to produce children who will continue the heritage and name of the family, and to guarantee the perpetuation of the lineage (Buor 1996; Gyekye 1996). In addition, children serve as social security in old age to compensate for the lack of formal welfare system. Voluntary childlessness is therefore not common in Ghana, with evidence showing that currently married Ghanaian women with no live births are likely to be encountering fertility problems (GSS et al. 2004). Childless couples in Ghana are in fact stigmatized and openly discriminated against (Donkor and Sandell 2007).

Even though marriage provides the culturally acceptable context for child birth in Ghana, premarital births are a common phenomenon in Ghana particularly among the Akans, most of whom transmit roles, statuses, and property intergenerationally through the female line (Nukunya 2003). The prevalence of premarital fertility among the matrilineal Akans has been attributed to a permissive attitude to female sexuality because children born to a woman become automatic members of her lineage regardless of paternity status. In matrilineal societies, where mostly marriages are conducted by a simple payment (Hollo and Leis 1986), female premarital sexual behaviour tends to be more permissive because lineage is more important than conjugal ties. Children are considered automatic members of their mothers' lineage regardless of the marital status of the mother. As argued by Hollos and Leis (1986), the matrilineal bias accords with a weak interest in paternal certitude and therefore accounts for permissive premarital sex.

On the other hand, the desire to establish paternity in patrilineal societies, means that female sexuality is more restrictive in patrilineal societies (Caldwell et al. 1991; Gage-Brandon and Meekers 1993; Meekers 1992). This is because rights in genetricem are exchanged for the bridewealth during a marriage ceremony in patrilineal societies (Nukunya 2003). This restrictive control toward female sexuality in marriage goes in tandem with the tendency to restrict sexual intercourse before marriage. As pointed by Goody (1976:13-14) “when one is attempting to control marriage, it is important to control courtship too.” Thus, the intolerance of premarital fertility is typical with patrilineal societies, where pregnancy outside of marriage is proscribed (Caldwell et al. 1991).

4.6 Religion

Prior to the arrival of the Arabs and Europeans to Ghana, religious beliefs and practices associated with the supernatural operated at many levels and in different forms including the High God, small gods, ancestors, witchcraft, oracles, magic, and sorcery (Nukunya 2003). The infiltration of the northern part of the country by the Moslem Wangara and Hausa traders, which began before the 17th century, led to the introduction of Islam as the first foreign religion in Ghana. The activities of the colonial administration and their European merchants facilitated the spread of the Christian gospel during the beginning of the 19th century (Nukunya 2003).

Although the 1992 constitution declares Ghana as a secular nation, the county is among the most religious nations in the world (Gallup International 2000), with

Christianity dominating the religious landscape (GSS 2009). Ghanaians have traditionally been a religious people. According to Busia (1967), religion is the central organizing structure around which all else is organized in Ghana. Omenyo (2002:24) describes the Ghanaian as “homo religious,” because religion permeates every aspect of life, including marriage and reproduction. According to findings from the Gallup International survey conducted in over 60 different countries in 2000, the majority (98%) of Ghanaians interviewed professed belonging to a religious denomination with 82% reporting regular church attendance (Gallup International 2000).

Through trade and later active colonization under the British, Western missionary societies associated with the various Christian denominations (e.g., the Basel (Presbyterian) and Bremen Missions (Switzerland), the Wesleyans (Methodist), Anglicans, and Catholic missionaries) helped to spread Christian ideals to Ghanaians. To facilitate the spread of the Gospel, church-based schools, hospitals, and other medical services were established throughout the country. Because formal classroom education, the acquisition of marketable skills, and employment opportunities formed part of the Christian package, Christianity emerged in Ghana as an attractive alternative to Islam (whose presence predated the European presence) and the indigenous African religions.

A discussion of religion in Ghana cannot be complete without reference to what has been happening during the past few decades. First, religion, specifically Christianity, has become more pervasive and more fervent in Ghana (see for example, Assimeng 1989, 1986; Gifford 1994; Nukunya 1992; Ojo 2000). Since the 1980s, an increasing number of

Ghanaians view themselves as Christians. La Verle (1994) reported that the percentage of Ghanaians claiming to be Christians rose sharply from 42% prior to the 1980s to 62% in the mid-1980s.

Second, until quite recently, the predominant religious groups in Ghana were associated with European colonial rule and influence. These include Protestants (including Presbyterians, Methodists, and Anglicans) and Catholics. The Protestants and Catholics, together with indigenous Pentecostal movements that led to the establishments of the church of Pentecost and Assemblies of God Church, constitute what is popularly termed as the mainline Christian denominations in Ghana. Although the mainline groups such as Methodists, Presbyterians, Anglicans, and Catholics tend to have more codified conventions regarding issues of sexuality and the importance of family, these churches tend to be more liberal in their views than those in traditional religions (Addai 1999).

The contemporary religious landscape in Ghana is in flux, as it is significantly marked by the active presence of new religious movements (NRM) such as the African Syncretic Churches and the new Pentecostal/Charismatic groups which represent a growing segment of the population. The new Pentecostal/Charismatic movements started proliferating in Ghana at the end of the 1970s, and differ from the established classical Pentecostal denominations mainly by maintaining autochthonous founder-led congregations where the personal and psychology of the leader is what shapes their orientation (Asamoah-Gyadu 2004). These new Pentecostal/Charismatic movements in

Ghana, with deep roots in the conservative evangelical movements in North America, boast of large urban-centered 'mega-church' youthful congregations. In characterizing the new Pentecostal/Charismatic movement in sub-Saharan Africa as a whole, Asamoah-Gyadu (2004) has noted:

They tacitly approve a relaxed, modern and fashion-conscious dress code for members. The pastors of these churches are often quite young, well educated (though not necessarily in theology), articulate in English, entrepreneurial and well travelled. Membership here is skewed in favour of youth, which is partly the reason they enjoy such a high profile. The churches are very international, modern, prosperous and flamboyant in outlook. This exotic image is also inspired by the messages of success and prosperity that Africa's new Pentecostal/Charismatic churches advocate (p. 65).

Another significant feature of the contemporary Ghanaian religious landscape is the extent to which the mass media (both print and electronic) have been appropriated as a means for religious publicity, outreach, and proselytization. With the new Pentecostal/charismatic leaders in the vanguard, the leaders in these churches tend to covet and enjoy great visibility in the media, where their personal charisma and prosperity are carefully constructed to reflect their gospel of prosperity. In order to remain competitive and secure their share of the religious market, the mainline churches have also been drawn into the realm of digital proselytization. Perhaps, the most striking of this development is the extent to which traditional religion, which was almost clouded out with the onset of modernization, is being vigorously repackaged through the use of information and communication technologies (ICTs). A cursory visit to

www.kwakubonsam.com shows how a fetish priest in Ghana maintains a website to solicit clients and to reach out to the world.

4.7 Education

The earliest schools in pre-independence period in the Gold Coast were started to educate the mixed race children of European traders. Much later the colonial government provided education to sustain the machinery of colonial rule, but the major effort to expand education was the work of Christian missions who regarded education as necessary for missionary activity. Later, some aspects of pre-independence education were characterized by attempts to create incentives for all children to attend school.

Formal education in Ghana has gone through a number of reforms since the time of independence (Acheampong et al. 2007; Little 2010). The current basic and secondary education structure comprises a six-year primary, three-year junior high, and three-year senior high. At the basic education level, pre-school education has officially been incorporated into the education system such that all primary schools are required to have nurseries or kindergartens. In line with the government's policy of making basic education free and compulsory for every Ghanaian child, a Capitation Grant was introduced countrywide in the 2005/2006 academic year, whereby the government absorbs school fees of all pupils in public basic schools (Osei et al. 2009). The tertiary sector is made up a number of vocational and technical institutes, teacher, and nursing

colleges, 10 polytechnics (one for each region), and 8 public universities.²¹ Presently, there are forty-three private institutions²² that are accredited by the National Accreditation Board to award Bachelor's degrees (www.nab.gov.gh).

The introduction of the Ghana Education Trust Fund (GETFUND) in 2000 has brought many improvements to the education system. The fund provides educational infrastructure such as buildings and vehicles to the country's tertiary institutions and has significantly enhanced teaching and learning. The increase in the number of educational facilities in the country in addition to the implementation of affirmative action programmes by successive governments have played a significant role in bridging the gender gap in students' enrolments. Notwithstanding these efforts, the gender gap continues to prevail as girls tend to have lower enrolment rates than boys, higher dropout

²¹ The public universities in Ghana are: University of Ghana, Legon – Accra, Kwame Nkrumah University of Science & Technology, Kumasi, University of Cape Coast, Cape Coast, University of Development Studies, Tamale, University of Education, Winneba, University of Mines and Technology, Tarkwa, Institute of Professional Studies, Accra, and Ghana Institute of Management and Public Administration.

²² Forty per cent of these private universities are religious-based. These are: Christ Apostolic University College, Good News Theological Seminary, Evangelical Presbyterian University College, Pan African Christian University College, All Nations University College, Maranatha University College, Christian Service University College, Ghana Christian University College, Ghana Baptist University College, Presbyterian University College, Pentecost University College, Methodist University College – Ghana, Islamic University College, Ghana, Central University College, Catholic University College of Ghana, Spiritan University College, and Catholic Institute of Business and Technology. The secular private institutions with accreditation are: Ashesi University College, Technical University College of Tamale, Advanced Business College, African University College of Communication, Accra, Zenith College, Ghana School of Marketing, Data Link Institute, Jayee University College, China Europe International Business School (Africa Campus), Ghana Telecom University College, Business Management and Financial Institute, West End University College, University College of Agriculture and Environmental Studies, Institute of Local Government Studies, Radford University College, New Bridge University College, Kings University College, KAAF University College, Ideas University College, Entrepreneurship Training Institute, Knutsford College, Garden City University College, Univesity College of Management Studies, Wisconsin International University College, Ghana, Regent University College of Science and Technology, and Meridian University College.

rates, and lower transition to secondary education (Akyeampong et al. 2007). On the whole, these reasons tend to be multifaceted and interrelated but with poverty as a common denominator (Academy for Educational Development 2002). Factors affecting female enrolments include beliefs, practices, and the perception of the role of girls by families and communities, financial constraints, and the opportunity cost of sending girls to school (Academy for Educational Development 2002; Shabaya and Konadu-Agyemang 2004).

4.8 Conclusion

The objective of this chapter has been to present an overview of Ghana's geography, population, and social structure. The chapter portrays Ghana as an interesting context for this study because of the dramatic changes that have occurred in political, economic, social, and religious institutions over the past three decades. In particular, there has been a significant expansion in basic schooling, an emerging peaceful democratic dispensation, an economy that has been subjected to large-scale national and subnational deregulation and liberalization policies, and the instantaneous flow of information through modern technologies. These political and socioeconomic changes have altered the context in which individuals make and carry out family formation decisions in Ghana. Because the family is closely related to and pervasively integrated with social change, the Ghanaian family can be said to be in a flux. It is against this backdrop of social change that I analyze recent changes in the timing of marriage and parenthood in Ghana. The next chapter, Chapter Five, will discuss the Ghana

Demographic and Health Survey as the data source for the quantitative component of this study.

CHAPTER 5

QUANTITATIVE DATA AND METHODS

5.1 Introduction

This chapter describes the Ghana Demographic and Health Survey (GDHS) as the data source for the quantitative component of this study. The chapter outlines the objectives of the survey, sampling, and data collection procedures of the GDHS. Because retrospective data collected in developing countries such as the GDHS suffer from several errors due to the paucity of vital registration systems, standard demographic techniques are employed in this chapter to assess the quality of the GDHS data. The chapter then describes how variables are conceptualized and operationalized for the analysis. Lastly, a case is made for the utilization of the Accelerated Failure Time (AFT) log-normal event history model for analyzing the transition to first marriage and first birth in Ghana.

5.2 Secondary Data Analysis: Ghana Demographic and Health Survey

Data for the quantitative analysis were obtained from the 2003 and 2008 Ghana Demographic and Health Survey (GDHS) women and men file. This publicly available data set can be found at www.measuredhs.com. GDHS is carried out by the Ghana Statistical Service (GSS) and the Ghana Health Service (GHS), with technical assistance from ICF Macro as part of the MEASURE DHS programme. The Demographic and Health Surveys (DHS) programme was established by the United States Agency for

International Development (USAID) in 1984. It was designed as a follow-up to the World Fertility Survey and the Contraceptive Prevalence Survey projects. The DHS programme has been conducting household surveys in developing countries since 1984. The main purpose of the DHS surveys is to provide countries with the data needed to monitor and evaluate population, health and nutrition programmes on a regular basis. Funding for the survey was provided by the United States Agency for International Development (USAID) and the Government of Ghana, with support from the United Nations Population Fund (UNFPA), the United Nations Children's Fund (UNICEF), the Ghana AIDS Commission (GAC), and the Danish Development Agency (DANIDA).

The Ghana Demographic and Health Survey (GDHS) utilizes a two-stage sample design. The first stage involves the selection of sample points or clusters from the most updated sample frame constructed for population and housing censuses in Ghana. Clusters are selected using systematic sampling with probability proportional to size. The second stage of selection involves the systematic sampling of households listed in each cluster. Each household selected is eligible for interview with the household questionnaire. In half of the selected households, all women age 15 to 49 years and all men age 15 to 59 years are eligible to be interviewed if they were usual residents of the households or visitors present in the household on the night before the survey. The GDHS therefore uses three standard questionnaires: (1) the household questionnaire; (2) the women's questionnaire; and (3) the men's questionnaire. The content of each

questionnaire is largely based on model questionnaires developed by Macro International Inc. to be used for the Demographic and Health Survey programme.

During data collection, trained interviewers visit the selected homes of the respondents to fill out the survey. Typical of GDHS data management, completed questionnaires are returned periodically from the field to the Ghana Statistical Service office in Accra, where they are entered and edited by data processing personnel who are specially trained. Data are entered using a specially designed programme for DHS surveys called CSPro. All data are doubly entered to ensure all cases are entered. In addition, the concurrent processing of data offers the Ghana Statistical Service the opportunity to advise field teams of problems detected during data entry. These arrangements are put in place to improve data quality and to ensure that sampling and other errors are negligible.

These procedures notwithstanding, various sources of error can affect data on the timing of first marriage and first birth due to the difficulty of recalling events that occurred in the distant past. This is particularly pervasive in developing countries where vital registration systems are inadequate and individuals may not have precise knowledge of dates. Biases in the timing of first marriage and first birth may also result from omissions, such as early unions of short duration or of children who died in the early infancy (Gage 1995). The extent of misreporting of the dates of first marriage and first birth is often revealed by the errors in the reporting of the respondent's age. The following session assesses the quality of the GDHS age data.

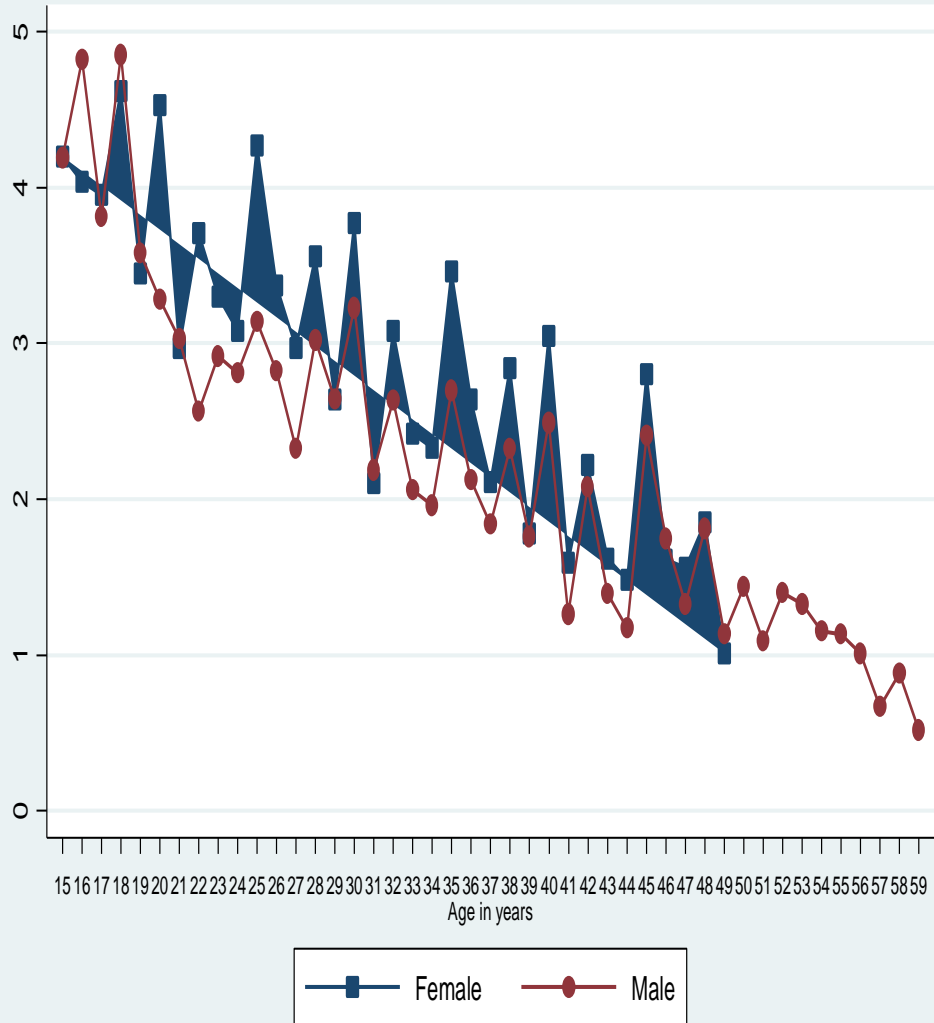
5.3 Evaluation of Age Data

The quest for good quality data cannot be overemphasized. This is primarily because quality data produce consistent and reliable results. However, a major problem associated with retrospective data that could affect parameter estimates is the accuracy of respondents' ages as reported on the individual questionnaire. As noted by Blanc and Rutenberg (1990), Kpedekpo (1982), and United Nations (1990), most surveys conducted in Africa suffer from various kinds of errors, especially of age misreporting. Incorrect reporting of ages in sub-Saharan Africa results from the fact that most births are not registered due to the poor vital registration system, illiteracy, and respondents often having preference for certain digits if estimates have to be made. For example, there has been a general observation that in many surveys there is a greater concentration of persons in the ages ending in zero and five and not of adjacent digits. There is therefore the need to ascertain the quality of the data before employing these data in any meaningful analysis.

It must be noted that, under normal circumstances, the distribution of any population is expected to decrease continuously with increasing age. This is precisely what a developing country's population pyramid typically depicts. However, as Figure 5.1 reveals, there are glaring distortions in age reporting due to large numbers of respondents reporting their ages ending with digits especially 0 and 5 for both males and females. The effect of age misreporting is usually concealed by grouping respondents in five year age groups as shown in Figure 5.2. It can be observed from Figure 5.2 that age distortions have been smoothed to a large extent compared with the single-year

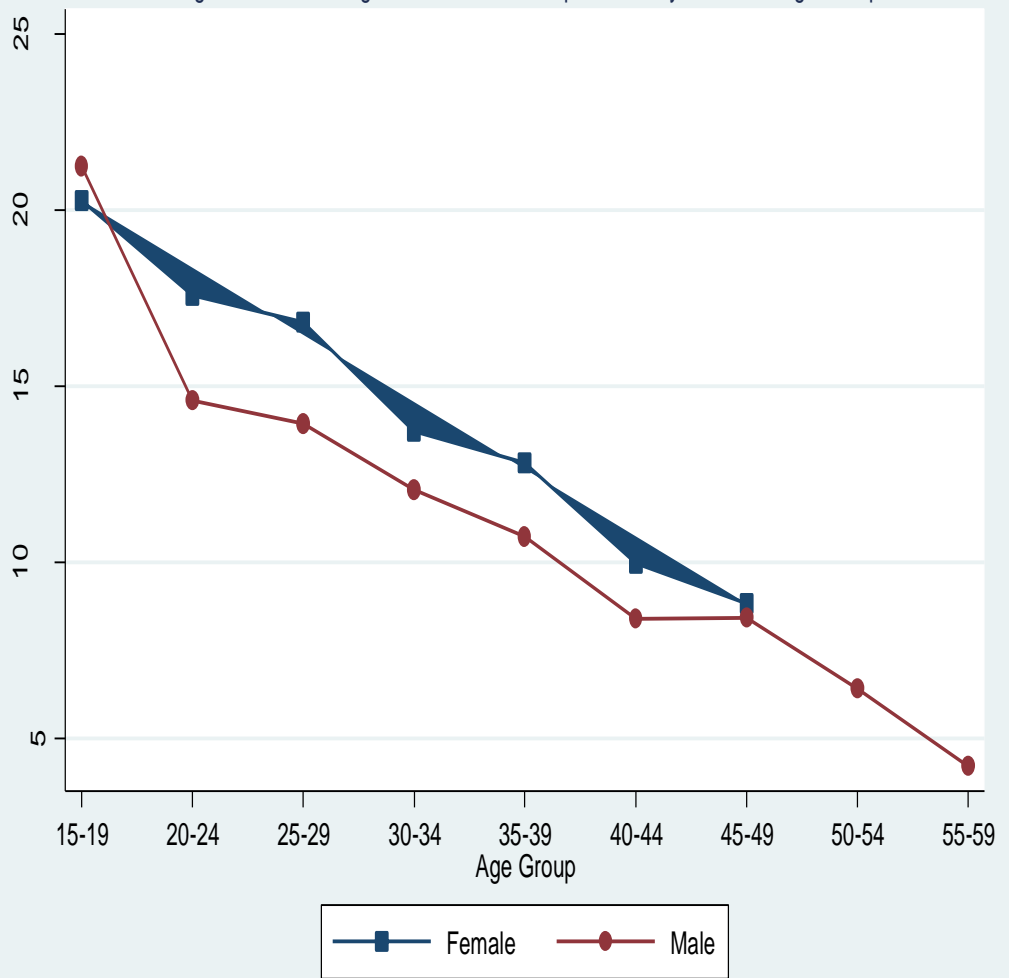
distribution. The percentage of respondents decreases consistently from the age group 15-19 years through to the age group 55-59 years.

Figure 5.1 Percentage Distribution Of Respondents By Current Age In Single Years



Source: GDHS, 2003-2008

Figure 5.2 Percentage Distribution Of Respondents By Five-Year Age Groups



Computed From GDHS, 2003-2008

A detailed evaluation of age data is better achieved when grouped data are analyzed. The United Nations has proposed the age-sex accuracy index in which the mean of the differences from age to age in reported sex ratios, without regard to sign, is taken as a measure of the accuracy of the observed sex ratios on the assumption that these age-to-age changes should approximate zero (Shryock et al. 1976). The U.N. age accuracy index combines the sum of the mean deviation of the age ratios for males and females from 100 and three times the mean of the age-to-age differences in reported sex ratios. In the computational procedure of the United Nations Joint Score, the age ratios are derived for both sexes and 100 is deducted from each of the ratios. The mean deviations of the male and female sex ratios are then computed to derive the age ratio scores for males (ARS^m) and age ratio scores for females (ARS^f), respectively.

In the U.N. procedure,

$$\text{The Joint Score (UN Age Accuracy Index)} = (ARS^m) + (ARS^f) + 3SRS$$

An age ratio is defined as the ratio of the population in a given age group to one-half the sum of the populations in the preceding and following groups.

An age ratio is defined as:

$$\text{Age ratio} = \frac{{}_5P_a}{\frac{1}{2}({}_5P_{a-5} + {}_5P_{a+5})} \times 100$$

where;

${}_5P_a$ is the population of a given age group

${}_5P_{a-5}$ is the population in the preceding age group

${}_5P_{a+5}$ is the population in the following age group

In the analysis of the sex ratios, a sex ratio is defined as;

$$\text{Sex ratio} = (m_i / f_i) \times 100$$

where;

m_i is male population of age group i

f_i is female population of age group i

The successive differences of the sex ratios are calculated. The mean of the successive differences constitute the sex ratio score (SRS). In the interpretation of the U.N. age-sex adequacy index, a computed score less than 20 indicates that the data are accurate. A score between 20 and 39 reveals that data are usable with some adjustment, while a score that falls between 40 and 60 indicates that data are deficient and may be used with caution. Any score that is greater than 60 shows that data are not usable.

The computation of the U.N. age-sex accuracy index is illustrated in Table 5.1.

The computation yielded a score of 52.4, suggesting that data are quite deficient and may be used with caution. The interpretation of the results will, therefore, take this limitation into account. Nevertheless, Demographic and Health Surveys (DHS) data are generally of

good quality and found to compare favourably with other large scale surveys such as the World Fertility Survey (Institute for Resource Development 1990). Indeed, an evaluation study by Gage (1995) found that DHS data on most demographic parameters such as age at first marriage and first birth are of good quality.

Table 5.1 Calculation of the U.N. Age-Sex Accuracy Index for Ghana, 2008

Age Group	Population		Analysis of sex data		Analysis of age ratios			
	Male (1)	Female (2)	Sex ratio [(1)/(2)]*100 (3)	Successive difference $\Delta(3) = (4)$	Male		Female	
					Ratio (5)	Deviation from 100 (5) - 100 = (6)	Ratio (7)	Deviation from 100 (7) - 100 = (8)
0-4	3164	3056	103.5	(x)	(x)	(x)	(x)	(x)
5-9	3424	3298	103.8	-0.3	109.2	9.2	109.4	9.4
10-14	3108	2972	104.6	-0.8	105.8	5.8	104.6	4.6
15-19	2454	2384	102.9	1.6	102.2	2.2	95.9	-4.1
20-24	1693	2001	84.6	18.3	86.4	-13.6	91.9	-8.1
25-29	1465	1972	74.3	10.3	100.7	0.7	113.2	13.2
30-34	1216	1484	81.9	-7.7	90.2	-9.8	86.9	-13.1
35-39	1232	1445	85.3	-3.3	113.8	13.8	110.8	10.8
40-44	949	1124	84.4	0.8	89.2	-10.8	92.3	-7.7
45-49	895	990	90.4	-6.0	106.1	6.1	94.3	-5.7
50-54	738	976	75.6	14.8	103.6	3.6	118.4	18.4
55-59	530	658	80.5	-4.9	84.7	-15.3	88.4	-11.6

[continued]

Table 5.1 continued

Age Group	Population		Analysis of sex data		Analysis of age ratios			
	Male (1)	Female (2)	Sex ratio [(1)/(2)]*100 (3)	Successive difference $\Delta(3) = (4)$	Male		Female	
					Ratio (5)	Deviation from 100 (5) - 100 = (6)	Ratio (7)	Deviation from 100 (7) - 100 = (8)
60-64	514	512	100.4	-19.8	117.1	17.1	97.2	-2.8
65-69	348	395	88.1	12.3	88.1	-11.9	89.6	-10.4
70-74	276	370	74.6	13.5	101.1	1.1	115.4	15.4
75-79	198	246	80.5	-5.9	95.7	-4.3	81.1	-18.9
80+	138	237	58.2	22.3	139.4	39.4	192.7	92.7
Total (irrespective of sign)	(x)	(x)	(x)	142.6	(x)	164.7	(x)	247.1
Mean	(x)	(x)	(x)	8.9	(x)	10.3	(x)	15.4

Source: Computed from GDHS 2008 Household Data File

(x) = Not applicable

$$\begin{aligned}
 \text{Index} &= (ARS^m) + (ARS^f) + 3SRS \\
 &= (10.3 + 15.4) + 3(8.9) \\
 &= 52.4
 \end{aligned}$$

5.4 Coding of Variables

This section discusses the conceptualization and operationalization of variables used in the quantitative analysis. Conceptualization involves a definition of what is meant by certain terms, while operationalization deals with specific ways that a concept is measured (Maxim 1999). Thus, operational definitions concretize the intended meaning of a concept in relation to a particular study and provide some criteria for measuring the empirical existence of that concept (Berg 2007; Leedy and Ormrod 2004).

It is pertinent to mention the difficulty in operationalizing ‘marriage’ in the African context because marriage is not a discrete event but often involves a process, involving rituals, negotiations, and transactions, which often takes several years to complete (Awusabo-Asare 1988; Meekers 1992). This conceptual problem makes it difficult to define exactly when an individual is married. Additionally, although there are formal and informal unions, the GDHS data make no distinction on these different unions. Considering these conceptual difficulties, the definition of marriage in this dissertation follows the one used by Macro International Inc. in Ghana as a “stable cohabitation between a man and a woman irrespective of whether any validating legal, religious, or customary rites or ceremonies have been performed” (ORC Macro 2005:11).

The second dependent variable is age at first birth. This variable is measured in completed months and years. Information on age at first birth was obtained by asking respondents the month and year, or age, at which they had their first child. This may also be interpreted as survival time from a childless state to parenthood. Though data on age at

first birth were based on retrospective reports which may be susceptible to misplacement and omission biases, Casterline and Trussell (1980) have emphasized that first births tend to be more accurately reported than births of a higher order. Following Kuate-Defo (1998) and Gyimah and Fernando (2002), the estimation of the timing of first birth was also limited to conceptions that resulted in live births only, due to the high incidence of misreporting of conceptions resulting in still births and miscarriages in most developing countries.

Individual women aged 15 to 49 years and men aged 15 to 59 years constitute the units of analysis for this study. The Demographic and Health Survey solicits information on the marital and birth histories of respondents in the survey. Respondents who have been married or given birth were asked to indicate the month and year in which they were first married or had their first child. The month and year in which these events occurred were transformed into *Century Month Code* (CMC), defined as the number of months since the beginning of the year 1900 (the twentieth century). For example, if a first marriage occurred on August 1994, the CMC date of first marriage is 1,136. This indicates that 1,136 months elapsed until an individual first married. As with the majority of life course studies, months are used as the unit of temporal analysis in this study. The CMC produces a chronological time for each individual positioned on an identical clock, regardless of age, life stage, and historical period or cohort membership (Mills 2000). CMC is often provided in many standard demographic data files, such as the Demographic and Health Surveys, and are calculated from the month and year data that

were collected during the survey. The following formula can be used to convert dates into CMCs.

$$CMC = [(Year - 1900) \times 12] + Month$$

where the month ranges from January (01) to December (12).

Like other retrospective surveys, a major limitation of the DHS is that the time-varying characteristics of the respondents relate to the time of the interview and may not necessarily apply to the date of their first marriage or first birth. However, the use of event history log-linear models makes it possible to include both fixed and time-varying covariates to address the non-linear and dynamic relationship between dependent variables and selected covariates (Mills 2000; Vermunt 1997). This is because the transformation of data into event history format places everyone in the sample on a common time-line which signifies the ‘beginning of time’ where no one under study has yet experienced the target event (Blossfeld and Rohwer 1995; Singer and Willett 2003). However, because data for this study come from a cross-sectional survey, time-varying covariates are only measured at the time of the survey. I was therefore unable to measure variables such as educational attainment, place of residence, religious affiliation and so forth as time-varying covariates.

This study therefore ties the beginning of time to the occurrence of a precipitating event – one that places all individuals in the sample at the risk of experiencing the target

event. To this end, the transition to first marriage measures the duration from age 10²³ until the age at first marriage, if marriage occurred. For censored observations, duration is measured as age at survey minus age 10. Similarly, the transition to first birth measures the duration from age 13²⁴ until the age at first birth, if birth occurred. For censored observations, duration is measured as age at survey minus age 13.

The main independent variable is globalization. Most of the discussion in the literature has emphasized the centrality of flexible forms of employment and the extent of exposure to the media as indicators of the globalization process. This dissertation will focus on the effects of occupational types in the context of other labour market influences on the transitions to first marriage and first birth. The transition to these adult roles is invariably linked to the individual's employment situation. According to Oppenheimer (1988), individuals are more likely to make long-term commitments, such as entering a marriage, if their future career prospects are predictable and if they can rely on a certain economic footing. Thus, having a job is likely to make it easier to initiate a marital partnership, simply because the financial burden associated with such a choice is reduced when a person works compared to the case in which he or she does not (Francesconi and Golsch 2005). On the other hand, family formation decisions could be delayed because these unions may not be compatible with certain kinds of jobs. Another important aspect of the individual's labour market position is his or her occupational type. It has been

²³ Age 10 was selected to capture very early marriages and is consistent with prior research on marriage timing in Ghana (see for example, Gyimah 2009).

²⁴ Age 13 broadly reflects the onset of puberty and hence the risk of conception.

argued that the degree of uncertainty faced by professionals is expected to differ from that faced by unskilled workers or by the self-employed (Francesconi and Golsch 2005). These differential degrees of uncertainty are expected to correspond with differences in the timing of the transitions to the adult life course. Five occupational categories are distinguished in this study: (1) professional/managerial, (2) sales, (3) agricultural, (4) skilled manual, (5) other occupations, and (6) not working.

Because the media serves as an important conduit of the globalization process, a multiple item measure (weighted summative index) of media exposure was created using *Principal Component Analysis*²⁵ (PCA) from questions asking whether respondents watched television and or listened to the radio. Responses to each of these questions ranged from not at all (coded 1), less than once a week (coded 2), at least once a week (coded 3), and almost everyday (coded 4). With the use of the PCA, lower values on the index scale indicate low exposure to the media, while higher values indicate high exposure. Three components were then created to distinguish those who were more likely to have low exposure (coded 1), medium exposure (coded 2), and high exposure (coded 3).

To assess the independent effect of the proxy globalization variables on family formation processes, several demographic, socioeconomic, geographic, and sociocultural

²⁵ Principal Components Analysis (PCA) is a statistical technique used for data reduction. PCA seeks to describe the variation of a set of multivariate data in terms of a set of uncorrelated linear combination of the original variables, where each consecutive linear combination is derived so as to explain as much as possible the variation in the original data, while being uncorrelated with other linear combinations (Rabe-Hesketh and Everitt 2007).

variables known to affect family formation processes in the developing world are controlled in the multivariate model (see for example, Gupta and Mahy 2003; Gyimah 2003, 2009; Heaton and Darkwah 2001; Takyi and Gyimah 2007). The demographic variables included in the study are birth cohort, gender, marital, and parenthood status. Birth cohort is indicative of the temporal influence of cultural, social, economic, and political factors that shape individuals' life course experiences. The GDHS collected information on the age of respondents at the time of the survey. Based on this information, two birth cohorts are identified to examine generational differences in the effects of globalization on the onset of first marriage and first birth. These are individuals born between 1950 and 1960 (age 43 to 58 years at the time of the survey) and those born between 1980 and 1990 (age 13 to 28 years at the time of the survey). The age intervals between the cohorts mean that those born between 1950 and 1960 could potentially be parents to those born between 1980 and 1990. Figure 5.3 below displays the age distribution of the two birth cohorts. Given the changing contextual factors affecting family formation processes in Ghana, I expect younger cohorts, who came of age in a period of more egalitarian gender roles, effective and more accessible contraceptives, and higher female enrolments in formal education, to have a longer transition to adult roles than the earlier cohort. Marital status is categorized as whether first marriage occurred under age 20 years (coded 1) or at age 20 and above (coded 0), while parenthood status is categorized as whether first birth occurred under age 20 years (coded 1) or at age 20 and above (coded 0). Age squared, which is a squared function of the individual's age, is

included in the multivariate models in order to capture any potential duration effects on the hazard functions (Francesconi and Golsch 2005).

Measures of socioeconomic and geographic variables included are educational attainment, household wealth, region of residence (*north* versus *south*), and place of residence (*rural* versus *urban*). The urban and rural distinction was considered important because of differences in access to health facilities, cultural beliefs, living situations, and opportunities. Like most developing countries, Ghana shows a marked spatial imbalance in development which has its roots in the historical and developmental processes of the country (Gyimah 2007). Generally, the level of socioeconomic development is more advanced in the south than in the north. If the conventional relationship between development and family formation holds, variations will be expected in family role transitions between individuals in the south and their counterparts in the north.

Educational attainment, similar to access to the mass media, is a measure of modernization and is coded as three categories: no formal education, primary, and secondary or higher. I examine education measured at the individual level and argue that the effects of education usually accrue to the individual who experiences a particular educational setting. The Demographic and Health Survey (DHS) has a composite variable computed from several household items that assesses household wealth from the poorest to the richest. The DHS uses Principal Component Analysis to construct an index of wealth from information on household ownership of durable goods and its housing

characteristics (Rutstein and Johnson 2004). Household wealth, unlike educational attainment, has been shown to be a better proxy measure of social class (Gyimah 2009).

Sociocultural variables included in the study are ethnic and religious affiliations. As in most other countries in sub-Saharan Africa (see for example, Arnaldo 2004), the extended kin group in Ghana is the hub around which social organization revolves. Though there are many local variations, the dominant kinship forms are the matrilineal and patrilineal systems. Under the patrilineal system, property and inheritance rights are passed through the father's line, whereas under matrilineal systems, such rights are transferred through the mother's line (Benefo, Tsui, and De Graft Johnson 1994; Manuh 1997; Murdock 1967). These two family arrangements serve as the bases of Ghanaian social organizations and are reproduced in succeeding generations through carefully crafted socialization processes and systems of rewards. Consistent with work by Takyi and Dodoo (2005) on lineage ties and gendered decision-making in Ghana, I argue that these differential rewards and expectations are likely to impact marriage and family life in general. This is particularly so among matrilineal groups where spouses tend to defer more to the preferences and needs of their lineage kin than is the case in non-matrilineal settings. For matrilineal groups, an individual's allegiance to the lineage often overrides any other loyalty and, as such, conjugal ties are considered to be less important than lineal "blood" ties. Because children are considered automatic members of their mother's lineage regardless of the marital status of the mother in matrilineal societies, it is expected that the transition to first birth will be faster among those in matrilineal kin

groups compared with those in patrilineal kin groups. Conversely, because there is a need to establish paternal certainty in patrilineal societies, it is expected that the transition to first marriage will occur faster among those in patrilineal societies than their matrilineal counterparts.

Religion is the second sociocultural variable controlled in the multivariate model. I am particularly interested in focusing on religious affiliation as there have been findings regarding the impact of denominational doctrines on family formation processes (Addai 1999, 2000; Agadjanian 2001; Heaton and Darkwah 2001). Catholics, for example, are known for their stance on fertility regulation and contraception, and as such, are expected to have an early transition to parenthood than Protestants. Similarly, the pro-natalist attitude of Muslims and traditionalists is likely to predispose them to early transition to marriage and first birth. The GDHS asked respondents to indicate their religious affiliation. Drawing on past research and taking into consideration theological differences and practices, two main groups can be distinguished: Christians and non-Christians. The Christians are further categorized into those belonging to the mainline Christian denominations (Protestant and Catholics) and the non-mainline groups (other Christians). The other Christians category is a collection of Evangelical, Charismatic, and Pentecostal groups theologically homogenized by their born-again experience as typified by tongue-speaking, prosperity messages, and divine healings (Gifford 1994; Meyer 2004; Sackey 2002). The non-Christian group, on the other hand, is composed of the Muslims, Traditional believers and those with no formal religious affiliation.

Table 5.2 Definitions and Specifications of Variables

Names	Specifications
<u>Response variables</u>	
Age at first marriage	Event occurrence variable coded 1 if a respondent first married by the time of the survey, 0 if censored.
Age at first birth	Event occurrence variable coded 1 if a respondent had a first birth by the time of the survey, 0 if censored.
<u>Explanatory variables</u>	
Occupation	Coded 1 if not working, 2 if managerial, 3 if sales, 4 if agriculture, 5 if skilled manual, and 6 if other occupation.
Media exposure	Constructed employing principal component analysis (PCA) using 2 items (watching television and listening to radio). The PCA scale is then aggregated into three groups, and coded 1 for low exposure, 2 for medium exposure, and 3 for high exposure.
Kinship type	Coded 1 if matrilineal, 0 otherwise.
Place of current residence	Coded 1 if urban, 0 otherwise.

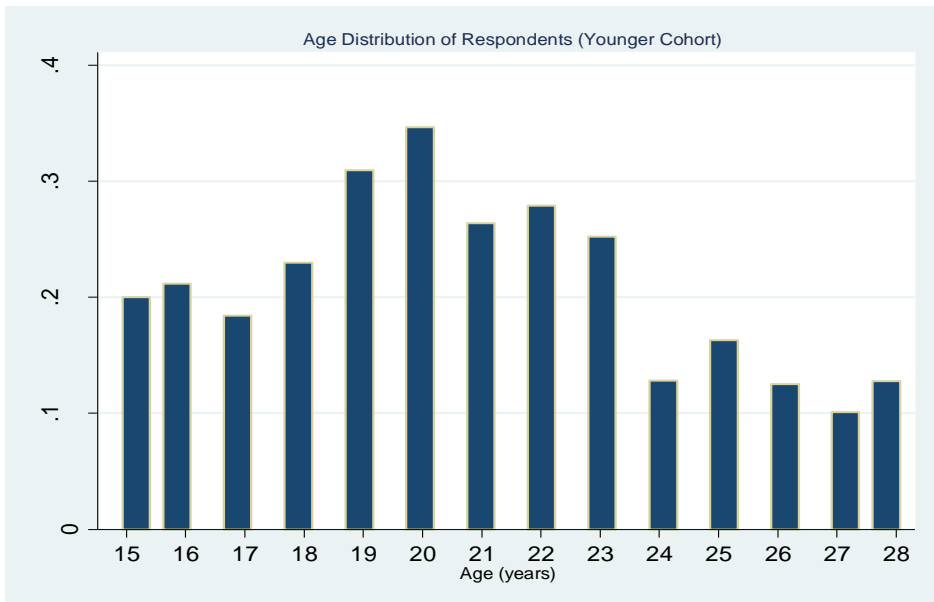
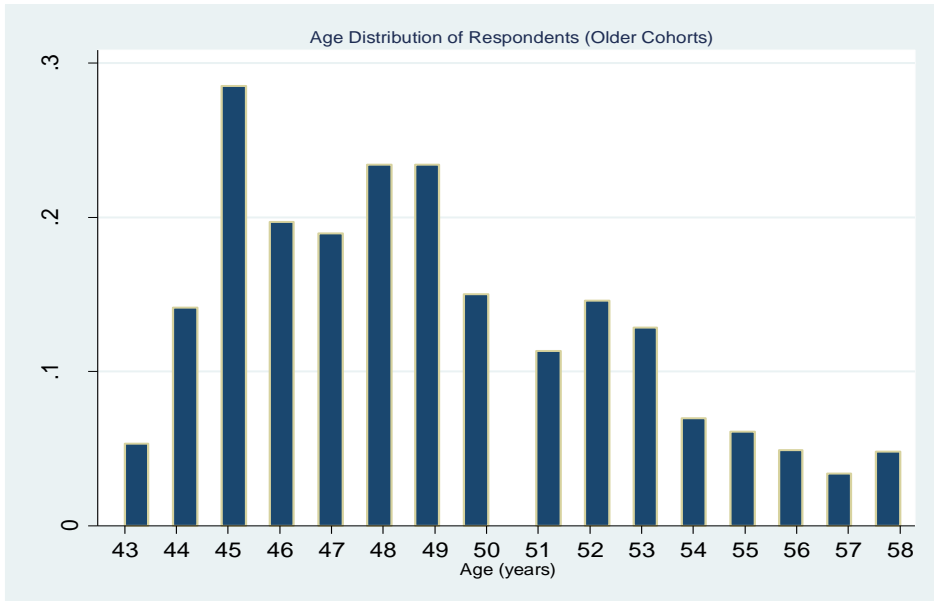
[continued]

Table 5.2 continued

Names	Specifications
Region of residence	Coded 1 if north, 0 otherwise.
Religion	Coded 1 if no religion, 2 if Protestant, 3 if Catholic, 4 if other Christian, 5 if Muslim, and 6 if other religion.
Education	Coded 1 if no education, 2 if primary, and 3 if secondary or higher.
Household wealth	Constructed using PCA on a set of over 15 wealth items, and aggregating the deciles into three groups coded 1 for the poor, 2 for the average, and 3 for the rich.
Age squared	The squared function of age

Source: GSS et al. 2009

Figure 5.3: Age Distribution of Cohorts



5.5 Statistical Models and Estimation Procedures

One analytic difficulty encountered with event occurrence data is the issue of censoring. Censoring occurs when an individual has not yet experienced the event by the date of the survey. While some individuals will never experience the target event, others will experience the event either shortly after data collection ends or at a much later time (Allison 1984; Courgeau and Lelievre 1992; Singer and Willett 2003). These individuals who have not yet experienced the target event by the date of the survey are considered to be right censored.²⁶ It must be stressed that while there is no information about the occurrence of the target event for right censored individuals, there is information about their exposure time (Blossfeld, Golsch, and Rohwer 2007).

Due to the presence of censoring, normal statistical procedures such as ordinary least squares often produce estimates with inflated standard errors because individuals who have not yet experienced the target event are deleted from the sample by the default listwise deletion procedure in standard statistical softwares. To overcome the problem of censoring, event history techniques are employed to estimate the probability of an event occurrence by taking account of censored observations in the *population at risk*. Event history models are stochastic in that the times at which events occur are assumed to be the result of a random process.

²⁶ Left censoring was not a methodological problem for this study because it mainly affects prospective data, where the individual had already experienced the event before the commencement of the study. With retrospective data, like those used in the demographic and health surveys, the prominent censoring problem encountered is right censoring (for details see Courgeau and Lelievre 1999). Furthermore, in instances where data were missing due to recall problems, missing data on age-related variables were imputed on the assumption that data are missing at random (Schafer and Olsen 1998). Imputation as a technique for handling missing information stems from its demonstrated ability to represent a tractable solution to missing data problems (for details see Schafer 1997; Wayman 2003).

Though the life table technique can be used to estimate survival time and event occurrence, it is a nonparametric model and is mainly useful for descriptive purposes. Event history parametric models are preferred in this study because they combine aspects of the life table and multiple regression techniques. An event history model is used when the outcome of interest is a duration until the occurrence of some target event (Courgeau and Lelievre 1992; Heckman and Singer 1985). This study uses an Accelerated Failure Time (AFT) model as the parametric model to examine transitions to first marriages and first births, by assuming that covariates serve to accelerate or decelerate the effect of time on the transition to these adult roles. A major assumption of parametric models is that the underlying timing function follows some known mathematical distribution, and that the specified time dependent distribution is the appropriate one for the event under study. AFT models therefore encompass a variety of sub models that differ in the assumed distribution of the timing function.

There are several parametric models, however, this study employs the log-normal distribution which assumes that the log of the timing function follows a normal distribution. This distribution is suitable for duration models with non-monotonic hazards that increase initially and decrease after some period. Thus, the rationale for considering the log-normal as a suitable distribution for this study stems from the fact that marriage and fertility are known to increase steadily to a maximum during the age span 20-30 and then decline (Halli and Rao 1992; Namboodiri and Suchindran 1987; Trussell and

Richards 1985). Further, Blossfeld and Huinink (1991) and Coale and McNeil (1972) observed that the initial entry into marriage among a population is normally distributed.

The choice of the log-normal parametric model is further justified by a post-estimation procedure. Table 5.2 displays the results for this procedure for discriminating between various parametric distributions using the 2003-2008 GDHS data on first marriage and first birth. For non-nested parametric models, the preferred model is the one with the lowest value of the Akaike Information Criterion (AIC) defined as:

$$AIC = -2(\text{Log}L) + 2(k + c + 1),$$

where k is the number of covariates and c the number of model specific distributional parameters.

According to Box-Steffensmeier and Jones (2004:44), the rationale behind the AIC is to “reward” a parsimonious model by penalizing the log-likelihood for each parameter estimated.

Table 5.3 Assessing Non-nested Parametric Models

Distribution	Hazard shape	Log-likelihood	AIC
First marriage			
Exponential	Constant	-19910.94	39823.88
Weibull	Monotone	-14540.00	29084.01
Gompertz	Monotone	-16419.70	32843.39
Log-normal	Variable	-14298.06	28600.12
First birth			
Exponential	Constant	-19805.27	39612.54
Weibull	Monotone	-16787.16	33594.14
Gompertz	Monotone	-18861.75	37727.51
Log-normal	Variable	-16650.01	33304.01

Table 5.3 presents the log-likelihood and AIC for each of the parametric models for both first marriage and first birth. Based on minimizing the AIC, the preferred model for these data is the log-normal parametric distribution. These empirical observations provide theoretical justification for examining the log-normal model as a means of studying patterns of first marriage and first birth timing. It needs to be emphasized here that the ultimate justification for choosing the log-normal parametric distribution is driven primarily by the substantive theory that the waiting time to first marriage or first birth follows a normal distribution, with a transition rate that initially increases to a maximum and then decreases (a non-monotone or variable hazard shape). The central purpose of log-normal models of event history analysis is to understand why some individuals exhibit a longer or lower risk of experiencing an event in contrast to others.

The log-normal survival $S(t)$, density $f(t)$, and hazard $h(t)$ functions are defined following Halli and Rao (1992) as:

$$S(t) = 1 - \Phi\left(\frac{\ln(t) - \mu}{\sigma}\right),$$

where Φ is the cumulative distribution function for the standard normal distribution, and μ and σ are covariates and parameter vectors, respectively.

The probability density function for the log-normal model is given by:

$$f(t) = \frac{\exp\left[-(\ln(t) - \mu)^2 / 2\sigma^2\right]}{t\sigma\sqrt{2\pi}},$$

where μ and σ^2 are scale and shape parameters, respectively.

The relationship between the survival function $S(t)$ and the density function $f(t)$ is captured through the hazard rate $h(t)$ in the following way:

$$h(t) = \frac{f(t)}{S(t)}.$$

The hazard rate gives the rate at which individuals experience the target event by time t given that the individual had survived until time t . Thus, the hazard rate $h(t)$, which is a conditional failure rate can be denoted formally as:

$$h(t) = \frac{\frac{1}{t\sigma\sqrt{2\pi}} \exp\left[-(ln(t) - \mu)^2 / 2\sigma^2\right]}{1 - \phi\left(\frac{ln(t) - \mu}{\sigma}\right)},$$

where the numerator is the density function $f(t)$ and the denominator is the survival function $S(t)$. The standard deviation σ is an ancillary parameter to be estimated from the data.

The models above presume that all of the relevant influences have been measured and included in the model. Hence, the differences in the hazard rate will result from variations in the independent variables. This assumption is however restrictive. In addition to the covariates included in the model, further characteristics that are not recorded or not known may also influence the hazard rate. For instance, the absence of some important correlates of the timing of these adult roles, including the physical and emotional maturity and health status of individuals, frequency of intercourse, and

personal values, could result in differential hazards independent of the observed covariates. Because it is fairly possible to omit relevant covariates in the model, the problem of unobserved heterogeneity is explicitly acknowledged through the introduction of *frailty* models.²⁷ The frailty α is a random positive quantity which is assumed to have unit mean and finite variance (Gutierrez 2002; StataCorp 2005). This dissertation adopts the gamma distributed frailty because of its flexible shape and mathematical tractability (Sastry 1997). In estimating the timing of first marriage and first birth, the models indicate that individuals, depending upon their unobserved heterogeneity, show different rates of transition to these adult roles.

Each model initially incorporated a gamma term and tested for the presence of unobserved heterogeneity. In the process of testing for unobserved heterogeneity for the models, the Weibull parametric model which assumes a monotone distribution of the hazard function was run alongside the log-normal distribution function for purposes of comparison.²⁸ In all the Weibull models, the likelihood ratio chi-square test that theta equals zero was always significant at the 5 percent alpha level, thus indicating the presence of unobserved heterogeneity. On the other hand, the frailty variance was not always significant when an individual hazard function that is non-monotone (log-normal) was specified. In this case, the heterogeneity may be attributed mainly to the passage of time, a condition that is controlled for in a log-normal model (Gutierrez 2002). However,

²⁷ A frailty model is an event history model that incorporates a random term to correct the problem of unobserved heterogeneity.

²⁸ Appendix F and Appendix G show a full STATA output for the AFT log-normal regression with gamma frailty and AFT Weibull regression with gamma frailty, respectively. Models for the older female subsample for first marriage are presented as illustration.

in those few instances where the frailty variance was significant for log-normal models, the frailty model was the preferred option for analysis. The standard log-normal model was used otherwise in all other analyses as it yields equally valid results.

The focus of the AFT log-normal models is primarily the timing function where positive coefficients imply longer timing (e.g., the individual experiences the event later) and negative coefficients connote early timing (e.g., the individual experiences the event sooner). For a more intuitive understanding, the coefficients are transformed by exponentiation ($e\beta$), and are interpreted as *time ratios*. The standard errors are also transformed appropriately. In this application, covariates with time ratios greater than one indicate a longer timing of first marriage or first birth while the opposite holds if the time ratio is less than one (Peake et al. 2006; StataCorp 2011).

5.6 Conclusion

This chapter described the Ghana Demographic and Health Survey (GDHS) as the data source for the quantitative component of this study. It outlined the objectives of the survey, sampling, and data collection procedures of the GDHS. Because retrospective data collected in developing countries such as the GDHS suffer from several errors due to poor vital registration systems, standard demographic techniques were employed in this chapter to assess the quality of the GDHS data. It became manifest that the data set had some deficiencies with respect to age reporting, but was generally of acceptable quality. The chapter then described how variables will be conceptualized and operationalized for the analysis. Finally, the chapter made a case for the utilization of the Accelerated Failure

Time (AFT) log-normal event history model for analyzing the transition to first marriage and first birth in Ghana. On the basis of these, the next chapter, Chapter Six, will present the empirical results from the survey component of this study.

CHAPTER 6

TIMING OF FIRST MARRIAGE AND FIRST BIRTH

6.1 Introduction

This chapter presents the empirical findings from the 2003-2008 Ghana Demographic and Health Survey, with the objective of examining the factors that influence the transition to marriage and parenthood among different birth cohorts in Ghana. The chapter is organized into five main sections. Section 6.2 presents the descriptive statistics of the variables used in the bivariate and multivariate models. These include the two dependent variables of the study (age at first marriage and age at first birth), the two main predictor variables (occupational status and media exposure), and six control variables (education, household wealth, kinship type, religion, place of residence, and region of residence). As multicollinearity between predictor variables can cause problems in multivariate analysis, the intercorrelations between the control variables were examined. The size of these correlations did not exceed the high level (> 0.70) that would suggest multicollinearity (Tabachnick and Fidell 2006).²⁹

Models examining the transition to first marriage and first birth are presented in Sections 6.3 and 6.4, respectively. These sections are each divided into three separate parts, involving the Kaplan-Meier life table, bivariate, and multivariate analyses. Sections presenting the results from the multivariate models are further divided into sub-sections stratified by gender and birth cohort. After presenting the results in the preceding

²⁹ Appendix E shows the pairwise correlation matrix for the variables used in the multivariate regressions.

sections, the last section of this chapter, Section 6.5, offers a more substantive interpretation to the findings and a conclusion.

6.2 Summary Statistics of Variables

This session presents the descriptive statistics of the variables included in this study. The analysis involves the use of simple frequency and percent distributions to describe and summarize the raw data. Performing this initial analysis serves two main purposes. First, I describe the characteristics and distribution of variables and their attributes, which then guides the selection of a reference category for multivariate models that incorporate dummy variables. These summaries are a prerequisite for more elaborate statistical analyses undertaken later in this chapter. Secondly, by performing univariate statistics, I am able to examine the extent to which a particular variable has missing observations and how I might account for the sources of such missing data.

It is against this backdrop that the descriptive statistics of each variable is presented in Table 6.1. Because this study aims primarily to compare the timing of first marriage and first birth across age cohorts and gender, the analysis is stratified into four parts: (1) females born between 1950 and 1960; (2) females born between 1980 and 1990; (3) males born between 1950 and 1960; and (4) males born between 1980 and 1990. For convenience, I will refer to the 1950-1960 female birth cohort as the older female cohort, females born between 1980 and 1990 will be termed as younger female cohort, while their male counterparts will be classified as older male cohort and younger male cohort, respectively.

To facilitate comparison, Panels A and B in Table 6.1 separate the female and male samples, respectively, into the two distinct birth cohorts. Out of the 20,190 cases pooled from the 2003 and 2008 Ghana Demographic and Health Survey male and female data files, the analytic sample utilized for this study was 8,658. These data comprise 663 females in the 1950-1960 birth cohort (7.7 percent of the working sample), 3,675 females in the 1980-1990 birth cohort (42.4 percent), 1,297 males in the 1950-1960 birth cohort (15.0 percent), and 3,023 males in the 1980-1990 birth cohort (representing 34.9 percent of the sample).

The results provide evidence to support the temporal nature of the transition to marriage and parenthood. The general pattern that is clearly discernible here is that the transition to marriage and parenthood status are both positively related with time. While 99.5% (660 out of 663) of the older female cohort has ever married, only 46.2% (1,698 out of 3,675) of their younger counterparts has ever married by the time of the survey. A similar pattern can be seen among the male samples, where 98.9% (1,282 out of 1,297) of the older male cohort has ever married compared with only 16.6% (503 out of 3,023) of their younger counterparts. These observed differences are largely due to maturation processes (in that one group is older than the other).

The results from Table 6.1, however, provide some interesting revelations concerning the timing of the onset of first marriage between the two birth cohorts. On the whole, the younger cohorts seem to have an earlier transition to first marriage than their older counterparts. Among the younger female cohort who had ever married, 75.7% of

them first married under the age of 20 years compared with their older cohort where 57% had married by age twenty. Among males too we observe a similar pattern. The percentage that was first married before the age of 20 is 45.1% among the younger cohort compared with 11.5% among the older cohort.

The results in timing of first birth closely parallel that of first marriage. The temporal nature of the timing of first birth is also discernible with 98.2% of the older female cohort and 97.7% of the older male cohort having had at least a child at the time of the survey. This compares with 42.5% of the younger female cohort and only 12.8% of the younger male cohort. Similar to the timing of first marriage, the younger cohorts seem to have an earlier transition to parenthood. For instance, among the younger female cohort who had ever had a child, 66.3% of these women had their first birth under the age of 20 years, while it is only 45.9% among women in the older female cohort. Among males who have ever had a child, 23.8% of the younger male cohorts had their first child under the age of 20 years, compared with only 4.4% among their older counterparts.

It is, however, important to indicate that these descriptive findings are useful only to the extent that they provide a general overview of the distribution of first marriage and first birth among the different cohorts at the time of the survey. Because censored cases (particularly among the younger cohorts) have not been incorporated into the analysis at this stage, it is impossible to make definite statements about the differentials in the rate of transition into these adult roles. In other words, many individuals in the sample are yet to have their first marriage or child. The event history analyses that follow these summary

descriptions are much better equipped to offer detailed insight to the varying transition rates.

Socioeconomic characteristics vary between the two birth cohorts. With regard to occupational status, Table 6.1 provides evidence that the agricultural sector is the leading employer among the older cohorts (both male and female), employing about half of them. The majority of the younger cohorts are currently not working presumably because most of them are still in school. Across the different cohorts, exposure to the media seems to be low, although the younger cohorts appear to have experienced relatively greater exposure to media. While about half of the older female cohort has no formal education, over half of the other samples (younger female and both male cohorts) have attained secondary or higher levels of education. The relative lower percentage of the older female cohort with secondary or higher educational attainment could be a testament to certain sociocultural beliefs and practices that discriminated against women's enrolment in higher levels of education in Ghana in prior decades.

Concerning household wealth, about half of the older cohorts (both male and female) can be classified as being poor while a little over half of the younger cohorts can be classified as rich. Consistent with current spatial distribution in Ghana, more than half of the respondents in the respective samples reside in rural areas and about two-thirds of each of these samples was drawn from southern Ghana. Across the different samples, there are slightly more individuals who practice the patrilineal system of inheritance, compared with the matrilineal group. The results also indicate that in terms of religious

affiliation, respondents who affiliate with the Pentecostal groups are comparatively more in number than their other religious counterparts across the different samples. The number is almost half among the younger cohorts, reflecting the growing influence of the new religious movements throughout much of Africa.

Table 6.1 Descriptive Statistics of Variables

Variables	Panel A (Women)				Panel B (Men)			
	Older Cohort		Younger Cohort		Older Cohort		Younger Cohort	
	Frequency	%	Frequency	%	Frequency	%	Frequency	%
Age at first marriage								
Under 20	377	57.12	1,285	75.68	148	11.54	227	45.13
20 and above	283	42.88	413	24.32	1,134	88.46	276	54.87
Age at first birth								
Under 20	299	45.93	1,036	66.28	56	4.41	92	23.77
20 and above	352	54.07	527	33.72	1,211	95.28	294	75.97
Occupation								
Not working	37	5.58	1,351	36.76	29	2.24	1,178	38.97
Managerial	37	5.58	110	2.99	177	13.65	161	5.33
Sales	158	23.83	719	19.56	55	4.24	134	4.43
Agric self-employed	308	46.46	653	17.77	729	56.21	855	28.28
Skilled manual	85	12.82	396	10.78	166	12.80	423	13.99
Other	38	5.73	446	12.14	141	10.87	272	9.00
Media exposure								
Low	433	65.31	1,727	46.99	601	46.34	1,086	35.92
Medium	121	18.25	1,147	31.21	396	30.53	1,107	36.62
High	109	16.44	801	21.80	300	23.13	830	27.46

[continued]

Table 6.1 continued

Variables	Panel A (Women)				Panel B (Men)			
	Older Cohort		Younger Cohort		Older Cohort		Younger Cohort	
	Frequency	%	Frequency	%	Frequency	%	Frequency	%
Education								
No education	304	45.85	695	18.92	360	27.78	363	12.03
Primary	104	15.69	783	21.32	149	11.50	604	20.01
Secondary/higher	255	38.46	2,195	59.76	787	60.73	2,051	67.96
Household wealth								
Poor	296	44.65	1,336	36.35	568	43.79	1,231	40.72
Average	133	20.06	664	18.07	249	19.20	539	17.83
Rich	234	35.29	1,675	45.58	480	37.01	1,253	41.45
Kinship type								
Matrilineal	294	44.34	1,637	44.54	525	40.48	1,258	41.61
Patrilineal	369	55.66	2,038	55.46	772	59.52	1,765	58.39
Religion								
No religion	48	7.24	107	2.91	99	7.63	131	4.33
Protestant	112	16.89	628	17.09	246	18.97	474	15.68
Catholic	110	16.59	591	16.08	215	16.58	450	14.89
Pentecostal	239	36.05	1,613	43.89	374	28.84	1,214	40.16
Muslim	105	15.84	628	17.09	221	17.04	598	19.78
Traditional/Other	49	7.39	108	2.94	142	10.95	156	5.16

[continued]

Table 6.1 continued

Variables	Panel A (Women)				Panel B (Men)			
	Older Cohort		Younger Cohort		Older Cohort		Younger Cohort	
	Frequency	%	Frequency	%	Frequency	%	Frequency	%
Place of residence								
Urban	239	36.05	1,746	47.51	482	37.16	1,315	43.50
Rural	424	63.95	1,929	52.49	815	62.84	1,708	56.50
Region of residence								
South	480	72.40	2,804	76.30	942	72.63	2,155	71.29
North	183	27.60	871	23.70	355	27.37	868	28.71
Total sample	663	100	3,675	100	1,297	100	3,023	100

6.3 Transition to First Marriage

This section examines the transition to first marriage, which measures the duration from age 10 until the age at which an individual first marries, if marriage occurred. For censored observations, duration is measured as age at survey minus 10 years. As earlier discussed, the timing of the onset of first marriage has several important implications for a society's fertility and reproductive health issues. The following sections discuss both nonparametric and parametric estimation methods to examine the variations in the timing of the onset of first marriage across different birth cohorts stratified by gender.

6.3.1 Product-limit Estimation of First Marriage

The product-limit, also called Kaplan-Meier (1958) method, is a nonparametric estimation method that can be used to describe the transition to first marriage among the different birth cohorts under investigation in this study. This method is helpful for graphical presentation of the survivor function as well as the transition rate. One advantage of this approach, compared to the traditional life table method, is that it does not require episode durations to be grouped according to arbitrarily defined time intervals (Blossfeld et al. 2007). It is rather based on the calculation of a risk set at every point in time where at least one event occurred. In this application, it is assumed that there are only single episodes and two defined states (being single or never married versus being ever married). The survivor function in this context, therefore, examines the likelihood of

remaining single, while a transition from a single state to a married state represents ‘failure’ in the language of survival models.

Because event occurrence (first marriage) was recorded using month and year data, and not precise dates (e.g., day, month, and year), the metric for clocking time is not truly continuous in this study. When event occurrence is not recorded using a truly continuous metric, ties³⁰ could become pervasive, and hence the resulting survival plots will appear jagged especially in early ages when event occurrence is relatively rare. As the risk set increases, or when event occurrence becomes more common, the plotted survivor functions then begin to appear relatively smooth. As a consequence, the plots of the following estimated continuous-time survivor functions for the transition to first marriage appear somewhat discrete. These graphs, nonetheless, afford the opportunity to examine two key parameters as the yardstick for assessing the differentials in the timing of first marriage among different cohorts in Ghana. The parameters to be considered are: (1) the median age at first marriage among the different samples and (2) the proportions that marry by exact age of 25 years.

Figures 6.1 and 6.2 plot the survivor functions and show estimates of the proportion of respondents in both female and male birth cohorts, respectively, who transitioned into their first marriage by exact ages. Among the older female cohort (the top panel of Figure 6.1), the estimated median age at first marriage is 18 years. By age

³⁰ Ties are said to have occurred when two or more individuals share an identical time. In this instance, it is highly probable that at least two individuals would have married on the same month and year. With a more continuous metric such as the day, month, and year format, the probability of ties will be infinitesimally small (Mills 2000).

25, only about 15% of the sample had remained single. In contrast, the younger cohort of women (the bottom panel of Figure 6.1), had an estimated median age at first marriage of 22 years, with a probability of remaining single by age 25 being twice as high (0.30) as their older counterparts.

The male sample presents quite a different picture. The older male cohort has a much longer transition to first marriage than their younger counterpart. As can be seen in the top panel of Figure 6.2, 50% of the older male cohort remained single by age 26, whereas by age 21, half of the sample of the younger male cohort had married (bottom panel of Figure 6.2). Also, the probability of remaining single by age 25 among the older male cohort is twice as high (0.60) as their younger cohort (0.30).

Figure 6.1 Kaplan-Meier Survival Estimates for First Marriage (Women)

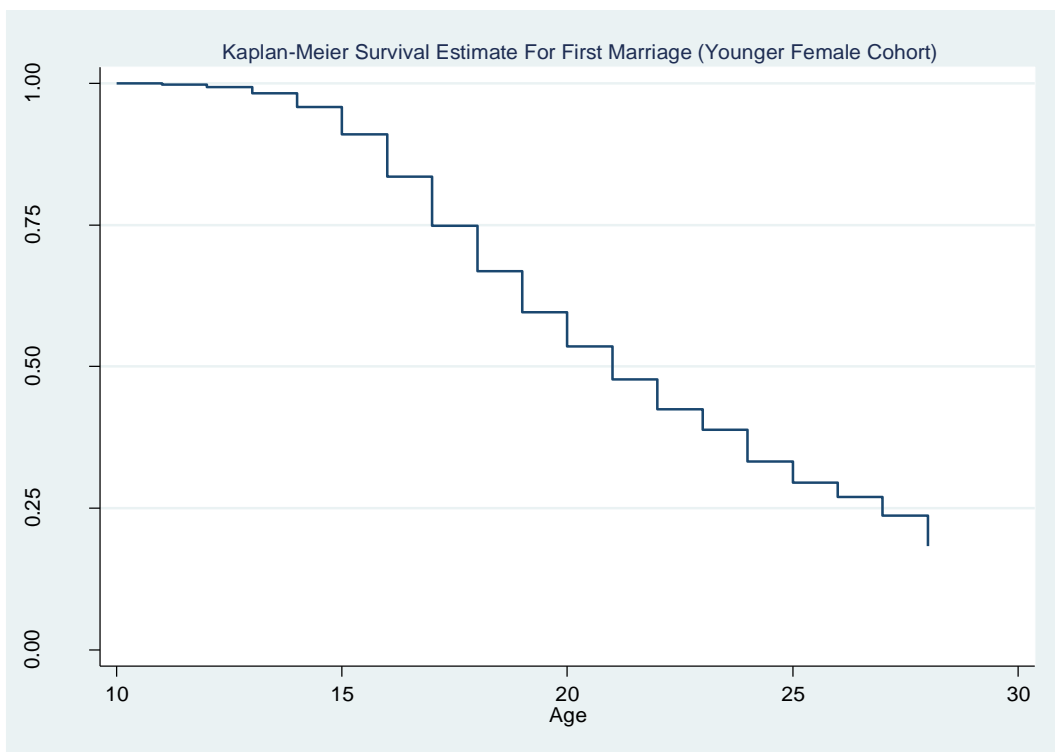
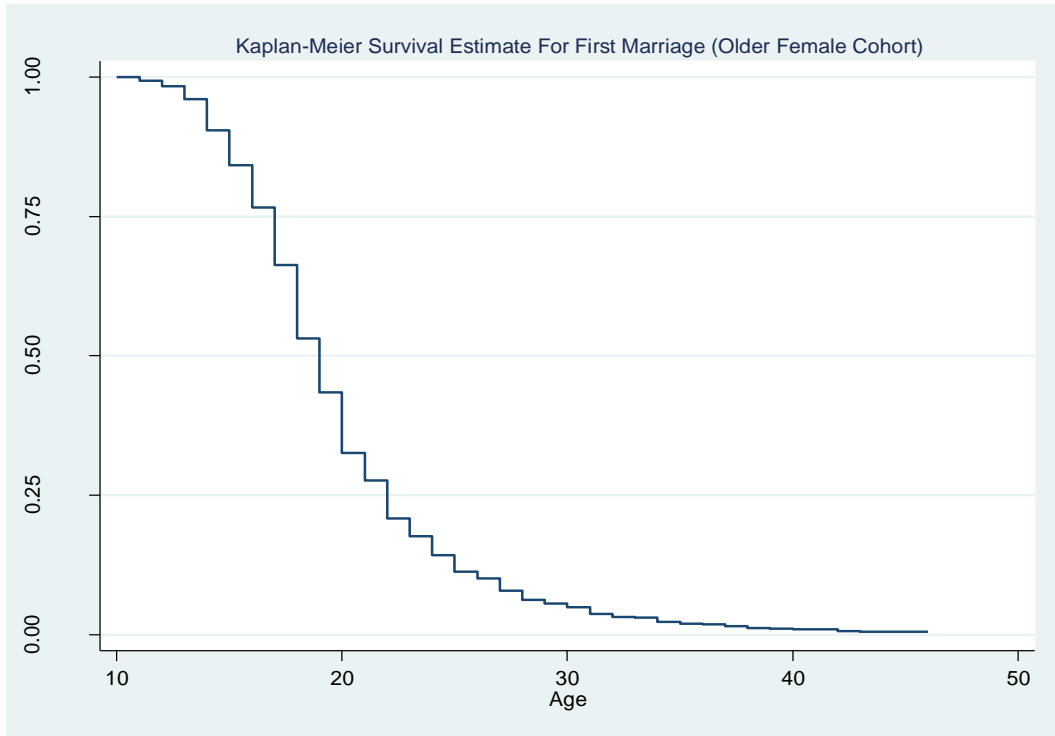
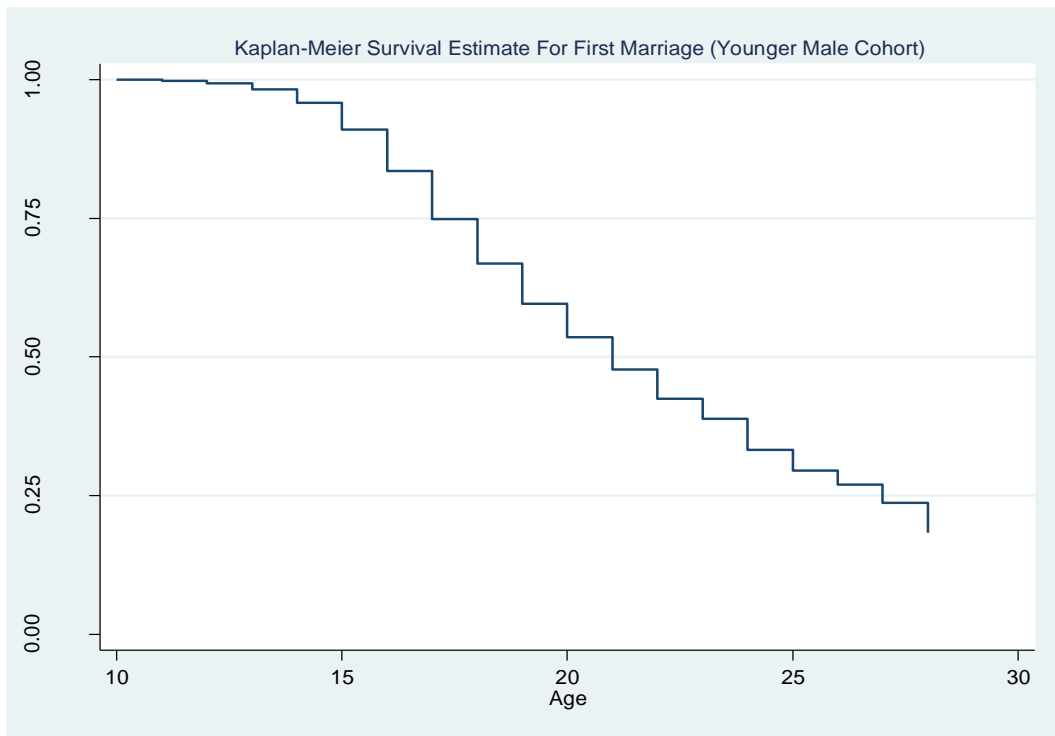
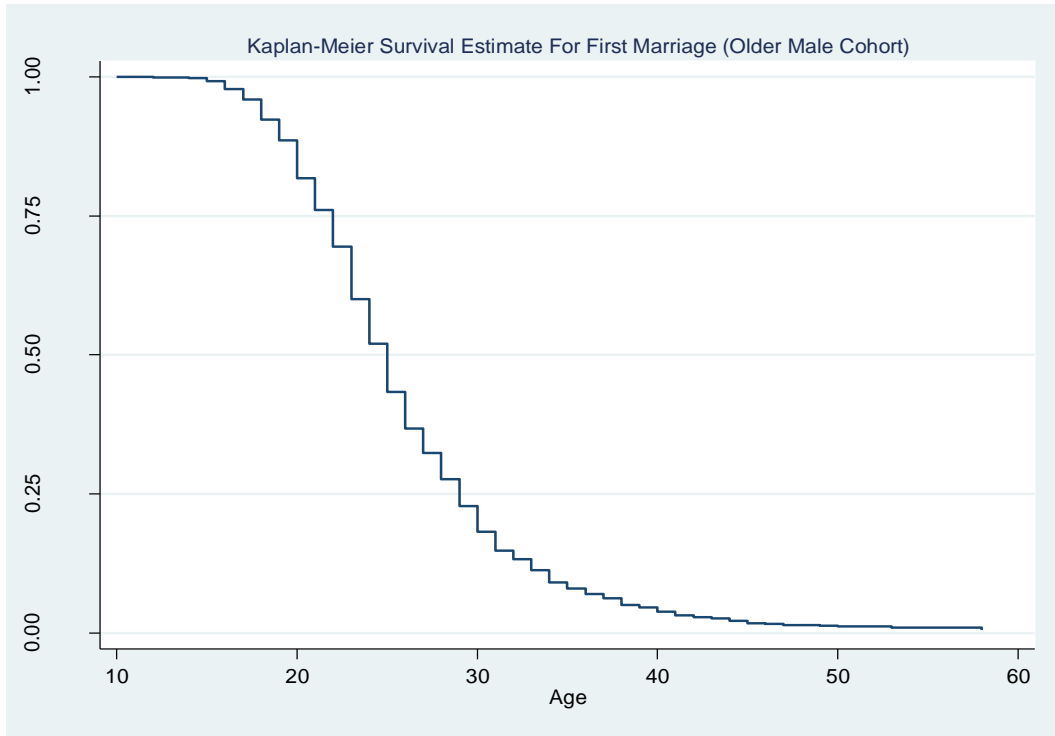


Figure 6.2 Kaplan-Meier Survival Estimates for First Marriage (Men)



6.3.2 Bivariate Analysis of First Marriage

The results of the bivariate Accelerated Failure Time (AFT log-normal) models on the transition to first marriage are presented in Table 6.2. As discussed in Chapter Five, the regression coefficients of these models are transformed through exponentiation into time ratios so that variables with time ratios greater than one indicate later timing or suggesting a lower risk of first marriage, while time ratios less than one indicate an earlier time or a higher risk of first marriage. The time ratios (*exp. b*) associated with the occupational type in the female sample indicate that the transition to first marriage is significantly longer for those employed in managerial positions compared with those not currently working. This is particularly the case of the younger female cohort where the transition to first marriage is 34% longer among those employed in managerial positions. Conversely, being employed in a managerial position tends to facilitate the transition to first marriage among males. For the young male cohort in particular, occupying a managerial position significantly reduces the waiting time to first marriage by 16% $[(1 - 0.839) \times 100]$ than those not currently working. Among the younger cohorts (both male and female), occupational categories such as sales, agriculture, and skilled manual significantly reduce the time to the onset of first marriage, while the differences are not statistically significant among the older cohorts.

On the whole, three other differences can be identified between the two generations with regard to covariate effects on marriage timing. First, attributes such as having a high exposure to the media, primary and secondary/higher levels of education, and coming from a rich household all significantly increase the timing to first marriage

among the younger cohorts, but do not have any significant effect on the transition to first marriage among the older cohorts. Secondly, the younger cohorts from patrilineal kinship societies have a faster transition to first marriage compared with those from matrilineal societies, while patriliney is associated with a later onset of first marriage among the older cohorts. Thirdly, the significant effect of religion on the timing of first marriage is only apparent among the younger cohorts. Particularly, younger females who identify as belonging to no religion, Muslim, and traditional/other religion have a significantly faster time, and thus higher risk to first marriage than those who identify as Protestants.

There are also some areas where there are similarities in covariate effects on the transition to first marriage between the two generations, irrespective of gender. Urban residence, for example, tends to be associated with a later timing to first marriage across the cohorts even though the effect is much stronger among the younger cohorts. The only variable whose magnitude and direction of effect remain virtually the same across the four gender-birth cohorts is the age at first birth. Individuals who had their first birth under the age of 20 years consistently (regardless of cohort and gender) have a significantly faster transition to marriage. With the exception of the older male cohort, residence in northern Ghana seem to be associated with a shorter transition to first marriage than their counterparts who reside in southern Ghana.

Table 6.2 Unadjusted Log-normal Models for First Marriage

Variables	Women		Men	
	Older Exp. (b)	Younger Exp. (b)	Older Exp. (b)	Younger Exp. (b)
Occupation				
Managerial	1.281*	1.343***	0.928	0.839*
Sales	1.153	0.747***	0.861 [†]	0.720***
Agriculture	1.072	0.571***	0.885	0.559***
Skilled manual	1.216 [†]	0.843***	0.882	0.678***
Other	1.292*	0.958	0.918	0.647***
Not working (<i>reference</i>)				
Media exposure				
High	1.103	1.426***	1.024	1.241***
Medium	0.942	1.262***	0.952	1.136***
Low (<i>reference</i>)				
Education				
Secondary/higher	1.07	1.664***	1.001	1.364***
Primary	0.954	1.132***	1.056	1.188***
No education (<i>reference</i>)				
Household wealth				
Rich	1.045	1.548***	1.028	1.265***
Average	1.003	1.177***	0.981	1.077*
Poor (<i>reference</i>)				
Kinship type				
Patrilineal	1.072 [†]	0.862***	1.055*	0.963
Matrilineal (<i>reference</i>)				

[continued]

Table 6.2 continued

Variables	Women		Men	
	Older Exp. (b)	Younger Exp. (b)	Older Exp. (b)	Younger Exp. (b)
Religion				
No religion	1.099	0.646***	1.028	0.914
Catholic	1.055	1.025	1.023	1.063
Pentecostal	0.948	0.953	1.018	0.982
Muslim	0.989	0.867***	1.045	0.976
Traditional/Other Protestant (<i>reference</i>)	0.976	0.682***	1.000	0.780***
Place of residence				
Urban	1.066	1.467***	1.051*	1.225***
Rural (<i>reference</i>)				
Region of residence				
North	0.898*	0.786***	1.026	0.931*
South (<i>reference</i>)				
Age at first birth				
Under 20	0.599***	0.660***	0.590***	0.689***
20 and above (<i>reference</i>)				
Age square				
	1.000	1.000***	1.000***	0.999***

Legend: † p<0.10; * p<0.05; ** p<0.01; *** p<0.001

6.3.3 Multivariate Analysis of First Marriage

Given the differences among the cohorts regarding the factors associated with the timing of first marriage, it is unclear as to whether the observed variations are the results of the explanatory variables per se or the result of other processes. In the following sections, I present results of the multivariate log-normal models on the timing of first marriage stratified by gender and birth cohort. Two models are presented for each sample. Model 1 examines the effects of the two main explanatory variables. Model 2 adds socioeconomic, sociocultural, geographic, and demographic variables as controls.

6.3.4 Multivariate Analysis of First Marriage (Women)

Table 6.3 presents the multivariate log-normal models on the transition to first marriage for the female sample. The respective log-likelihood and their associated likelihood ratios show the overall models as statistically significant. Among the older female cohort, the transition to first marriage is longer among those who are gainfully employed than their counterparts who are unemployed. In Model 1 under the panel for older females, skilled manual occupations and women in occupations categorized as “other” have a 22% and 31%, respectively, longer transition to first marriage compared with those not currently working. With the incorporation of control variables in model 2, however, the effects of these occupational attributes on the timing of first marriage were significantly reduced. This suggests that the control variables largely moderate the effects of occupational type on marriage timing among the older female cohort. This is not surprising because these women came of age at a time when employment positions were

relatively more secured, compared with the more recent volatilities in employment relations.

Among the younger female cohort, all occupational categories, except managerial, reduce the timing of the onset to first marriage. As can be seen in model 1, for example, the transition time to first marriage is about 1.3 times longer for those employed in a managerial position than those not working. The significant difference, however, disappears with the addition of all the control variables in model 2. The only attribute that maintained its significance is agricultural employment which upon all the controls, is estimated to reduce the waiting time to first marriage by about 9 percent. Compared with women with low media exposure, those with high media exposure have a longer transition to first marriage in the parsimonious model. Belonging to a patrilineal system is significantly associated with a slower transition to first marriage (transition time reduced by 3 percent) compared with those from a matrilineal system.

Broadly, two main similarities can be drawn between the younger women and their older counterpart. The first is that, just like their older cohort, women with high media exposure have a longer transition to first marriage, but the difference is not statistically significant when all variables in the model are controlled. Secondly, having a child under the age of 20 years significantly shortens the transition to first marriage. Among the younger women, having a child under age 20 years significantly reduces the timing to first marriage by 27 percent compared with those who first gave birth after age 20 years.

The results further point out other important differences between the two cohorts of women. Unlike their older cohort, younger women with secondary or higher levels of educational attainment, as well as those who reside in urban areas, have a significantly longer transition to first marriage. Secondary/higher educational attainment for instance lengthens the timing to first marriage by 1.14 times compared with those with no formal educational attainment. Also, unlike the older cohort of women, residence in northern Ghana and affiliation with a patrilineal kinship group do not have a significant effect on the timing of first marriage among the younger female cohort.

Table 6.3 Multivariate Log-normal Models for First Marriage (Women)

Variables	Older cohort		Younger cohort	
	Model 1 Exp. (b)	Model 2 Exp. (b)	Model 1 Exp. (b)	Model 2 Exp. (b)
EXPLANATORY VARIABLES				
Occupation				
Managerial	1.260 [†]	1.094	1.270***	1.042
Sales	1.167	1.113	0.746***	0.957
Agriculture	1.079	1.072	0.613***	0.908**
Skilled manual	1.222*	1.098	0.847***	0.981
Other	1.306*	1.204 [†]	0.937 [†]	1.026
Not working (<i>reference</i>)				
Media exposure				
High	1.043	1.053	1.225***	1.025
Medium	0.914	0.951	1.138***	0.964
Low (<i>reference</i>)				
SOCIOECONOMIC VARIABLES				
Education				
Secondary/higher		0.968		1.144***
Primary		0.966		1.055 [†]
No education (<i>reference</i>)				
Household wealth				
Rich		0.949		0.962
Average		1.005		0.981
Poor (<i>reference</i>)				
SOCIOCULTURAL VARIABLES				
Kinship type				
Patrilineal		1.102*		0.970
Matrilineal (<i>reference</i>)				

[continued]

Table 6.3 continued

Variables	Older cohort		Younger cohort	
	Model 1 Exp. (b)	Model 2 Exp. (b)	Model 1 Exp. (b)	Model 2 Exp. (b)
Religion				
No religion		1.127		0.937
Catholic		1.059		1.034
Pentecostal		0.926		0.963
Muslim		0.987		1.018
Traditional/Other		0.990		1.023
Protestant (<i>reference</i>)				
GEOGRAPHIC VARIABLES				
Place of residence				
Urban		1.059		1.096**
Rural (<i>reference</i>)				
Region of residence				
North		0.813***		0.970
South (<i>reference</i>)				
DEMOGRAPHIC VARIABLES				
Age at first birth				
Under 20		0.606***		0.730***
20 and above (<i>reference</i>)				
Age squared				
		1.000		1.000***
Constant	8.093***	9.984***	14.570***	7.750***
Sigma	0.514	0.432	0.503	0.379
Log likelihood	-499.746	-376.537	-2175.867	-808.165
Likelihood ratio chi-square	15.85	219.74	581.38	444.24
Prob > LR chi-square	0.027	0.000	0.000	0.000

Legend: † p<0.10; * p<0.05; ** p<0.01; *** p<0.001

6.3.5 Multivariate Analysis of First Marriage (Men)

Table 6.4 presents the multivariate log-normal models on the transition to first marriage for the male sample. Again, the respective log-likelihood and their associated likelihood ratios show the overall models as significant. The results indicate that being gainfully employed reduces the waiting time to first marriage among males. However, when the control variables are added in Model 2, the significant effect of occupation on the timing of first marriage among males disappears. In the full model (Model 2), the only change that can be seen is that younger males employed in managerial positions and those in sales tended to have a longer transition to first marriage than their counterparts not working.

For both cohorts, urban residence and residence in northern Ghana are associated with a slower transition to first marriage, while having a child under the age of 20 years significantly reduces the waiting time to first marriage. Variables such as household wealth, kinship type, and religious affiliation do not have a significant effect on the timing of first marriage among males, irrespective of their birth cohort. While having high exposure to the media reduces the waiting time to first marriage among the older cohort, it lengthens the transition time for the younger cohort. Although the effect of media exposure is in expected direction, it is however not statistically significant. As regards educational attainment, the results indicate that having at least a primary level of education significantly prolongs the waiting time to first marriage among the older male cohort by about 9 percent ($p < 0.05$), while it shortens the transition time to first marriage among the younger birth cohort by about 11 percent ($p < 0.05$).

Table 6.4 Multivariate Log-normal Models for First Marriage (Men)

Variables	Older cohort		Younger cohort	
	Model 1 Exp. (b)	Model 2 Exp. (b)	Model 1 Exp. (b)	Model 2 Exp. (b)
EXPLANATORY VARIABLES				
Occupation				
Managerial	0.926	0.961	0.833*	1.113
Sales	0.852 [†]	0.872	0.714***	1.043
Agriculture	0.872 [†]	0.941	0.573***	0.923
Skilled manual	0.876 [†]	0.902	0.679***	0.962
Other	0.911	0.920	0.647***	0.933
Not working (<i>reference</i>)				
Media exposure				
High	0.991	0.999	1.071	1.018
Medium	0.939*	0.980	1.030	1.025
Low (<i>reference</i>)				
SOCIOECONOMIC VARIABLES				
Education				
Secondary/higher		1.032		0.979
Primary		1.091*		0.893*
No education (<i>reference</i>)				
Household wealth				
Rich		1.044		0.999
Average		1.009		1.034
Poor (<i>reference</i>)				
SOCIOCULTURAL VARIABLES				
Kinship type				
Patrilineal		1.040		0.971
Matrilineal (<i>reference</i>)				

[continued]

Table 6.4 continued

Variables	Older cohort		Younger cohort	
	Model 1 Exp. (b)	Model 2 Exp. (b)	Model 1 Exp. (b)	Model 2 Exp. (b)
Religion				
No religion		1.023		1.042
Catholic		1.012		1.065
Pentecostal		1.025		0.989
Muslim		1.034		1.039
Traditional/Other Protestant (<i>reference</i>)		1.004		0.937
GEOGRAPHIC VARIABLES				
Place of residence				
Urban		1.027		1.072 [†]
Rural (<i>reference</i>)				
Region of residence				
North		1.031		1.076 [†]
South (<i>reference</i>)				
DEMOGRAPHIC VARIABLES				
Age at first birth				
Under 20		0.604***		0.753***
20 and above (<i>reference</i>)				
Age squared				
Constant	16.927***	10.234***	26.266***	7.159***
Sigma	0.394	0.358	0.461	0.233
Log likelihood	-646.779	-504.169	-889.976	-77.578
Likelihood ratio chi-square	12.79	153.26	212.79	170.10
Prob > LR chi-square	0.078	0.000	0.000	0.000
LR test that theta = 0	0.000	0.000	0.000	0.245**

Legend: [†] p<0.10; * p<0.05; ** p<0.01; *** p<0.001

6.4 Transition to First Birth

This section examines the transition to first birth, which measures the duration from age 13 until the age at which an individual first gives birth, if birth occurred. For censored observations, duration is measured as age at survey minus age 13. From a demographic and social standpoint, the timing of the onset of parenthood has important implications for family size dynamics, health of mother and child, and generally provides useful insights into individual life course transitions and preferences for family living. The following sections discuss both nonparametric and parametric estimation methods to examine the variations in the timing of the onset of parenthood status across different birth cohorts under investigation, stratified by gender.

6.4.1 Product-limit Estimation of First Birth

Just like the modeling on first marriage timing, the modeling strategy for the transition to first birth is assumed to have a single episode with two defined states (being childless and ever being a parent). The survivor function in this context, therefore, examines the likelihood of remaining childless while a transition from a childless state to a state of parenthood represents failure. Also, because the occurrence of first birth was recorded using month and year data, and not complete or exact dates, the metric for clocking time is not truly continuous. Ties are again pervasive and hence the resulting plots of the survivor function appear jagged and somewhat discrete. The following Kaplan-Meier survivor function graphs, nonetheless, enable an examination of the

differentials in the median age at first birth among the different samples as well as the proportion that first gave birth at precise ages.

Figures 6.3 and 6.4 plot the survivor functions of both women and men separately for the transition to parenthood. The estimated median age at first birth for both female cohorts is 21 years, with almost 80% of the older cohort (see top panel of Figure 6.3) having had their first child by age 25 in contrast to 60% among their younger birth cohort (see bottom panel of Figure 6.3). Thus, even though the age at which Ghanaian women have their first birth had remained stable over time, a much higher percentage of the younger cohort seem to delay first birth until they are 25 years and over compared with their older cohort.

Just like the transition to first marriage, the male sample presents quite a different picture. The older male cohort has a longer transition to parenthood than their younger counterpart. As can be seen in the top panel of Figure 6.4, 50% of the older male cohort remained childless by age 28, whereas by age 22, half of the sample of younger male cohort had already transitioned to parenthood (see bottom panel of Figure 6.4). Also, the probability of remaining childless by age 25 among the older male cohort is 0.75, compared with only 0.45 among their younger cohort.

Figure 6.3 Kaplan-Meier Survival Estimates for First Birth (Women)

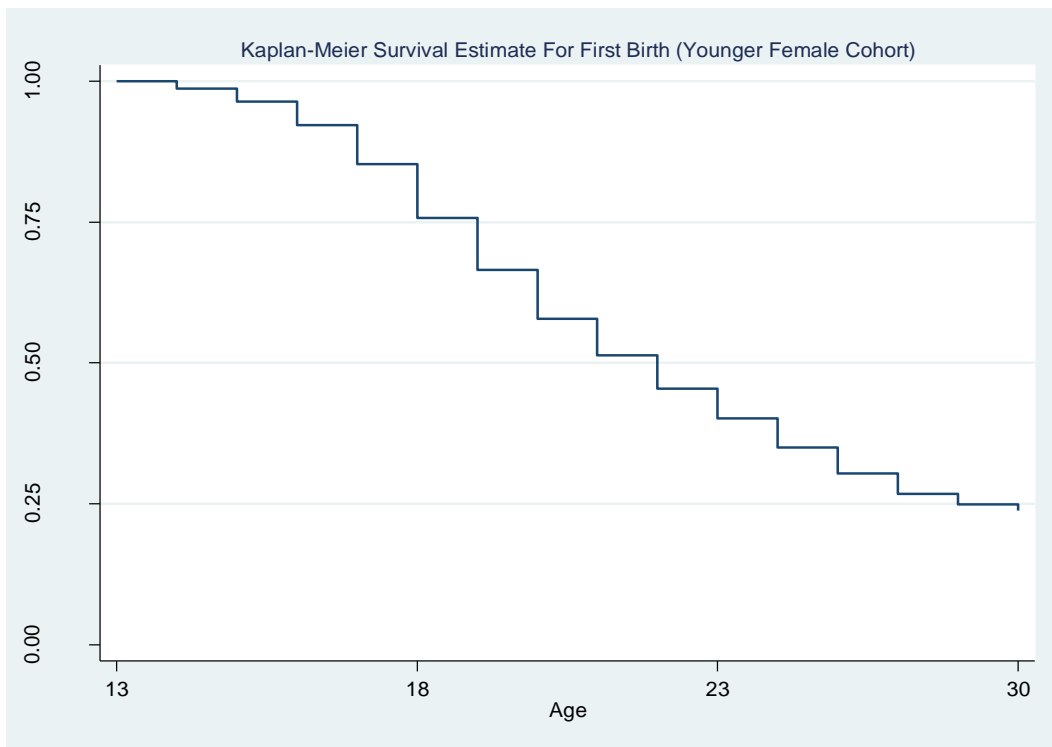
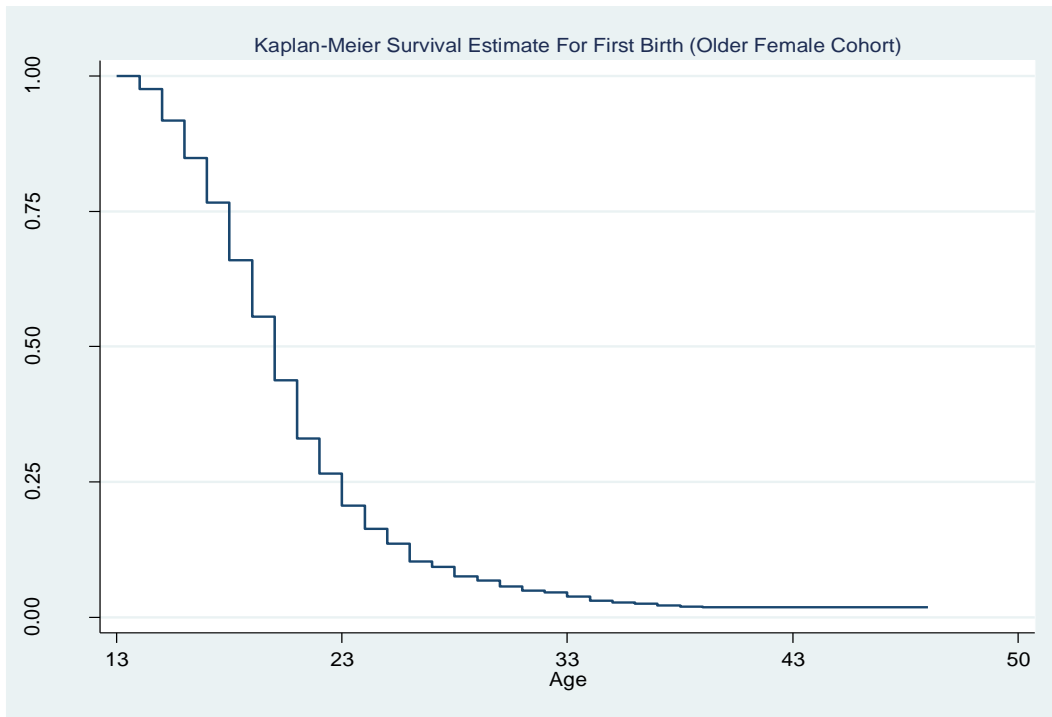
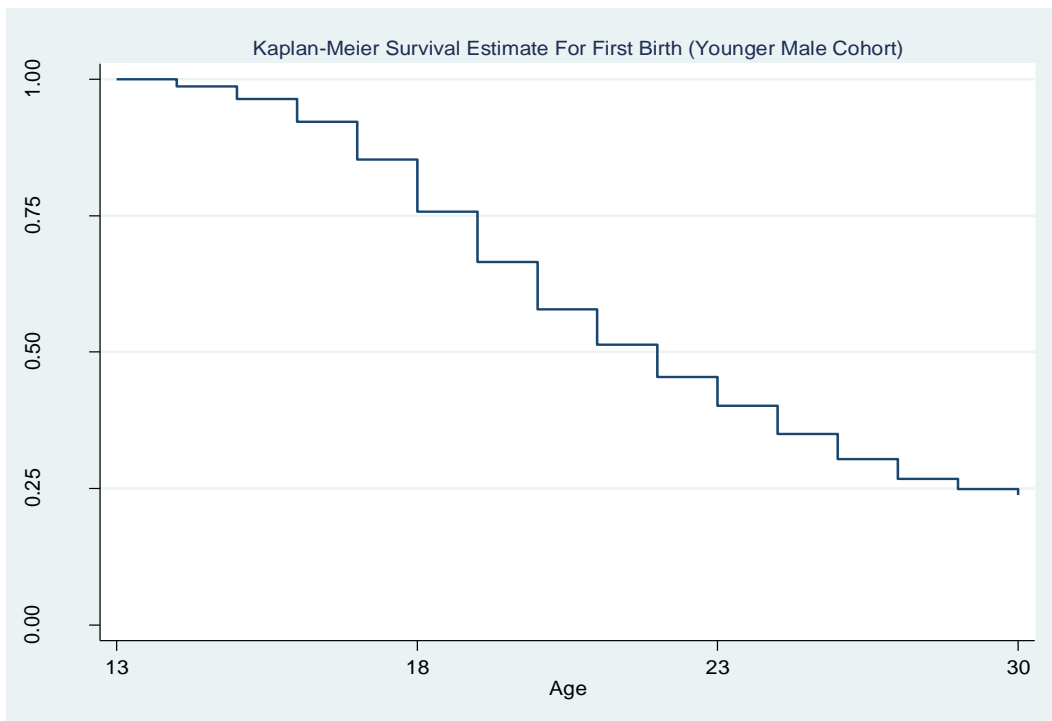
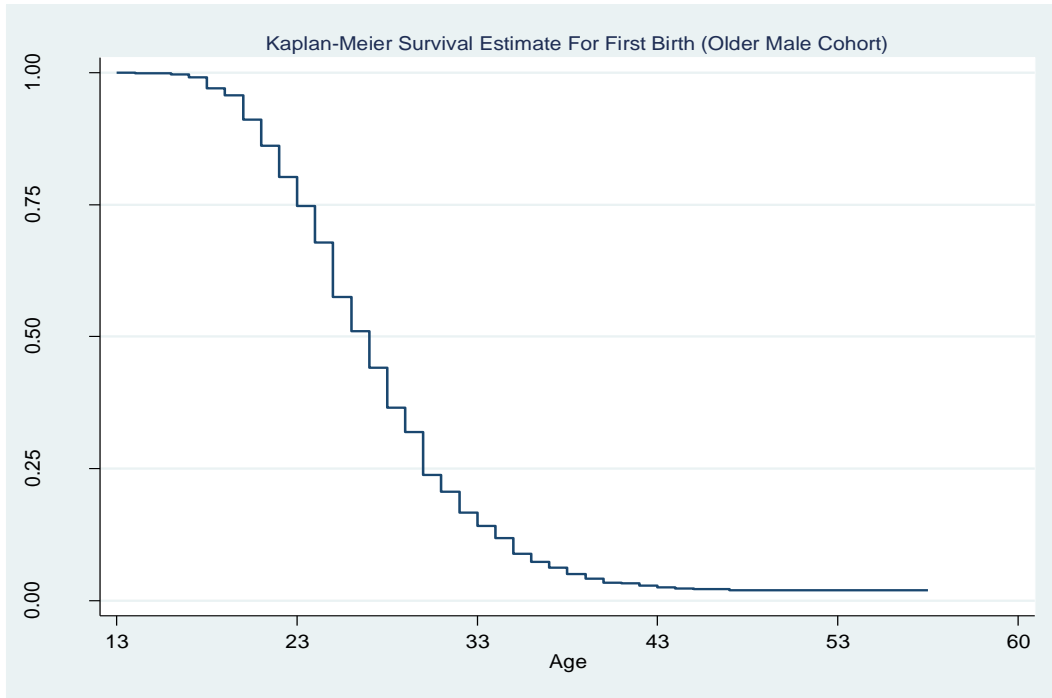


Figure 6.4 Kaplan-Meier Survival Estimates for First Birth (Men)



6.4.2 Bivariate Analysis for First Birth

The results of the bivariate Accelerated Failure Time (AFT log-normal) models on the transition to parenthood are presented in Table 6.5. The time ratios (exp. *b*) associated with the occupational type in the female sample indicate that the transition to parenthood is significantly longer for those employed in managerial capacities compared with those not currently working. This is particularly the case of the younger cohort where the transition to first birth is 67% longer among those employed in managerial positions. In contrast, being employed in any capacity tends to facilitate the transition to parenthood among males. With the exception of those employed in managerial positions, all other employment categories significantly reduce the waiting time to first birth compared with those not working among males. For the young male cohort in particular, working in skilled manual labour, for example, significantly reduces the time to first birth by 33% $[(1-0.673) \times 100]$ than those unemployed. Also, among the younger cohorts, occupational types such as skilled manual and those categorized as “other” significantly reduce the waiting time to the onset of parenthood status, while the differences are not statistically significant among the older cohorts at conventional levels.

Several differences can be discerned between the two generations. First, attributes such as high exposure to the media, secondary/higher educational attainment, being from a rich household, affiliating with the traditional/other religion, and having no religious affiliation significantly increase the transition to first birth among the younger cohorts, while their effects are not all statistically significant among the older cohorts. Also, while

being from a patrilineal society lengthens the transition time to parenthood among the older cohorts, it has the opposite effect on the younger cohort.

There are, however, some areas where there are similarities in the transition to first birth among the two generations, irrespective of gender. Urban residence, for instance, tends to increase the timing to first birth across all the samples even though the effect is much stronger among the younger cohort. The only variable whose magnitude and strength is almost the same across the four gender-birth cohorts is the age at first marriage, where individuals who had their first marriage under the age of 20 years have significantly faster transitions to parenthood. With the exception of the older male cohort, residence in northern Ghana is associated with a shorter transition to parenthood than their counterparts who reside in southern Ghana.

Table 6.5 Unadjusted Log-normal Models for First Birth

Variables	Women		Men	
	Older Exp. (b)	Younger Exp. (b)	Older Exp. (b)	Younger Exp. (b)
Occupation				
Managerial	1.368*	1.671***	0.855 [†]	0.866
Sales	1.237 [†]	0.708***	0.819*	0.760**
Agriculture	1.138	0.535***	0.838*	0.553***
Skilled manual	1.328*	0.892*	0.851 [†]	0.673***
Other	1.244	1.019	0.847 [†]	0.629***
Not working (<i>reference</i>)				
Media exposure				
High	1.086	1.524***	0.996	1.272***
Medium	0.901	1.379***	0.918**	1.143***
Low (<i>reference</i>)				
Education				
Secondary/higher	1.088	1.800***	0.958	1.339***
Primary	0.910	1.088*	1.014	1.202**
No education (<i>reference</i>)				
Household wealth				
Rich	0.998	1.687***	1.003	1.322***
Average	0.885	1.208***	0.936*	1.084 [†]
Poor (<i>reference</i>)				
Kinship type				
Patrilineal	1.132*	0.876***	1.074**	0.963
Matrilineal (<i>reference</i>)				

[continued]

Table 6.5 continued

Variables	Women		Men	
	Older Exp. (b)	Younger Exp. (b)	Older Exp. (b)	Younger Exp. (b)
Religion				
No religion	1.015	0.606***	1.052	0.851 [†]
Catholic	0.999	1.024	0.980	1.041
Pentecostal	0.915	0.930 [†]	1.027	0.986
Muslim	1.030	0.901*	1.100*	1.017
Traditional/Other Protestant (<i>reference</i>)	1.197	0.589***	0.978	0.759***
Place of residence				
Urban	1.008	1.534***	1.054*	1.250***
Rural (<i>reference</i>)				
Region of residence				
North	0.980	0.811***	1.052 [†]	0.963
South (<i>reference</i>)				
Age at first marriage				
Under 20	0.511***	0.529***	0.608***	0.624***
20 and above (<i>reference</i>)				
Age squared				
	1.000	0.999***	1.000***	0.999***

Legend: [†] p<0.10; * p<0.05; ** p<0.01; *** p<0.001

6.4.3 Multivariate Analysis for First Birth

This section presents results of the multivariate log-normal models on the timing of first birth stratified by gender and birth cohort. Two models are presented for each gender-cohort. Model 1 examines the independent effects of the two main explanatory variables and Model 2 adds socioeconomic, sociocultural, geographic, and demographic variables as controls.

6.4.4 Multivariate Analysis for First Birth (Women)

Table 6.6 presents the multivariate log-normal models on the transition to first birth for the female sample. The respective log-likelihood and their associated likelihood ratios show the overall models as statistically significant. Among the older female cohort, the transition to first birth is longer among those who are gainfully employed than their counterparts who are unemployed. In model 1 for instance, older women employed as skilled manual workers have a 33% longer transition to first birth compared with those not working. With the incorporation of control variables in model 2, however, the effects of these occupational attributes on the timing of first birth were considerably reduced (both in terms of magnitude and significance). Among the younger female cohort, having an occupation tends to be associated with faster transition to parenthood compared with those having no occupation. Being employed in a managerial position is, however, the only exception. In Model 1 for example, being employed in a managerial position significantly makes the waiting time to parenthood about 1.57 times longer than those unemployed. The effect of occupation on the timing of first birth among the younger

female cohort, however, disappears in the full model due to the moderating effects of the control variables in model 2.

On the whole, three main similarities can be drawn between these two cohorts of women with regard to the effect of covariates on their transition to parenthood. The first is that those with high media exposure have a longer transition to first birth but the difference is not statistically significant when all covariates in the model are controlled. Secondly, getting married under the age of 20 years significantly associates with a faster transition to parenthood for both cohorts. Getting married under age 20 years significantly reduces the timing to first birth by 48% among the younger cohort and about 43% among the older cohort. Lastly, secondary or higher level of educational attainment significantly prolongs the timing to first birth for both cohorts, with the effect being more pronounced among the younger cohort of women. For these women, having secondary or higher education significantly extends the time to parenthood by about 22% compared with their counterparts with no formal education.

The results also indicate some differences in covariate effects on the timing to first birth between the two cohorts of women. While attributes such as coming from a rich household, urban residence, and residing in northern Ghana are associated with a longer transition to first birth among the younger cohort of women, these factors tend to have the opposite effect among the older cohort of women. Secondly, affiliation with a patrilineal group is associated with a shorter transition to parenthood among the younger cohort, whereas it is associated with a longer transition among the older cohort. The

results further indicate that different attributes of religious affiliation have differing effects on the transition to first birth between the two cohorts of women. While affiliation with the traditional/other religion significantly prolongs the waiting time to parenthood among the older cohort, affiliation with the Pentecostal groups marginally reduces the timing to first birth among the younger cohort of women.

Table 6.6 Multivariate Log-normal Models for First Birth (Women)

Variables	Older cohort		Younger cohort	
	Model 1 Exp. (b)	Model 2 Exp. (b)	Model 1 Exp. (b)	Model 2 Exp. (b)
EXPLANATORY VARIABLES				
Occupation				
Managerial	1.349 [†]	1.188	1.573***	1.170
Sales	1.255 [†]	1.206 [†]	0.706***	0.943
Agriculture	1.142	1.132	0.587***	0.954
Skilled manual	1.334*	1.206 [†]	0.895*	1.060
Other	1.267	1.076	0.986	1.082
Not working (<i>reference</i>)				
Media exposure				
High	1.035	1.019	1.269***	1.025
Medium	0.878	0.958	1.223***	1.066
Low (<i>reference</i>)				
SOCIOECONOMIC VARIABLES				
Education				
Secondary/higher		1.130 [†]		1.217***
Primary		1.011		1.017
No education (<i>reference</i>)				
Household wealth				
Rich		0.970		1.041
Average		0.878*		1.025
Poor (<i>reference</i>)				
SOCIOCULTURAL VARIABLES				
Kinship type				
Patrilineal		1.079		0.995
Matrilineal (<i>reference</i>)				

[continued]

Table 6.6 continued

Variables	Older cohort		Younger cohort	
	Model 1 Exp. (b)	Model 2 Exp. (b)	Model 1 Exp. (b)	Model 2 Exp. (b)
Religion				
No religion		1.057		0.949
Catholic		0.997		0.969
Pentecostal		0.952		0.925 [†]
Muslim		1.124		1.047
Traditional/Other Protestant (<i>reference</i>)		1.322**		0.902
GEOGRAPHIC VARIABLES				
Place of residence				
Urban		0.916		1.021
Rural (<i>reference</i>)				
Region of residence				
North		0.887 [†]		1.033
South (<i>reference</i>)				
DEMOGRAPHIC VARIABLES				
Age at first marriage				
Under 20		0.521***		0.567***
20 and above (<i>reference</i>)				
Age squared				
		1.000		1.000
Constant	5.784***	7.735***	11.584***	8.631***
Sigma	0.661	0.553	0.642	0.511
Log likelihood	-664.092	-545.928	-2395.632	-1268.922
Likelihood ratio chi-square	12.71	225.11	498.84	487.62
Prob > LR chi-square	0.079	0.000	0.000	0.000

Legend: [†] p<0.10; * p<0.05; ** p<0.01; *** p<0.001

6.4.5 Multivariate Analysis for First Birth (Men)

Table 6.7 presents the multivariate log-normal models on the transition to parenthood for the male sample. Yet again, the respective log-likelihood and their associated likelihood ratios show the overall models as significant. The results indicate that being gainfully employed reduces the waiting time to parenthood among males, particularly among those of the older cohort. The only occupational attribute that maintained its significance after the incorporation of all covariates into the model (model 2) was sales among the older cohort. Older males who work as sales personnel have a 16% significantly shorter transition time to parenthood compared with their counterparts who are unemployed. Among the younger cohort, agricultural employment is the only occupational attribute that seem to be associated with a faster transition to parenthood compared with the unemployed. Among the younger cohort, all other occupational categories tend to be associated with a longer transition to first birth.

For both cohorts, getting married under the age of 20 years significantly reduces the waiting time to the onset of parenthood status. Marriage under the age of 20 years is significantly associated with a faster transition to first birth of 48% among the older cohort, and 35% faster among the younger cohort. Interestingly, none of the other control variables (education, household wealth, kinship type, religious affiliation, place, and region of residence) had any significant effect on the timing to first birth for either birth cohort.

Table 6.7 Multivariate Log-normal Models for First Birth (Men)

Variables	Older cohort		Younger cohort	
	Model 1 Exp. (b)	Model 2 Exp. (b)	Model 1 Exp. (b)	Model 2 Exp. (b)
EXPLANATORY VARIABLES				
Occupation				
Managerial	0.861 [†]	0.925	0.857	1.057
Sales	0.823*	0.836*	0.751**	1.111
Agriculture	0.829*	0.907	0.572***	0.985
Skilled manual	0.850 [†]	0.898	0.673***	1.006
Other	0.847 [†]	0.885	0.628***	1.022
Not working (<i>reference</i>)				
Media exposure				
High	0.979	1.001	1.106*	1.048
Medium	0.911**	0.944*	1.046	1.014
Low (<i>reference</i>)				
SOCIOECONOMIC VARIABLES				
Education				
Secondary/higher		1.000		0.997
Primary		1.034		1.028
No education (<i>reference</i>)				
Household wealth				
Rich		0.983		1.081
Average		0.963		1.008
Poor (<i>reference</i>)				
SOCIOCULTURAL VARIABLES				
Kinship type				
Patrilineal		1.037		0.977
Matrilineal (<i>reference</i>)				

[continued]

Table 6.7 continued

Variables	Older cohort		Younger cohort	
	Model 1	Model 2	Model 1	Model 2
	Exp. (b)	Exp. (b)	Exp. (b)	Exp. (b)
Religion				
No religion		1.033		0.980
Catholic		0.941		0.946
Pentecostal		1.025		0.915
Muslim		1.058		1.019
Traditional/Other		0.941		0.935
Protestant (<i>reference</i>)				
GEOGRAPHIC VARIABLES				
Place of residence				
Urban		0.916		1.024
Rural (<i>reference</i>)				
Region of residence				
North		0.887		1.006
South (<i>reference</i>)				
DEMOGRAPHIC VARIABLES				
Age at first marriage				
Under 20		0.521***		0.655***
20 and above (<i>reference</i>)				
Age squared				
		1.000		1.000
Constant	16.079***	12.062***	23.779***	10.074***
Sigma	0.428	0.363	0.509	0.323
Log likelihood	-768.671	-611.418	-754.533	-212.058
Likelihood ratio chi-square	15.93	229.94	142.23	202.46
Prob > LR chi-square	0.026	0.000	0.000	0.000
LR test that theta = 0	0.010	0.091***	0.000	0.000

Legend: † p<0.10; * p<0.05; ** p<0.01; *** p<0.001

6.5 Discussion and Conclusion

This chapter examined cohort differences in transition to marriage and parenthood in Ghana. The analysis is based on data from the 2003 and 2008 Ghana Demographic and Health Survey (GDHS), a nationally representative survey of women ages 15 to 49 years and men ages 15 to 59 years. The survey covered key aspects of fertility, mortality, migration, child and reproductive health, and marriage. Results from the Kaplan-Meier life table analysis suggest a convergence in the timing to these adult roles between young women and young men (years 13 to 28) compared with the earlier generation (years 43 to 58). Among the older birth cohort of men and women, there was an 8-year gap in the median age at first marriage (18 years for women and 26 years for men). This gap has converged among the younger cohort: 22 years for women and 21 years for men. The transition to parenthood closely mirrors the pattern for marriage, where the 7-year gap in the median age at first birth (28 years for the older men and 21 years for the older women) has reduced to a 1-year difference (22 years for the younger men and 21 years for the younger women).

The observed differences in the timing of first marriage and first birth between the older and younger male cohorts could be seen as cohort differences since the groups grew up in different sociocultural periods. The increase in early marriage and first birth among contemporary young men in Ghana parallels the observation made by Quisumbing and Hallman (2005) concerning the declining age at first marriage among Ethiopian men. However, unlike Quisumbing and Hallman (2005:259) who attributed this phenomenon to Ethiopia's "isolation from outside forces" compared with other African countries

previously colonized by Europe, I argue that changes in sociocultural practices, such as polygyny, could explain the declining age at first marriage and first birth within the Ghanaian context. The recent decline in the practice of polygyny (the system of plurality of wives),³¹ which is a distinctive feature of Ghanaian marriages, was prevalent at the time that the older cohort was coming of age. Polygyny was facilitated by a relatively low age at first marriage for women and considerable age differences between spouses. This practice has the potential to restrict access of young men to sexual partners and thereby delay their entry to marriage and parenthood. As Reniers and Tfaily (2012) argue, practicing polygynists tend to monopolize the marriageable women in the community and thus squeeze young men out of the market for sexual partners. The recent decrease in the prevalence of polygyny in Ghana could help to explain why the timing of first marriages and first births for contemporary young men and women have converged, thus making the life courses of contemporary men and women more similar than they were among earlier cohorts.

Results from the multivariate analysis provide insight into the extent to which globalization has affected the timing of first marriages and childbearing of different birth cohorts in Ghana. To assess the residual effects of the proxy globalization variables on the transition to first marriage and first birth, several covariates were introduced as controls in the multivariate models. In line with the expectation that positions with

³¹ Hayase and Liaw (1997) observed a declining trend of polygamy towards younger age cohorts in Ghana. In their study, the contrast between the 15-19 and 40-49 age groups was highly significant and extremely large: 12% versus 39%.

insecurities will delay decisions of a long term commitment such as marriage and parenthood, the results indicate that women who occupy employment positions that are managerial or professional in nature tend to have a longer transition to marriage and particularly parenthood. Although the effects are not statistically significant in the multivariate models probably due to sampling error, the magnitude of the coefficients is indicative that the widespread uncertainty that characterizes labour-market relations in the West might be apparent within the Ghanaian context. From the findings, younger women who occupy managerial positions, for example, have a transition rate to parenthood that is 1.17 times longer than their counterparts who are not working. It is quite obvious that early marriage and first birth are not compatible with the career objectives of this category of women. As Morgan and Rindfuss (1999:62) point out “... an early birth is a burden that makes other goals seem less attainable.” This finding also broadly reflects the feminization of the labour force due to the globalization process, where women are the most affected by the adverse effects of globalization. Like their counterparts in the developed world, women in the developing world are gaining an increasing share of jobs but are still disadvantaged in the new labour markets. Women are disproportionately involved in forms of employment with high turnover rates (Brecher, Castello, and Smith 2000; Eitzen and Zinn 2006; Kay, Alarie, and Adjei 2013; Moghadam 1999).

As regards the media, the results show that high exposure to the media tends to prolong the timing to first marriage and first birth for both cohorts, regardless of gender,

with the effect being more pronounced particularly among the younger cohort of women and men. Greater exposure to the television and radio broadens individuals' horizons beyond the confines of their domestic environment and offers new ideas that may compete with traditional customs that promote early marriages and first births. By exposing individuals to non-traditional roles as well as alternative family arrangements, the media plays a considerable role in expanding individuals' life choices. The primary effect of the media on the timing of first marriage and first births may thus relate to the development of value orientations that favour personal fulfillment over more traditional roles of marriage and childbearing.

Regardless of the model specification, entry into marriage and parenthood in Ghana seem to be more affected by demographic, socioeconomic, and sociocultural processes rather than by globalization variables, per se. For both cohorts, irrespective of gender, entry into parenthood is significantly accelerated if they first married before the age of 20 years. At the same time, having the first child under the age of 20 years significantly accelerated the transition to marriage. This strong interrelationship between the timing of first marriage and first birth has received empirical support from prior research (see for example, Francesconi and Golsch 2005; Gyimah 2009; Mensch et al. 2005).

Beyond these demographic regularities, the effects of certain socioeconomic and sociocultural covariates on the transition to first marriage and first birth were found to be time-varying. These covariates are educational attainment, place of residence, and

kinship type. Although higher educational attainment is associated with delayed onset of marriage, particularly among women, results from the models suggested that the effect was more pronounced among contemporary young women. The risk ratio for education among the younger women was even stronger in the model on the transition to the first birth (from 1.14 to 1.22), plausibly because having a child has a greater conflict with educational and formal employment career. Consistent with Gyimah (2009), the pronounced effects of education among the young cohort on the transition to marriage and parenthood is attributable to the collapse of cultural barriers that in the past saw marriage and particularly motherhood as the ultimate life time achievements for women.

The delay entry into marriage and parenthood among the young women could also be attributed to the enhanced career opportunities for contemporary educated women. Although the socialization process in Ghana predisposes young girls into accepting domestic roles (Ampofo 2001), the trend is changing with new educational opportunities and enhanced career options for contemporary Ghanaian women. As a consequence, the social pressure that was often exerted on women, including educated women, to marry and have children early, is becoming less pervasive. For contemporary educated women, it is highly plausible that career roles convey important social value to them, as marriage and parenthood did for their older generations.

Similar to secondary/higher educational attainment, urban residence has a more pronounced effect on the transition to marriage among the younger cohort, particularly young women. The effect of urban residence on the timing of first birth was similar to

that of first marriage. However, the effect is not statistically significant at conventional levels. In general, urban residence was found to be associated with later transition to first marriage and later childbearing. The explanations for the rural–urban differential on the transition to adult roles including marriage and parenthood have been attributed mainly to variations in socioeconomic characteristics. From a socioeconomic perspective, it has been argued that not only are recent urban women more educated, but they are also active players in the formal labour market. Additionally, recent urban young women tend to have better access and knowledge of contraception and are more likely to use effective methods to delay childbearing than their older counterparts (Oheneba-Sakyi and Takyi 1997).

Thirdly, while affiliation with patrilineal groups were associated with delayed transition to marriage and parenthood among the older cohorts, this affiliation tended to accelerate the timing to first marriage and first birth among the younger cohort. Though the differences are not statistically significant at conventional alpha levels due possibly to sampling variability, this finding lends credence to the time-varying effect of sociocultural factors on the transition to adult roles in Ghana. Among the older cohorts, affiliation with patrilineal groups delayed the entry into marriage and parenthood because that generation was more likely to uphold the strict cultural restrictions that governed marriage and sexuality. With increasing awareness of individuals' civil liberties and freedom from traditional cultural norms and restrictions, affiliation with a patrilineal

group no longer has a decelerating effect on the transition to first marriage and first birth among contemporary young men and women in Ghana.

The effects of other covariates, such as religious affiliation, on the timing of first marriage and first birth were largely not statistically significant in the multivariate models. The absence of marked distinctions in the transition to marriage and parenthood among different birth cohorts of varying religious persuasions in Ghana, to a large extent, reflects the notion that religious experiences in the country have been significantly impacted by what Mazrui (1986) terms the “Triple Heritage” where the African indigenous heritage often serves as the backdrop against which the practices of the foreign religions (Christianity and Islam) take place. The different religious groups are, therefore, becoming increasingly more alike in terms of their fertility ideals. The salience of religion on the timing of family formation might be better discerned if other measures of religion such as the frequency of church attendance, frequency of prayers, and the importance of God in one’s life are used. However, the study was constrained to use denominational affiliation as the sole criterion for investigating the link between religion and the timing to first marriage and first birth.

The results from the statistical analyses afford the opportunity to examine the significant impacts of broader socioeconomic and sociocultural factors on the timing of first marriages and first births in Ghana. Though this approach is useful for generalizations and predictions, the approach is not as good at explaining behaviours and perceptions (Brannen 1992), and tends to detach findings from real-world contexts

(Moghaddam, Walker, and Harre 2003). Thus, while quantitative approaches to studying the life course focus on identifying the specific characteristics that affect the timing and likelihood of important life transitions, such as marriage and entry into parenthood status, qualitative approaches help bring into sharp focus the importance of institutional processes. Qualitative approaches also help in identifying the role of human agency in making choices, which is particularly enacted when the individual faces an uncertain pathway (Carr 2004). How do individuals themselves understand the factors that shape their decision to marry and become parents? Qualitative research methods, specifically in-depth interviews, are very good for generating detailed knowledge of the experiences, perceptions, emotions, beliefs, and behaviours of respondents (Minichiello et al. 1995; Teye 2012) and help to increase the plausibility of findings (Miller and Fredericks 1994). As argued by Verd and Lopez (2011), qualitative approaches go beyond the most purely *emic* elements and afford the opportunity to address actions of individuals in relation to external factors whose influence may be outside of their awareness.

I turn next, in Chapter Seven, to explore the views that participants expressed in the in-depth interviews conducted in Aburi in the Eastern Region of the Republic of Ghana during the summer of 2010. It is expected that a mixed methods approach will provide a broader and more credible understanding of the research problem than a dichotomous qualitative/quantitative approach (Tashakkori and Teddlie 2010).

CHAPTER 7

FIELDWORK AND EMERGING THEMES

7.1 Introduction

To help contextualize the results from the survey data, qualitative interviews were also conducted to complement the quantitative surveys. There were two research purposes for which qualitative data were especially useful in this study. The first reason was to understand the *meaning* that the participants gave to the events and actions that marked their transition to adult roles and of the accounts that they offer of their lives and expectations. The second rationale for complementing the quantitative surveys with qualitative in-depth interviews was to illuminate the particular *context* and *processes* participants experienced and to understand how their transition to adult roles was shaped by unique circumstances. A major strength of qualitative data is the opportunity they offer to uncover the processes that lead to particular outcomes. These more nuanced processes are often unmeasurable in conventional quantitative inquiry and are therefore often poorly identified using survey research.

7.2 Research Site

The qualitative study was conducted in Aburi, located on the Akwapim Ranges in the Akwapim South Municipality of the Eastern Region of Ghana. The Municipality lies between latitude 5.45° North and 5.58° North and longitude 0.07° West and 0.27° West, covering a land area of about 503 square kilometres. Aburi is the third largest town in the

Akwapim South Municipality with a population of about 10,000. Though a small town, three of Ghana's most prominent educational institutions are located in Aburi. These are the Aburi Girls' Senior High School, Adonton Senior High School, and the Presbyterian Women's College of Education. The traditional occupations of the people in this region are predominantly farming, stone quarrying, and wood carving.

The choice of Aburi for this study stems from two reasons. The first is that the Aburi township serves as one of the prominent tourist sites in the country and hence a good location to investigate the influence of globalization on family formation decisions. With an elevation of about 800 to 1,500 feet above sea level, the town provides some absolutely breath-taking and fascinating open view of the cities of Accra and Tema. Besides its cool and serene environment, Aburi is noted largely in West Africa for its Botanical Gardens which attract a lot of tourists and other social groups to the Town (Adzovie 2009). Various rare species of flora and fauna can be found in the Gardens. In addition to the magnificence of the Akwapim mountains and the Botanical Gardens, the annual "Odwira" festival that is celebrated among the people of Aburi with great pomp and pageantry is a toast of tourists. Further, Aburi's proximity to the national capital of Accra (about 34 kilometres) makes it close enough to be influenced by the urban environment while at the same time retaining many features as a rural and agricultural community. I was interested in knowing the extent to which globalization, resulting from this cultural and economic contact, might influence family formation decisions of the people of Aburi.

The second reason for selecting Aburi as the site for this study was because most of the residents in the town belong to the Akwapim ethnic group, a subgroup of the Akan in southern Ghana that practices both matrilineal and patrilineal inheritance (Frost and Dodoo 2010), thus making them culturally representative of the varying kinship systems of Ghana.

Fieldwork was conducted in July 2010. I began the research process by first contacting an *assembly member*³² in the community who helped to recruit research participants. The study sample comprised 30 respondents, purposively selected to include dyads of parents (aged between 43 and 65) and their resident adult children aged between 15 and 25 years. Interviews were conducted in respondents' own homes or, for some younger people, in a youth centre they regularly attended. Each interview was conducted in the local Akan language and followed a loose topic guide. Interviews lasted about one hour. All interviews were conducted, tape-recorded, and immediately transcribed by the researcher. The process of data analysis was performed without the use of qualitative research analysis software and did not follow any pre-existing protocol. Rather, as typical for qualitative research, the identification of themes evolved hand in hand with data collection (Aboderin 2004; Denzin and Lincoln 1994). Such an unstructured approach was deemed useful for understanding the processes that influence a specific outcome of

³² Each community in Ghana has an administrative leader, who in the local parlance is called an assemblyman/assemblywoman as the case may be, and these local community leaders occupy political positions within the decentralized system of government in Ghana. This decentralized structure for promoting local level planning and decision-making was based on the local Government law 1988, PNDC Law 207, which has been revised to reflect constitutional demands in the form of a local Government Act passed in December 1993 (Aye 2003).

interest, what Huberman and Miles (1988) termed “local causality.” Single case studies are often conceptualized as “bounded” units— studying them can be important in their own right in the absence of comparison to other cases (Stake 1994:236). Indeed, sociological knowledge is often gained from single-site case studies (Walton 1992). Such case studies sometimes give pause when claiming generalizations, support existing findings, introduce new questions, and propose new avenues for research (Goodwin and Horowitz 2006; Lieberson 1992). In essence, this approach was meant to trade generalizability and comparability for internal validity and contextual understanding.

Guided by the study’s research questions, theoretical framework, and past literature, a general interview schedule was designed.³³ According to McNamara (2009), the advantage in having an interview guide is that it affords the researcher the ability to ensure that the same general areas of information are collected from each interviewee, while simultaneously allowing for a degree of flexibility in their composition (Turner 2010). A pilot test of the instrument was conducted with colleagues from the University of Ghana who were familiar with the language and culture of the study participants. The pilot test helped to identify flaws, limitations, and other weaknesses with the interview design. Necessary revisions were made prior to conducting the fieldwork.

Typical with case studies, a nonprobability method of sampling was used to recruit study participants (Miles and Huberman 1994). I began by contacting an assembly member of the town at his office at the local district assembly. After discussing the

³³ Appendix D shows the interview schedule used for the fieldwork.

purpose and objectives of my study, he kindly accepted to serve as my key informant for recruiting potential participants. With his knowledge of the community, the informant led me from house to house to personally invite participants purposively targeted for the study. After introducing myself as a student and explaining what my study was about, individuals who expressed interest to participate were asked to suggest a suitable place and time for interview. Whenever an invitation was unsuccessful, which was the case on six occasions, the informant led me to another household until I was able to recruit thirty participants from fifteen households.

Although respondents were quite homogenous in religious affiliation (most identified as Protestant, and in particular Presbyterian³⁴), there was considerable diversity in socioeconomic status. To capture a spectrum of possible perspectives on transition to adult roles, the sample was structured to include a broad range of socioeconomic groups and occupations that may be highly gendered and those that are more integrated including: teachers, sales personnel, secretaries, industrial workers, agricultural workers, and students at various levels – college, polytechnic, and vocational. With the exception of one widow, all the participants of the older generation were married at time of the interview. None of their resident children interviewed for the study were married, though some indicated that they were sexually active. Table 7.1 below shows the socioeconomic and demographic characteristics of the interview participants.

³⁴ This was unsurprising because the Akuapem area was among the first Presbyteries to be established by the Basel Missionaries, and is widely believed to be the cradle of the Presbyterian Church of Ghana (Sule-Saa 2000).

Table 7.1 Socioeconomic and demographic characteristics of interview participants

	Older generation	Younger generation
Education		
No education	3	-
Primary	8	-
Secondary/higher	4	15
Occupation		
Agriculture	3	-
Sculpture	-	2
Teaching	1	-
Sales	8	3
Driving	-	2
Student	-	6
Other	3	2
Marital status		
Currently married	14	-
Formerly married	1	-
Never married	-	15
Sex		
Female	9	8
Male	6	7
Age range	43-65 years	15-25 years

The interviews were conducted in a relaxed and comfortable atmosphere and on a one-on-one basis to ensure privacy and confidentiality. I obtained each respondent's permission for the interview in advance. I scheduled a time and place that the respondents considered appropriate and comfortable. Ethical approval for the research was obtained from the General Research Ethics Board (GREB) at Queen's University at Kingston, Ontario, Canada (see Appendix A). I explained to respondents that the purpose of the

study was to gather individual interpretations of adult role transitions. I provided copies of the consent form to those who were willing to participate. I read them the content of the letter, explaining that participation was completely voluntary and that their answers would remain confidential. The document also explained that the risks associated with this study were no greater than those encountered in daily life. I also made it abundantly clear from the onset that even though it would be greatly appreciated if they could answer all questions as frankly as possible, they were not obliged to answer any questions that they found objectionable or that made them feel uncomfortable. In addition, necessary precautions were taken to protect research participants' anonymity and safety by using pseudonyms whenever an issue involved a particular individual. Participants were reassured that they may withdraw at any time from the interview and that the interview would have no impact on benefits they derive from participating in the study.

Participants were offered snacks which were mainly in the form of soda drinks with some pastries at the end of the interview. These snacks were offered whether or not respondents completed the interview. A post-interview interaction ensued at the time of refreshment. This afforded me the opportunity to reaffirm the promises of confidentiality and anonymity and to offer participants a sense of comfort by reassuring them that the information they shared in the interview was very relevant for my study.

As a Ghanaian and an Akan native, I was able to use my commonalities with respondents to build interviewee trust. However, given age differences between myself and the youth in particular, and the fact that I was a doctoral candidate from a university

in Canada, it seemed possible that age and status hierarchies could affect their responses. To counteract this possibility, I introduced myself as a student who had come to learn about their life experiences, issues about which they were the ‘experts.’ In this way respondents were treated as authorities on the issues they discussed, allowing them to talk more freely than typical age and status hierarchies in Ghana would often permit.

The main focus of the interviews was to identify broad patterns between the two generations as a whole, rather than dynamics within individual family units. In the analysis phase, after returning from the field, generational group perspectives were systematically compared through tabulation. Though considerable effort was made to draw participants from a broad range of socioeconomic background, I found that the life experiences were quite homogenous within each generational group. Also, there were no discernible gender differences in the narratives. Emerging themes were further analyzed and then conceptually developed or substantiated by drawing on the life course literature. I use the term “generation” in this context to refer to an individual’s ranked-descent order within the family rather than the term “cohort” which refers to a category of individuals born during some particular period (Bengtson and Allen 1993).

As part of confidentiality and anonymity agreement, I was unable to provide detailed descriptions of participants whose quotes are used in the study. In such a closely knit community and given that some respondents shared personal experiences with me because of the rapport we built and their trust reposed in me, a detailed description of each individual by attributes such as sex, age, education, and occupation could risk the

individual being identified and therefore threaten anonymity. Because I wanted to learn about differences in generational views about family formation processes as well as what the two generational groups perceived to be the impact of contextual influences on their family formation decisions, I followed the approach taken by Schuler and Rottach (2011) and Aboderin (2004) in identifying respondents by generational group and gender. In conducting the analysis, I selected a few quotations that I found to represent views or perspectives typical of a particular generation. This was done through a systematic identification of themes and patterns that emerged from the transcripts.

7.3 Results

In the following discussion, the objective is to apply insights from the life course perspective to understand how contextual and personal factors have shaped family formation decisions between the two generational groups. The life course perspective serves as the most ideal framework because it involves a contextual, processual, and dynamic approach to the study of change in the lives of individual family members over time, and of families as social units as they change over historical periods (Bengtson and Allen 1993; Elder 1974; Hareven 1982). The analysis evolved around the development of three main organizing themes: (1) importance of institutional influences; (2) growing individualism; and (3) interplay of tradition and change. Overall, these three organizing themes help to conceptualize the life course as a multidimensional phenomenon, ranging from structured pathways through social institutions and organizations to the social trajectories of individuals (Elder 1994).

The analytical challenge was to illuminate how changes in individuals' perspectives have related to changes in the wider global context. The accounts therefore followed what Giddens (1984:284) terms as "double hermeneutic," which involves an interpretation of the meaningful social world as constituted by lay actors and a meta-language used by social scientists to explain social action. For each of the generated accounts, only a few direct quotations are presented here as illustration. All quotations represent perspectives typical of a particular generation.

7.3.1 Importance of Institutional Influences

The life course perspective investigates the contextual and institutional factors that explain differences in the transition to adult roles across different societies, among social strata within a society, and through historical time (Shanahan 2000). This section examines how life courses are shaped by forces external to the individual person and how institutional arrangements build tracks that individual trajectories are often bound to follow. Within the Ghanaian context, I identified the religious institution as having the most important impact in shaping individual life course decisions. I further observed, particularly among the younger generation, that the influence of religion often interacts with emerging value orientations and economic constraints.

Although religion did not appear as a statistically significant factor that influences the timing of family role transitions in the multivariate models, it featured predominantly in the interviews. This was quite unsurprising because religion plays an integral role in the affairs of the Ghanaian (Assimeng 1995). Historically, Ghanaians have always been a

religious people. Busia (1967) argues that in Ghana religion has been the central organizing structure around which all else is organized. Omenyo (2002) has described the Ghanaians' epistemology and ontology as religious, leading him to describe the Ghanaian as *homo religious*. Lorimer (1954), for example, found that religion permeated and influenced Ghanaian society and institutions, including reproductive behaviour and marriage. This view reflects the perspectives of both generations in this study.

When asked about the factors that influenced their mate selection decisions, respondents usually acknowledged the role of the church and other religious contexts. The church's role as a marriage market was vividly alluded to in most of the interactions. As one elderly woman responded to the question about how she met her husband: "*I met my husband when I joined the church choir.*" The younger generation has quite a similar experience too. Though they reveal a more secular lifestyle compared with their older counterparts, they nonetheless had a solid religious upbringing which invariably shapes their life choices. Commenting on how they brought up their children, two elderly men had this to say:

We have taken the kids to the church since their infancy and as they grow, they enrolled into different church associations. My wife for instance was the choir organist so we always took the children along with us when going to church.

Once you raise a child in a God-fearing way, the child will not take to any wayward life styles such as smoking weed or drinking alcohol. With this good foundation it can be expected that the child will have a good future.

Consequently, the younger generation also alluded to the role of the church in their mate selection processes. Recounting his personal experience with one of the youth associations in his church, one of the young men underscored the marriage market potential of the church:

When I first joined the youth fellowship, that was in 2004, there were several members in the group and people took advantage of that to engage in relationships. That was the only occasion for them to meet because one could not visit the other in their homes. There is now a new sense of discipline within the fellowship which has made it impossible for people to be doing those kinds of things.

In a rather witty way, one young man asserted that the primary motivation for joining a youth association in the church was to get a girlfriend. In light of this, he redefined the Young Peoples' Guild (YPG), which is the main youth fellowship in the Presbyterian Church to mean "*Ye Pe Girls*" – literally meaning "we like girls."

On the whole, the older generation seems to be comfortable with the prospects of the younger generation using the church as an avenue for future mate selection. Indeed one older woman who had indicated that she met her husband in the choir had this to say when asked about her son also choosing someone from the youth fellowship:

Hahaha...trying to emulate us? That will be a very welcome idea.

In an era where arranged marriages are considered obsolete, parents do not directly influence the choice of partner for their children, even though they have their preferences for an ideal partner for their children. When asked if they had any particular

preference for their children's future spouse, the older generation hinted at religious considerations. As one elderly woman indicated:

I will not in any way interfere with his choice of a partner just that I shall enquire to see if the woman is also a Christian. Once she is a Christian no other factor will count.

When asked what influenced the timing of their first birth, responses usually came in the form of normative answers: *"It was all in the hands of God."* In such a highly religious context, it was quite premature for one to determine when to begin childbearing because there are so many unforeseeable hazards such as miscarriage or stillbirth. Consequently, one's fate is only known to God. One elderly woman responded to the question by saying: *"Children are a gift from God so you accept whenever it gets to your turn."* Unsurprisingly, a subsequent question that asked about their ideal number of children yielded a fairly uniform response particularly from the older generation: *"As many as God had intended for me."*

On the contrary, asking the younger generation, "How many children do you want to have (in the future)?"—resulted in more definite responses: averaging about two children. This response indicates that there may be a separate set of norms for the younger generation. Having smaller families than those in which most of them were raised would certainly represent a significant change from their parents' lives. This smaller and more definite stated number is part of a hoped-for future that the younger generation has for themselves which is largely influenced by the western-style family

systems that they are exposed to through the media and partly by economic realities. As two young women explained:

These days when you watch movies and even in television commercials, you see that people have two children, usually a boy and a girl. So when you get two children that should be fine.

If God permits, I'll like to give birth to two children. It also depends if I'll get someone to support me or if I can get a good job. What is important though, especially in today's world, is that one would first have to get gainfully employed and secure one's accommodation before one should think about getting married or having children. But if you do not know your left from your right and you proceed to get married, you end up bringing problems to yourself and your parents as well.

Two things become apparent from the above examples. The first is that the exposure to lifestyles of people in affluent countries through the media has introduced new value systems in the developing world. This provides support to Mensch et al.'s (2005) observation that the increasing exposure to Western media in the developing world affects common norms and alters the life expectations of young people. The second issue here relates to the fact that economic circumstances tend to over-ride religious ideals, particularly among younger generations. Especially for young men, the ability to support a family through stable employment is a necessary precursor to family formation. Because agriculture is no longer the main economic activity among most contemporary men, it takes a much longer time to attain such economic independence. With a shift in the economy, young men, and increasingly young women, had to gain the education and

skills necessary to participate in an increasingly technical and information-based economy. The following is exemplary of the views of the younger generation:

For now I'm not thinking about marriage at all. I only think about how best to complete my education and get a good job to cater for myself and my parents.

I will be ready for marriage and child birth after I have completed my degree and have begun working. At that time I'll seize any marriage opportunity that will come my way.

This view was also shared by the older generation when they compared the economic situation during their youthful days with what currently pertains. The following quotations are illustrative of this position:

Those days the world was sweet. You wouldn't have to spend so much money to buy a tin of fish, for instance. Clothing wasn't that expensive. But now, things have become so expensive and life is so hard.

Things have changed a lot. Nowadays things have become very expensive unlike those earlier days and these have made life as a whole a bit more difficult these days.

7.3.2 Growing Individualism

The location of individuals in the broader social structure influences the events they experience with the passage of time. For example, altered levels of income affect individual decision making processes, as Elder (1974) demonstrated in terms of the effects of the Great Depression. The present economic conditions, coupled with the declining levels of material support from extended family members, as observed by Aboderin (2004) in Ghana, have tended to make the lives of the contemporary young

men and women more independent relative to their older generations. Reflecting on his parents' inability to cater for his needs, one respondent expressed this sentiment:

Personally I do not know what is termed as motherly love or fatherly love. This is because right from my childhood, my parents never showed me anything that indicates that they love me. I have decided to continue my education but my parents say there is no money that is why I am still staying at home. So I have no desire to ever please my parents. This kind of behaviour is as a result of how parents interact with their wards. For instance, if you don't have money as a parent, there is a way to talk about it to a child who's in need. You don't have to shout at the child for making demands you cannot meet. This tends to make the child become timid and will never like to share his or her problems with the parents.

The younger generation asserted this independence from familial expectations thus:

It is always best to have a job before you marry. If I'm 30 years and still don't have money and someone decides to put pressure on me to marry, then it means that person is willing to provide the woman with chop money. But once no one will be willing to do that, no one can put pressure on me to marry. The days when parents could even arrange marriages are over.

For me, the ideal time for marriage is when you feel you have the capability to support yourself, your wife and your children.

While acknowledging the shifts in economic realities in the contemporary era, the older generation also seems to attribute this growing sense of individuality among the younger generation to the process of globalization. Informants belonging to the older generation echo the following views:

Things have changed so much these days, and you cannot push someone into getting married. These days, a woman would first have to find a job so that she can supplement her husband's efforts. In addition, it is even difficult to counsel the youth of today so if you say something one or two times it should end there lest you incur their displeasure. They say they are in a computer world. I can only give you guidance based on my own experience in life, but if you decide to go your own way, that's your own cup of tea.

The youth of today pride themselves of living in a computer world and therefore put on the latest fashions. We cannot and they tease us of being "colo."³⁵

Edgar (2004) maintains that the globalization process, particularly the immediacy and universality of communication networks, is largely responsible for the recent rise in individualism and the need to negotiate one's own life course in non-Western societies. Interviews were designed to allow the influence of globalization to arise in the narrative. I addressed the issue directly toward the end of the interview when participants were asked how they think the growth of economic and cultural networks through communications technology and media networks had impacted their life choices. While the older generation seems remotely affected by the rapid economic and sociocultural changes brought by the forces of globalization, this new development has had profound impacts on the lives of the younger generation. For the younger generation, this situation can be both a blessing and a curse.

On the positive side, some individuals use the modern information technologies as a quick and easy source of knowledge and opportunities. Several participants, particularly

³⁵ "Colo" is a colloquial word used in reference to the era when Ghana was under British colonial rule. It is generally used to describe something or someone considered to be old-fashioned.

those in post-secondary education, indicated using the internet to access information to write their project works. Others also frequented internet cafés to browse graduate school programmes abroad, job advertisements, and local and international news items.

On the negative side, these new technologies have introduced new forms of greed and other dangers that lead individuals away from conventional family norms. In the following section, I examine how traditional beliefs and practices have intertwined with the modern technologies to culminate in a deviant practice referred to as “*sakawa*”³⁶ in the local Ghanaian parlance.

7.3.3 Interplay of Tradition and Change

Information and communication technology (ICT) penetration and adoption is on the increase across Africa (International Telecommunications Union 2008). Although rudimentary access to internet and other online facilities in most of sub-Saharan Africa still depends on the use of public internet access points such as cyber cafés, nations like Cameroun, Ghana, and Nigeria now have facilities for mobile internet access through satellite connections and fiber optic cables (Boateng et al. 2011). This increase in penetration of ICT has spurred a growth in ICT-based businesses and services especially along the west coast of Africa. Unfortunately, this level of globalization being facilitated by ICTs has simultaneously given rise to cyber criminality (Atta-Asamoah 2009). In a region characterized by endemic poverty, coupled with rising youth unemployment rates,

³⁶ Sakawa is a term derived from the Hausa language which means ‘put inside.’ It has generally come to represent internet fraud.

the flamboyant display of wealth by cyber criminals has become a lure to poor and unemployed youth desperate to share in the wealth.

It is indeed common to find in the Ghanaian media, particularly the print media, reports about foreigners who claim to be victims of marriage scams perpetuated by internet fraudsters residing in Ghana (see for example, *The Chronicle* 2013) as well as reports about the traumatizing experiences of some Ghanaian youth who had engaged in mysterious rituals pertaining to *Sakawa* (see for instance, GhanaWeb 2012). Given these developments, it was perhaps unsurprising that the issue of internet fraud was frequently alluded to by the younger generation. The pervasiveness and lucrative nature of the cyber crime was a recurring theme among the younger generation, and was best captured by two young male participants who have personally attempted it before:

Anything that has advantages also has disadvantages. You just have to select whatever you think is good for you. Personally, when I see that they're showing a football match on the television, there is no way I'll watch it. What I like are movies, but I do not like love movies. What I like best are the Chinese movies which are full of comedy. I do not mind watching them the whole day. As regards the internet, though I have learnt a lot about the computer, nothing can influence me to go into doing sakawa. I mainly go to the internet just to chat with friends. I do not want to be involved in acts that will create problems for me in the future. I know people who go to the internet to do sakawa but I want to steer clear away from that. There was a time that someone influenced me but I realized that it was getting dangerous.

They're doing it. It is now very easy to see a young guy with at least three cars. The one who taught us at first is now living in America.

As a consequence, there has been a radical shift in value orientation from the traditional indicators such as marriage and childbearing as markers of the transition to adulthood to the situation where affluence and material possessions have become the cultural goal. As one of the young men interjected:

It's because if you have money you have everything. In today's world if you do not have cars and do not dress in expensive clothing, nobody will ever give you the recognition and respect you deserve.

There are several *modus operandi* but the one that resonates well with this research interest involves the practice whereby men pose as women to chat with unsuspecting victims online. Such imposters pretend to be in love with their supposed 'boyfriends.' The boyfriend is asked to send gifts and huge sums of money for a marriage to be established. In order to succeed, perpetrators indulge in occult ritual practices to enhance their potential to defraud people and become wealthy. Another young male explained this *modus operandi* this way:

It begins in the form of a penpal, whereby you send out letters. If you want it faster, you go to the internet and upload a picture of a woman with your address attached so that a company will publish it. It is important that you keep a copy of that picture so that when someone abroad contacts you, you can be able to send the exact same picture to him. If the person is interested in having you as a partner you begin to communicate until such a time that he will come over to visit or send you invitation letters for you to go and visit. When it gets to this stage, you would have to back it with a spirit. If you do not go to a fetish to support you, it may not succeed. For instance, you can give the picture to the fetish to chant over it. The fetish will then give you some time to come for the picture. With those powers backing the picture, as soon as you mail it and the

person at the other end receives it and takes a look at it, the person will automatically become confused and whatever you demand the person will do. Another thing is that they are not interested in men, so once you send out a woman's picture you also have to hire a woman who will be corresponding with the other person on the phone. By this business, most of the guys have hit big fortunes.

The literature so far has only explored the negative effects of the rising internet fraud on the economy, including loss of corporate and national image (Hassan, Lass, and Makinde 2012), setbacks on business transactions, and reduction in foreign investments (Diekmann, Jann, and Wyder 2002). However, the effect of *sakawa* on marriage and reproduction has received no articulation. This issue becomes manifest when one examines the terms and conditions associated with the alleged occult rituals that are performed to facilitate the wooing of their unsuspecting partners online. Those who engage in it are required to follow certain rules and live a certain lifestyle, such as swearing an oath of secrecy to fully abide by *sakawa* rules including, *inter alia*, spiritually sacrificing one's manhood or abstaining from sexual intercourse (which manifests as either impotence or infertility). One young male participant of this study who admitted ever venturing into *sakawa* but quickly opted out described the conditions and consequences as follows:

The danger has to do with the consultation with the fetish. They can make several demands from you. Sometimes they could instruct you not to bathe and sometimes too after getting the money they can instruct you never to have an affair with a woman or that you should never own a house, but that you're supposed to remain a tenant in somebody's house for the rest of your life even though you have plenty of money. When they ask you not to bathe again, then it

means you constantly have to put on a perfume. When people find you that way they will suspect you have signed an evil pact and this is a big disgrace. You may also not know the person you are dealing with from the other end. It is possible that person may possess a stronger spirit that can overcome your fetish backing. I know of a guy who made a fortune of about thirteen thousand Cedis and when the victim found out that he's not a woman as purported, the victim asked for a refund of all the money the guy had received or else he'll go mad. The guy couldn't reimburse the money and is now mad.

It became very apparent from the interviews that while among the older generation, the transition to adulthood was more complete once childbearing was underway, preferably within the context of marriage; the younger generation seems to equate adulthood with the ability to participate fully in the consumerist culture. The development of new value orientations can be considered a consequence of globalization. This adaptation to concrete situations suggests that the globalization process has indeed allowed the life course of contemporary young people to become more flexibly structured within the Ghanaian context. It thus lends credence to the primacy of sociocultural time in the life course trajectories of individuals, with all other elements of the life course (human agency, linked lives, and context) coalescing through the funnel of sociocultural timing (Giele and Elder 2005).

7.4 Conclusion

This chapter presented findings from the qualitative component of this study. The results were based on an analysis of 30 in-depth interviews that were conducted with parents and their resident adult children in Ghana in the summer of 2010. The interviews

were conducted with individual males and females ages 15 to 64 years in Aburi in the Eastern Region of Ghana. The rationale for incorporating qualitative data was so that the researcher could delve deep into the experiences, perceptions, emotions, beliefs, and behaviours of respondents, and provide a more nuanced understanding of the contextual factors that influence family formation processes in Ghana.

The qualitative data were thematically analyzed along three main organizing themes: (1) importance of institutional influences; (2) growing individualism; and (3) interplay of tradition and change. It was observed that the religious institutions had the most salient impact in shaping family formation decisions in Ghana, even though this effect seemed to be waning among the younger generation as a result of new emerging value orientations and economic realities. Among the older generation, the onset of childbearing, often within the context of marriage, marked the transition to adulthood. In contrast, the younger generation seemed to equate adulthood with the ability to participate fully in a consumerist culture, due largely to their exposure to globalizing forces. Thus, unlike their older counterparts who marked an adulthood transition with the onset of childbearing, the younger generation (both young men and young women) seemed to equate adulthood with the ability to participate fully in a consumerist culture. Among the younger generation, there seems to be an emerging radical shift in value orientation from marriage and childbearing as markers of the transition to adulthood to the situation where affluence and material possessions have become the cultural goals. With limited economic opportunities for social mobility, the desire to innovate often

entails an involvement in certain occult practices such as spiritually sacrificing one's manhood or abstaining from sexual intercourse altogether, which manifests as either impotence or infertility.

CHAPTER 8

SUMMARY AND CONCLUSION

8.1 Overall Summary of Study

A growing body of research has documented a range of structural and individual level factors that have shaped family formation processes over the past couple of decades in the developing world. Prominent among these are the rising levels of educational attainment, urbanization, decline in arranged marriages and parental involvement in the affairs of their children, rising cost of dowry, and squeeze in the marriage market. These notwithstanding, scholars have yet to investigate the extent to which the rapid economic and sociocultural changes have affected the timing of marriage and parenthood among different birth cohorts in the developing world. This study has argued that this neglect is unfortunate because the general uncertainties relating to employment and job stability, coupled with the shifting gender roles that have been occasioned by the globalization process, could hold important ramifications for the lives of individuals in the developing world.

The study's rationale was based on the growing realization that the decisions taken by the burgeoning population of young people have implications for reproductive health and other social policies and programmes in the developing world. In Ghana, for example, the median age is 17.5 years, with about 21 percent of its population falling within the 15-24 age group. The preponderant youthfulness in the Ghanaian society plays an important role in national socioeconomic development since attitudes towards

reproduction, work, family size, and health-related matters have profound implications for the size and characteristics of the future population of the country.

Guided by the life course theoretical framework, the study utilized a mixed method approach to analyze the global as well as local factors that influence the timing of first marriage and first birth among two birth cohorts in Ghana. The first stage involved a quantitative analysis of multiple Ghana Demographic and Health Survey (GDHS) data sets. The 2003 and 2008 GDHS were pooled, yielding an effective sample size of 10,607 women aged 15-49 years and 9,583 men aged 15-59 years. These surveys, respectively, represent the fourth and fifth cycles in a series of surveys undertaken by the Ghana Statistical Service in collaboration with Macro International, beginning in the late 1980s. Both surveys are nationally representative, stratified, self-weighting probability samples. DHS data are known for their high quality and the Ghanaian case is no exception. The study identified two birth cohorts: (1) those born between 1950 and 1960 and (2) those born between 1980 and 1990. Judging from the time intervals, it was assumed that those born between 1950 and 1960 could be parents to those born between 1980 and 1990.

Log-normal AFT models were used to examine the transition time to first marriage and first birth in the multivariate context. The log-normal distribution was chosen on the theoretical basis that the timing of marriage and fertility are normally distributed in the population (Halli and Rao 1992; Trussell and Richards 1985). This was reinforced by a further exploratory analysis that showed the hazard of first marriage and first birth as rising initially and decreasing thereafter. Also, on the basis of exploratory

analysis and the concern about the effects of unobserved heterogeneity in event history models, frailty models were estimated for each transition including a term for unobserved heterogeneity.

Other parametric models (Weibull, exponential, and Gompertz) that do not assume a non-monotone distribution of the hazard function were run alongside the log-normal distribution function for purposes of comparison. For these parametric models that do not assume a non-monotone distribution of the hazard function, the likelihood ratio chi-square test that θ equals zero was always significant at the 5 percent alpha level. This indicates the presence of unobserved heterogeneity. The frailty variance was, however, not always significant when an individual hazard function that is non-monotone (log-normal) was specified. It became apparent that heterogeneity may be attributed mainly to the passage of time, a condition that is controlled for in a log-normal model. The implication here is that when the most optimal hazard distribution function is specified in an event history model, it significantly reduces the problem of unobserved heterogeneity.

For the non-parametric analysis, results from the Kaplan-Meier life table analysis suggested a convergence in marriage and parenthood timing between contemporary young women and young men compared with their older cohort. Among the older birth cohort of men and women, there was an 8-year gap in the median age at first marriage (18 years for women and 26 years for men). This gap has converged among the younger cohort: 22 years for women and 21 years for men. The transition to parenthood closely

mirrored the pattern for marriage, where the 7-year gap in the median age at first birth (28 years for the older men and 21 years for the older women) has reduced to a 1-year difference (22 years for the younger men and 21 years for the younger women).

The observed difference in the timing of first marriage and first birth between the older and younger male cohorts was attributed to cohort differences since the groups grew up in different sociocultural periods. The increase in early marriage and first birth among contemporary young men could largely reflect the recent decline in the practice of polygyny, a practice that restricted access of young men to sexual partners and thereby delayed their entry to marriage and parenthood (Reniers and Tfamily 2012).

Results from the multivariate analysis allowed us to examine the extent to which employment relations and media exposure have affected the timing of first marriages and childbearing of different birth cohorts in Ghana. To assess the residual effects of the proxy globalization variables (occupational type and media exposure) on the transition to first marriage and first birth, several covariates were introduced as controls in the multivariate models. Consistent with the expectation that insecure employment positions will delay decisions of a long-term commitment such as marriage and parenthood, the results showed that women who occupy employment positions that are managerial or professional in nature tend to have a longer transition to marriage and particularly parenthood. Although the effects were not statistically significant in the multivariate models, judging from the strength and direction of the coefficients, one can speculate that the widespread uncertainty that characterizes labour-market relations in the West might

be apparent within the Ghanaian context. Like their counterparts in the developed world, women in the developing world are gaining more employment opportunities but are still disproportionately involved in forms of employment with high turnover rates (Brecher, Castello, and Smith 2000; Eitzen and Zinn 2006; Kay et al. 2013; Moghadam 1999).

It is important to stress that employment positions that are managerial or professional, which are often characterized by high turnover rates, were the only occupational types that consistently were associated with a longer transition to marriage and first birth among females. This suggests that it is not just a matter of labour force participation *per se* that affects family formation decisions of individuals as proposed by Becker (1981). Economic security rather seems to be a more important factor. This finding therefore lends credence to Oppenheimer's (1988) supposition that individuals are more likely to make long-term commitments, such as entering a marriage or becoming a parent, if their future career prospects are predictable and if they can rely on a secured economic footing.

The results showed that high exposure to the media prolongs the timing to first marriage and first birth for both birth cohorts, regardless of gender, with the effect being more pronounced particularly among the younger cohort. By exposing individuals to non-traditional roles as well as alternative family arrangements, the media plays a considerable role in expanding individuals' life choices. I argue that the primary effect of the media on the timing of first marriage and first births relate to the development of

value orientations that favour personal fulfillment over more traditional roles of marriage and childbearing.

Regardless of the model specification, entry into marriage and parenthood in Ghana was found to be more affected by demographic, socioeconomic, and sociocultural processes. For both birth cohorts, irrespective of gender, entry into parenthood was significantly accelerated if the individual first married before the age of 20 years. At the same time, having a first child before 20 years of age significantly accelerated the transition to marriage. This strong interrelationship between the timing of first marriage and first birth corroborates finding from prior research (see for example, Francesconi and Golsch 2005; Gyimah 2009; Mensch et al. 2005).

Beyond these demographic regularities, the effects of certain socioeconomic and sociocultural covariates on the transition to first marriage and first birth were found to vary by cohort. These covariates included educational attainment, place of residence, and kinship type. Although higher educational attainment associated with delayed onset of marriage particularly among women, results from the models suggested that the effect was more pronounced among contemporary young women. The risk ratio for education among the contemporary young women was even stronger in the model on the transition to the first birth (from 1.14 to 1.22). I contend that having a baby may conflict with educational and formal employment career. The pronounced effects of education among the younger cohort on the transition to marriage and parenthood was attributed to the collapse of traditional cultural barriers that in the past saw marriage, and particularly

motherhood, as the ultimate life time achievements for women. Similarly, urban residence was found to have a more pronounced effect on the transition to marriage among the younger cohort, particularly among young women. The effect of urban residence on the timing of first birth was similar to that of first marriage. Generally, urban residence was found to be associated with later transition to first marriage and later childbearing.

While affiliation with patrilineal groups was associated with delayed transition to marriage and parenthood among the older cohorts, the effect was reversed among the younger cohort. For the younger cohort, affiliation with a patrilineal group tended to be associated with a faster timing to first marriage and first birth compared with their counterparts belonging to a matrilineal group. Even though the differences were not statistically significant at conventional alpha levels, this finding suggests that the effect of sociocultural factors on the transition to adult roles vary by cohort. Among the older cohorts, affiliation with patrilineal groups delayed the entry into marriage and parenthood because that generation was more likely to uphold the strict cultural restrictions that governed marriage and sexuality. With increasing awareness of individuals' civil liberties and freedom from traditional cultural norms and restrictions, affiliation with a patrilineal group seemed to have a reduced effect on the transition to first marriage and first birth among contemporary young men and women in Ghana.

It is important to acknowledge that the measure of lineage used in this dissertation departs from Murdock's *Atlas of World Cultures* (Benefo et al. 1994; Murdock 1967) and

like Taky and Dodoo (2005) relied solely on a unidimensional indicator of lineage based on ethnic affiliation. In the variable coding, all individuals who self-reported to be Akan, for whom most transmit roles, statuses, and property through the femal line, were categorized as belonging to the matrilineal group. However, the Akan is an umbrella body comprising a number of groups, with a small fraction, specifically the Akwapims, known to have a bilateral (both matrilineal and patrilineal) rather than a unilateral kinship system (Nukunya 2003). Thus, classifying all Akans as matrilineal is an imperfect measure of lineage and could potentially conceal the true effect of matriliney on the timing of marriage and parenthood.

The second stage involved a qualitative analysis of 30 in-depth interviews conducted with parents and their resident adult children in Ghana in the summer of 2010. The interviews were conducted with individual males and females ages 15 to 64 years in Aburi in the Eastern Region of Ghana. The qualitative data were thematically analyzed along three main organizing themes: (1) importance of institutional influences; (2) growing individualism; and (3) interplay of tradition and change. It was observed that within the study context, the religious institution had the most salient impact in shaping individual life course decisions, even though this effect seemed to be waning particularly among the younger generation due to new emerging value orientations and economic realities.

Secondly, it was revealed through the qualitative interviews that among the older generation, the transition to adulthood was more complete once childbearing was

underway, typically within the context of marriage. In contrast, due to the accelerating flow of mass media images, presented through soap operas, music videos and the internet, the younger generation seems to equate adulthood with the ability to participate fully in a consumerist culture. This is happening in the face of limited economic opportunities for social mobility among the youth in Ghana. Meanwhile the electronic media bombards Ghanaians with constant images and messages of prosperity. Because religion plays a central role in the lives of Ghanaians, the recent rise in the prosperity gospel³⁷ in Ghana with roots from North America (see for example, Wright, Azumah, and Asamoah-Gyadu 2009), has served to legitimize the craze for material possessions among the youth in Ghana. Thus, while the influential role of the religious institution was seen as a standardizing force in the life course of the older generation, secular developments, particularly in the areas of education, career aspirations, and information technologies, have made the life course trajectories of the younger generation more individualized and diverse. This study argues that the ability to adapt to contextual influences has allowed the life course of contemporary young people to become more flexibly structured within the Ghanaian context, thus lending credence to the important role of sociocultural timing in an individual's life course trajectory (Giele and Elder 2005).

8.2 Policy Implications

Given the medium term objective of the Government of Ghana, as indicated in the Vision 2020 document, is to achieve a middle income status by the year 2020, it is vital

³⁷ Wright et al. (2009) define prosperity gospel as the teachings that project material welfare as a sign of God's blessings.

to develop and harness the potential of young people in the country. However, there is an absence of a more holistic youth policy in Ghana that takes into account the multi-faceted nature of the globalized world and how to incorporate emerging behavioural patterns into the developmental agenda. This serves as a drawback to the efforts to promote responsible adulthood and parenthood in Ghana. There is the need to educate the youth on matters that directly affect their wellbeing in order to guide them towards responsible adulthood. The formulation of a comprehensive youth policy in Ghana should take on board the reality of individuals' agency as well as the broader structural constraints that impact either positively or negatively on their lives.

The findings from this study also suggest that policies and programmes that encourage young people, particularly women, to continue schooling up to at least the secondary level will be useful in delaying early childbearing, and go a long way in helping to reach the total fertility rate (TFR) target of 3.0 by the year 2020 as stipulated in the 1994 Ghana National Population Policy. Although there have been some gains in female educational attainment in Ghana (Takyi and Addai 2002), the educational reforms that accompanied the structural adjustment programmes of the 1980s have tended to make education more expensive for the rural majority. Household financial constraints can considerably curtail female enrolment rates in a patriarchal setting such as Ghana. As Gyimah, Maxim, and White (2005) succinctly noted concerning Ghana:

With the emphasis on cost-sharing in education in the face of abject poverty, many parents may be likely to educate their sons at the expense of their daughters, mainly because boys are considered a greater economic asset to the family (p. 139).

The Capitation Grant introduced countrywide in the 2005/2006 academic year, whereby the government absorbs school fees of all pupils in public basic schools, should be extended to cover secondary schooling in the country. Also the implementation of affirmative action programmes that help in bridging the gender gap in students' enrolments should be sustained and vigorously pursued.

8.3 Methodological Implications

Methodologically, the results underscore the need to properly specify the shape of the hazard function in event history models. In demographic applications, parametric models (exponential, Weibull, Gompertz, log-normal, and log-logistic) are often used to model transition data. In such applications, the hypothesized shape of the hazard function dictates the kind of parametric model to be used. It is possible that such hypotheses, while realistic, will not be anchored in sound theoretical and empirical grounds. This study has demonstrated that properly specifying the distribution of the hazard function, based primarily on substantive theory and empirical evidence, significantly reduces the problem of unobserved heterogeneity that is inherent in event history models. This is particularly the case when a set of theoretically relevant covariates capture much of the variance in an outcome variable, but then heterogeneity is still induced due to the passage of time (Gutierrez 2002).

Also, pursuing a mixed-methods approach helped to uncover the important role the religious institution plays in family formation processes in Ghana. Data from the cross-sectional survey had denominational affiliation as the only measure of religion,

whose effect was found to be statistically insignificant in the multivariate models. This may be due to sampling variability or the fact that the various religious groups in Ghana are becoming more alike in terms of their family formation ideals. Reliance on the cross-sectional survey data alone could have clouded our understanding of the salient influence of the religious institution on family formation processes in Ghana.

Consistent with Francesconi and Golsch's (2005) quantitative analysis, the proxy globalization variables were found to delay family formation decisions for women, but had no impact on family formation decisions of men. However, the qualitative component of this study had revealed that the quest for material status, inflamed by the processes of globalization, affects family formation processes of young men and young women in an equal measure within the Ghanaian context. Unlike their older counterparts who marked adulthood transition with the onset of childbearing, preferably within the context of marriage, the younger generation (both young men and young women) seemed to equate adulthood with the ability to participate fully in a consumerist culture, due largely to their exposure to globalizing forces. Among the younger generation, there seems to be an emerging radical shift in value orientation from the traditional indicators such as marriage and childbearing as markers of the transition to adulthood to the situation where affluence and material possessions have become the cultural goal. With limited economic opportunities for social mobility, the desire to innovate often entails an involvement in certain occult practices such as spiritually sacrificing one's manhood or abstaining from sexual intercourse altogether (which manifests as either impotence or

infertility). These practices tend to proscribe marriage, and are anathema to other forms of conventional family living.

8.4 Limitations and Directions for Future Research

As with any project, there are always shortcomings due to data or time constraints. One data limitation of this study is that the measure of religion was limited to affiliation alone, which is rather crude. This is because affiliation *per se* may not capture all the specific religious beliefs and practices relevant within the Ghanaian Context. Large-scale quantitative studies employing multiple measures of religion, such as frequency of church attendance (religiosity), subjective views about God, and the extent of interactions between clergy and lay (see for example, Yeatman and Trinitapoli 2008) are needed to examine the precise mechanism through which religion impacts family formation decisions. These aspects of religiosity may capture characteristics that tap directly into personal moral values and habits that would otherwise be unobserved.

Another key limitation of this study, which is also common in this area of research, is the lack of longitudinal data for analyzing change over time. The cross-sectional survey only measures variables at the time of the survey, and therefore makes it impossible to determine the temporal ordering of variables for purposes of causal inferences. In order to model change in behavioural patterns and lifestyles, one would ideally need longitudinal data that describe how each individual in the sample changes over time. However, due to time and logistical constraints, it was practically impossible to gather longitudinal data for this study. As Singer and Willett (2003) argue, using cross-

sectional data to describe differences among individuals of different ages to make generalizations about change over time is problematic. This is primarily because cross-sectional studies confound age and cohort effects and tend to be prone to selection bias. For this reason, it would be beneficial to channel research grant funding into the collection of longitudinal data on the timing and sequencing of demographic events in the developing world.

Another major limitation worth acknowledging is the fact that the proxy measures of the globalization process used for the quantitative analysis of this study were severely limited in their scope. The study mainly operationalized the concept of globalization only in terms of the increased volatility in certain occupational categories due to the increasing international integration of economic activity (as proxy for the economic component of globalization), and the emergence of international/interregional networks and systems of interaction and exchange through the activities of the media (as proxy for the cultural component of globalization). Although prior studies have used similar approaches as discussed earlier in the dissertation, the use of single indicators for these broad concepts could be lacking in content validity. Future studies could gain more from using multiple indicators to capture the different dimensions of the globalization process. For example, future studies interested in examining the effects of the economic aspects of globalization on family formation processes could utilize a set of quantifiable indicators proposed by the Organization for Economic Cooperation and Development (OECD) to gauge the intensity and magnitude of the economic globalization process. These set of indicators

are based on national data sources and include information on the extent of internationalization of trade and investment, economic activity of multinational enterprises, and the internationalization of technology and knowledge (OECD 2010). These indicators can be converted into an index which, when yields a strong Cronbach's alpha, could be used as a more valid measure for economic globalization. This approach could shed more lights on the effects of economic globalization on family formation processes in the developing world, and also make for a better comparison between OECD and non-OECD countries.

Even though the study clearly benefitted from supplementing quantitative survey analyses with insights derived from qualitative work, including helping to provide more nuanced understanding of the contextual influence of the religious institution on marriage timing, mixed methods should ideally target the same sample used in the survey sampling (see for example, Kay et al. 2013; Leahey 2007). This was, however, not the case with this study, and should therefore be noted as a limitation. Also, it needs to be acknowledged that the qualitative component of the study was based on a nonprobabilistic sampling approach which does not permit generalizations to the larger population. Future studies should endeavour to undertake a large scale representative sampling approach so that cautious inferences can be made to the larger population in the study area.

In spite of these challenges, this study has been able to show that the spread of information technology, through the processes of globalization, has had differential

effects on two birth cohorts in Ghana. Life course scholars are concerned with how changes in socioeconomic and sociocultural factors affect the lives and decisions of individuals belonging to different birth cohorts. Using the life course theoretical framework, we are able to understand the extent to which individuals construct their lives within social events and constraints. This study has shown that while religion played an important role on family formation decisions among the older generation; the effects of education and information technology on family role transitions have been more pronounced among contemporary young people in Ghana. The recent move to a more consumerist and career-oriented lifestyle has created conditions for alternative pathways to adulthood that undercut traditional family norms. By assessing the dynamics of timing of marriage and parenthood among different birth cohorts, this dissertation underscores the impact of structural and institutional processes in providing insights into family formation processes during a period of social change.

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Appendix A

Letter of Information

“Contextual influences on family role transitions in sub-Saharan Africa: The case of Ghana”

This research is being conducted by Jones Kwaku Adjei under the supervision of Prof. Stephen Obeng Gyimah³⁸, in the Department of Sociology at Queen’s University in Kingston, Ontario, Canada. This study has been granted clearance according to the recommended principles of Canadian ethics guidelines, and Queen's University policies.

What is this study about? The purpose of this research is to investigate the factors that influence youth transitions to adulthood in Ghana. The study will require about forty minutes of your time to participate in an interview which will be tape recorded. Though the interview will contain sensitive questions, adequate steps are provided to ensure that there will be no psychological as well as physical, economic, or social risks associated with this study.

Is my participation voluntary? Yes. Although it would be greatly appreciated if you would answer all questions as frankly as possible, you should not feel obliged to answer any question that you find objectionable or that makes you feel uncomfortable. You may also withdraw at any time with no effect on your benefits from participating in this study. Guaranteed benefits include the right to request final results from the study as well as the provision of snacks in the form of compensation for respondents’ time.

What will happen to my responses? We will keep your responses confidential. Only researcher and his supervisor will have access to this information. The interviews will be tape recorded and the tapes will be safely kept in a locked filing cabinet in the researcher’s office at Queen’s University immediately after fieldwork. Interviews will be transcribed within a month after data collection, and then the tapes will be completely destroyed. The information will be used in a dissertation, and may also be published in professional journals or presented at scientific conferences, but any such presentations will be of general findings and will never breach individual confidentiality. Should you be interested, you are entitled to a copy of the findings.

Will I be compensated for my participation? Yes, you will receive snacks in the form of refreshments after the interview. This is regardless of whether you complete the interview or not.

³⁸ Dr. Stephen Obeng Gyimah was my primary supervisor during data collection, entry, and analysis. Sadly, he passed away suddenly. Dr. Fiona Kay replaced him as my substantive supervisor.

What if I have concerns? Any questions about study participation may be directed to Jones Kwaku Adjei at the Department of Sociology, Queen's University, Kingston Ontario, Canada, or 6jka@queensu.ca. Any ethical concerns about the study may be directed to the Chair of the General Research Ethics Board at chair.GREB@queensu.ca or 001-613-533-6081.

Again, thank you. Your interest in participating in this research study is greatly appreciated.

Appendix B

Consent Form for Parent in Household

“Contextual influences on family role transitions in sub-Saharan Africa: The case of Ghana”

1. I have read the Letter of Information and have had any questions answered to my satisfaction.
2. I understand that I will be participating in the study called “Contextual influences on transitions to adulthood in sub-Saharan Africa: the case of Ghana”. I understand that this means that I will be asked to participate in a forty minute interview which will be tape recorded.
3. I understand that my participation in this study is voluntary and I may withdraw at any time. I understand that every effort will be made to maintain the confidentiality of the data now and in the future. Only the researcher and his supervisor will have access to this information. The information will be used in a dissertation, and may also be published in professional journals or presented at scientific conferences, but any such presentations will be of general findings and will never breach individual confidentiality. Should you be interested, you are entitled to a copy of the findings.
4. I am aware that if I have any questions or concerns about the study, I may contact Grad Student; Jones Kwaku Adjei at the Department of Sociology, Queen’s University, Kingston Ontario, Canada, or 6jka@queensu.ca. Any ethical concerns about the study may be directed to the Chair of the General Research Ethics Board at chair.GREB@queensu.ca or 001-613-533-6081.

I have read the above statements and freely consent to participate in this research:

Signature: _____

Date: _____

I agree to have the interview tape recorded:

Signature: _____

Appendix C

Consent Form on Behalf of Minor in Household

“Contextual influences on family role transitions in sub-Saharan Africa: The case of Ghana”

1. I have read the Letter of Information and have had any questions answered to my satisfaction.
2. I understand that my ward who is a minor will be participating in the study called “Contextual influences on transitions to adulthood in sub-Saharan Africa: the case of Ghana”. I understand that this means that he/she will be asked to participate in a forty minute interview which will be tape recorded.
3. I understand that his/her participation in this study is voluntary and he/she may withdraw at any time. I understand that every effort will be made to maintain the confidentiality of the data now and in the future. Only the researcher and his supervisor will have access to this information. The information will be used in a dissertation, and may also be published in professional journals or presented at scientific conferences, but any such presentations will be of general findings and will never breach individual confidentiality. Should you be interested, you are entitled to a copy of the findings.
4. I am aware that if I have any questions or concerns about the study, I may contact Grad Student; Jones Kwaku Adjei at the Department of Sociology, Queen’s University, Kingston Ontario, Canada, or 6jka@queensu.ca. Any ethical concerns about the study may be directed to the Chair of the General Research Ethics Board at chair.GREB@queensu.ca or 001-613-533-6081.

I have read the above statements and freely consent to allow my ward to participate in this research:

Signature: _____

Date: _____

I agree to have interview with my ward tape recorded:

Signature: _____

Appendix D

Interview Guide

Pre-Interview Questionnaire

Date; Gender; Age; Occupation; Highest Level of Education; Religious affiliation; Marital status

Biographical questions

Q: Where were you born? Where did you grow up? Where have you lived? What schools have you attended? What jobs have you had? How did you get your first job? When and where did you get your first job?

Family questions

Q: Tell me about any stories you know about your family? How did your parents come to meet and marry? What are some of your childhood memories?

Adulthood questions

Q: When did you first realize you can be considered an adult? What was the indication? Was there any traditional ceremony to commemorate your transition to adulthood? What were your impressions upon discovering that you were no longer a child? Do you see yourself as a complete adult now? Where/how did you meet your partner? What was the important factor in selecting/accepting your partner? How many children do you have? Ideally, how many children did you want to have? What was your experience like after having your first child? *For younger generation probe for sexual activity, marriage and parenthood decisions.

Contextual influences

Q: Do you compare yourself with your peers? How would you describe a typical youth of today? What do you think about the media/internet? How have your exposure to the internet, mobile phone, TV, foreign movies and music impacted your life choices? Are there any governmental policies that ever shaped your life directly?

Closing

Is there anything more you will like to add?
Do you have any questions for me to answer?
Thank you again for your time.

Appendix E
Correlation Matrix for Control Variables

	Marriage	First birth	Region	Place	Religion	Occupation	Birth cohort	Education	Kinship	Media	Wealth
Marriage	1.00										
First birth	0.11	1.00									
Region	-0.08	0.02	1.00								
Place	0.10	0.00	-0.24	1.00							
Religion	-0.01	0.00	0.18	0.00	1.00						
Occupation	0.07	0.02	0.02	-0.09	0.01	1.00					
Birth cohort	-0.42	-0.08	0.00	0.08	0.02	-0.22	1.00				
Education	0.17	0.01	-0.36	0.32	-0.19	-0.14	0.15	1.00			
Kinship	0.00	0.01	0.38	-0.15	0.20	0.03	-0.01	-0.35	1.00		
Media	0.20	0.02	-0.30	0.40	-0.07	-0.06	0.05	0.46	-0.25	1.00	
Wealth	0.12	0.00	-0.36	0.70	-0.06	-0.09	0.06	0.46	-0.26	0.54	1.00

Appendix F

Accelerated Failure Time Log-Normal Regression with Gamma Frailty

EXPLANATORY VARIABLES	Coefficient	<i>p</i> -value
Occupation		
Managerial	0.088	0.406
Sales	0.100	0.215
Agriculture	0.065	0.415
Skilled manual	0.086	0.334
Other	0.188	0.067
Not working (<i>reference</i>)		
Media exposure		
High	0.050	0.401
Medium	-0.051	0.298
Low (<i>reference</i>)		
SOCIOECONOMIC VARIABLES		
Education		
Secondary/higher	-0.031	0.535
Primary	-0.035	0.530
No education (<i>reference</i>)		
Household wealth		
Rich	-0.055	0.380
Average	0.006	0.909
Poor (<i>reference</i>)		
SOCIOCULTURAL VARIABLES		
Kinship type		
Patrilineal	0.099	0.021
Matrilineal (<i>reference</i>)		

[continued]

Appendix F continued

Religion		
No religion	0.110	0.000
Catholic	0.055	0.187
Pentecostal	-0.076	0.361
Muslim	-0.008	0.902
Traditional/Other	-0.007	0.934
Protestant (<i>reference</i>)		
GEOGRAPHIC VARIABLES		
Place of residence		
Urban	0.056	0.247
Rural (<i>reference</i>)		
Region of residence		
North	-0.211	0.000
South (<i>reference</i>)		
DEMOGRAPHIC VARIABLES		
Age at first birth		
Under 20	-0.055	0.000
20 and above (<i>reference</i>)		
Age squared	0.000	0.783
Constant	2.266	0.000
Sigma	0.423	
Log likelihood	-376.238	
Likelihood ratio chi-square	220.330	
Prob > LR chi-square	0.000	
LR test that theta = 0	0.029	0.220

Appendix G

Accelerated Failure Time Weibull Regression with Gamma Frailty

EXPLANATORY VARIABLES	Coefficient	<i>p</i> -value
Occupation		
Managerial	0.097	0.311
Sales	0.053	0.475
Agriculture	0.047	0.516
Skilled manual	0.067	0.412
Other	0.178	0.050
Not working (<i>reference</i>)		
Media exposure		
High	0.034	0.524
Medium	-0.060	0.175
Low (<i>reference</i>)		
SOCIOECONOMIC VARIABLES		
Education		
Secondary/higher	-0.022	0.622
Primary	-0.030	0.545
No education (<i>reference</i>)		
Household wealth		
Rich	-0.040	0.471
Average	0.002	0.958
Poor (<i>reference</i>)		
SOCIOCULTURAL VARIABLES		
Kinship type		
Patrilineal	0.087	0.023
Matrilineal (<i>reference</i>)		

[continued]

Appendix G continued

Religion		
No religion	0.078	0.314
Catholic	0.045	0.409
Pentecostal	-0.044	0.347
Muslim	-0.009	0.888
Traditional/Other	-0.017	0.827
Protestant (<i>reference</i>)		
GEOGRAPHIC VARIABLES		
Place of residence		
Urban	0.048	0.266
Rural (<i>reference</i>)		
Region of residence		
North	-0.188	0.000
South (<i>reference</i>)		
DEMOGRAPHIC VARIABLES		
Age at first birth		
Under 20	-0.489	0.000
20 and above (<i>reference</i>)		
Age squared	0.000	0.653
Constant	2.438	0.000
/ln_p	1.487	0.000
Log likelihood	-344.097	
Likelihood ratio chi-square	246.340	
Prob > LR chi-square	0.000	
LR test that theta = 0	1.004	0.000
