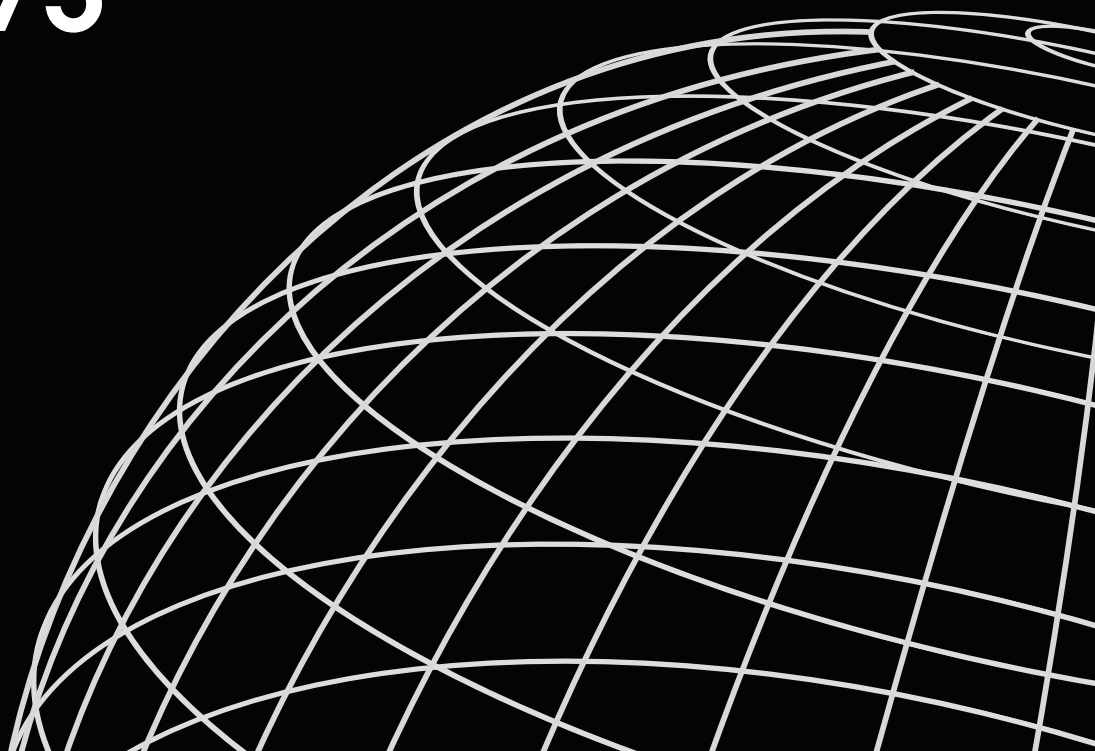




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TYOLOGIES AND TRAJECTORIES: A DESCRIPTIVE STUDY OF MEN'S REPRODUCTIVE LIFE COURSE

DHS ANALYTICAL STUDIES 75



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Typologies and Trajectories: A Descriptive Study of Men's Reproductive Life Course

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CONTENTS

TABLES	v
FIGURES	vii
PREFACE	ix
ABSTRACT	xi
ACRONYMS AND ABBREVIATIONS	xiii
1 BACKGROUND	1
1.1 Life Course Theory	1
1.2 Family Formation, Masculinity, and the Life Course	2
2 METHODS	5
2.1 Research Questions	5
2.2 Data	5
2.2.1 Country selection	5
2.2.2 Sample selection	6
2.3 Measures and Analytical Strategy	7
2.3.1 Family formation events	7
2.3.2 Economic variables	8
2.3.3 Social variables	8
2.3.4 Fertility-related variables	9
3 RESULTS	11
3.1 Patterns of Key Family Formation Events for Men	11
3.1.1 Differences between rural and urban men in family formation patterns	14
3.1.2 Developing family formation typologies for men	15
3.1.3 Typology classification and differences by residence type	17
3.2 The Social Timetable of Men's Family Formation	17
3.3 Trajectories through Family Formation Events	20
3.3.1 Common features of family formation trajectories	21
3.3.2 Family formation trajectories in West Africa	23
3.3.3 Family formation trajectories in East Africa	24
3.3.4 Family formation trajectories in South Asia	25
3.4 Association of Marriage-Birth Trajectories with Social, Economic, and Fertility- related Outcomes	26
3.4.1 Overview of outcomes	27
3.4.2 Men's trajectories and economic outcomes	28
3.4.3 Men's trajectories and social outcomes	33
3.4.4 Men's trajectories and fertility-related outcomes	35
4 DISCUSSION AND CONCLUSION	41
4.1 Patterns of Family Formation for Men	41
4.2 Family Formation Trajectories	42
4.3 Relationship between Marriage-Birth of First Child Trajectories, and Social, Economic, and Fertility-related Outcomes	42
4.4 Limitations	43
4.5 Conclusion	43

REFERENCES.....	45
APPENDIX TABLES	49

TABLES

Table 1	Analytic sample size, men age 30-34	6
Table 2	Time in years between median ages at first sex, first marriage, and birth of first child among men age 30-34 by residence and typology	12
Table 3	Ordering of family formation life course events and typology among men age 30-34	13
Table 4	Overview of relationship between various economic, social, and fertility-related outcomes and marriage-birth trajectories among men age 30-34.....	28
Table 5	House ownership by marriage-birth trajectory among men age 30-34	29
Table 6	Land ownership by marriage-birth trajectory among men age 30-34	29
Table 7	Household wealth by marriage-birth trajectory among men age 30-34.....	31
Table 8	Decision-making about large household purchases by marriage-birth trajectory among currently married men age 30-34.....	32
Table 9	Attitude toward wife-beating by marriage-birth trajectory among men age 30-34	33
Table 10	Educational attainment by marriage-birth trajectory among men age 30-34.....	34
Table 11	Attitude toward contraceptive decision-making by marriage-birth trajectory among men age 30-34.....	35
Table 12	Use of modern contraception by marriage-birth trajectory among men age 30-34 in the past (12/3) months	36
Table 13	Living children by marriage-birth trajectory among men age 30-34	37
Table 14	Fertility desires by marriage-birth trajectory among men age 30-34	39
Appendix Table A1	Median ages at family formation events (age at first sex, age at first marriage, and age at birth of first child) among men age 15-44, according to current age	49
Appendix Table A2	Median ages at family formation events (age at first sex, age at first marriage, and age at birth of first child) among urban men age 15-44, according to current age.....	50
Appendix Table A3	Median ages at family formation events (age at first sex, age at first marriage, and age at birth of first child) among rural men age 15-44, according to current age	51
Appendix Table A4	Percentage of men age 30-34 experiencing earlier-than-typical, typical, or later-than-typical timing of first sex, first marriage, and birth of first child, according to residence.....	52
Appendix Table A5	Ordering of family formation events among men age 30-34, according to residence	53

FIGURES

Figure 1	Median ages at first sex, first marriage, and birth of first child among men age 30-34	11
Figure 2	Median ages at first sex, first marriage, and birth of first child among men age 30-34 by residence*	14
Figure 3	Percent distribution of men age 30-34 experiencing earlier-than-typical, typical, or later-than-typical timing of first sex, first marriage, and birth of first child among Typology 1 countries	18
Figure 4	Percent distribution of men age 30-34 experiencing earlier-than-typical, typical, or later-than-typical timing of first sex, first marriage, and birth of first child among Typology 2 countries	19
Figure 5	Percent distribution of men age 30-34 experiencing earlier-than-typical, typical, or later-than-typical timing of first sex, first marriage, and birth of first child among Typology 3 countries	20
Figure 6	Family formation trajectories among men age 30-34, Benin	21
Figure 7	Family formation trajectories among men age 30-34, Mali	22
Figure 8	Family formation trajectories among men age 30-34, Nigeria	23
Figure 9	Family formation trajectories among men age 30-34, Ethiopia	24
Figure 10	Family formation trajectories among men age 30-34, Rwanda	24
Figure 11	Family formation trajectories among men age 30-34, Uganda	25
Figure 12	Family formation trajectories among men age 30-34, India	26
Figure 13	Family formation trajectories among men age 30-34, Nepal	26

PREFACE

The Demographic and Health Surveys (DHS) Program is one of the principal sources of international data on fertility, family planning, maternal and child health, nutrition, mortality, environmental health, HIV/AIDS, malaria, and health services.

One of the objectives of The DHS Program is to analyze DHS data and provide findings that will be useful to policymakers and program managers in low- and middle-income countries. The DHS Analytical Studies serve this objective by providing in-depth research on a wide range of topics, typically including several countries and applying multivariate statistical tools and models. These reports also illustrate research methods and applications of DHS data that can build the capacity of other researchers.

The topics in this series are selected by The DHS Program in consultation with the U.S. Agency for International Development.

It is hoped that the DHS Analytical Studies will be useful to researchers, policymakers, and survey specialists, particularly those engaged in work in low- and middle-income countries.

Sunita Kishor
Director, The DHS Program

ABSTRACT

There is little research on the implications of family formation patterns for individual outcomes and life course trajectories of men. This study uses the conceptual framework of life course theory to examine patterns of family formation for men age 30-34 in eight countries (Benin, Mali, Nigeria, Ethiopia, Rwanda, Uganda, India, and Nepal) and explore how these may influence economic, social, and fertility-related outcomes later in life. We examine three key research questions: (1) What are the patterns of key family formation events for men and how do these compare across countries; (2) What are trajectories of men's family formation events, specifically from sex-to-marriage-to-birth, and how are patterns of timing for each of these events related to each other; and (3) What are the consequences of experiencing particular family formation trajectories? The analyses in this study are primarily descriptive, focusing on three key family formation events: first sex, first marriage, and birth of first child. We first calculate the median ages at each event for men age 30-34 for each country both at the national level and for rural and urban areas. We then use the median age as a marker of what represents the 'typical' age at which these events take place to categorize men into three groups based on the relative timing of each event: earlier-than-typical, at typical timing, and later-than-typical. Based on this, we develop specific trajectories for the family formation process and compare these across countries using Sankey diagrams. Finally, we examine the association of selected first marriage-to-birth of first child trajectories with key economic, social and fertility-related outcomes.

The results show that while there are important differences between the countries in their family formation patterns, mainly around the timing of events and the prevalence of premarital sexual activity and childbearing, three typologies of family formation are clearly identified. These broadly apply to both urban and rural areas, suggesting common drivers for family formation that are generally regionally based. The Sankey diagrams illustrate that there is considerable diversity in family formation in each country, but that the most common involves trajectories that were entirely or mostly typical in timing, with considerable continuity of timing between events.

In all settings, the patterns suggest that marriage or long-term cohabitation is a particularly significant family formation milestone, along with childbearing, especially in countries where premarital sexual activity is less common. The analysis of the relationship between first-marriage-to-birth of first child trajectories suggests that nontypically timed trajectories, particularly those that are earlier-than-typical, are associated with poorer outcomes for men.

These results suggest that life course theory is well suited to the exploration of family formation patterns for men and provides strong foundation for further analyses. They also suggest that, as is the case for women, men's lives are shaped in important ways by their family formation experiences. More research is needed that focuses on better understanding the full implications of different life course trajectories for men's lives, which will allow for the development of more effective program and policy interventions.

Key words: life course, family formation, men, trajectories, first sex, first marriage, birth of first child.

ACRONYMS AND ABBREVIATIONS

DHS	Demographic and Health Survey
EB	earlier than typical birth
EM	earlier than typical marriage
IUD	intrauterine device
LAM	lactational amenorrhea method
LB	later than typical birth
LCT	life course theory
LM	later than typical marriage
SDM	standard days method
TB	typically timed birth
TM	typically timed marriage

1 BACKGROUND

The process of forming families has tremendous significance for both individuals and societies. Families are the social, emotional, and economic foundation within which most people live their lives, and at the aggregate level shape the demographic, social, and economic direction of social groups and nations. The timing and sequencing of key life events that are linked to reproduction, including sexual debut, union formation and/or marriage, and the initiation of childbearing, have long been the core features of our understanding of processes of demographic and social change.

Most research on the implications of family formation patterns on individual outcomes has focused on the life course trajectories of women. Much less is known about how men's lives are shaped by key life events such as marriage or childbearing, the consequences these have for men and others. As a result, the field's knowledge of the full implications of even basic demographic outcomes such as early marriage or childbearing, both of which are associated with adverse outcomes for women, remains incomplete for men.

This study addresses this gap by examining the patterns of family formation for men in eight countries, the connections among different components of the family formation process, and the association of different family formation trajectories with a range of economic, social, and fertility-related outcomes. Our approach is based on the conceptual framework of life course theory (Elder Jr, Johnson, and Crosnoe 2007), which views individual behavior at any given point as the result of a complex interaction between individual and institutional factors across time. This framework is ideal for examining the questions raised in this study, as described below.

1.1 Life Course Theory

Life course theory (LCT) seeks to understand and explain human behavior through the examination of the social pathways of human lives, the broader socioeconomic context of lives, and the social and personal meaning that society gives to the passage of biological time (Elder Jr, Johnson, and Crosnoe 2007; Hagestad 1991; Neugarten 1996; Roy 2014). The LCT is one of the few theoretical approaches that comprehensively address the experiences of individuals within contexts of significant societal change, understanding that individuals live in multiple social contexts that change over people's lives, and that human development is shaped by the interaction of chronological age, period effects such as a rapidly changing social norms, and factors unique to an individual's cohort (Elder Jr 2001; Elder Jr, Johnson, and Crosnoe 2007; Hagestad 1991; Hareven 1977b, 1977a; Roy 2014).

In contrast to other frameworks that focus on the immediate situation of individuals during limited portions of the life span, the LCT focuses on the entirety of individual lives and the social processes that create, recognize, and share expectations for particular behaviors at specific stages of life (Elder Jr, Johnson, and Crosnoe 2007; Hagestad 1990). For example, LCT can explore how certain childhood conditions influence health outcomes in adults. In this study, individual family formation events are not viewed as isolated events, but rather as a series of linked events that are each influenced by the particular social, economic and cultural context of the time and the individual's social reference group. For example, the individual context for decisions about initiating sexual relations during adolescence may be very

different from the individual context for decisions about marriage or childbearing. The importance and meaning of specific events for individuals depends on when they take place during a person's life course, particularly when events occur earlier in the life course. For example, fathering a child has very different social, economic, and demographic implications for an adolescent boy than for an older man. Although LCT suggests that individual behavior at any given point in time is influenced by personal history, the individual is not necessarily beholden to such influence. Individuals are engaged in a lifelong process of development and learning and have individual agency that allows them to actively shape the trajectory of their life course (Elder Jr, Johnson, and Crosnoe 2007; Hagestad 1990).

Within the LCT framework, life course trajectories are composed of a series of time-ordered, sequential life course stages that individuals are expected to move through as they age. While these stages are partially defined by biological factors, such as menarche or the physical changes associated with aging, they are defined primarily through the social meaning and expectations for behavior that are attached to them. The beginning and ending points of life course stages are marked by transition points that indicate the end of one stage, such as adolescence or youth, and the beginning of another, such as adulthood. Transitions can be marked by single events or, more often, a grouping of transition events, such as completing education, entering full-time employment, and moving away from the parental home. When these transitions alter the trajectory of the life course in a fundamental way, they are termed 'turning points'—one example might be an unintended pregnancy at a very early age, which could trigger the termination of formal education and entry into full-time employment, both of which have long-term consequences for well-being.

Context-specific social norms define the appropriate timing and sequencing of life course stages, along with expectations for the behavior within them. These norms are loosely linked to chronological age, which acts as one of several markers that can be used to determine if an individual is progressing through life course stages according to social expectations. This provides structure for both individuals and groups, and acts as a 'social timetable' that specifies the appropriate ages and conditions, such as being married before initiating childbearing, for transitions in and out of life course stages (Neugarten 1996). This timetable provides the framework for whether transitions into specific life course stages are considered on-time or off-time, or either early or late relative to social expectations. Both early and late transitions can lead to formal or informal social sanctions that create social boundaries for social behavior. These work to ensure that the majority of life trajectories in a society take place within common 'social pathways' that are shared across groups. Failing to remain within those boundaries can have significant consequences for individuals and groups, including adverse mental health outcomes (Harley and Mortimer 2000).

1.2 Family Formation, Masculinity, and the Life Course

The process of family formation is a critical component of the life course for both men and women. Family formation is a key marker of transitions between different life stages and social statuses, with families typically the environment within which the majority of life course events take place. Formation of stable unions in which childbearing is socially sanctioned and the subsequent initiation of childbearing are core markers of the transition from adolescence or youth to adulthood and the achievement of adult status in most contexts.

Although the process of family formation varies significantly across different cultural contexts, we focus on three key events that form the basis of virtually all family formation processes. The first is the initiation of sexual intercourse, which is often a key marker of an individual's entry into longer-term committed relationships. The second is marriage or long-term cohabitational relationships in which childbearing is socially sanctioned and expected. The third is the initiation of childbearing, which can consolidate the social status of marital relationships. These three events do not capture the full process of family formation, which may include the achievement of particular fertility goals, the dissolution and re-formation of marital or cohabitational relationships, or the development of a broader network of kinship relationships that are part of the social definition of families. However, these three events do capture critical components of the process of forming families—the development of longer-term sexual relationships, entry into socially recognized and sanctioned unions where reproduction may take place, and the initiation of childbearing.

Given the importance of the family as a social institution, social norms that regulate the appropriate timing, sequencing, and preconditions for family formation are typically strong and associated with significant social sanctions for those who deviate from the established social pathway. These norms are typically heavily gendered and strongly linked to social definitions of masculinity and femininity, which serve to define and establish standards and expectations for male and female behavior. As a result, men and women may pass through the same general life course stages, but are subject to different expectations about behavior that can result in significant differences in both behavior and consequences for nonconformity. For example, the sexual double standard in most societies often imposes significantly more control over female sexuality than male sexuality, especially during adolescence, and is a key driver of child marriage and other adverse outcomes (Greene et al. 2018).

Although social definitions for masculinity differ across cultural contexts and over time, core expectations for men's behavior directly influence family formation. These include beginning sexual activity and forming unions (predominantly heterosexual in most contexts), fathering children, playing the role of 'head' of the familial unit, and acting as the primary economic provider and main protector of the family (Heilman, Barker, and Harrison 2017). Reflecting the importance placed on family formation in most societies, failure to conform to the social timetable for family formation or to meet expectations within specific life course stages often carries very significant consequences for both men and others in their lives. Because of the link between masculinity and male identity, failure to complete life course transitions can be a direct threat to social and self-perceptions of masculine identity (Ragonese, Shand, and Barker 2019; Stergiou-Kita et al. 2015). For example, men's inability to perform the role of primary breadwinner is associated with increased intimate partner violence (Krishnan et al. 2010), which might reflect a desire by men to reassert their masculinity through violence (Heilman, Barker, and Harrison 2017).

These norms and expectations structure the life course for men in similar ways in many different contexts. In recent work that examined male needs and vulnerabilities across the life course, the Institute for Reproductive Health proposed three broad life course stages that are applicable in most contexts: (1) infancy and childhood, which begins at birth and ends with the transition to adolescence/youth, often at the onset of puberty; (2) adolescence/youth, which is divided into younger and older adolescence and ends with the transition to adulthood; (3) adulthood, which is divided into younger, middle, and older adulthood and ends at the end of life.

Of these stages, older adolescence, younger adulthood, and middle adulthood are linked most closely to the family formation process. Older adolescence is the life course stage in which boys first engage in romantic relationships, initiate sexual activity, and model behavior that sets the stage for later relationships. While varying across cultural contexts, the transition from older adolescence to young adulthood is generally associated with expectations of greater independence, such as moving out of the family home, establishing independent income through full-time employment, and entering into longer-term romantic relationships. As activities associated with adolescence or youth, such as being in school or engaging in risky behavior, become less tolerated, men are typically increasingly expected to perform the roles of protector and provider for their immediate family. Marriage or the establishment of long-term cohabitational relationships within which childbearing may take place is a key component of this transition, although the process through which this takes place can vary across settings. Finally, as men meet the expectations of young adulthood, they enter middle adulthood, during which social expectations typically focus on consolidating the gains made during young adulthood. This includes developing clear employment goals and careers, having and raising children, remaining in unions, and assuming increased responsibility within familial and community settings.

In this study, we focus on these three life course stages (older adolescence, younger adulthood, and middle adulthood), the family formation processes that play a critical role in defining them, and the implications of conforming or failing to conform to social expectations. As is the case for women, understanding the implications of different family formation patterns for men is critically important for better understanding of social and demographic processes, and for developing more effective program and policy responses that can effectively address and intervene to prevent adverse outcomes.

2 METHODS

2.1 Research Questions

This study will describe men’s reproductive life course in eight low-income countries using DHS data. Specifically, this study has three primary research questions that guide the analysis:

1. What are the patterns—in terms of timing and sequencing—of key family formation events for men and how do they compare across the study countries? The key events examined are first sexual intercourse, first heterosexual marriage or cohabitational relationship, and the birth of the first child.
 - a. How closely to the normative timing and sequencing of these events are men’s actual experiences? What proportion of men experience these events at their *typical* timing (relative to other men in that context) and either *earlier* or *later* than is typical?
 - b. Can we identify *typologies* into which countries can be classified, based on the patterns we observe on both the timing and sequencing of family formation events, and how closely do men adhere to the normative behavioral patterns?
2. What are men’s sex-to-marriage-to-birth trajectories? How related are men’s patterns of timing for each family formation event? Is the timing of men’s first family formation event associated with the timing of subsequent events?
 - a. How much switching do we see across timing categories? For example, do men who experience first sex or first marriage earlier-than-typical then experience the birth of their first child earlier-than-typical, at a typical age, or later-than-typical?
3. What are the consequences of experiencing certain marriage-to-birth trajectories? Are some trajectories associated, either positively or negatively, with key economic, social, and fertility-related outcomes for men?

This study is primarily descriptive, including the treatment of the latter research question. We use a chi-square test of independence to determine if any association between a particular trajectory and outcome is statistically meaningful. We are particularly interested in the experience of “off-time” trajectories, as compared to typically timed trajectories.

2.2 Data

2.2.1 Country selection

The first DHS surveys that included men were completed in 1987 under DHS-1 in Burundi and Mali, with the number of surveys including interviews with men increasing steadily since that time. The DHS has interviewed men in approximately 9 of 10 DHS surveys conducted since DHS-7 (approximately 2014). Men’s data are representative at the national level, urban and rural areas, and at least one subnational regional level. Men’s samples are typically smaller than those of women, because smaller sample sizes are needed to achieve representation for the key indicators collected from men; typically men are eligible for interview in one out of every two or three selected households.

We selected a total of eight countries for this study. We aimed to select two or three countries for each of three regions: West Africa, East Africa, and South Asia. To be eligible for selection, a country needed to have a recent survey (since 2014) including interviews with men, with a sample size sufficiently large enough to allow for detailed analyses, all variables of interest, and a sample of all men. For example, we briefly considered the 2017-18 Pakistan DHS, but the survey was ineligible because it sampled ever-married men rather than all men and thus excluded men whose life course trajectories did not include marriage.

The final country selection included the following surveys: 2017-18 Benin DHS, 2018 Mali DHS, 2018 Nigeria DHS, 2016 Ethiopia DHS, 2014-15 Rwanda DHS, 2016 Uganda DHS, 2015-16 India DHS (NFHS-4), and the 2016 Nepal DHS. The eligible men’s response rate in these surveys ranged from 85.5% in Ethiopia to 99.5% in Rwanda. Details on sampling strategies and survey implementation can be found in the survey final reports (Central Statistical Agency - CSA/Ethiopia and ICF 2017; Institut National de la Statistique - INSTAT, Cellule de Planification et de Statistique Secteur Santé-Développement, and ICF 2019; Institut National de la Statistique et de l’Analyse Économique and ICF 2019; International Institute for Population Sciences - IIPS/India and ICF 2017; Ministry of Health - MOH/Nepal, New ERA/Nepal, and ICF 2017; National Institute of Statistics of Rwanda et al. 2016; National Population Commission - NPC and ICF 2019; Uganda Bureau of Statistics - UBOS and ICF 2018).

2.2.2 Sample selection

The sample sizes in these surveys range from 4,063 men age 15-49 in Nepal to 112,122 men age 15-54 in India. We limit our analysis to men age 30-34. This is the youngest age group in which at least 50% of men in all study countries have experienced each of the family formation events examined in this study, which permitted calculation of median ages for these events. While this is the most recent cohort to have experienced these events, one limitation is that we are only capturing historical experience. Current/younger cohorts who have not yet completed all family formation events may have experiences that differ from those in the age group we observe. Our final analytic sample sizes of men age 30-34 range from 532 in Nepal to 14,640 in India, as shown in Table 1.

Table 1 Analytic sample size, men age 30-34

Country	Survey	Urban	Rural	N
Benin	2017-18 Benin DHS	402	481	883
Mali	2018 Mali DHS	224	407	631
Nigeria	2018 Nigeria DHS	736	1,015	1,751
Ethiopia	2016 Ethiopia DHS	513	1,072	1,585
Rwanda	2014-15 Rwanda DHS	259	673	932
Uganda	2016 Uganda DHS	169	568	737
India	2015-16 India NFHS	4,690	9,950	14,640
Nepal	2016 Nepal DHS	342	190	532

2.3 Measures and Analytical Strategy

2.3.1 Family formation events

We examine three key family formation events in this study: first sex, first marriage, and birth of first child.¹ To examine the patterns in the family formation process across the eight countries, we calculate the median age at each event (the age at which 50% of the sample have experienced the event) for men age 30-34 for each country nationally and separately for urban and rural areas.

To assess typologies of family formation events across study countries, we next examine the usual sequence of events and duration of time between median ages of each of these events—from first sex to first marriage, from first marriage to birth of first child, and the overall duration of progression from first to last event (again, nationally and in urban and rural areas).

Within each country, we present the distribution of ages at each event. For each event, we calculate the difference in years between when each individual man experienced the event and the median age at which his peers in the 30-34 age group experienced the event, by subtracting the median age from the reported age that he experienced the event. For example, a man who reports that he first had sex at age 19.5 in a setting where the median age at first sex was 18 would differ from the median by 1.5 years. We establish the ‘typical’ timing of each event as within one-half standard deviation from the mean difference from the median age for that event. Men who experienced the event younger than one-half standard deviation less the median age are classified as ‘earlier-than-typical’, while men who are one-half standard deviation older than the median when they experienced the event are classified as ‘later-than-typical’. Men who have not yet experienced the event are also classified as later-than-typical.

Using this classification, we display men’s trajectories through these three family formation events by using Sankey diagrams. The Sankey diagrams show the distribution of the sample by whose experience of each event (first sex, for example) is earlier-than-typical, typical, or later-than-typical. The diagrams also show the magnitude of the flow from timing of first sex through the timing of first marriage to the timing of the birth of first child.

To address our third research question, we focus more specifically on the trajectories for marrying and fathering a child, because these represent the core of the family formation process. We assess the distribution of different ‘on-time’ and ‘off-time’ trajectories across several economic, social, and fertility-related variables, testing the strength of the relationship between trajectory types and outcomes using a chi-square test of independence. These variables are operationalized as follows.

¹ DHS questionnaires do not ask about the sex/gender of the first sexual partner and generally assume that all relationships are heterosexual; to do otherwise, in countries where same-sex relationships are illegal and met with opprobrium, would create risk for both respondents and fieldworkers. There is a possibility that respondents who are not heterosexual or whose sexual experiences are not entirely with partners of the opposite sex will provide information on those nonheterosexual relationships/encounters as though they were heterosexual, or just not disclose those relationships/encounters altogether. As a result, this study is limited to conceptualizing the family formation process only within the context of heterosexual relationships.

2.3.2 Economic variables

Year-round employment is recategorized as a dichotomous variable based on men's responses to the questions, "Have you done any work in the last 12 months?" and "Do you usually work throughout the year, or do you work seasonally, or only once in a while?" with those who hadn't worked in the past 12 months or either seasonally or once in a while coded as 0 and those who had employment throughout the year as 1.

House and land ownership are dichotomous measures from the questions, "Do you own this or any other house either alone or jointly with someone else?" and "Do you own any agricultural or nonagricultural land either alone or jointly with someone else?" For both measures, sole and joint ownership are combined and contrasted with no ownership.

Household wealth quintile is a standard variable included in DHS datasets. A wealth index is calculated by using confirmatory factor analysis on an inventory of assets and housing materials, and then categorized into quintiles at the household level (Rutstein and Johnson 2004).

We developed three categorical **decision-making** variables, which describe how decisions are made about how men's earnings are spent, men's own health care, and large household purchases. For each decision, categories were man alone, jointly with wife or wife alone, and someone else/other. These three variables are available only for currently married men.

2.3.3 Social variables

Current marital status is a recoded categorical variable with three categories: currently married, living together as if married, and never married/formerly married.

Multiple sexual partners is a dichotomous variable that captures if men have had multiple sexual partners in past 12 months recoded from the question, "In total, with how many different people have you had sexual intercourse in the last 12 months?"

Attitudes toward gender-based violence is a dichotomous variable that indicates if the man agrees that it is justified for a man to beat his wife in at least one of five specific scenarios or disagrees that wife-beating is justified in all of them. The five scenarios are:

- If she argues with him
- If she goes out without telling him
- If she neglects the children
- If she refuses to have sex with him
- If she burns the food?

Educational attainment is a three-category variable that captures the highest level of education men have completed and is categorized as less than primary, less than secondary, and secondary or higher.

2.3.4 Fertility-related variables

Contraceptive attitudes were captured in two dichotomous variables based on men’s responses that indicate agreement or disagreement with the following two attitudinal statements:

1. “Contraception is a woman’s concern and a man should not have to worry about it.”
2. “Women who use contraception may become promiscuous.”

Contraceptive method used at last sex is a three-category variable (none, traditional/folk, modern) based on responses to the questions, “The last time you had sex, did you or your partner use any method other than a condom to avoid or prevent a pregnancy?” “The last time you had sex did you or your partner use any method to avoid or prevent a pregnancy?” and “What method did you or your partner use?” We also recode this variable into a second, dichotomous variable that indicates if men used a *modern* method of contraception at last sex. Modern methods include male and female sterilization, injectables, intrauterine devices (IUDs), contraceptive pills, implants, female and male condoms, emergency contraception, standard days method (SDM),² and lactational amenorrhea method (LAM).

This approach to capturing contraceptive use among men differs from that among women, who are asked, “Are you or your partner currently using something or doing something to delay or prevent pregnancy?” This may produce different estimates of contraceptive prevalence (ICF International 2015; MacQuarrie et al. 2015). In addition, this variable is calculated only for the subset of men who have been sexually active in the past 3 months and is unavailable for men who have never had sex or who have not had sex recently.

Number of living children is a recoded categorical variable with the following four options: none, 1-2 children, 3-5 children, and 6 or more children.

Fertility desires is a four-category variable recoded from a pair of questions: “Now I have some questions about the future. Would you like to have another child, or would you prefer not to have any more children?” and “How long would you like to wait from now before the birth of another child?” Categories are wants no more, wants within 2 years, wants after 2 years (those who were unsure about timing or were undecided about wanting more children were also included in this category), and can’t have any more. This variable is calculated only for currently married men.

For each of these outcome variables, we present the distribution of each variable across life course trajectories, focusing on the latter two family formation events: first marriage and birth of first child. We present the *p*-value results of a chi-square statistic, which indicates if the distribution of the outcome varies with trajectory type. We interpret a *p*-value of ≤ 0.05 as an indication that the association is statistically significant.

All data analyses are conducted in Stata SE version 15. All data are weighted to account for sampling probability and nonresponse. The *svy* suite of commands is used to adjust confidence intervals and standard errors to account for the clustered sampling strategy of DHS surveys.

² SDM is not considered a modern method in Nepal.

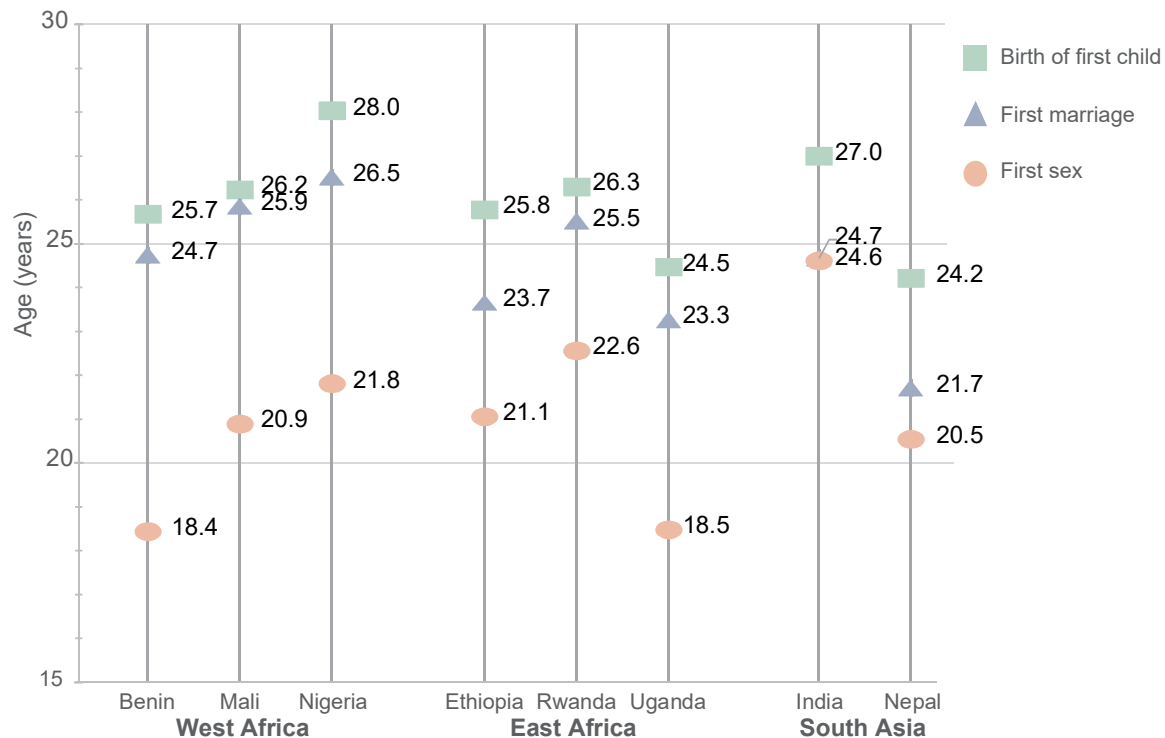
3 RESULTS

The presentation of the results in this section follows the ordering of the research questions guiding this study closely, beginning with broad patterns of family formation for men in the eight selected countries, moving to a closer examination of men’s family formation trajectories, and then examining the economic, social, and fertility-related consequences of experiencing particular marriage-to-birth trajectories. Together these results provide a detailed picture of the connection of family formation events in men’s lives, areas of similarity and differences between countries, and the potential influence of these patterns on future life course stages. Given the importance of social factors in defining and imposing expectations for life course stages and trajectories, we focus especially on those men whose trajectories are off-time, either in terms of timing or the sequencing of family formation events.

3.1 Patterns of Key Family Formation Events for Men

Figure 1 and Table 2 present data on the patterns of key family formation events for men. Table 2 also indicates in which ‘typology’ of family formation each country is included, which we discuss in greater detail below. Figure 1 presents the median ages at which men age 30-34 experienced first sexual intercourse, first marriage or cohabitation, and the birth of their first child for each of the eight countries. The median ages of these events by age group are found in Appendix Table A1. As shown in Figure 1, there is significant diversity in the family formation process across countries. This is particularly clear in the median ages at which events take place and the compactness of the typical family formation process in each country.

Figure 1 Median ages at first sex, first marriage, and birth of first child among men age 30-34



In Benin, for example, the family formation process begins at earlier ages than other countries, with a median age at first sexual intercourse of 18.4, and extends over a longer period of time, with a difference of 7.24 years between the median age of first sex and the birth of his first child (see Table 2 for differences in median ages for each event). In contrast, the median age at first sexual intercourse for men in India was much later (24.6 years) and the family formation process much more compact, with a difference of 2.39 years. Similar variation was evident for both the median age at first marriage and birth of first child, although the differences between countries are generally smaller than for first sexual intercourse. The median age at first marriage was lowest in Nepal (21.7 years) and highest in Nigeria (26.5 years), while the median age at which men experienced the birth of their first child was lowest in Benin (25.7 years) and Ethiopia (25.8 years).

Table 2 Time in years between median ages at first sex, first marriage, and birth of first child among men age 30-34 by typology

	First sex to first marriage	First marriage to birth of first child	Overall span	N	Typology
Benin	6.29	0.95	7.24	883	Type 1
Mali	4.96	0.38	5.34	631	Type 1
Nigeria	4.70	1.52	6.22	1,751	Type 1
Ethiopia	2.60	2.12	4.72	1,585	Type 2
Rwanda	2.94	0.80	3.74	932	Type 2
Uganda	4.78	1.21	5.99	737	Type 1
India	0.06	2.33	2.39	14,640	Type 3
Nepal	1.17	2.51	3.68	532	Type 3

Typology legend

Type 1:	Longer progression to family formation with extended gap between median ages at first sex and marriage, followed by short gap to first birth, premarital sex, and childbearing relatively common.
Type 2:	Moderate progression to family formation with moderate gap between median ages at first sex and marriage, followed by longer gap to first birth, premarital sex moderately common, and premarital childbearing relatively rare.
Type 3:	Short progression to family formation with short gap between median ages at first sex and marriage, followed by moderate gap to first birth, premarital sex relatively less common, and premarital childbearing very rare.

With the notable exceptions of India and Nepal, the majority of the diversity in both the timing and degree of compactness of the family formation process is due to variation in the median age at first sexual intercourse and the difference between this and the median age at first marriage. In India and Nepal, the median ages at first sex and first marriage are very close, which suggests very low levels of premarital sexual activity. Other countries have much larger differences between the median ages at first sex and first marriage, particularly Benin (6.29 years), Mali (4.96 years), Uganda (4.78 years), and Nigeria (4.70 years), which suggests higher levels of premarital sexual activity. In contrast, there is less variation in the median ages at first marriage and birth of first child across the eight countries, and generally a much shorter gap between these events, which ranges from 0.38 years in Mali to 2.51 in Nepal.

Despite the diversity in the timing of family formation events, there are some important commonalities across the countries. First, there is a clear ordering of family formation events, with the median age at first sex being younger than first marriage, which is younger than the median age at the birth of first child. The only exception to this is India, where the median ages at first sex and first marriage are essentially the same, differing by only 0.1 years. Second, as noted above, the difference in the median ages for first marriage and childbearing is small relative to the difference between first sexual intercourse and first marriage, with India and Nepal the only exceptions. Together with the ordering of family formation

events, this suggests a strong preference for having children in the context of marriage, even in contexts where premarital sexual activity may be common.

This is supported by the data presented in Table 3, which shows the proportions of men in each country reporting having had first sexual intercourse earlier than marriage and the proportions reporting having married before the birth of their first child. These data, disaggregated by rural and urban residence, are presented in Appendix Table A4. Men in those countries with a more significant gap between the median age at first sexual intercourse and first marriage are more likely to report having had premarital sexual activity than those with a smaller gap. For example, 85.4% of men in Benin, where the difference between the median age at first sex and first marriage is the largest (6.29 years) among the eight countries, reported sexual activity before marriage. In contrast, less than a quarter (21.5%) of men in India, where the median ages at first sexual intercourse and marriage were extremely close (0.1 years), reported premarital sexual activity. This pattern also held for countries with moderate gaps between first sex and first marriage, such as Ethiopia and Rwanda, where only slightly over half (50.8% and 51.0% respectively) of men reported premarital sexual activity.

Table 3 Ordering of family formation life course events and typology among men age 30-34

		First sex before first marriage	N	First marriage before birth of first child	N
Benin	No	14.6	128	19.1	256
	Yes	85.4	746	80.9	566
	Total		874		822
Mali	No	27.0	160	20.7	205
	Yes	73.0	433	79.3	371
	Total		593		576
Nigeria	No	35.3	585	9.9	329
	Yes	64.7	1,073	90.1	1,129
	Total		1,658		1,458
Ethiopia	No	49.2	748	8.5	279
	Yes	50.8	773	91.5	1,169
	Total		1,521		1,448
Rwanda	No	49.0	427	13.5	190
	Yes	51.0	445	86.5	634
	Total		872		824
Uganda	No	24.1	172	23.2	253
	Yes	75.9	542	76.8	434
	Total		714		687
India	No	78.5	9,959	4.5	1,643
	Yes	21.5	2,734	95.5	11,105
	Total		12,693		12,748
Nepal	No	69.9	367	1.5	37
	Yes	30.1	158	98.5	481
	Total		525		518

Note: The calculation of the percentage experiencing first sex before first marriage excludes those who have never had sex or been married. The calculation of the percentage experiencing first marriage before first birth excludes those who have never been married or fathered a child.

Typology legend

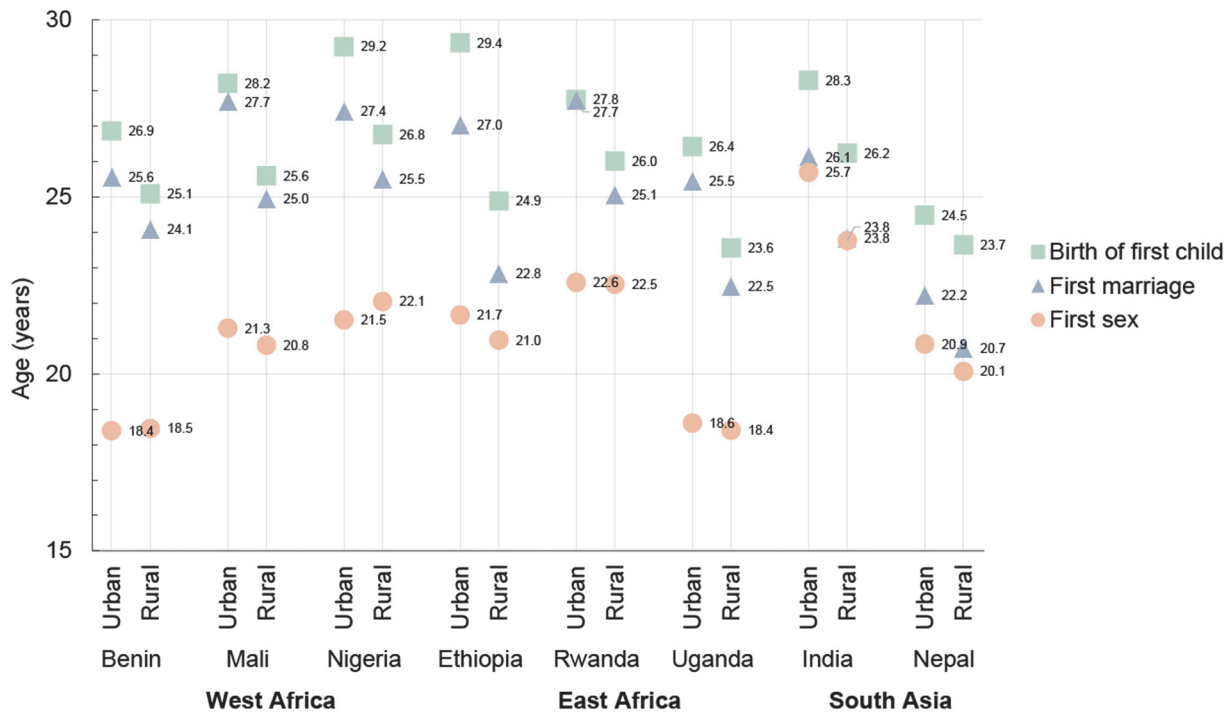
Type 1:	Longer progression to family formation with extended gap between median ages at first sex and marriage, followed by short gap to first birth, premarital sex, and childbearing relatively common.
Type 2:	Moderate progression to family formation with moderate gap between median ages at first sex and marriage, followed by longer gap to first birth, premarital sex moderately common, and premarital childbearing relatively rare.
Type 3:	Short progression to family formation with short gap between median ages at first sex and marriage, followed by moderate gap to first birth, premarital sex relatively less common, and premarital childbearing very rare.

A similar pattern is observed for premarital childbearing, where those countries with larger gaps between the median ages at first sexual intercourse and marriage also generally have higher proportions of men who report not being married or cohabiting before the birth of their first child. One-fifth (20.7%) of men in Mali, for example, where the gap between first sexual activity and marriage is 4.96 years, reported a premarital birth. In contrast, premarital childbearing was extremely rare in India and Nepal, both of which have smaller differences between the median ages at first sexual activity and marriage (0.1 and 1.2 years respectively). Nigeria is an exception to this pattern with relatively high levels of premarital sexual activity (64.7% of men) combined with relatively low levels of premarital childbearing (9.9%).

3.1.1 Differences between rural and urban men in family formation patterns

The patterns described above provide a broad overview of the family formation patterns for men age 30-34 in each country. However, these patterns potentially mask some significant differences between rural and urban areas, which typically have quite different family formation patterns. This is significant for a number of reasons, but particularly because of the importance the life course places on social norms in terms of defining life course stages and pathways. These norms are likely to be quite different in rural than in urban areas because life course stages and definitions of ‘on-time’ or ‘off-time’ also differ.

Figure 2 Median ages at first sex, first marriage, and birth of first child among men age 30-34 by residence



Note: Medians are calculated separately for urban and rural men.

Figure 2 presents the median ages for first sexual intercourse, first marriage, and birth of first child, while the difference in years between the different family formation events is presented in the lower two panels of Table 4. Detailed data on median ages for rural and urban men by age group are presented in Appendix Tables A2 and A3. A number of the differences between rural and urban areas are common across most of the countries. First, the family formation process in rural areas typically takes place at younger ages than

in urban areas. This is especially evident when examining the median ages at first marriage and birth of first child, which are substantially higher in urban areas in every country. The pattern is less evident for age at first sex, where there is very little difference between rural and urban areas for three of the eight countries (Benin, Rwanda, and Uganda), a higher median age in rural areas in one country (Nigeria), and a higher median age in urban areas in four countries (Mali, Ethiopia, India, and Nepal). As shown in Table 4, the overall span of the family formation process is longer in urban areas in every country, although this again can largely be attributed to the differences between the median ages at first sexual intercourse and first marriage. Overall, there are important differences in terms of the timing of different family formation events between rural and urban areas, although the general pattern of family formation in the ordering of events and the difference in years between the median ages at first marriage and birth of first child is very similar in most countries.

Table 4 Time in years between median ages at first sex, first marriage, and birth of first child among men age 30-34 by residence and typology

	First sex to first marriage	First marriage to birth of first child	Overall span	N	Typology
URBAN MEN					
Benin	7.16	1.29	8.45	402	Type 1
Mali	6.38	0.53	6.91	224	Type 1
Nigeria	5.89	1.82	7.71	736	Type 1
Ethiopia	5.35	2.33	7.68	513	Type 2
Rwanda	5.13	0.03	5.16	259	Type 2
Uganda	6.83	0.97	7.80	169	Type 1
India	0.44	2.16	2.60	4,690	Type 3
Nepal	1.37	2.27	3.64	342	Type 3
RURAL MEN					
Benin	5.62	1.00	6.62	481	Type 1
Mali	4.13	0.65	4.78	407	Type 1
Nigeria	3.45	1.26	4.71	1,015	Type 1
Ethiopia	1.87	2.06	3.93	1,072	Type 2
Rwanda	2.51	0.96	3.47	673	Type 2
Uganda	4.06	1.08	5.14	568	Type 1
India	0.06	2.41	2.47	9,950	Type 3
Nepal	0.65	2.92	3.57	190	Type 3
Typology legend					
Type 1:	Longer progression to family formation with extended gap between median ages at first sex and marriage, followed by short gap to first birth, premarital sex, and childbearing relatively common.				
Type 2:	Moderate progression to family formation with moderate gap between median ages at first sex and marriage, followed by longer gap to first birth, premarital sex moderately common, and premarital childbearing relatively rare.				
Type 3:	Short progression to family formation with short gap between median ages at first sex and marriage, followed by moderate gap to first birth, premarital sex relatively less common, and premarital childbearing very rare.				

3.1.2 Developing family formation typologies for men

To better understand the potential linkages between different family formation events, we explored whether the data suggest different ‘typologies’ of family formation that allow grouping of countries. This followed a similar approach used by Stevanovich-Fenn et al. (2015) for young women. Based on the distribution of the median ages at first sexual intercourse, marriage, and birth of first child, we identified three distinct typologies:

- Typology 1: Characterized by a longer family formation process with extended gap between median ages at first sexual intercourse and marriage, followed by a relatively short gap to first birth. This suggests that premarital sex and childbearing are relatively common in these countries.
- Typology 2: Characterized by moderately long family formation process with a moderate gap between median ages at first sex and marriage, followed by longer gap to first birth. This suggests that premarital sex was moderately common, although less so than Typology 1, and that premarital childbearing is relatively rare in these countries.
- Typology 3: Characterized by a shorter family formation process with short gap between median ages at first sex and marriage, followed by moderate gap to first birth. This suggests that premarital sex is relatively less common and premarital childbearing is very rare in these countries.

The categorization of each country into one of the three typologies is illustrated in Tables 2, 3 and 4, with those shaded green categorized as Typology 1, those shaded blue Typology 2, and those shaded grey Typology 3.

The countries in Typology 1 (Benin, Mali, Nigeria, and Uganda) are characterized by a number of common features. The average difference between the median ages at first sex and first marriage for these countries is 5.18 years, with a much shorter gap (1.02 years) between first marriage and birth of first child (not shown in tables). With the large gap between first sex and marriage, countries in Typology 1 have the longest overall time span between first sex and the birth of a child, averaging 6.2 years. With the exception of Nigeria, around three-quarters of men reported having sexual intercourse before marriage, and roughly one-fifth report having fathered a child before marriage. While lower than other countries included in Typology 1, Nigeria has substantially higher proportions reporting premarital sexual activity (64.7%) and fathering a child before marriage (9.9%) relative to countries in other typologies.

The countries in Typology 2 (Ethiopia and Rwanda) have substantially shorter overall spans of family formation than those in Typology 1, averaging 4.23 years between the median age at first sex and first marriage. The gap between first sexual intercourse and first marriage is also substantially shorter (an average of 2.77 years) than in Typology 1. However, the gap between the median age at first marriage and first birth differs between these two countries, with Ethiopia having a relatively large gap of 2.12 years and Rwanda a much shorter gap of 0.80 years. In comparison to countries in Typology 1, men in Typology 2 are also much less likely to have had sex before marriage (49.2% and 51.0% for Ethiopia and Rwanda, respectively) or having had a birth before marriage (8.5% and 13.5% respectively).

The countries in Typology 3 (India and Nepal) have the shortest overall span between the median age at first sexual intercourse and birth of first child (an average of 3.04 years), because of a much shorter period between first sexual intercourse and first marriage (0.06 years for India and 1.17 years for Nepal). The gap between the median age at first marriage and birth of first child, however, is longer on average (2.42 years) than either of the other typologies. The proportion of men reporting having had sexual intercourse before marriage is much lower than in either Typology 1 or 2 (21.5% and 30.1% for India and Nepal, respectively), as is fathering a child before marriage, which is very rare in both countries (4.5% and 1.5%, respectively).

These typologies generally follow regional patterns, with West African countries (Benin, Mali, and Nigeria) classified as Typology 1, East African countries (Ethiopia and Rwanda, but not Uganda) as Typology 2, and South Asian countries (India and Nepal) as Typology 3. This may be a reflection of the relatively small number of countries included in this study, or other factors that shape family formation patterns across geographic regions, including norms such as those related to gender, that influence family formation.

3.1.3 Typology classification and differences by residence type

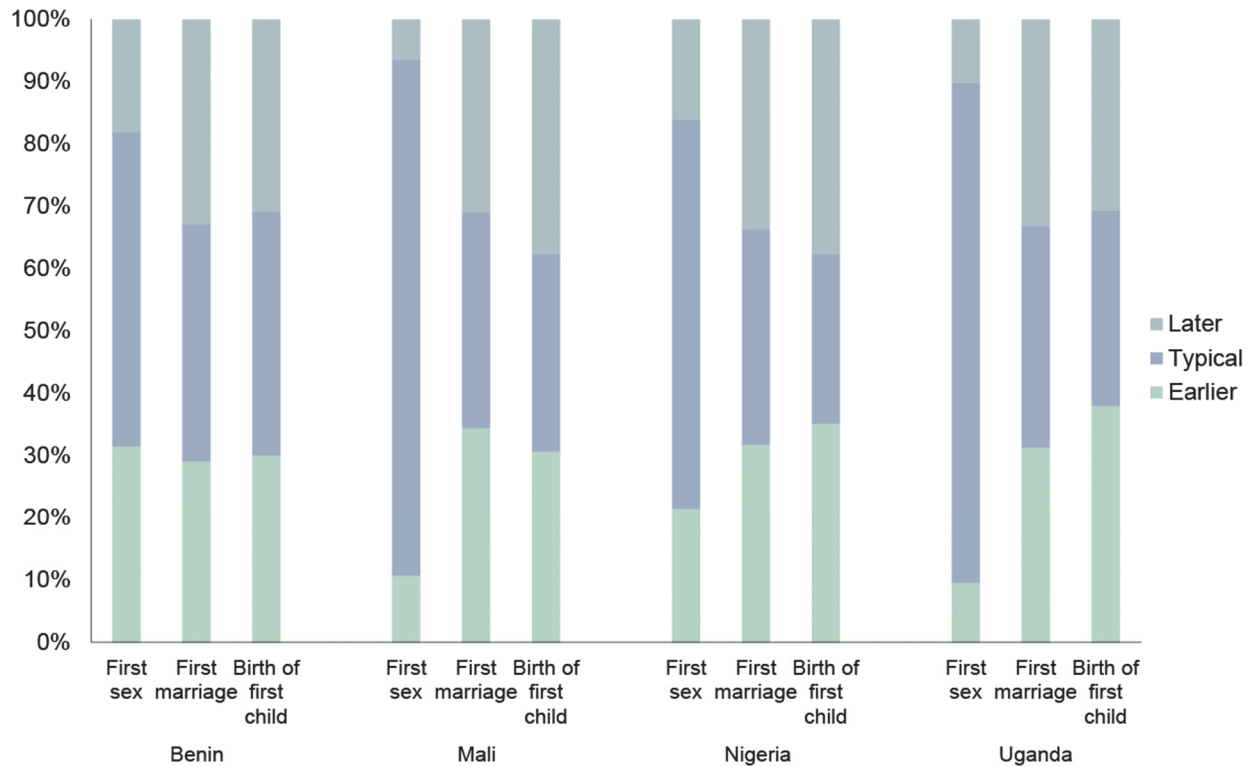
As described above, differences between rural and urban areas in terms of family formation behavior can provide insights into how dominant particular family formation norms are throughout a country and the degree to which national trends are driven by either rural or urban trends. If there are significant differences between urban and rural areas, this may lead to a misclassification of countries into typologies, and it may be that urban and rural areas fit quite different typologies.

Table 4 presents these differences for each of the family formation events examined here, with the typologies identified by color scheme. In each of the typologies, the median age at first marriage in rural areas is earlier than that in urban areas, although the degree varies by typology. On average, men in urban areas have larger differences than those in rural areas—for Typology 1, this difference is 2.3 years, while in Typology 2 the average difference is 3.1 years, and in Typology 3, 0.6 years. The differences between the median age at first marriage and birth of the first child is much smaller in all three typologies, although it is less consistently longer for men in urban areas. For countries in Typology 1, the difference is 0.2 years longer for men in urban areas, while in Typology 2 and 3, it is rural men who have the larger difference on average (0.3 and 0.5, respectively). Overall, these findings suggest that while there are important differences between urban and rural areas, particularly in terms of timing of events, the typologies established at the national level characterize both residence types well.

3.2 The Social Timetable of Men’s Family Formation

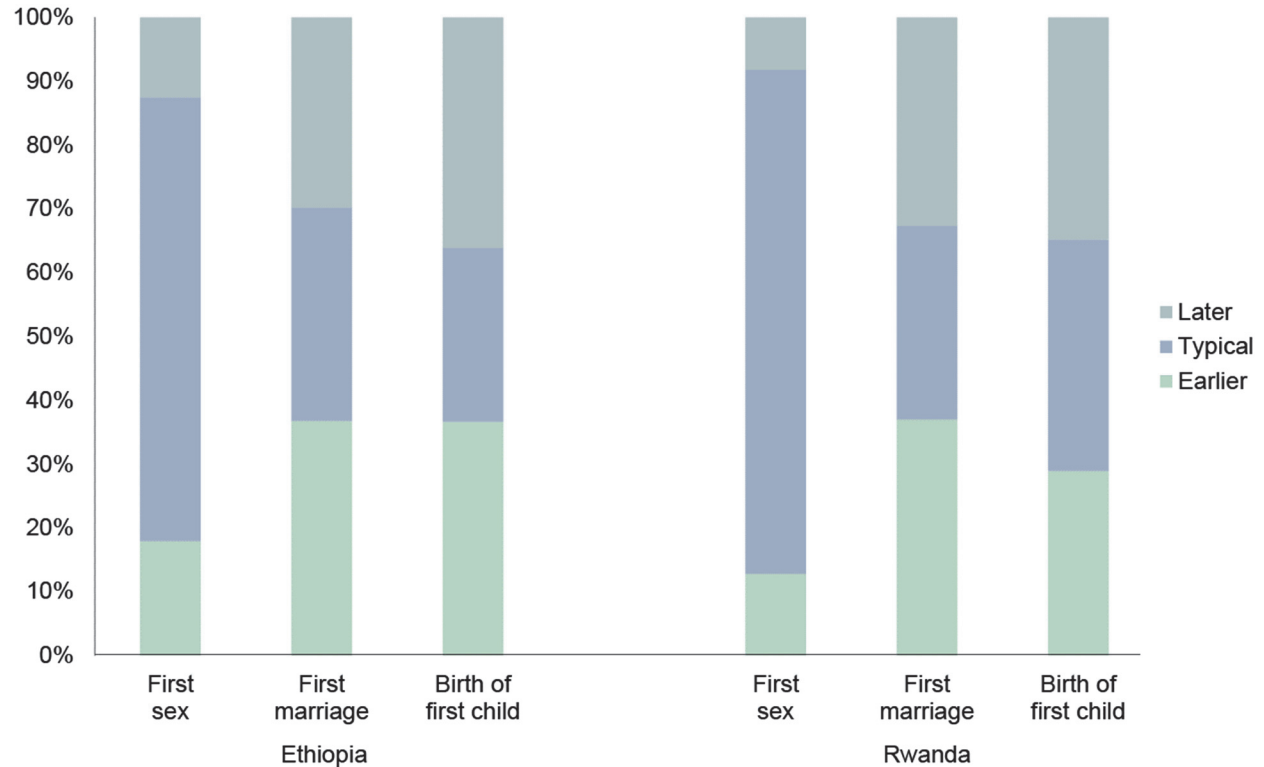
Figures 3-5 present the proportions of men experiencing each of the key family formation events at ages that are typical, earlier-than-typical, or later-than-typical relative to the median ages at which those events take place in their country. These data, disaggregated by rural and urban residence, are found in Appendix Table A3. For each event, these figures demonstrate the proportion of men who are on-time or off-time relative to their peers. The figures are organized by typologies, with Figure 3 presenting the distributions for Typology 1 countries (Benin, Mali, Nigeria, and Uganda), Figure 4 for Typology 2 countries (Ethiopia and Rwanda), and Figure 5 the distributions for Typology 3 countries (India and Nepal).

Figure 3 Percent distribution of men age 30-34 experiencing earlier-than-typical, typical, or later-than-typical timing of first sex, first marriage, and birth of first child among Typology 1 countries



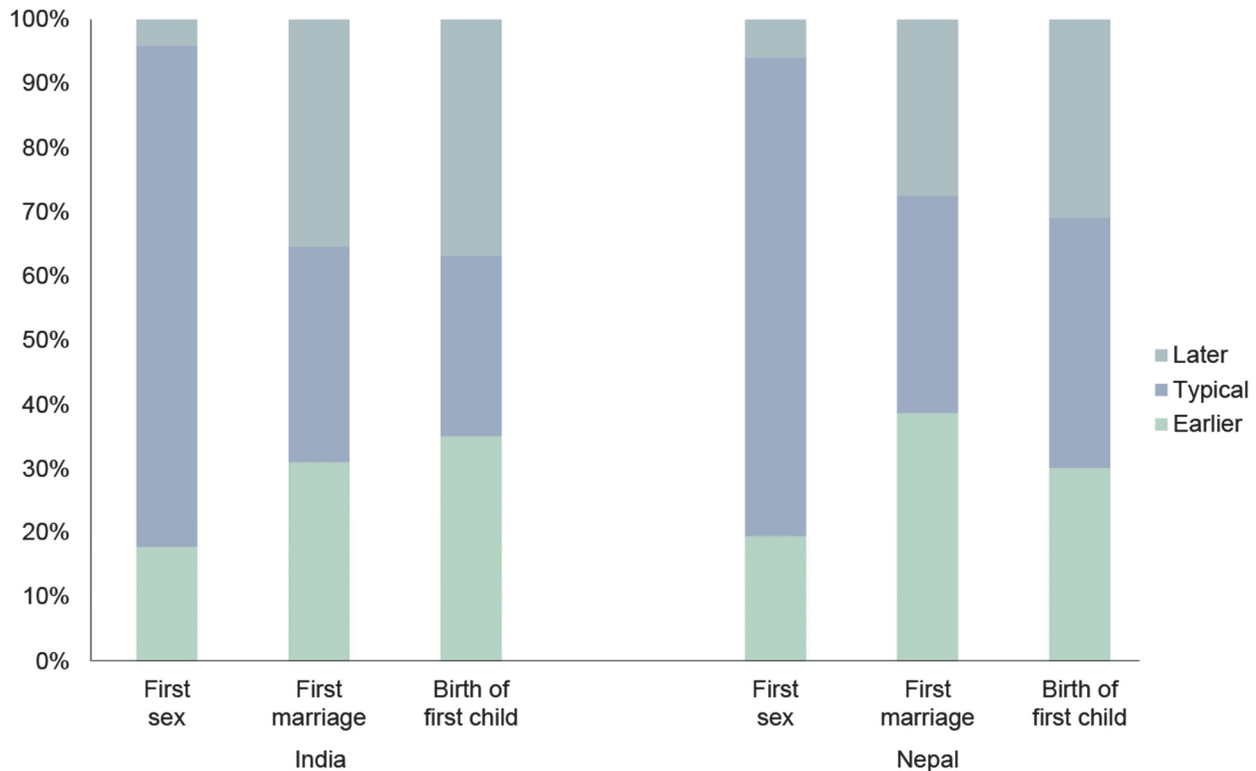
There are no clear differences between the typologies in terms of the distribution of the proportions of men who are on-time or off-time for each of the different family formation events. This is not surprising, as this measure is based on the distribution within each country individually, meaning that the proportions of individuals who are considered to be “on-” or “off-time” within individual countries may be similar even though the ages at which individual events take place are quite different between countries.

Figure 4 Percent distribution of men age 30-34 experiencing earlier-than-typical, typical, or later-than-typical timing of first sex, first marriage, and birth of first child among Typology 2 countries



When comparing the different family formation events, however, there are some clear patterns that are consistent across countries. In each country, a higher proportion of men are considered to be on-time for the initiation of sexual activity than for either marriage or childbearing. For example, in Nigeria, 62.5% of men were classified as on-time for first sexual intercourse, compared to 34.5% and 27.1% for first marriage and the birth of first child, respectively (data not shown). A majority of men in each country are classified as on-time for the initiation of first sexual intercourse, with ranges from 50.3% in Benin to 82.8% in Mali. In contrast, the proportion of men classified as on-time for first marriage ranges between 30.3% in Rwanda to 37.9% in Benin, and the proportion for the birth of the first child between 27.1% and 39.0%. With slight variations across countries, the proportions considered to be on- or off-time for first marriage and birth of first child are similar in all countries, with the proportions being earlier or later-than-typical approximately the same.

Figure 5 Percent distribution of men age 30-34 experiencing earlier-than-typical, typical, or later-than-typical timing of first sex, first marriage, and birth of first child among Typology 3 countries



These results suggest that there is generally greater diversity in the ages at first marriage and initiation of childbearing than there is for sexual activity, and that sexual activity may be different from the other family formation events in some way. How these events are linked together, particularly in terms of timing, is less clear from these figures. We examine this in greater detail in the following section.

3.3 Trajectories through Family Formation Events

Life course trajectories are inherently complex, even when examining a relatively narrow range of life experiences such as the family formation process. To capture this complexity and visually represent the family formation trajectories of men in each of the eight countries in this study, we use Sankey diagrams. Sankey diagrams are particularly useful for applications such as this because they provide a visual representation both of the diversity of different combinations of family formation trajectories and how common these are in a given population.

In this case, the Sankey diagrams are designed to capture the trajectories of men in terms of timing of first sex, first marriage, and birth of first child. Each of these is represented by a column that is divided into three categories indicating whether the man experienced the event earlier-than-typical (colored green), at typical timing (colored blue), or later-than-typical (colored salmon), allowing for 27 possible trajectories. When read vertically, each column replicates the results of the stacked bar charts in Figures 3-5. For example, in the first Sankey diagram for Benin (Figure 6), 32% of men experienced first sexual intercourse earlier-than-typical, 50% at typical timing, and 18% later-than-typical. The width of each of the bars in each column provides a visual representation of the proportions of men in each category.

The flows between each of the columns show the proportions of men experiencing individual pieces of their family formation trajectory. Each flow retains the color of the first category it came from – that is, the green flows all relate to men who had sexual intercourse at an earlier-than-typical age, even if they married or had a child at typical or later-than-typical ages. As with the columns, the width of the flows indicates the proportion of men who experienced that trajectory. Again, using Benin (Figure 6) as an example, of the 50% of men who had first sexual intercourse at a typical age:

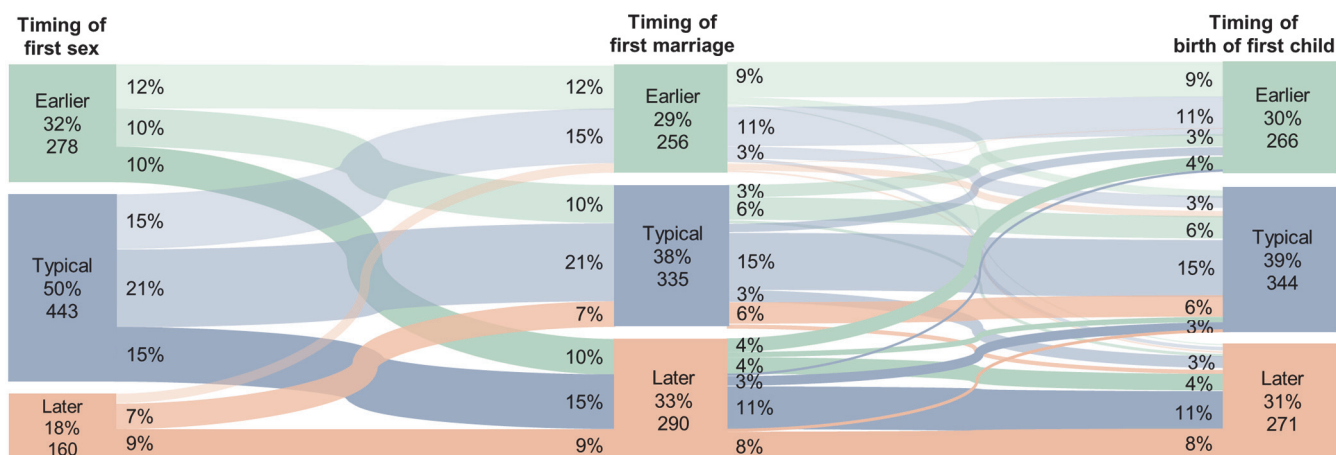
- 15% had first marriage at an earlier-than-typical age and 11% had the birth of a first child at an earlier-than-typical age.
- 21% experienced first marriage at a typical age and 15% then went on to have the birth of a first child at a typical age.
- 15% had first marriage at a later-than-typical age and over two-thirds of those men (or 11% of all men) experienced the birth of their first child at a later-than-typical age.

3.3.1 Common features of family formation trajectories

The eight Sankey diagrams reveal diversity in the patterns of family formation trajectories across countries. There were no particular patterns found by region or typology, but there are several features common to all study countries.

First, the most common trajectory in every country includes at least one family formation event that takes place at ages that are typical for that country. This is usually the trajectory in which all three family formation events are typically timed (as in Benin (Figure 6), Rwanda (Figure 10), and Nepal (Figure 13)), or typically timed first sex followed by earlier-than-typical first marriage and birth of first child (as in Nigeria (Figure 8), Ethiopia (Figure 9), and Uganda (Figure 11)). A trajectory with typically timed first sex followed by later-than-typical first marriage and birth of first child is most common in two countries, Mali (Figure 7) and India (Figure 12).

Figure 6 Family formation trajectories among men age 30-34, Benin

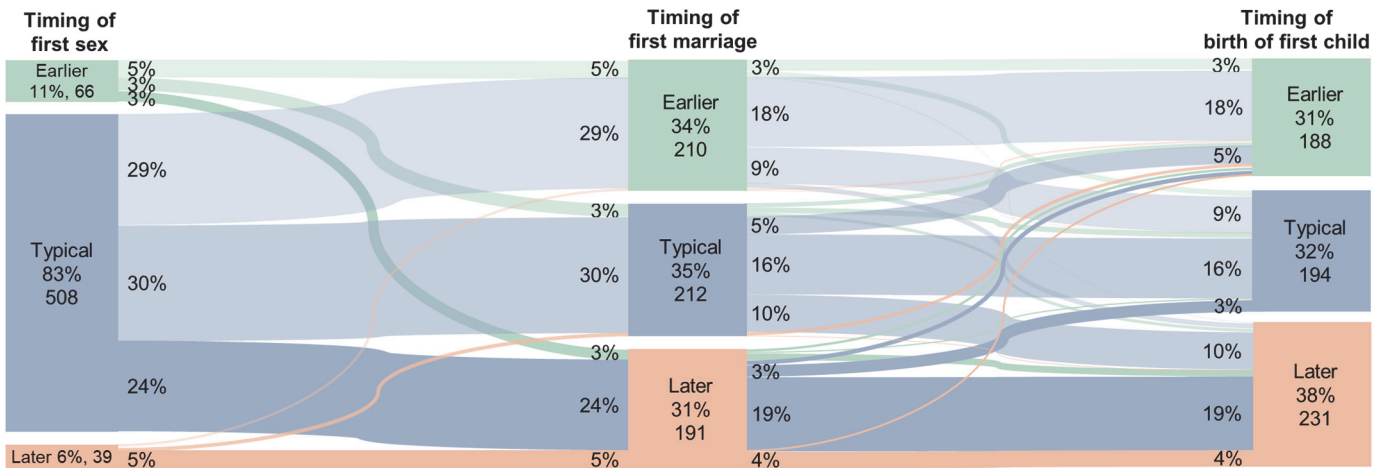


Second, the Sankey diagrams reveal considerable path dependence, with the timing of each event being closely tied to timing of the subsequent event. For example, most men who begin their trajectory early also experience the next family formation event early. This dependence is especially evident for the trajectory segment between first marriage and birth of the first child. Path dependence appears to be greater here than in the trajectory segment between first sex and first marriage. For example, Figure 8 shows that 32% of men in Nigeria marry earlier-than-typical, with at least 26% having the birth of their first child earlier than is typical. Compare this to the 22% of men whose sexual debut is earlier-than-typical, more than half of whom (14%) experience typical or later timing of marriage.

Path dependency is also evident for those trajectories with later-than-typical events. Across all countries, it is particularly unlikely for men experiencing one family formation event later-than-typical to experience the next events with early or typical timing. Mali (Figure 7) and Ethiopia (Figure 9) are good examples. Even in Nepal, the country with the most sizable late trajectories, few men experience a typically timed or earlier-than-typical event (Figure 13).

Third, one possible exception in terms of path dependency is among men whose trajectory begins with typical timing of first sex. These men experience a variety of trajectories. While a plurality of men experience typically timed first sex and go on to experience typically timed marriage, this is almost never a majority.³ In Rwanda (Figure 10), the typically timed first sex to earlier-than-typical first marriage trajectory segment (30% of all men) even exceeds the size of the trajectory segment from typically timed first sex to typically timed first marriage (27% of all men). In India (Figure 12), the typically timed first sex to later-than-typical first marriage trajectory segment (32% of all men) exceeds the typically timed first sexual intercourse to typically timed first marriage flow (30% of all men).

Figure 7 Family formation trajectories among men age 30-34, Mali



Fourth, when men experience both sex and marriage earlier-than-typical, it is especially unlikely that they will go on to experience the birth of their first child later-than-typical. This trajectory does not appear at in Rwanda and is very rare elsewhere. This is not the case when first sex, alone, is experienced earlier-than-

³ Nepal is the exception (Figure 13).

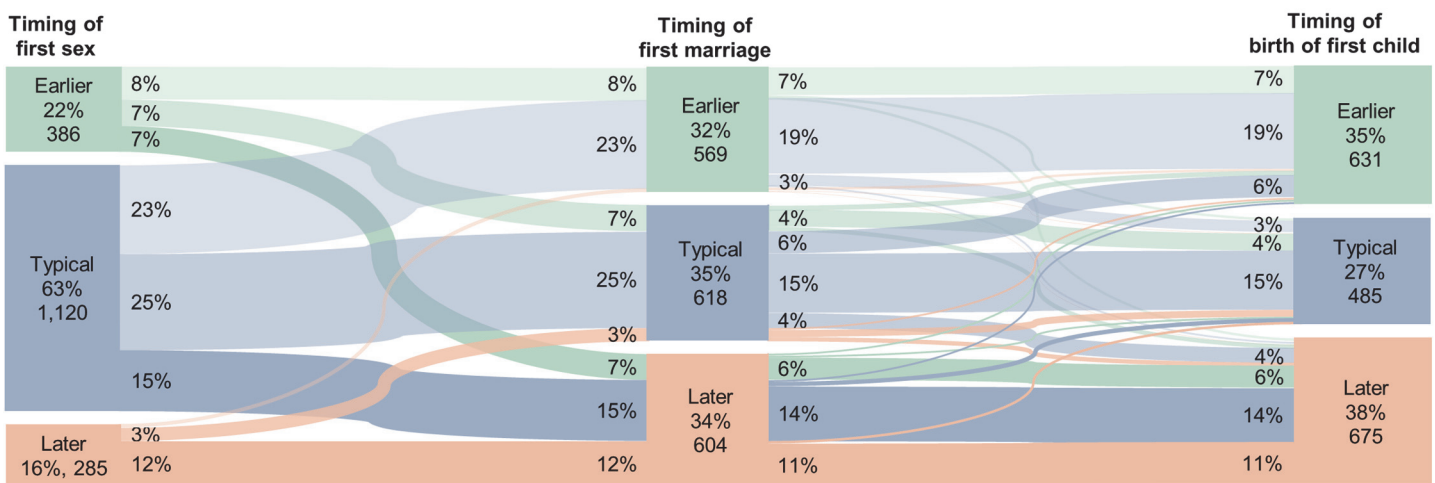
typical. For example, 6% of Nigerian men have an earlier-later-later than typical trajectory through the three family formation events (Figure 8).

While all countries have these patterns in common, each country has distinctive details that are unique to that country. Some of these distinguishing features are described in the following section, for each country, grouped by region.

3.3.2 Family formation trajectories in West Africa

All the study countries in West Africa (plus Uganda) exhibit the Typology 1 pattern of family formation, in which there is a longer progression to family formation with an extended gap between median ages at first sexual intercourse and marriage, followed by a short gap from first marriage to birth of the first child, and in which premarital sex and childbearing are relatively common. The Sankey diagram positions events according to their typical sequence in this typology (sexual intercourse, then marriage, then birth), although it should be noted that some men, particularly (but not only) those who experience birth of their first child earlier-than-typical actually do so before marriage, do not follow this sequencing.

Figure 8 Family formation trajectories among men age 30-34, Nigeria

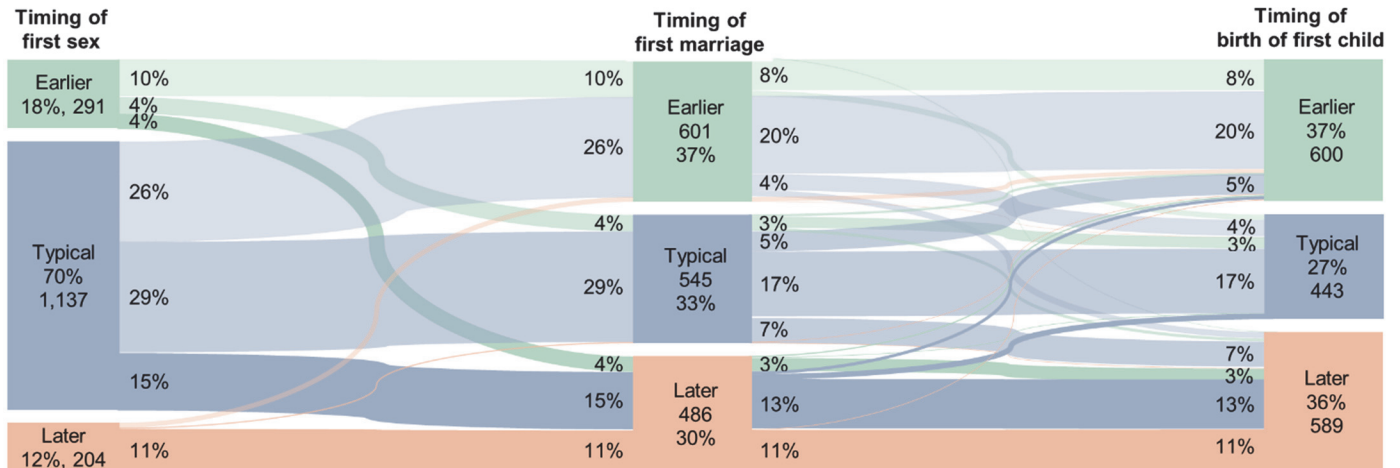


Benin (Figure 6) is the country with the largest proportion of men starting their trajectories with earlier-than-typical first sex. Almost equal proportions of these men go on to marry in each timing category. Of those starting with earlier-than-typical timing of first sex, the most common single trajectory is one with all family formation events occurring early (9%). The largest single trajectory is one from typically timed first sex (50% of all men) through typically timed first marriage (21%) to typically timed birth of first child (15%). Similar proportions of men have typically timed first sex, earlier-than-typical marriage and birth trajectory as have a typical first sex, late-than-typical marriage, and birth trajectory (11%).

Mali (Figure 7) has a higher proportion of men (83%) starting their trajectories from typically timed first sex than any other country. From this origin, three trajectories are of similar magnitude: later-than-typical marriage and birth (19%), earlier-than-typical marriage and birth (18%), and typically timed marriage and birth (16%). Mali also has one of the larger earlier marriage to typically timed birth trajectory segments (9%) of the study countries.

As shown in Figure 8, Nigerian men for whom sexual debut occurs earlier-than-typical are evenly distributed across all three trajectories, showing little connection between timing of sex and marriage. Almost all men who marry earlier also experience the birth of their first child earlier. The same pattern is evident among men who marry later. However, births occur at a variety of timings for men who marry at a typical age.

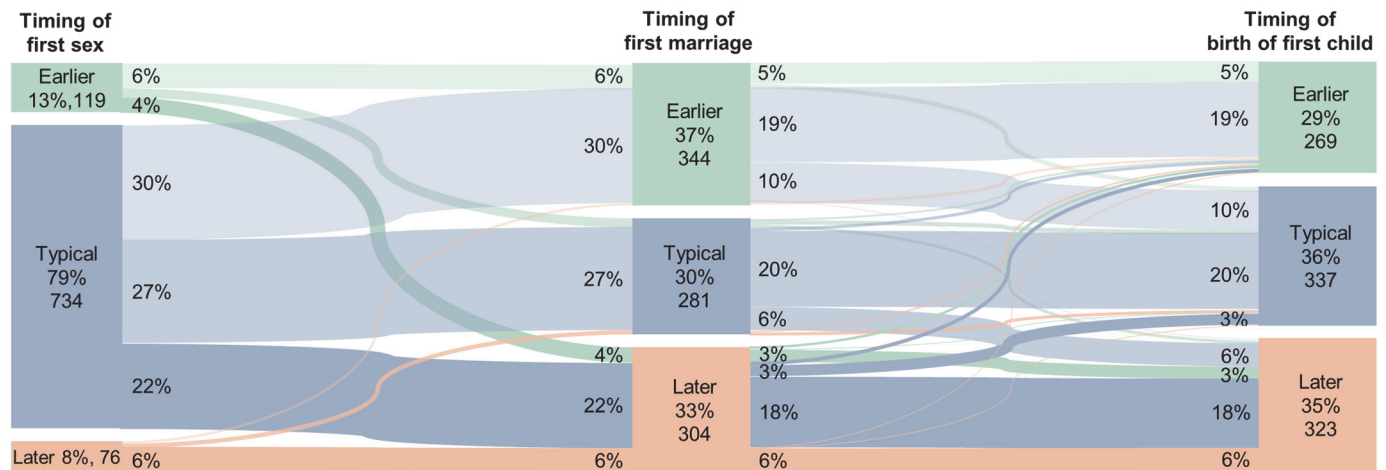
Figure 9 Family formation trajectories among men age 30-34, Ethiopia



3.3.3 Family formation trajectories in East Africa

Although Uganda follows the behavioral patterns of countries in Typology 1, the other two countries in this region, Ethiopia and Rwanda, exhibit behaviors that fall into their own typology (Typology 2), in which there is a moderate progression to family formation with a moderate gap between median ages at first sex and marriage, followed by a longer gap to first birth. Premarital sex is moderately common, although premarital childbearing is relatively rare.

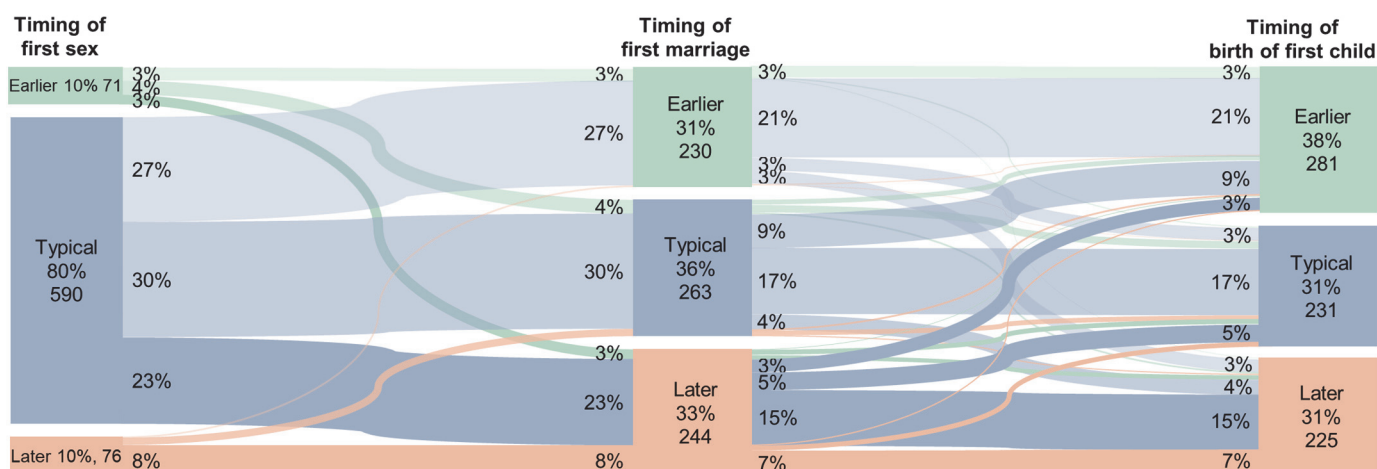
Figure 10 Family formation trajectories among men age 30-34, Rwanda



The most common single trajectory for Ethiopian men is one in which first sex is typically timed, followed by earlier-than-typical marriage and birth of first child (20%) (Figure 9). Ethiopia also shows how unlikely it is for men who experience sex later-than-typical to experience either earlier or typically timed marriage or birth—of the 12% of men who experience sex later-than-typical, 92% (or 11% of all men) are classified as having both later marriages and births. This likely includes men who have not yet experienced any of the three events (by definition later-than-typical for this age group).

The most common single trajectories in Rwanda (Figure 10) are where men experience typical timing of all three events (20%), followed by typically timed sex but earlier marriage and birth (19%) and typically timed sex and later marriage and birth (18%). Rwanda most closely resembles Mali, although the proportions of men experiencing premarital sex and childbearing are much lower. In Rwanda, few men who marry at a typical age or later-than-typical experience the birth of their first child earlier-than-typical (<3%), with most (67% or 20% of all men) remaining on the typical trajectory.

Figure 11 Family formation trajectories among men age 30-34, Uganda



In contrast, Uganda’s patterns (Figure 11) show slightly more movement from later-than-typical marriage to earlier or typical time of birth than in other countries. The small proportion of men for whom sex occurs earlier-than-typical means that trajectories originating from this point include very few men. Only 3% of men had an earlier sex, earlier marriage, and earlier birth trajectory. As with Ethiopia, the overwhelming majority of men experiencing later-than-typical initiation of sexual intercourse remain on a late trajectory for first marriage and first birth.

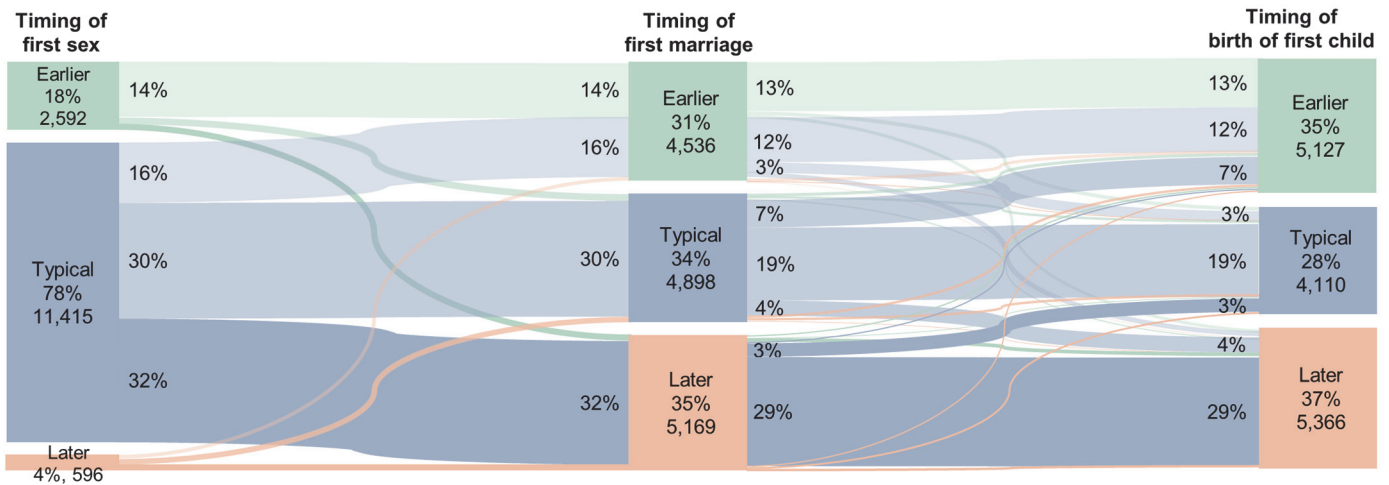
3.3.4 Family formation trajectories in South Asia

Both India and Nepal exhibit the Typology 3 pattern of family formation in which the median ages at first sex and marriage are very close, followed by a moderate gap to first birth. This suggests that premarital sex is not common and premarital childbearing is very rare.

Figure 12 indicates that there are no appreciably sized trajectories originating from later-than-typical first sex in India, which reflects the very low proportion of men (4%) in this category. However, there is a large proportion of Indian men for whom trajectories originate with typically timed first sex. Most

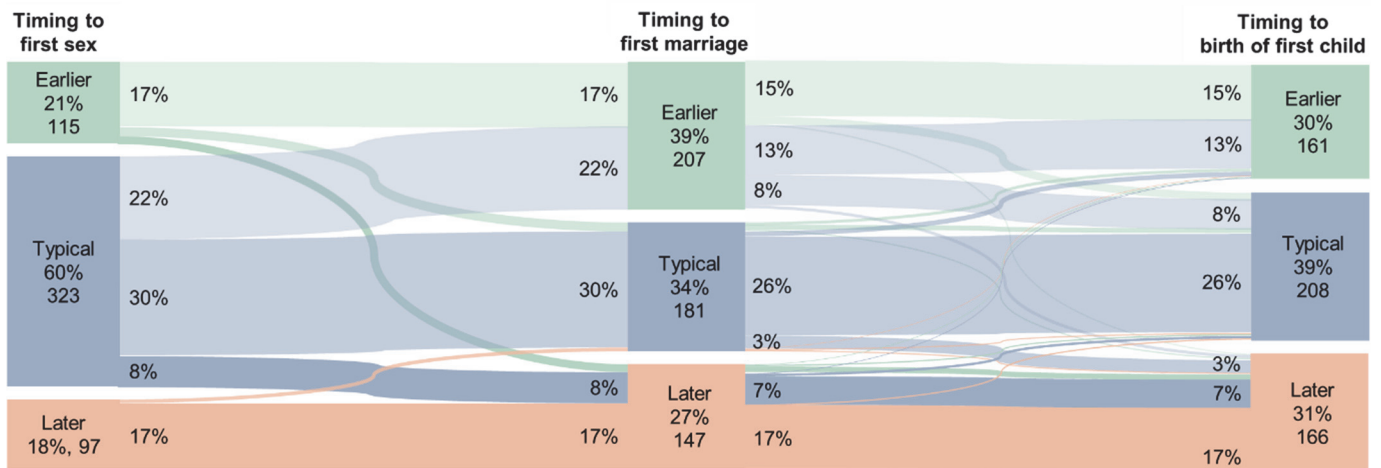
trajectories leading to later-than-typical marriage (32%) or birth (29%) originate from typically timed first sex.

Figure 12 Family formation trajectories among men age 30-34, India



Both India and Nepal have the largest trajectories with all three events occurring earlier-than-typical compared with the other six countries in the study. In India, this trajectory accounts for 13% of men and 15% of men in Nepal. In Nepal (Figure 13), men who have sex earlier-than-typical are unlikely to have any trajectory other than this earlier marriage and birth trajectory. Nepal is distinctive for having the most sizable trajectory of later-than-typically timed events (17%), in contrast to India.

Figure 13 Family formation trajectories among men age 30-34, Nepal



3.4 Association of Marriage-Birth Trajectories with Social, Economic, and Fertility-related Outcomes

The concept of linked events is central to LCT, with events taking place earlier in the life course assumed to shape a range of outcomes and behaviors later in the life course. As a result, we can expect that the various family formation trajectories have consequences for other aspects of a man's life. In this section, we explore these relationships, and focus on economic, social, or fertility-related behaviors. To do this,

we assess if the trajectories are associated with selected behaviors using a chi-square test of independence. Although we are ultimately interested in consequences and effects of men's trajectories, this is an initial exploration. Results are descriptive and no causal direction can be established, although LCT and research on the impact of family formation patterns for women suggest that some behaviors are influenced at least to some extent by men's family formation experiences. We focus mainly on off-time trajectories, those that include earlier-than or later-than-typical family formation events, as compared with typical trajectories, because LCT suggests that these are most likely to be socially sanctioned and harmful to life course progress. We further focus on the segment between first marriage and birth of the first child. This is for two reasons. First, the analyses above suggest that the initiation of sexual activity may be different in some important ways than the marriage and the initiation of childbearing. In particular, the latter two events may be more closely associated with the formation of a family unit than the initiation of sexual activity (with the possible exception of countries such as Nepal and India where entry into marriage and initiation of sexual activity are very closely tied). Secondly, the consequences of entry into marriage and initiation of childbearing are likely to be more substantial than becoming sexually active, particularly for men and when this does not result in pregnancy.

3.4.1 Overview of outcomes

We explored a wide range of indicators as possible economic, social, and fertility-related outcomes that might be influenced by variations in the family formation, as shown in Table 5. We do not present all of them in this report. We selected for presentation those indicators that more consistently demonstrated a statistically meaningful relationship with marriage-to-birth trajectories across the eight countries. Table 5 provides an overview of all indicators that we explored, displays the countries in which an association, either positive or negative, is indicated by an 'x', and notes if the indicator is calculated on a subsample or the full sample of men.

Table 5 Overview of relationship between various economic, social and fertility-related outcomes and marriage-birth trajectories among men age 30-34

	Benin	Mali	Nigeria	Ethiopia	Rwanda	Uganda	India	Nepal
Economic Outcomes								
Has year-round employment		x					x	
Owns a house	x	x	x	x	x	x	x	
Owns land	x	x	x	x	x	x	x	
Household wealth quintile	x	x	x	x	x	x	x	x
Decision-making*								
Man's own earnings			x					
Man's own health care		x	x				x	
Large household purchases	x		x				x	x
Social Outcomes								
Current marital status	x	x	x	x	x	x	x	x
Has had multiple sexual partners in past 12 months	x	x	x	x	x	x	x	x
Agreement with any reasons for gender-based violence	x		x				x	x
Educational attainment	x	x	x	x	x	x	x	x
Fertility-Related Outcomes								
Contraceptive attitudes								
Contraception is a woman's concern	x				x		x	
Women who use contraception may become promiscuous	x		x	x				
Used any contraceptive method at last sex**	x		x	x	x	x	x	x
Used modern contraceptive method at last sex**	x		x		x		x	x
Number of living children	x	x	x	x	x	x	x	x
Fertility desires	x	x	x	x	x	x	x	x

* Includes only currently married men.

** Includes only those who have been sexually active in past 3 months.

Of 16 possible indicators, we retained four economic outcomes, three social outcomes, and four fertility-related outcomes. Among the economic outcomes, household wealth quintile is associated with marriage-to-birth trajectories in all eight study countries, and house and land ownership in all countries except Nepal. Currently married men's decision-making regarding large household purchases is related to these trajectories in half of the study countries: Benin, Nigeria, India, and Nepal.

The social outcomes of current marital status and educational attainment are associated with marriage-to-birth trajectories in all study counties, while attitudes toward gender-based violence are associated with trajectories in Benin, Nigeria, India, and Nepal. We do not further explore men's sexual partnerships in the past 12 months, although this outcome shows an association in all eight countries.

We assessed two contraceptive attitudes, each of which is associated with men's trajectories in three countries. We focus on agreement with the statement, "contraception is a woman's concern and a man should not have to worry about it," which indicates a significant relationship in Benin, Rwanda, and India. The indicators for contraceptive used and modern method of contraception used at last sex show similar results. We focus on the latter outcome, which is significant in Benin, Nigeria, Rwanda, India, and Nepal.

3.4.2 Men's trajectories and economic outcomes

Table 6 shows the proportion of men who own a home by marriage-birth trajectory. In all countries, men are most likely to own a house, alone or jointly, if they are in the earlier marriage-earlier birth or earlier marriage-typically timed birth trajectory. House ownership also remains quite common among men in the

typical marriage-early birth and typical marriage-typical birth trajectories in Mali, Ethiopia, Rwanda, and India. House ownership is consistently lower among men in the later-than-typical birth trajectories (typical marriage or late marriage). Men's house ownership, overall, appears to be the highest in Ethiopia and Rwanda, especially among men who marry and have the birth of their first child earlier-than-typical (91%-92%).

Table 6 House ownership by marriage-birth trajectory among men age 30-34

	Percentage of men who own a house (alone or jointly)							p-value ⁸
	EM-EB ¹	EM-TB ²	TM-EB ³	TM-TB ⁴	TM-LB ⁵	LM-LB ⁶	Other ⁷	
Benin (N=880)	55.7	68.0	37.4	45.5	34.1	29.4	33.7	0.000
Mali (N=614)	66.4	61.7	60.3	60.3	53.4	40.8	56.6	0.009
Nigeria (N=1,793)	62.4	65.9	43.2	44.3	34.5	29.3	43.0	0.000
Ethiopia (N=1,634)	91.8	86.7	76.1	84.5	71.2	43.2	73.7	0.000
Rwanda (N=931)	90.9	84.3	85.8	83.1	75.3	50.9	56.3	0.000
Uganda (N=734)	87.4	86.0	79.5	75.3	68.7	52.7	67.4	0.000
India (N=14,604)	78.0	72.2	72.9	70.7	70.0	61.1	71.1	0.000
Nepal (N=536)	23.6	25.1	18.4	18.8	13.7	8.5	19.4	0.107

¹ Marriage-birth trajectory of first marriage at earlier-than-typical age (EM) and first birth at earlier-than-typical age (EB).
² Marriage-birth trajectory of first marriage at earlier-than-typical age (EM) and first birth at typical age (TB).
³ Marriage-birth trajectory of first marriage at typical age (TM) and first birth at earlier-than-typical age (EB).
⁴ Marriage-birth trajectory of first marriage at typical age (TM) and first birth at typical age (TB).
⁵ Marriage-birth trajectory of first marriage at typical age (TM) and first birth at later-than-typical age (LB).
⁶ Marriage-birth trajectory of first marriage at later-than-typical age (LM) and first birth at later-than-typical age (LB).
⁷ Other marriage-birth trajectories.
⁸ p-value for a chi-square test of independence between house ownership and trajectory.

Land ownership shows similar patterns to those of house ownership (Table 7). Land ownership is usually most likely among men experiencing an earlier marriage-earlier birth trajectory. Land ownership is also common among men in the earlier marriage-typical birth and typical marriage-earlier birth trajectories. In Mali, men's land ownership in the typical marriage-earlier birth trajectory (64%) exceeds that of all other trajectories. Similar to house ownership, land ownership is least likely within the later marriage-later birth trajectory, and occasionally substantially so. In Ethiopia, 37% of men in this trajectory own land compared with 82% of men in the earlier marriage and birth trajectory, a difference of 45 percentage points.

Table 7 Land ownership by marriage-birth trajectory among men age 30-34

	Percentage of men who own land (alone or jointly)							p-value ⁸
	EM-EB ¹	EM-TB ²	TM-EB ³	TM-TB ⁴	TM-LB ⁵	LM-LB ⁶	Other ⁷	
Benin (N=880)	63.1	67.9	39.4	49.2	44.1	33.5	40.7	0.000
Mali (N=614)	62.5	48.7	64.2	59.4	34.5	34.1	43.3	0.000
Nigeria (N=1,793)	65.2	62.5	42.7	42.1	31.3	28.3	50.2	0.000
Ethiopia (N=1,634)	82.2	72.2	76.0	72.6	60.6	36.7	77.4	0.000
Rwanda (N=931)	81.3	74.9	67.6	71.8	75.7	60.3	50.9	0.000
Uganda (N=734)	81.0	68.9	78.1	75.9	69.1	57.2	58.9	0.000
India (N=14,604)	56.5	49.5	52.7	51.2	55.4	46.2	56.6	0.000
Nepal (N=536)	34.1	35.9	21.7	22.1	20.1	20.3	30.7	0.183

¹ Marriage-birth trajectory of first marriage at earlier-than-typical age (EM) and first birth at earlier than typical age (EB).
² Marriage-birth trajectory of first marriage at earlier-than-typical age (EM) and first birth at typical age (TB).
³ Marriage-birth trajectory of first marriage at typical age (TM) and first birth at earlier-than-typical age (EB).
⁴ Marriage-birth trajectory of first marriage at typical age (TM) and first birth at typical age (TB).
⁵ Marriage-birth trajectory of first marriage at typical age (TM) and first birth at later-than-typical age (LB).
⁶ Marriage-birth trajectory of first marriage at later-than-typical age (LM) and first birth at later-than-typical age (LB).
⁷ Other marriage-birth trajectories.
⁸ p-value for a chi-square test of independence between house ownership and trajectory.

Table 8 shows the proportion of men in each household wealth quintile, by trajectory. Men who experience earlier trajectories, whether earlier marriage-earlier birth or earlier marriage-typically timed birth, predominantly occupy the poorest and poorer household wealth quintiles in Benin, Nigeria, and Ethiopia. These men are concentrated in the middle quintiles (presenting a normal distribution) in Rwanda, Uganda, and Nigeria.

Even clearer are the wealth patterns of men experiencing family formation events later-than-typical. Men in later typical marriage-later birth and later marriage-later birth trajectories are more likely to be in the richer and richest quintiles, while few are in the poorest quintile. In many countries, this same pattern—a greater likelihood of being in the wealthier quintiles—applies for the typical marriage-typical birth trajectory as well. Men who experience the typical marriage-earlier birth trajectory exhibit a variety of wealth patterns, with little consistency across study countries.

The dominant pattern of decision-making about large household purchases (asked only of those who are currently married or cohabiting), across all trajectories, is that these decisions are made by men alone in Benin, Mali, and Nigeria, and that these decisions are made jointly with their wives in Ethiopia, Rwanda, and India (Table 9). The proportions making these decisions themselves and jointly are similar in Uganda. The participation of others in these decisions is common only in Nepal. The pattern of decision-making varies with the family formation trajectory in Benin, Nigeria, India, and Nepal.

Table 8 Household wealth by marriage-birth trajectory among men age 30-34

	Percent distribution of men by household wealth quintile							p-value ⁸
	EM-EB ¹	EM-TB ²	TM-EB ³	TM-TB ⁴	TM-LB ⁵	LM-LB ⁶	Other ⁷	
Benin (N=880)								
Poorest	19.3	33.0	11.7	20.4	21.7	9.6	14.8	0.000
Poorer	26.3	21.4	15.1	15.2	21.6	13.7	23.6	
Middle	18.6	14.1	22.2	20.2	4.4	13.1	18.4	
Richer	21.0	12.1	20.8	19.9	9.9	20.2	21.5	
Richest	14.8	19.5	30.2	24.3	42.4	43.4	21.7	
Mali (N=614)								
Poorest	27.6	24.7	33.5	15.2	8.0	10.8	21.3	0.002
Poorer	15.2	20.7	9.3	19.8	17.5	10.5	12.0	
Middle	21.6	23.3	20.9	17.8	19.6	13.9	9.2	
Richer	22.7	17.9	16.8	23.5	31.7	24.2	27.0	
Richest	12.9	13.4	19.5	23.7	23.2	40.6	30.5	
Nigeria (N=1,793)								
Poorest	27.9	11.9	17.3	8.7	9.8	7.4	11.4	0.000
Poorer	23.3	35.8	13.9	13.6	7.9	8.6	22.7	
Middle	21.1	23.6	21.5	20.2	17.9	18.3	18.1	
Richer	17.0	21.1	26.4	35.3	23.2	26.5	18.1	
Richest	10.7	7.6	20.9	22.1	41.2	39.2	29.6	
Ethiopia (N=1,634)								
Poorest	22.6	23.6	18.3	13.9	12.0	8.5	15.7	0.000
Poorer	23.7	22.4	23.0	24.5	24.6	13.4	23.8	
Middle	20.9	20.7	16.7	23.9	15.0	14.0	16.6	
Richer	19.2	18.4	21.1	14.2	11.3	19.1	14.3	
Richest	13.6	14.9	20.9	23.6	37.1	45.0	29.5	
Rwanda (N=931)								
Poorest	15.7	19.0	31.7	17.5	17.7	16.0	15.4	0.001
Poorer	21.1	25.7	12.9	21.2	19.6	18.4	7.6	
Middle	25.8	26.1	21.5	24.2	22.3	15.5	19.7	
Richer	24.0	15.4	24.7	16.8	19.5	14.7	19.3	
Richest	13.4	13.9	9.1	20.3	20.9	35.4	37.9	
Uganda (N=734)								
Poorest	21.4	28.5	18.1	16.3	26.3	10.0	10.9	0.000
Poorer	28.3	15.1	21.0	17.0	14.4	9.5	22.5	
Middle	24.0	14.8	24.4	18.2	11.1	12.0	11.9	
Richer	16.3	19.7	21.8	23.9	17.6	16.9	20.5	
Richest	9.9	21.8	14.6	24.5	30.6	51.5	34.3	
India (N=14,604)								
Poorest	24.2	21.8	16.7	12.2	9.4	6.1	16.4	0.000
Poorer	24.3	20.2	19.4	16.4	17.8	13.1	18.3	
Middle	22.3	21.7	25.2	21.2	23.0	19.1	24.1	
Richer	19.0	19.3	21.8	23.6	24.7	26.2	20.7	
Richest	10.1	17.1	16.8	26.5	25.1	35.5	20.5	
Nepal (N=536)								
Poorest	19.3	20.1	15.0	19.4	3.1	9.3	34.9	0.002
Poorer	20.3	24.7	10.4	15.3	21.9	9.4	10.5	
Middle	21.6	4.1	16.2	22.2	12.7	16.4	16.5	
Richer	22.8	34.4	50.0	21.5	30.0	23.8	26.0	
Richest	16.0	16.8	8.4	21.6	32.4	41.1	12.1	

¹ Marriage-birth trajectory of first marriage at earlier than typical age (EM) and first birth at earlier than typical age (EB).

² Marriage-birth trajectory of first marriage at earlier than typical age (EM) and first birth at typical age (TB).

³ Marriage-birth trajectory of first marriage at typical age (TM) and first birth at earlier than typical age (EB).

⁴ Marriage-birth trajectory of first marriage at typical age (TM) and first birth at typical age (TB).

⁵ Marriage-birth trajectory of first marriage at typical age (TM) and first birth at later than typical age (LB).

⁶ Marriage-birth trajectory of first marriage at later than typical age (LM) and first birth at later than typical age (LB).

⁷ Other marriage-birth trajectories.

⁸ p-value for a chi-square test of independence between house ownership and trajectory.

Table 9 Decision-making about large household purchases by marriage-birth trajectory among currently married men age 30-34

	Percent distribution of men by who makes decisions about large household							p-value ⁸
	EM-EB ¹	EM-TB ²	TM-EB ³	TM-TB ⁴	TM-LB ⁵	LM-LB ⁶	Other ⁷	
Benin (N=777)								
Man alone	66.9	66.1	56.9	66.4	53.9	58.0	49.1	0.095
Jointly with wife or wife alone	26.9	27.9	39.0	25.2	44.2	36.7	43.9	
Someone else/other	6.2	4.6	4.1	8.4	1.9	5.4	7.1	
Mali (N=566)								
Man alone	83.3	84.8	83.8	78.3	72.1	74.7	69.1	0.455
Jointly with wife or wife alone	2.8	1.6	2.9	4.9	7.5	9.8	10.1	
Someone else/other	11.9	13.6	13.3	16.8	19.1	12.7	14.4	
Nigeria (N=1,413)								
Man alone	62.7	64.9	48.9	52.2	51.4	42.3	50.5	0.056
Jointly with wife or wife alone	22.5	9.7	35.1	33.1	33.4	37.4	26.4	
Someone else/other	14.5	25.4	16.0	14.7	15.3	20.2	23.1	
Ethiopia (N=1,389)								
Man alone	19.3	20.5	18.0	9.9	23.4	11.1	23.0	0.214
Jointly with wife or wife alone	76.6	74.3	75.9	87.1	72.6	83.1	75.1	
Someone else/other	4.0	5.2	6.2	3.0	4.0	5.8	1.9	
Rwanda (N=774)								
Man alone	31.0	29.7	28.5	33.1	26.5	30.0	12.3	0.547
Jointly with wife or wife alone	64.0	63.6	64.8	64.8	72.2	66.4	84.6	
Someone else/other	5.0	6.7	6.7	2.1	1.3	3.6	3.1	
Uganda (N=633)								
Man alone	46.6	48.7	51.8	45.8	59.0	48.5	48.6	0.971
Jointly with wife or wife alone	39.4	43.0	39.1	42.7	37.2	41.3	41.2	
Someone else/other	14.0	8.3	9.1	11.5	3.8	10.1	10.2	
India (N=12,638)								
Man alone	25.5	25.0	22.0	23.8	21.4	21.4	23.9	0.054
Jointly with wife or wife alone	66.8	65.7	68.4	67.5	69.6	66.0	64.2	
Someone else/other	7.7	8.9	9.2	8.4	8.5	12.3	11.8	
Nepal (N=514)								
Man alone	24.7	41.3	48.8	43.0	23.0	23.5	21.2	0.006
Jointly with wife or wife alone	30.9	15.9	21.3	24.3	29.1	16.4	25.9	
Someone else/other	44.3	42.8	29.9	32.8	48.0	60.1	52.9	

¹ Marriage-birth trajectory of first marriage at earlier than typical age (EM) and first birth at earlier than typical age (EB).

² Marriage-birth trajectory of first marriage at earlier than typical age (EM) and first birth at typical age (TB).

³ Marriage-birth trajectory of first marriage at typical age (TM) and first birth at earlier than typical age (EB).

⁴ Marriage-birth trajectory of first marriage at typical age (TM) and first birth at typical age (TB).

⁵ Marriage-birth trajectory of first marriage at typical age (TM) and first birth at later than typical age (LB).

⁶ Marriage-birth trajectory of first marriage at later than typical age (LM) and first birth at later than typical age (LB).

⁷ Other marriage-birth trajectories.

⁸ p-value for a chi-square test of independence between household ownership and trajectory.

In Benin and Nigeria, the likelihood of joint decision-making is decreased—and men’s sole decision-making is increased—among men in the earlier marriage-earlier birth and earlier marriage-typical birth trajectories. In India, the likelihood of sole decision-making is similarly higher among men in these trajectories, although others’ participation in decision-making (not joint decision-making) is lower in these trajectories. Joint decision-making occurs at similar levels within all trajectories in India. Similarly, in Nepal, others’ participation in decision-making increases in trajectories with a later-than-typical (and the other trajectories category) compared to trajectories with earlier or typically timed marriages and births. However, the pattern of joint and sole decision-making across trajectories is not clear.

3.4.3 Men’s trajectories and social outcomes

Attitudes toward gender-based violence are associated with family formation trajectory in Benin, Nigeria, India, and Nepal (Table 10). Yet, the pattern of these attitudes varies in each of these four countries. In Benin and Nepal, acceptance of wife-beating in at least one scenario is highest among men in the typical marriage-earlier birth trajectory (27% and 51%, respectively). It is lowest among men in the later marriage-later birth trajectory in Benin (7%), but lowest among men in the earlier marriage-typical birth trajectory in Nepal (8%). Nepal also has the largest difference in acceptance of wife-beating, with these trajectories separated by 43 percentage points. The differences are more modest in India, where acceptance of wife-beating is highest among men in the other trajectories (37%) and lowest among men in the typical marriage-typical birth trajectory (28%). In Nigeria, acceptance is highest among men in the earlier marriage-earlier birth trajectory (24%) and lowest in the typical marriage-later birth trajectory (9%).

Table 10 Attitude toward gender-based violence by marriage-birth trajectory among men age 30-34

	Percentage of men who agree that a husband is justified in hitting or beating his wife in any of 5 specific scenarios ¹							p-value ⁹
	EM-EB ²	EM-TB ³	TM-EB ⁴	TM-TB ⁵	TM-LB ⁶	LM-LB ⁷	Other ⁸	
Benin (N=880)	17.0	13.2	26.6	17.8	15.9	6.8	22.4	0.008
Mali (N=614)	47.4	56.9	38.2	51.2	48.3	36.1	45.3	0.204
Nigeria (N=1,793)	23.7	21.3	14.2	17.9	8.5	16.2	19.3	0.033
Ethiopia (N=1,634)	23.6	37.5	17.0	24.4	17.9	20.3	35.0	0.135
Rwanda (N=931)	18.3	18.3	19.6	10.7	14.2	11.2	15.0	0.182
Uganda (N=734)	41.9	30.2	51.0	30.0	40.6	31.6	34.1	0.100
India (N=14,604)	31.3	32.4	33.0	27.9	27.5	31.3	36.6	0.017
Nepal (N=536)	22.5	7.7	51.0	20.7	12.3	8.5	32.7	0.000

¹ If she burns the food, if she argues with him, if she goes out without telling him, if she neglects the children, and/or if she refuses to have sexual intercourse with him.
² Marriage-birth trajectory of first marriage at earlier-than-typical age (EM) and first birth at earlier-than-typical age (EB).
³ Marriage-birth trajectory of first marriage at earlier-than-typical age (EM) and first birth at typical age (TB).
⁴ Marriage-birth trajectory of first marriage at typical age (TM) and first birth at earlier-than-typical age (EB).
⁵ Marriage-birth trajectory of first marriage at typical age (TM) and first birth at typical age (TB).
⁶ Marriage-birth trajectory of first marriage at typical age (TM) and first birth at later-than-typical age (LB).
⁷ Marriage-birth trajectory of first marriage at later-than-typical age (LM) and first birth at later-than-typical age (LB).
⁸ Other marriage-birth trajectories.
⁹ p-value for a chi-square test of independence between house ownership and trajectory.

Table 11 presents the educational attainment by trajectory, which is significantly associated in all eight study countries. This indicates that higher levels of education are most likely among men in the typical marriage-later birth and later marriage-later birth trajectories, while less education is more common in

trajectories characterized by earlier marriage. This pattern is true both in countries with low levels of education, like Benin, and where secondary or higher education is common, like Nigeria.

Table 11 Educational attainment by marriage-birth trajectory among men age 30-34

	Percent distribution of men by highest level of educational attainment							p-value ⁸
	EM-EB ¹	EM-TB ²	TM-EB ³	TM-TB ⁴	TM-LB ⁵	LM-LB ⁶	Other ⁷	
Benin (N=880)								
None	75.4	70.6	70.0	61.9	63.3	46.6	62.8	0.000
Primary	21.5	24.0	24.3	26.9	17.9	26.2	28.2	
Secondary or higher	3.1	5.4	5.8	11.2	18.8	27.2	9.0	
Mali (N=614)								
None	73.5	83.3	64.5	71.5	55.8	47.2	67.5	0.000
Primary	20.7	15.5	35.5	22.5	28.8	35.0	28.5	
Secondary or higher	5.9	1.1	0.0	6.1	15.4	17.8	4.0	
Nigeria (N=1,793)								
None	40.2	27.0	26.0	18.5	11.6	7.3	19.4	0.000
Primary	23.7	22.4	14.4	19.3	17.8	14.2	18.8	
Secondary or higher	36.1	50.6	59.6	62.2	70.6	78.5	61.8	
Ethiopia (N=1,634)								
None	89.1	88.6	89.3	76.4	78.1	45.1	73.4	0.000
Primary	6.8	6.2	5.7	11.0	7.3	26.9	8.8	
Secondary or higher	4.1	5.1	5.0	12.6	14.7	28.0	17.7	
Rwanda (N=931)								
None	77.1	76.3	70.6	61.8	66.9	54.0	37.7	0.000
Primary	22.4	21.8	29.4	33.0	16.0	23.4	44.9	
Secondary or higher	0.5	1.9	0.0	5.1	17.1	22.6	17.4	
Uganda (N=734)								
None	58.1	36.4	44.3	29.5	17.3	22.0	42.9	0.000
Primary	33.6	54.4	46.5	53.8	48.1	26.2	35.9	
Secondary or higher	8.2	9.2	9.2	16.7	34.6	51.9	21.2	
India (N=14,604)								
None	30.9	27.4	23.8	16.6	18.3	9.1	18.5	0.000
Primary	56.7	56.6	55.4	53.5	49.0	44.7	54.1	
Secondary or higher	12.4	16.0	20.8	29.9	32.7	46.2	27.4	
Nepal (N=536)								
Less than primary	34.3	12.2	31.9	28.5	17.7	13.0	36.0	0.000
Less than secondary	44.5	71.2	53.6	39.1	51.5	26.0	20.6	
Secondary or higher	21.2	16.6	14.4	32.4	30.7	61.0	43.5	

¹ Marriage-birth trajectory of first marriage at earlier than typical age (EM) and first birth at earlier than typical age (EB).

² Marriage-birth trajectory of first marriage at earlier than typical age (EM) and first birth at typical age (TB).

³ Marriage-birth trajectory of first marriage at typical age (TM) and first birth at earlier than typical age (EB).

⁴ Marriage-birth trajectory of first marriage at typical age (TM) and first birth at typical age (TB).

⁵ Marriage-birth trajectory of first marriage at typical age (TM) and first birth at later than typical age (LB).

⁶ Marriage-birth trajectory of first marriage at later than typical age (LM) and first birth at later than typical age (LB).

⁷ Other marriage-birth trajectories.

⁸ p-value for a chi-square test of independence between house ownership and trajectory.

3.4.4 Men’s trajectories and fertility-related outcomes

Men were asked if they agreed with the statement, “contraception is a woman’s concern and a man should not have to worry about it.” Men’s trajectories are associated with contraceptive attitudes in three countries: Benin, Rwanda, and India, as shown in Table 12. Agreement with the statement is highest among men in the typical marriage-earlier birth trajectory (34% and 21%, respectively) and lowest among men in the later marriage-later birth trajectory (14% and 3%, respectively) in both Benin and Rwanda. In India, the level of agreement does not vary across family formation trajectories. Still, agreement is significantly higher (47%) within the earlier marriage-earlier birth trajectory than the typical marriage-typical birth trajectory (41%).

Table 12 Attitude toward contraceptive decision-making by marriage-birth trajectory among men age 30-34

	Percentage of men who agree that “Contraception is a woman’s concern and a man should not have to worry about it”							p-value ⁸
	EM-EB ¹	EM-TB ²	TM-EB ³	TM-TB ⁴	TM-LB ⁵	LM-LB ⁶	Other ⁷	
Benin (N=880)	30.4	20.5	34.2	23.4	16.7	14.1	33.4	0.002
Mali (N=614)	30.6	28.8	28.8	18.5	33.2	26.1	27.1	0.546
Nigeria (N=1,793)	38.0	38.1	31.3	38.6	31.4	34.7	25.9	0.594
Ethiopia (N=1,634)	9.5	12.6	10.0	9.1	7.4	9.6	12.8	0.943
Rwanda (N=931)	6.9	5.9	20.7	3.2	6.5	3.1	4.5	0.052
Uganda (N=734)	22.7	8.8	27.7	20.3	31.7	17.7	28.0	0.207
India (N=14,604)	47.0	45.8	41.8	41.2	45.9	41.9	42.3	0.040
Nepal (N=536)	12.5	20.4	27.2	6.8	13.3	8.8	19.4	0.139

¹ Marriage-birth trajectory of first marriage at earlier-than-typical age (EM) and first birth at earlier-than-typical age (EB).

² Marriage-birth trajectory of first marriage at earlier-than-typical age (EM) and first birth at typical age (TB).

³ Marriage-birth trajectory of first marriage at typical age (TM) and first birth at earlier-than-typical age (EB).

⁴ Marriage-birth trajectory of first marriage at typical age (TM) and first birth at typical age (TB).

⁵ Marriage-birth trajectory of first marriage at typical age (TM) and first birth at later-than-typical age (LB).

⁶ Marriage-birth trajectory of first marriage at later-than-typical age (LM) and first birth at later-than-typical age (LB).

⁷ Other marriage-birth trajectories.

⁸ p-value for a chi-square test of independence between house ownership and trajectory.

Although men’s family formation trajectories are frequently related to modern contraceptive use, the patterns of those relationships are highly individual to each specific country. For example, Table 13 shows that use of a modern method of contraception at last sex⁴ is most likely among men in the later marriage-later birth trajectory (21%) and least likely in the typical marriage-later birth trajectory (1%) in Benin, although the opposite pattern is found in Rwanda. Modern method use at last sex is most common within the typical marriage-later birth trajectory (62%) and least common in the later marriage-later birth trajectory (44%) here. In Nigeria, modern method use is most common in the later marriage-later birth trajectory (45%), like Benin, but least common in the typical marriage-earlier birth trajectory (10%). In both India and Nepal, modern method use is most likely in this typical marriage-earlier birth trajectory (29% and 89%, respectively), but least likely in the typical marriage-later birth trajectory in India and in the later marriage-later birth trajectory in Nepal.

⁴ Measured only among men who have had sex in the past three months.

Table 13 Use of modern contraception by marriage-birth trajectory among men age 30-34 in the past 3 months

	Percentage of men who had sexual intercourse in the past 3 months and used a modern method of contraception ¹ at last sex							p-value ⁹
	EM-EB ²	EM-TB ³	TM-EB ⁴	TM-TB ⁵	TM-LB ⁶	LM-LB ⁷	Other ⁸	
Benin (N=852)	10.5	11.1	9.5	13.9	1.1	21.2	8.9	0.004
Mali (N=568)	13.7	11.0	10.1	14.7	16.6	26.7	11.6	0.139
Nigeria (N=1,532)	9.9	12.6	9.7	13.1	10.5	44.7	21.7	0.000
Ethiopia (N=1,399)	38.5	48.5	41.0	46.1	42.8	51.3	49.1	0.424
Rwanda (N=812)	59.6	54.2	47.4	59.5	61.6	43.7	48.0	0.051
Uganda (N=662)	33.2	30.2	48.0	38.7	26.5	36.4	44.8	0.238
India (N=12,208)	23.8	14.1	28.7	23.6	12.0	14.7	13.2	0.000
Nepal (N=492)	62.6	72.1	89.4	57.5	41.5	31.2	44.2	0.000

¹ Female sterilization, male sterilization, pill, IUD, injectables, implants, male condom, female condom, emergency contraception, standard days method (SDM; excluding Nepal), lactational amenorrhea method (LAM), and other modern methods.

² Marriage-birth trajectory of first marriage at earlier-than-typical age (EM) and first birth at earlier-than-typical age (EB).

³ Marriage-birth trajectory of first marriage at earlier-than-typical age (EM) and first birth at typical age (TB).

⁴ Marriage-birth trajectory of first marriage at typical age (TM) and first birth at earlier-than-typical age (EB).

⁵ Marriage-birth trajectory of first marriage at typical age (TM) and first birth at typical age (TB).

⁶ Marriage-birth trajectory of first marriage at typical age (TM) and first birth at later-than-typical age (LB).

⁷ Marriage-birth trajectory of first marriage at later-than-typical age (LM) and first birth at later-than-typical age (LB).

⁸ Other marriage-birth trajectories.

⁹ p-value for a chi-square test of independence between house ownership and trajectory.

Table 14 shows the percent distribution of the number of living children by family formation trajectory. It shows that the number of children increases as trajectories start earlier. The likelihood of men having no children or 1-2 children is concentrated in the trajectories with later marriage-later birth or typical marriage-later birth, while the likelihood of having 3-5 children or 6 or more children is highest among men in the earlier marriage-earlier birth and earlier marriage-typical birth trajectories. Men in the typical marriage-earlier birth and typical marriage-typical birth trajectories fall between these two groups, typically having either 1-2 or 3-4 children.

Table 14 Living children by marriage-birth trajectory among men age 30-34

	Percent distribution of men by number of living children							p-value ⁸
	EM-EB ¹	EM-TB ²	TM-EB ³	TM-TB ⁴	TM-LB ⁵	LM-LB ⁶	Other ⁷	
Benin (N=880)								
None	0.0	0.0	0.0	0.6	5.4	44.1	3.7	0.000
1 to 2	7.2	23.1	20.4	41.4	61.8	48.1	58.6	
3 to 5	56.2	62.2	59.1	53.7	29.0	7.8	30.2	
6+	36.7	14.8	20.5	4.3	3.9	0.0	7.5	
Mali (N=614)								
None	0.0	0.0	0.0	0.0	14.9	46.5	6.2	0.000
1 to 2	13.9	20.1	28.7	49.5	71.9	50.9	61.1	
3 to 5	71.8	68.5	66.0	46.3	13.2	2.6	29.4	
6+	14.3	11.4	5.3	4.1	0.0	0.0	3.2	
Nigeria (N=1,793)								
None	0.1	2.9	0.0	1.0	27.8	73.1	17.5	0.000
1 to 2	22.3	49.0	42.6	76.0	65.0	26.4	60.5	
3 to 5	66.5	47.2	48.3	22.4	7.2	0.4	19.0	
6+	11.1	0.8	9.1	0.6	0.0	0.1	2.9	
Ethiopia (N=1,634)								
None	0.0	0.0	0.0	0.0	26.2	60.2	13.4	0.000
1 to 2	23.2	47.8	30.5	57.4	70.4	38.1	62.4	
3 to 5	62.8	49.9	60.5	39.2	3.4	1.7	21.9	
6+	14.0	2.3	8.9	3.3	0.0	0.0	2.4	
Rwanda (N=931)								
None	0.0	1.5	0.0	0.0	8.8	50.5	1.8	0.000
1 to 2	18.8	42.7	27.5	70.8	74.7	47.6	64.6	
3 to 5	77.3	55.0	72.5	29.2	16.5	1.8	33.6	
6+	3.9	0.8	0.0	0.0	0.0	0.0	0.0	
Uganda (N=734)								
None	0.0	0.0	0.8	0.0	14.7	38.8	1.2	0.000
1 to 2	7.0	18.0	8.1	27.5	40.8	50.9	43.8	
3 to 5	63.9	58.6	70.1	69.0	36.9	10.4	47.0	
6+	29.1	23.4	21.0	3.5	7.7	0.0	8.0	
India (N=14,604)								
None	0.4	1.1	0.1	0.5	47.6	63.4	21.6	0.000
1 to 2	45.8	69.4	64.6	83.3	49.0	35.9	69.3	
3 to 5	52.2	29.2	34.6	16.0	3.4	0.7	8.8	
6+	1.6	0.3	0.7	0.3	0.0	0.0	0.3	
Nepal (N=536)								
None	0.0	0.0	0.0	0.0	19.2	28.9	17.0	0.000
1 to 2	46.2	56.4	29.8	65.6	70.1	66.3	58.2	
3 to 5	52.9	41.4	70.2	34.4	10.7	4.8	24.8	
6+	0.8	2.3	0.0	0.0	0.0	0.0	0.0	

¹ Marriage-birth trajectory of first marriage at earlier than typical age (EM) and first birth at earlier than typical age (EB).

² Marriage-birth trajectory of first marriage at earlier than typical age (EM) and first birth at typical age (TB).

³ Marriage-birth trajectory of first marriage at typical age (TM) and first birth at earlier than typical age (EB).

⁴ Marriage-birth trajectory of first marriage at typical age (TM) and first birth at typical age (TB).

⁵ Marriage-birth trajectory of first marriage at typical age (TM) and first birth at later than typical age (LB).

⁶ Marriage-birth trajectory of first marriage at later than typical age (LM) and first birth at later than typical age (LB).

⁷ Other marriage-birth trajectories.

⁸ p-value for a chi-square test of independence between house ownership and trajectory.

The patterns of fertility desires, on their own and in relation to men's family formation trajectories, differ by region (Table 15). Regardless of trajectory, the most common fertility desire is typically for another child after 2 years or more, followed by another child within 2 years throughout the six West and East African countries in the study. In South Asia, it is more likely that men want no more children.

The proportion of men reporting that they cannot have any more children is negligible in most trajectories. In the six West and East African countries, it is typically only measurable among men in the later marriage-later birth trajectory. In India, this response is most likely among men in the later marriage-later birth trajectory (36%) as well. However, in Nepal, this response is most likely among men in the typical marriage-later birth trajectory (26%). Both India and Nepal have a measurable proportion of men with this response in most trajectories, which distinguishes them from the patterns observed in the African countries.

In West African countries in this study and Uganda, which all exhibit typology 1, wanting a child within the next 2 years is most likely in the typical marriage-typical birth or other trajectories. In Ethiopia and Rwanda, both typology 2 countries, wanting no more children is most likely among trajectories with either earlier marriage or earlier birth or both. In all countries, regardless of typology or region, wanting no more children is most common among men experiencing earlier marriage, earlier birth, or both.

Table 15 Fertility desires by marriage-birth trajectory among men age 30-34

	Percent distribution of men by desire for children							p-value ⁸
	EM-EB ¹	EM-TB ²	TM-EB ³	TM-TB ⁴	TM-LB ⁵	LM-LB ⁶	Other ⁷	
Benin (N=784)								
Want no more	23.2	9.5	22.1	8.7	6.6	1.9	5.7	0.000
Yes, within 2 years ⁹	35.3	33.9	12.6	36.7	33.5	36.1	32.6	
Yes, after 2 years or more	39.8	56.6	65.3	52.8	57.9	57.4	61.7	
Sterilized/infecund	1.8	0.0	0.0	1.9	2.0	4.6	0.0	
Mali (N=574)								
Want no more	9.7	13.6	11.2	11.4	3.4	6.7	0.1	0.001
Yes, within 2 years	46.0	40.3	40.8	40.7	50.9	40.4	61.6	
Yes, after 2 years or more	43.9	46.2	44.4	46.8	44.2	40.8	38.2	
Sterilized/infecund	0.4	0.0	3.5	1.1	1.4	12.0	0.0	
Nigeria (N=1,527)								
Want no more	11.7	7.5	11.5	5.2	2.8	2.2	5.9	0.000
Yes, within 2 years ⁹	46.4	38.1	48.5	49.1	63.9	35.9	64.0	
Yes, after 2 years or more	41.6	53.1	39.5	45.5	32.3	26.3	30.1	
Sterilized/infecund	0.3	1.3	0.4	0.2	0.9	35.6	0.0	
Ethiopia (N=1,477)								
Want no more	24.5	24.8	20.7	11.9	9.5	1.4	24.1	0.000
Yes, within 2 years ⁹	19.9	25.7	11.1	20.8	36.0	20.4	9.4	
Yes, after 2 years or more	55.5	49.5	64.9	67.2	54.4	50.1	66.5	
Sterilized/infecund	0.0	0.0	3.3	0.0	0.1	28.1	0.0	
Rwanda (N=811)								
Want no more	61.7	51.6	21.8	38.6	27.9	10.7	37.2	0.000
Yes, within 2 years ⁹	3.9	9.4	0.0	8.8	16.5	12.9	13.0	
Yes, after 2 years or more	34.4	39.0	78.2	52.6	55.6	55.5	49.8	
Sterilized/infecund	0.0	0.0	0.0	0.0	0.0	20.9	0.0	
Uganda (N=645)								
Want no more	35.3	14.6	32.0	22.4	10.3	6.4	15.8	0.000
Yes, within 2 years ⁹	17.3	19.7	19.4	12.1	16.3	24.8	16.1	
Yes, after 2 years or more	47.4	65.7	48.6	65.5	68.2	58.9	68.1	
Sterilized/infecund	0.0	0.0	0.0	0.0	5.2	9.9	0.0	
India								
Want no more	80.9	63.6	74.4	60.7	35.3	16.9	45.0	0.000
Yes, within 2 years ⁹	5.3	12.4	8.8	16.2	29.4	19.8	25.7	
Yes, after 2 years or more	6.8	20.4	9.8	17.4	29.6	27.4	25.5	
Sterilized/infecund	7.0	3.7	7.0	5.6	5.8	35.9	3.8	
Nepal (N=519)								
Want no more	76.2	68.6	44.0	69.5	52.6	35.2	56.4	0.000
Yes, within 2 years ⁹	5.6	4.3	4.6	8.0	21.6	21.4	15.8	
Yes, after 2 years or more	5.1	13.3	25.6	16.4	25.8	37.9	27.8	
Sterilized/infecund	13.1	13.8	25.8	6.2	0.0	5.5	0.0	

¹ Marriage-birth trajectory of first marriage at earlier than typical age (EM) and first birth at earlier than typical age (EB).

² Marriage-birth trajectory of first marriage at earlier than typical age (EM) and first birth at typical age (TB).

³ Marriage-birth trajectory of first marriage at typical age (TM) and first birth at earlier than typical age (EB).

⁴ Marriage-birth trajectory of first marriage at typical age (TM) and first birth at typical age (TB).

⁵ Marriage-birth trajectory of first marriage at typical age (TM) and first birth at later than typical age (LB).

⁶ Marriage-birth trajectory of first marriage at later than typical age (LM) and first birth at later than typical age (LB).

⁷ Other marriage-birth trajectories.

⁸ p-value for a chi-square test of independence between house ownership and trajectory.

⁹ Includes those who want a(nother) child but are undecided as to when and those who are undecided as to whether they want

4 DISCUSSION AND CONCLUSION

This study examined the family formation process for men within the conceptual framework provided by LCT. The study sought to better understand the patterns of family formation for men in the selected countries, the family formation trajectories of these men, and the potential consequences of following different family formation pathways.

4.1 Patterns of Family Formation for Men

The patterns of family formation for the eight countries in this study suggest that while there are important differences in the ages and compactness of the family formation processes across countries, most follow a similar pattern in the order of family formation events. This is consistent with the patterns predicted by the LCT, because each country is subject to somewhat different normative structures that guide the timing of family formation. The most significant differences were in the degree to which premarital sexual activity and, to a much lesser extent, premarital childbearing, are prevalent in each country. The relatively smaller differences across countries and typologies for the gap between the median age at first marriage and the birth of their first child suggest that sexual activity is, at least in some countries, not as integral a part of the family formation process as marriage and having children. This is supported by the differences in the timing of first sexual intercourse and the other two family formation events, with much higher proportions of men reporting typical timing for first sex. The relative disconnect of sexual activity with the overall family formation process is likely to be especially true for men, for whom premarital sexual activity is often encouraged or expected and the consequences of unplanned pregnancies less severe than for women.

In all settings, these patterns suggest that marriage or long-term cohabitation signifies a concrete step toward having children, with both events representing more significant components of the family formation process than sexual activity. This is particularly the case in countries where premarital sex was common (typology 1 and, to a lesser extent, typology 2), where the gap between the median age at first marriage and birth of the first child is small. In these settings, couples may already know each other well, and marriage takes place either after pregnancy or in anticipation of having children soon. For example, in both Benin and Mali, the gap between the median age at first sex and birth of first child is less than a year, while the median age at first sexual intercourse is significantly earlier. In contrast, marriage and sexual activity are much more closely linked in typology 3 countries, where arranged marriage is more common, and the gap between marriage and birth of first child somewhat larger than in typology 1 countries.

While a greater range of countries is required to assess the validity of the typology scheme developed here, the results strongly suggest that this may be an effective way of classifying countries in terms of family formation processes. Further research to better understand the underlying reasons for the commonalities evident within the different typologies may provide useful information for programmers and policymakers. Further research can also provide the framework for grouped analyses that may provide further insights into the drivers of family formation behaviors across multiple settings. With the exception of Uganda, the typologies largely grouped countries together from the same geographical region, and this suggested that common cultural, religious, or economic factors may be shaping family formation behavior in ways that are common in broader regions. Although the results suggest some

differences within countries, particularly in terms of rural and urban areas, the patterns of family formation within countries are broadly the same (although rural areas consistently experienced family formation events at earlier ages). This strengthens the argument for common macro-level drivers of behavior.

Finally, the findings suggest that there is more diversity in the timing of both first marriage and birth of first child relative to the median age than is the case for first sexual intercourse. Based on the classification in this study, significant proportions of men experience off-time family formation events. This is, in part, due to the significant diversity in the family formation trajectories followed by men in each country.

4.2 Family Formation Trajectories

The family formation trajectories for men match the patterns suggested by LCT in a number of respects. Although there is significant variation both between and within countries in terms of trajectories, the most common trajectories were those that were either entirely typical in terms of timing or where the key family formation events of marriage and childbearing took place at typical ages. As predicted by LCT, there is evidence of a continuity of behavior throughout the family formation process (men who initiated sexual activity earlier-than-typical were also more likely to be earlier-than-typical for marriage and childbearing) and some suggestion of individuals changing their trajectories by adapting their behavior.

4.3 Relationship between Marriage-Birth of First Child Trajectories, and Social, Economic, and Fertility-related Outcomes

The relationship between the trajectories of first marriage to birth of the first child and the behavioral outcomes is complex, because there is considerable diversity in the trajectories across countries and many of the outcomes are interrelated. The descriptive approach allows for the identification of broad relationships but cannot take other potentially confounding factors fully into account. Furthermore, the causal relationship between the family formation trajectory and a number of the outcomes is unclear and bidirectional. For example, earlier-than-typical marriage and childbearing is associated with lower educational attainment. Young men who started their family formation process relatively early face additional pressure to perform in the role of provider for the new family, which leads to dropping out of school. Those who drop out of school may be more likely to engage in behaviors that lead to premature family formation.

The analyses do suggest that earlier-than-typical transitions are associated with poorer outcomes for men. These men are more likely to be poor, to be less equitable in their household decision-making processes, have dropped out of school at relatively early ages, and have less favorable views of contraceptive use. They also have more children. They are also more likely to own a home or land, which possibly reflects the higher proportions of men with earlier-than-typical trajectories in rural areas, who are more likely to be using modern contraception and are less likely to want more children. These relationships are likely to be due, in part, to the earlier start these men had in the family formation process, and that they have more opportunity to accumulate assets or have children. For example, those marrying earlier may have already achieved their desired family size and be more motivated to use contraception.

4.4 Limitations

There are a number of limitations to this study that should be taken into account when applying the findings more broadly. First, the relatively small sample sizes available limited our ability to use inferential statistical approaches that would have aided in clarifying the relationships between family formation trajectories and outcomes. Secondly, we are unable to directly examine other markers of life course transitions that typically accompany family formation, such changes in residence patterns, ending education, or the initiation of fulltime employment. Thirdly, the focus on the 30-34-year-old cohort, necessitated by the use of median ages as indicators of the ‘typical’ age at which specific events take place, may not reflect the more current behavior of younger cohorts. Finally, as noted above, our analysis assumes heterosexual relationships and family formation patterns, thus potentially excluding the experiences of homosexual men.

4.5 Conclusion

Overall, the results of this study provide strong support for LCT as an organizing framework for examining family formation patterns for men. The results provide some evidence for the relationship between the trajectory taken by men in their family lives and other outcomes. Further research is needed with a wider range of countries, which would allow for a deeper examination of the validity of the typologies used here, and approaches that allow for a more direct assessment of causal relationships than was possible in this study. It is imperative that we collect better, more complete data from men, which will allow for the same level of depth in analyses as is possible for women. Understanding family formation behaviors for both men and women requires a more complete engagement with men and their needs than has been the case to date. This has hampered our understanding of the family formation process and our ability to develop programming and policy approaches that can improve key social, economic, and demographic outcomes.

REFERENCES

Central Statistical Agency - CSA/Ethiopia, and ICF. 2017. *Ethiopia Demographic and Health Survey 2016*. Addis Ababa, Ethiopia: CSA and ICF. <http://dhsprogram.com/pubs/pdf/FR328/FR328.pdf>.

Elder Jr, G. H. 2001. "Life Course: Sociological Aspects." In *International Encyclopedia of the Social & Behavioral Sciences*, edited by Neil J. Smelser and Paul B. Baltes, 8817-8821. Amsterdam, The Netherlands: Elsevier LTD.

Elder Jr, G. H., M. K. Johnson, and R. Crosnoe. 2007. "The Emergence and Development of Life Course Theory." In *Handbook of the Life Course* edited by Jeylan T. Mortimer and Michael J. Shanahan, 3-19. New York, NY: Kluwer Academic/Plenum Publishers.

Fenn, N. S., J. Edmeades, H. Lantos, and O. Onovo. 2015. *Child Marriage, Adolescent Pregnancy and Family Formation in West and Central Africa*. Dakar, Senegal: International Center for Research on Women and UNICEF.

Greene, M., S. Perlson, J. Hart, and M. Mullinax. 2018. "The Centrality of Sexuality for Understanding Child, Early and Forced Marriage." Washington, DC, and New York: GreeneWorks and American Jewish World Service. https://ajws.org/wp-content/uploads/2018/05/centrality_of_sex_final.pdf.

Hagestad, G. O. 1990. "Social Perspectives on the Life Course." In *Handbook of Aging and the Social Sciences*, edited by Robert H. Binstock and Linda K. George, 151-168. New York, NY: Academic Press.

Hagestad, G. O. 1991. "Trends and Dilemmas in Life Course Research: An International Perspective." In *Theoretical Advances in Life Course Research*, 23-57. Weinheim, Germany: Deutscher Studien Verlag.

Hareven, T. K. 1977a. "The Family Cycle in Historical Perspective: A Proposal for a Developmental Approach." *The Family Life Cycle in European Societies*: 339-352.

Hareven, T. K. 1977b. "Family Time and Historical Time." *Daedalus* 106: 57-70.

Harley, C., and J. T. Mortimer. 2000. "Social Status and Mental Health in Young Adulthood: The Mediating Role of the Transition to Adulthood." Paper presented at the *Biennial Meeting of the Society for Research on Adolescence, Chicago, IL, March 30 - April 2*.

Heilman, B., G. Barker, and A. Harrison. 2017. *The Man Box: A Study on Being a Young Man in the US, UK, and Mexico*. Washington, DC: Promundo.

ICF International. 2015. *Questionnaires: Household, Woman's, and Man's, Demographic and Health Surveys Methodology*. Rockville, MD: ICF International.

Institut National de la Statistique - INSTAT, Cellule de Planification et de Statistique Secteur Santé-Développement, and ICF. 2019. *Mali Demographic and Health Survey 2018*. Bamako, Mali: INSTAT/CPS/SS-DS-PF and ICF. <http://dhsprogram.com/pubs/pdf/FR358/FR358.pdf>.

- Institut National de la Statistique et de l'Analyse Économique , and ICF. 2019. *République du Bénin Cinquième Enquête Démographique et de Santé au Bénin (Edsb-V) 2017-2018*. Cotonou, Bénin: INSAE/Benin and ICF. <http://dhsprogram.com/pubs/pdf/FR350/FR350.pdf>.
- International Institute for Population Sciences - IIPS/India, and ICF. 2017. *India National Family Health Survey NFHS-4 2015-16*. Mumbai, India: IIPS and ICF. <http://dhsprogram.com/pubs/pdf/FR339/FR339.pdf>.
- Krishnan, S., C. H. Rocca, A. E. Hubbard, K. Subbiah, J. Edmeades, and N. S. Padian. 2010. "Do Changes in Spousal Employment Status Lead to Domestic Violence? Insights from a Prospective Study in Bangalore, India." *Social Science & Medicine* 70 (1): 136-143. <https://doi.org/10.1016/j.socscimed.2009.09.026>.
- MacQuarrie, K. L. D., J. Edmeades, M. Steinhaus, and S. K. Head. 2015. *Men and Contraception: Trends in Attitudes and Use*. DHS Analytical Studies No. 49. Rockville, MD, USA: ICF International. <http://dhsprogram.com/pubs/pdf/AS49/AS49.pdf>.
- Ministry of Health - MOH/Nepal, New ERA/Nepal, and ICF. 2017. *Nepal Demographic and Health Survey 2016*. Kathmandu, Nepal: MOH/Nepal, New ERA, and ICF. <http://dhsprogram.com/pubs/pdf/FR336/FR336.pdf>.
- National Institute of Statistics of Rwanda, Ministry of Finance, Economic Planning/Rwanda, Ministry of Health/Rwanda, and ICF International. 2016. *Rwanda Demographic and Health Survey 2014-15*. Kigali, Rwanda: National Institute of Statistics of Rwanda, Ministry of Finance and Economic Planning/Rwanda, Ministry of Health/Rwanda, and ICF International. <http://dhsprogram.com/pubs/pdf/FR316/FR316.pdf>.
- National Population Commission - NPC, and ICF. 2019. *Nigeria Demographic and Health Survey 2018 - Final Report*. Abuja, Nigeria: NPC and ICF. <http://dhsprogram.com/pubs/pdf/FR359/FR359.pdf>.
- Neugarten, B. L. 1996. *The Meanings of Age: Selected Papers*. Chicago, IL: The University of Chicago Press.
- Ragonese, C., T. Shand, and G. Barker. 2019. *Masculine Norms and Men's Health: Making the Connections*. Washington, DC: Promundo-US. https://promundoglobal.org/wp-content/uploads/2019/02/Masculine-Norms-Mens-Health-Report_007_Web.pdf.
- Roy, K. 2014. "Fathering from the Long View: Framing Personal and Social Change through Life Course Theory." *Journal of Family Theory & Review* 6 (4): 319-335. <https://doi.org/10.1111/jftr.12050>.
- Rutstein, S. O., and K. Johnson. 2004. *The DHS Wealth Index*. DHS Comparative Reports No. 6. Calverton, MD: ORC Macro. <https://dhsprogram.com/pubs/pdf/CR6/CR6.pdf>.
- Stergiou-Kita, M., E. Mansfield, R. Bezo, A. Colantonio, E. Garritano, M. Lafrance, J. Lewko, et al. 2015. "Danger Zone: Men, Masculinity and Occupational Health and Safety in High Risk Occupations." *Safety Science* 80: 213-220. <https://doi.org/10.1016/j.ssci.2015.07.029>.

Uganda Bureau of Statistics - UBOS, and ICF. 2018. *Uganda Demographic and Health Survey 2016*. Kampala, Uganda: UBOS and ICF. <http://dhsprogram.com/pubs/pdf/FR333/FR333.pdf>.

APPENDIX TABLES

Appendix Table A1 Median ages at family formation events (age at first sex, age at first marriage, and age at birth of first child) among men age 15-44, according to current age

	Current Age											
	15-19	N	20-24	N	25-29	N	30-34	N	35-39	N	35-44	N
FIRST SEX												
Benin	na	1,559	18.70	1,137	18.66	1,140	18.44	883	18.71	798	18.75	1,419
Mali	na	894	19.77	551	20.59	538	20.89	631	20.95	563	21.21	1,040
Nigeria	na	2,474	na	1,545	22.08	1,618	21.81	1,751	21.49	1,774	21.57	3,288
Ethiopia	na	2,533	na	1,969	21.79	2,030	21.06	1,585	20.99	1,375	20.95	2,592
Rwanda	na	1,281	na	999	22.54	964	22.56	932	22.55	559	22.53	1,028
Uganda	na	1,270	17.99	944	18.40	740	18.48	737	18.63	497	18.48	989
India	na	19,082	na	16,630	24.43	16,151	24.61	14,640	24.23	13,897	24.07	25,851
Nepal	na	964	na	633	20.81	522	20.54	532	20.04	516	20.24	989
FIRST MARRIAGE												
Benin	na	1,559	na	1,137	24.77	1,140	24.73	883	25.00	798	25.03	1,419
Mali	na	894	na	551	na	538	25.85	631	26.06	563	26.17	1,040
Nigeria	na	2,474	na	1,545	na	1,618	26.51	1,751	27.69	1,774	27.81	3,288
Ethiopia	na	2,533	na	1,969	24.74	2,030	23.66	1,585	23.11	1,375	23.02	2,592
Rwanda	na	1,281	na	999	na	964	25.50	932	25.23	559	25.31	1,028
Uganda	na	1,270	na	944	23.26	740	23.26	737	23.50	497	23.27	989
India	na	19,082	na	16,630	na	16,151	24.67	14,640	24.29	13,897	24.11	25,851
Nepal	na	964	na	633	23.01	522	21.71	532	20.70	516	20.97	989
FIRST BIRTH												
Benin	na	1,559	na	1,137	na	1,140	25.68	883	25.62	798	25.68	1,419
Mali	na	894	na	551	na	538	26.23	631	27.22	563	27.26	1,040
Nigeria	na	2,474	na	1,545	na	1,618	28.03	1,751	28.90	1,774	29.06	3,288
Ethiopia	na	2,533	na	1,969	na	2,030	25.78	1,585	25.52	1,375	25.62	2,592
Rwanda	na	1,281	na	999	na	964	26.30	932	26.01	559	26.43	1,028
Uganda	na	1,270	na	944	23.94	740	24.47	737	23.97	497	23.87	989
India	na	19,082	na	16,630	na	16,151	27.00	14,640	26.61	13,897	26.56	25,851
Nepal	na	964	na	633	na	522	24.22	532	23.52	516	23.76	989

na = Omitted because less than 50% of men experienced the family formation event for the first time before reaching the beginning of the age group.

Appendix Table A2 Median ages at family formation events (age at first sex, age at first marriage, and age at birth of first child) among urban men age 15-44, according to current age

	Current Age											
	15-19	N	20-24	N	25-29	N	30-34	N	35-39	N	35-44	N
FIRST SEX												
Benin	na	673	18.75	501	18.72	509	18.41	402	18.56	368	18.80	663
Mali	na	293	19.61	185	19.91	195	21.30	224	21.44	179	21.73	331
Nigeria	na	976	na	605	20.93	606	21.53	736	21.40	796	21.47	1,480
Ethiopia	na	703	na	662	21.77	741	21.67	513	21.52	396	21.23	730
Rwanda	na	279	na	305	22.09	305	22.59	259	22.60	149	22.74	273
Uganda	na	216	17.64	242	18.45	204	18.62	169	18.78	104	18.64	205
India	na	5,844	na	5,290	na	5,169	25.69	4,690	25.54	4,428	25.42	8,289
Nepal	na	642	na	432	21.52	342	20.85	342	19.83	345	20.39	641
FIRST MARRIAGE												
Benin	na	673	na	501	na	509	25.57	402	26.00	368	25.96	663
Mali	na	293	na	185	na	195	27.68	224	28.37	179	28.14	331
Nigeria	na	976	na	605	na	606	27.42	736	29.41	796	29.79	1,480
Ethiopia	na	703	na	662	na	741	27.02	513	28.48	396	27.83	730
Rwanda	na	279	na	305	na	305	27.72	259	29.06	149	28.41	273
Uganda	na	216	na	242	na	204	25.45	169	25.58	104	24.67	205
India	na	5,844	na	5,290	na	5,169	26.13	4,690	25.63	4,428	25.40	8,289
Nepal	na	642	na	432	23.75	342	22.22	342	20.84	345	21.44	641
FIRST BIRTH												
Benin	na	673	na	501	na	509	26.86	402	25.98	368	26.23	663
Mali	na	293	na	185	na	195	28.21	224	29.75	179	29.54	331
Nigeria	na	976	na	605	na	606	29.24	736	30.71	796	30.95	1,480
Ethiopia	na	703	na	662	na	741	29.35	513	30.29	396	29.56	730
Rwanda	na	279	na	305	na	305	27.75	259	27.93	149	28.20	273
Uganda	na	216	na	242	na	204	26.42	169	25.29	104	25.25	205
India	na	5,844	na	5,290	na	5,169	28.29	4,690	27.96	4,428	27.87	8,289
Nepal	na	642	na	432	na	342	24.49	342	23.45	345	23.86	641

na = Omitted because less than 50% of men experienced the family formation event for the first time before reaching the beginning of the age group.

Appendix Table A3 Median ages at family formation events (age at first sex, age at first marriage, and age at birth of first child) among rural men age 15-44, according to current age

	Current Age											
	15-19	N	20-24	N	25-29	N	30-34	N	35-39	N	35-44	N
FIRST SEX												
Benin	na	886	18.66	636	18.61	631	18.47	481	18.86	430	18.75	756
Mali	na	601	19.83	366	20.79	343	20.82	407	20.86	384	21.21	709
Nigeria	na	1,498	na	940	22.61	1,012	22.05	1,015	21.63	978	21.57	1,808
Ethiopia	na	1,830	na	1,307	21.79	1,289	20.96	1,072	20.91	979	20.95	1,862
Rwanda	na	1,002	na	694	22.67	659	22.54	673	22.54	410	22.53	755
Uganda	na	1,054	18.10	702	18.38	536	18.42	568	18.60	393	18.48	784
India	na	13,238	na	11,340	23.78	10,982	23.77	9,950	23.29	9,469	24.07	17,562
Nepal	na	322	19.37	201	19.85	180	20.08	190	20.42	171	20.24	348
FIRST MARRIAGE												
Benin	na	886	na	636	23.84	631	24.09	481	24.87	430	25.03	756
Mali	na	601	na	366	24.73	343	24.95	407	25.95	384	26.17	709
Nigeria	na	1,498	na	940	na	1,012	25.50	1,015	27.09	978	27.81	1,808
Ethiopia	na	1,830	na	1,307	23.80	1,289	22.83	1,072	23.40	979	23.02	1,862
Rwanda	na	1,002	na	694	na	659	25.05	673	25.42	410	25.31	755
Uganda	na	1,054	na	702	22.63	536	22.48	568	23.36	393	23.27	784
India	na	13,238	na	11,340	24.43	10,982	23.83	9,950	24.48	9,469	24.11	17,562
Nepal	na	322	na	201	21.38	180	20.73	190	21.12	171	20.97	348
FIRST BIRTH												
Benin	na	886	na	636	na	631	25.09	481	25.35	430	25.68	756
Mali	na	601	na	366	na	343	25.60	407	26.24	384	27.26	709
Nigeria	na	1,498	na	940	na	1,012	26.76	1,015	26.98	978	29.06	1,808
Ethiopia	na	1,830	na	1,307	na	1,289	24.89	1,072	25.11	979	25.62	1,862
Rwanda	na	1,002	na	694	na	659	26.01	673	25.60	410	26.43	755
Uganda	na	1,054	na	702	23.20	536	23.56	568	23.60	393	23.87	784
India	na	13,238	na	11,340	na	10,982	26.24	9,950	25.79	9,469	26.56	17,562
Nepal	na	322	na	201	23.83	180	23.65	190	23.74	171	23.76	348

na = Omitted because less than 50% of men experienced the family formation event for the first time before reaching the beginning of the age group.

Appendix Table A4 Percentage of men age 30-34 experiencing earlier-than-typical, typical, or later-than-typical timing of first sex, first marriage, and birth of first child, according to residence

	Timing	Urban			N	Rural			N
		First sex	First marriage	Birth of first child		First sex	First marriage	Birth of first child	
Benin	Earlier	31.91	54.23	29.89	385	31.30	32.28	28.49	496
	Typical	49.99	24.18	37.20		50.52	33.77	41.32	
	Later	18.10	21.60	32.92		18.18	33.95	30.19	
Mali	Earlier	23.70	41.46	31.87	169	11.11	30.50	34.41	445
	Typical	60.98	29.60	31.76		82.27	37.11	33.33	
	Later	15.32	28.94	36.37		6.62	32.39	32.26	
Nigeria	Earlier	21.72	46.82	32.53	880	14.07	33.68	35.80	912
	Typical	59.33	23.33	21.72		73.36	32.60	28.48	
	Later	18.95	29.85	45.75		12.57	33.72	35.72	
Ethiopia	Earlier	32.59	43.70	29.47	374	11.64	34.32	31.90	1,261
	Typical	39.13	28.19	23.33		78.19	36.38	38.25	
	Later	28.28	28.10	47.19		10.17	29.30	29.85	
Rwanda	Earlier	26.12	40.59	27.78	201	12.40	33.00	30.94	728
	Typical	60.57	28.49	39.46		81.39	33.35	37.87	
	Later	13.31	30.92	32.76		6.21	33.66	31.19	
Uganda	Earlier	10.93	32.90	29.67	226	8.96	37.79	37.69	509
	Typical	80.56	36.79	38.15		80.93	29.14	30.86	
	Later	8.50	30.32	32.18		10.11	33.07	31.46	
India	Earlier	18.74	29.25	34.26	5,689	15.54	35.96	32.14	8,915
	Typical	77.10	34.63	26.40		79.54	34.13	36.37	
	Later	4.17	36.12	39.34		4.92	29.92	31.49	
Nepal	Earlier	19.99	35.92	36.90	350	37.18	33.62	33.22	185
	Typical	63.56	33.13	30.28		37.90	42.68	39.46	
	Later	16.45	30.95	32.82		24.91	23.71	27.32	

Appendix Table A5 Ordering of family formation events among men age 30-34, according to residence

	Percent- age	Urban				Rural			
		First sex before first marriage	N	First marriage before first birth	N	First sex before first marriage	N	First marriage before first birth	N
Benin	No	11.60	44	19.00	66	17.00	84	19.20	91
	Yes	88.40	338	81.00	281	83.00	408	80.80	384
	Total		382		347		492		475
Mali	No	20.00	33	22.70	34	29.80	127	19.90	84
	Yes	80.00	133	77.30	117	70.20	300	80.10	339
	Total		166		151		427		423
Nigeria	No	24.60	199	7.50	51	45.40	385	12.00	93
	Yes	75.40	610	92.50	628	54.60	463	88.00	685
	Total		809		679		848		778
Ethiopia	No	28.20	97	6.50	18	55.30	651	9.00	105
	Yes	71.80	247	93.50	265	44.70	526	91.00	1,060
	Total		344		283		1,177		1,165
Rwanda	No	31.90	60	23.30	38	53.70	367	11.20	74
	Yes	68.10	129	76.70	123	46.30	316	88.80	590
	Total		189		161		683		664
Uganda	No	19.70	43	22.90	45	26.00	129	23.40	114
	Yes	80.30	175	77.10	153	74.00	367	76.60	375
	Total		218		198		496		489
India	No	77.40	3,733	4.10	197	79.10	6,226	4.80	381
	Yes	22.60	1,092	95.90	4,579	20.90	1,642	95.20	7,592
	Total		4,825		4,776		7,868		7,973
Nepal	No	68.10	234	1.90	6	73.30	133	0.70	1
	Yes	31.90	110	98.10	333	26.70	49	99.30	177
	Total		344		339		182		178

Note: The calculation of the percentage experiencing first sex before first marriage excludes those who have never had sex or been married. The calculation of the percentage experiencing first marriage before first birth excludes those who have never been married or fathered a child.