

Changing gender gaps in the timing of partnership formation in Sub-Saharan Africa

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Abstract

Due to scarcity of research about the demographic behavior of men in Sub-Saharan Africa, the evolution of gender differences in the patterns of family formation remains undocumented. We analyze the first stage of the family building process - partnership formation - focusing on the age of first union, the age of sexual initiation and the context in which first sexual intercourse occurs (marital or non-marital). Basing on studies suggesting that modernization and developmental processes are likely to make gender relations more egalitarian, we examine whether differences between women and men in the timing of partnership formation decreased in Sub-Saharan Africa. We analyze data for 27 countries from 100 Demographic and Health Surveys which, apart from women's questionnaires, included men's questionnaires, previously unexploited for the study of the timing of partnership formation in the region. Using survival analysis, we find that gender gaps in the age at first union and probability of first sex occurring outside of union diminished, in particular in countries where they were largest initially. These processes were driven mainly by the emerging "catching up" of women with men when it comes to their partnership formation behavior. Preliminary analyses of the relationship between these changes and changing gender gaps in schooling support the hypothesis that developmental processes are likely to play a role in shaping differences between men and women in family building behavior. These results enhance the understanding of the relationship between gender inequalities and development in Sub-Saharan Africa.

1. Background and objectives

In spite of the fact that partnership formation is a process involving both women and man, research exploring the levels and trends in the age of sexual initiation, age of first union formation and premarital sexual activity in Sub-Saharan Africa has so far focused on women (e.g. Mensch, Grant, and Blanc 2006). Such on-sided perspective omits a crucial dimension of partnership formation dynamic – behavior of men. Consequently, the knowledge about the extent to which changes in the timing of vital events marking transition to adulthood have been uniform or differed between men and women in the region in the last decades is limited. In particular, the understanding of the magnitude of gender gaps in these processes and their changes over time is lacking. Examining the evolution of gender differences in partnership formation is important to enhance the understanding of social change, gender relations and gender inequalities. This is particularly relevant in Sub-Saharan Africa, where child marriage and early pattern of transition to adulthood among women are frequent (Koski, Clark, and Nandi 2017). This has implications for women's opportunities in wide range of domains, their empowerment and the balance of power within households.

Looking at the changes in gender gaps in the timing of partnership formation is particularly important in the context of vast changes which occurred in Sub-Saharan Africa. Last decades have seen pronounced social and economic transformations which included urbanization, westernization, increasing exposure to mass media, increasing women's employment and education. The two latter changes have been particularly transformative in the lives of young women (Lloyd 2005). Theories of social change suggest that such modernization and developmental processes are likely to make gender relations more egalitarian (Caldwell 1982; Goode 1963; Malhotra 1997). It could therefore be hypothesized that through their impact on various domains of young people's lives, and women's in particular, these changes could bring men and women closer in terms of their family building behavior. So far, however there has been no studies examining whether the differences between men and women in the age at which they form partnerships changed over time and whether there has been a convergence in the behavior of men and women in these dimensions in Sub-Saharan Africa.

Consequently, the aim of this paper is to describe the patterns of gender differences in the age at first sex, first union and premarital sexual activity in Sub-Saharan Africa and examine whether these gender gaps decreased in the last decades. Second, we explore whether these changes could be related to the developmental processes observed in the region, by exploring the relationship between gender gaps in the timing of partnership formation and gender gaps in schooling.

Focus on schooling is relevant given that educational expansions has been one of the most important changes that occurred in the last decades in the lives of young people in low- and middle-income

countries (LMICs) (Lloyd, Grant, and Ritchie 2008). Moreover, there has been a growing body of research documenting decreasing gender gaps in educational attainment in LMICs and hypothesizing about the potential demographic consequences of it, for example on the patterns of timing of union formation (Grant and Behrman 2016). It could be hypothesized that the closing gender gap in education could be related to diminishing gender gap in the timing of partnership formation. That could happen via various mechanism, for example changes in social norms and expectations, in particular regarding the role of women; more similar patterns of socialization and learning among girls and boys during adolescence; increasing role of school and institutions in general in shaping the lives of young people, while the family control over early life course transitions loosening (Gupta and Mahy 2003; Lloyd, Grant, and Ritchie 2008; Mensch, Singh, and Casterline 2005). All of these processes could influence the gender differences in the timing of partnership formation and potentially bring men and women closer in terms of their family building behavior. Yet, currently there is no research directly connecting, and examining the relationship between the gender differences in the educational attainment and gender difference in the timing of partnership formation in in Sub-Saharan Africa or low- and middle-income countries more broadly.

This paper contributes to the scant body of studies which take a more holistic approach and include not only the perspective of women but also men in order to understand the partnership formation dynamic in Sub-Saharan Africa. For that purpose we compile all of the Demographic and Health Surveys which include men's questionnaires. For 28 countries, we create indicators of gender gaps in the age at first sex, union, premarital sexual activity and schooling for cohorts born between 1950 and 1990. Beyond uncovering the trends in these gender gaps, we cast light on whether the changes in these processes were driven mainly by the behavior of women or men. Lastly, we explore one of the potential determinants of these changes. We hypothesize that the differences between men and women in the timing of partnership formation will be greater there where the gender gaps in education are also greater. Moreover, we explore whether the gender gaps in the timing of partnership formation change as a function of changes in the gender gaps in schooling in the region. It is known that the latter process has been driven by an increase in women's educational attainment towards the levels observed among men. Hence, if the gender gaps in the timing of partnership formation are correlated with the gender gaps in schooling then we expect to document a decrease in the gaps between men and women in when they form partnerships, driven by the process of women "catching up" with men in terms of their behavior.

2. Data

We use Demographic and Health Surveys (DHS) for all Sub-Saharan African countries with at least two rounds of surveys which included men's questionnaire. Moreover, we use surveys which satisfied following conditions: all men and women irrespectively of their marital status were interviewed, a survey included a question about the age at first union and age at first sex for both men and women. This leaves us with a sample of 27 countries (Tab.1). DHSs are nationally representative both at the level of women and men. The surveys include information about all women aged 15-49 residing in randomly selected households. The age ranges of interviewed men differ from country to country but always include men aged 15-49. In some surveys, all men irrespectively of their age are interviewed. For the purpose of the analysis, we pooled all surveys available for each country, separately for women and men, in order to generate a long-term series of indicators for cohorts born between around 1950 to around 1990 (Tab.1). In order to apply sampling weights to the pooled data, we de-normalized individual men's and women's weights available in each survey according to the guidelines of the DHS program (ICF 2012). For that purpose we used estimates of the population of men and women for each survey and year from the 2017 World Population Prospect (United Nations 2017).

We use mainly two retrospective questions to study the extent and changes in the timing of partnership formation across cohorts: age at first union and age at first sex. Age at first union corresponds to the age at first marriage or age at first cohabitation since no distinction is made between these two types of unions. The variable describing age at first sex allows us to identify the timing of sexual initiation. Moreover, since it includes a category "first sex at the time of first union", it also permits distinguishing whether first intercourse took place before, or after first union was established. We restrict the analysis to individuals aged 20-39 for two reasons. First, it is known that the responses to retrospective questions might suffer from recall bias. This problem have been found to be most pronounced among the oldest respondents, in particular above the age of 40 (Blanc and Rutenberg 1990). Hence, in this study we consider individuals up to the age of 39. Second, responses of adolescents to questions about sensitive vital events such as age of sexual initiation, age at marriage or age at birth were found to suffer from various biases (Neal and Hosegood 2015). For that reasons we exclude individuals below the age of 20.

In order to study the relationship between the gender gaps in the timing of partnership formation and schooling we use two measures of education level: years of schooling completed and the highest level of education attended.

3. Methods

Using pooled DHS surveys, for each country, separately for men and for women, we estimate cohort trends in the age at first union, age at first sex and levels of premarital sex (more specifically, whether first sexual intercourse was premarital or not). For that purpose we use survival analysis. In order to estimate the trends in age at first union and sex, we use Kaplan-Meier estimator which permits calculating the median ages at these events, the ages at which 25% and 75% of the population experiences these events as well as interquartile range. In order to obtain information about the levels of premarital sex, we use multiple decrement life tables. We follow approach applied in previous studies and treat first sex and first union as competing risks (Mensch, Grant, and Blanc 2006). Since almost everyone in our samples has had sex or entered first union by age 25, we estimate the cumulative probability of premarital sex by age 25. In all analyses we follow individuals from age 10 onwards. For the calculation of the median age at first union and sex, we follow men and women until they experience these events, or censor them at the age at the time of the interview. Similarly, in the analysis of probability of premarital sex, we follow individuals until they experience premarital sex or form a union. We censor individuals at age 25 or age at interview if they have not experienced either of these events or were less than 25 years old at the time of the interview, respectively.

Based on these measures of timing of partnership formation for men and women, we calculate the indicators of gender gaps, separately for each country and cohort. The gender gap in the age of first union is the difference in the median, 25th and 75th percentile for the age at first union between men and women in a given cohort. Corresponding gender gap in the age at first sex is calculated. The gender gap in premarital sexual activity is the difference between men and women in the cumulative probability of premarital sex for a given cohort. In order to examine how these gaps changed over time, we calculated the difference in the gender gaps in all of the indicators of timing between the youngest and the oldest cohort available for each country (Tab.1). We also study whether the changes we document resulted mainly from the change in the behavior among women or men.

In order to explore the relationship between gender gaps in the timing of partnership formation and gender gaps in education, for each country and cohort, we calculate the difference between men and women at the population level in: (i) the percentage of individuals who have any education and (ii) the mean years of schooling. Subsequently, using information for all country-cohorts, in the next step of this research we will run two series of regression analysis. First, we will study the association between a given indicator of gender gap in the timing of partnership formation and gender gap in education. This will allow us to explore the hypothesis that the gender gaps in one process will be higher there where the gender gaps in the other

process are also higher. Second, we will study the association between the *change* in the all of the measures of gender gaps in the timing of partnership formation and *change* in all of the measures of gender gaps in the education. This will allows us to explore whether the gaps in the timing of union formation change as a function of changing gender gaps in schooling.

4. Results

4.1. Gender gaps in the timing of partnership formation

Fig.1 depicts gender gaps in the median age at first union, median age at first sex and the probability of premarital first sex for the oldest and the youngest cohorts. This allows assessing the direction and the magnitude of the difference between men and women in these processes.

The gender gaps in the median age at first union are positive in all countries, which means that men transition to first union later than women and this has not changed across cohorts. The gender gaps range from around 12 years in Senegal to around 4 years in Burundi. The comparison of the gender gaps in the median age at first union and sex reveal that the gaps in the timing of union formation are greater than the gender gap in timing of initiation of sexual initiation. This means that the differences between men and women in the age at which they form unions are much greater than those in the age at which they initiate sexual activity. Given the positive and greater than for sexual initiation gender gap in the timing of first union formation, one could expect higher levels of premarital sexual activity among men than among women. Indeed, the gender gap in the probability of premarital sex is positive in all of the countries, for both the oldest and the youngest cohorts. This means that men have higher levels of premarital sex.

In terms of the patterns of change in gender gaps, it can be seen that the differences between men and women in the median age at first union decreased there were gaps were largest initially (countries where change was greater than one year are highlighted with arrows). There is evidence of convergence between countries with initially larger gender gaps with those where these were smaller. There does not seem to be evidence of a decrease in gender gaps in the age of sexual initiation, with the exception of four countries. Changes in gender gaps in probability of premarital first sex exhibit similar pattern as changes in the first-union gaps – they tend to decrease mainly, but not only, in these countries where union gaps decreased as well.

Fig.2 shows that there occurred an appreciable decrease in gender gaps in the age at which 75% of women and men form first union in the majority of countries. This decrease was the biggest there where the initial gaps were also biggest, however it occurred also there where gaps were smaller. There has been little change in gender gaps in the age at which 25% of men and women form first union. As a consequence,

gender gaps in the interquartile range for the age at first union decreased in many countries. This means that gender differences in how quickly the process of entrance into first union builds up in the population once substantial minority enters first union decreased across cohorts. The changes in the measure of gender gaps in the timing of first union formation provide evidence of decreasing differences in the timing of family formation behavior between men and women. Gaps in the 25th and 75th percentiles for the age at first sex changed to a much smaller extent, similarly as gender gaps in the median age at first sex.

Maps provide insights into the geographical variation in gender gaps in all of the processes described above. The differences between men and women in the median age at first union and sex are largest in Western Africa, both for the oldest and youngest cohorts. It can be seen that the geographical variation in these processes in the youngest cohorts is less pronounced than for oldest cohorts. The regional patterns of gender gaps in the probability of premarital 1st sex are less clear. Nonetheless, it can be seen that the geographical variation in that processes diminished as well for the youngest cohorts.

To cast light on whether changing gender gaps in the processes of interest were driven by the behavior of men or women, these Fig.3-5 show changes in the indicators of the age at partnership formation by gender and by cohort. The filled dots and dark arrows show the direction of change in a given indicator across cohorts, by gender, for countries which were highlighted with arrows in Fig.1 and Fig.2 (solid lines, gender gap change >1 year). Countries in which the change in the gender gap was smaller than 1 year are in empty dots and dotted arrows.

According to Fig.3, in all of the highlighted countries (solid arrows) the median, 25th and 75th percentile as well as the interquartile range for the age at first union increased among women. Among men, the changes varied, but the most common pattern is that of no change or a decrease in the age of first union, especially for the median and the 25th percentile. However, in some countries, there has been quite a substantial increase in the age at which 75% of men form first union and the interquartile range, suggesting first union postponement at the higher end of the distribution. Generally, the changes in the 75th percentile both for men and women were greater than in the 25th percentile, which explains a rather pronounced change in the interquartile range across cohorts for both genders.

The changes in the age at first union among women were generally more pronounced than among men in all of the indicators in the highlighted countries (solid arrows). This means that gender gaps in the timing of first union formation decreased mainly because of first union postponement among women. By looking at countries where changes in gender gaps in the median age at first union were smaller than 1 year (dotted arrows), one can see that the lack of decrease in gender gaps in the majority of these countries is related to

the fact that women and men postponed first unions to a similar extent (dotted arrows are parallel with the 45 degree line).

The patterns of change in the median age at first sex in the highlighted countries (solid arrows) are similar to those in the age at first union, but the number of countries where a significant change occurred is much smaller. The picture is more mixed for the 25th and 75th percentile and IR. In some cases, change among men in these indicators was greater than among women, but that was the case in a fewer number of countries than the opposite. Similarly as for first union, in the majority of countries where gender gaps did not decrease (dotted arrows) this was due to a similar degree of postponement of sexual initiation among men and women.

Fig.5 show that in almost all countries where gender gaps in the probability of premarital first sex decreased by more than 0.1 (solid arrows), the probability of premarital first sex increased among women. This is expected from a more pronounced increase in age at first union as compared to the age at first sex among women (bottom left). Among men the picture is again more mixed (solid arrows): there is either a decrease or no change in the probability of premarital sex. This results from the fact that the change in the age at first sex among men in many countries was more pronounced than change in the age at first union (bottom right). Given these changes, the decrease in gender gaps in premarital first sex was driven by increases in premarital sex among women and in some cases additionally by decreases in premarital first sex among men.

In sum, there is evidence of decreasing gender gaps in the timing of first union formation in countries where these gaps were biggest, driven by first union postponement among women and especially at the higher end of the distribution. This confirms our hypothesis of the emerging convergence in the pattern of timing of partnership formation between women and men. The lack of decrease in other countries and in gender gaps in the timing of sexual initiation is mainly due to similar level of postponement in these processes among men and women. The processes behind decreasing gender gaps in the probability of premarital first sex are more complex. However, two main patterns can be identified: (i) increasing levels of premarital sexual activity among women due to first union postponement (greater than for first sex) and (ii) decreasing levels of premarital sexual activity among men due to 1st sex postponement (greater than that for first union). Nonetheless, for all of the measure of the timing of partnership formation there is evidence of a decreasing geographical variation in presented gender gaps.

4.2. Association between gender gaps in the timing of partnership formation and gender gaps in schooling

Tab.2 shows gender differences in educational level: the difference between the percentage of men and women who have some education (gender gap any education) and the difference between men and women in the mean years of schooling completed (gender gap mean years). The gender gaps are mainly positive, both for the youngest and the oldest cohort, denoting men's advantage in educational attendance. Gabon is an exception to that pattern. In line with the previous literature on the topic, these gaps generally decreased across cohorts (bolded). The biggest decrease occurred in the countries in which the gaps were the biggest; in some countries, the differences almost disappeared. In a non-negligible number of countries however the gender gap increased. Additional analysis revealed that this was because of a greater increase in educational attendance among men than among women.

To give a visual example of the association between gender gaps in the timing of partnership formation and gender gaps in schooling, Fig.6 shows a scatterplot describing the relationship between gender gaps in any education (top) and mean years of schooling (bottom) and gender gaps in the median age at first union. These figures shows all of the cohort-country points together with examples of within country trajectories of change across cohorts. The country-cohort points indicate a positive association between the two indicators: gender differences in median age at first union tend to be greater there where the greater gender gaps in any education and mean years of schooling are also biggest. The black lines give further insights into this positive relationship. It can be seen that as the gender gap in education decreases, the gender gap in the timing of union formation decreases as well. This indicates that there might exist an association not only between the levels of gender gaps but also their changes over time.

In order to summarize the relationship between all of the indicators of the gender gaps in the timing of partnership formation and educational attendance, in the next step of this research we will run a series of regressions. The first set of regressions will explore the association between the gender gap in a given indicator of timing and gender gap in a given indicator of education. The second set of model will explore the relationship between the *change* in the gender gap in education and *change* in the gender gap in timing.

5. Preliminary Discussion

This study is the first to document the extent of and the changes in gender gaps in the timing of partnership formation in Sub-Saharan Africa. By incorporating information about the age at first union and sex from men's DHS questionnaires and expanding the focus of the analysis beyond women, this study enhances the knowledge of the patterns of union formation in the region.

As expected from the studies which suggest that modernization and developmental processes are likely to make gender relations more egalitarian, we find that gender gaps in some indicators of the timing of partnership formation decreased. Our study identifies a clear pattern of women “catching up” with men when it comes to the age at first union and our results have implications for understanding of gender inequalities in the region. These results could point to the decline in patriarchy in the region and changing social norms relating to the role of women in the society. Increasingly similar trajectories of men and women in terms of first union formation might have positive implications for women’s bargaining power and for the balance of power within the household.

Moreover, by relating the changing gender gaps in the timing of p formation to the changing gender gaps in schooling, our preliminary analysis show first evidence for the support of the hypothesis that developmental processes are likely to play a role in shaping gender dynamics in family building behavior in the region. Specifically, we find a relationship between changes in the gender gap in the timing of first union formation and gender differences in schooling, an association which we will explore in depth as a next step of this research. This underlines the possible influence of the closing gender gap in education and women’s education opportunities on the increasing similarities between men and women in the timing of union formation in Sub-Saharan Africa. This study contributes to the limited body of knowledge about the demographic consequences of decreasing gender gap in schooling in LMICs. These results enhance the understanding of the relationship between gender inequalities and development in the context of rapid social and economic changes observed in the last decades in Sub-Saharan Africa.

Beyond first union formation, we show that differences between men and women in the age of first sex have become less pronounced. In a few countries these gender gaps decreased, but in the majority of them no substantial change was observed. This was due to the fact that the age at which men and women initiated sexual activity changed to a similar extent. However, we find evidence of increasing similarity between women and men when it comes to the context in which their sexual initiation occurs. Namely, the gender gaps in the probability of premarital first sex decreased across cohort, mainly driven by decoupling of sexual initiation and union formation among women. This process in some countries have however been also driven by decreasing levels of premarital sex among men, due to greater postponement of sexual initiation than first union formation among them. The decreasing levels of premarital sex among men in some countries suggest that the developmental processes might affect men’s and women’s transition to adulthood differently. While women seem to exhibit behaviors indicative of changes in the traditionally defined norms prescribing early partnership formation and discouraging premarital sex, among men the direction of change in these processes seems opposite. Hence our results so far document the complexity of the changes in the gender differences in the timing of partnership formation in Sub-Saharan Africa. We

will provide a more nuanced discussion of that complexity and its determinants as next steps of this research.

6. References

- Blanc, A.K. and Rutenberg, N. (1990). *An Assessment of DHS-O Data Quality*. Demographic and Health Surveys Methodological Reports No.1. Macro Systems, Inc. Columbia, Maryland.
- Caldwell, J.C. (1982). *Theory of Fertility Decline*. London: Academic Press.
- Goode, W.J. (1963). *World Revolution and Family Patterns*. New York: Free Press of Glencoe.
- Grant, M.J. and Behrman, J.R. (2016). Gender Gaps in Educational Attainment in Less Developed Countries. *Population and Development Review* 36(1):71–89.
- Gupta, N. and Mahy, M. (2003). Sexual Initiation among Adolescent Girls and Boys: Trends and Differentials in Sub-Saharan Africa. *Archives of Sexual Behavior* 32(1):41–53.
- ICF (2012). *Demographic and Health Survey Sampling and Household Listing Manual*.
- Koski, A., Clark, S., and Nandi, A. (2017). Has Child Marriage Declined in sub-Saharan Africa? An Analysis of Trends in 31 Countries. *Population and Development Review* 43(1):7–29.
- Lloyd, C.B. (2005). *Growing up Global: The Changing Transitions to Adulthood in Developing Countries*. Washington, D.C.: National Academies Press.
- Lloyd, C.B., Grant, M., and Ritchie, A. (2008). Gender Differences in Time Use Among Adolescents in Developing Countries: Implications of Rising School Enrollment Rates. *Journal of Research on Adolescence* 18(1):99–120.
- Malhotra, A. (1997). Gender and the Timing of Marriage: Rural-Urban Differences in Java. *Journal of Marriage and the Family* 59(2):434.
- Mensch, B.S., Grant, M.J., and Blanc, A.K. (2006). The changing context of sexual initiation in sub-Saharan Africa. *Population and Development Review* 32(4):699–727.
- Mensch, B.S., Singh, S., and Casterline, J.B. (2005). *Trends in the Timing of First Marriage among Men and Women in the Developing World*. Policy Research Division Working Paper no. 202. New York: Population Council.
- Neal, S.E. and Hosegood, V. (2015). How Reliable Are Reports of Early Adolescent Reproductive and Sexual Health Events In Demographic and Health Surveys? *Perspectives on Sexual and Reproductive Health* 41(4):210–217.
- United Nations (2017). World population prospects. The 2017 revision [electronic resource]. New York: United Nations.

Tab.1: Countries, surveys, the youngest and the oldest cohort covered by the analyses

Country	Cohorts		Survey years							
	Oldest	Youngest								
Burundi	1975-80	1985-90	2010	2016						
Comoros	1960-65	1980-85	1996	2012						
Ethiopia	1965-70	1985-90	2000	2005	2011	2016				
Kenya	1955-60	1980-85	1993	1998	2003	2008	2014			
Malawi	1965-70	1985-90	1992	2000	2004	2010	2015			
Mozambique	1960-65	1985-90	1997	2003	2011					
Rwanda	1965-70	1980-85	2000	2005	2010	2014				
Tanzania	1955-60	1985-90	1991	1996	1999	2004	2010	2015		
Uganda	1960-65	1985-90	1995	2000	2006	2011	2016			
Zambia	1960-65	1980-85	1996	2001	2007	2013				
Zimbabwe	1960-65	1985-90	1994	1999	2005	2010	2015			
Benin	1960-65	1980-85	1996	2001	2006	2011				
Burkina Faso	1960-65	1980-85	1998	2003	2010					
Ivory Coast	1960-65	1975-80	1994	1998	2011					
Ghana	1955-60	1980-85	1993	1998	2003	2008	2014			
Guinea	1965-70	1980-85	1999	2005	2012					
Liberia	1970-75	1980-85	2007	2013						
Mali	1960-65	1980-85	1995	2001	2006	2012				
Niger	1970-75	1980-85	1998	2006	2012					
Nigeria	1965-70	1980-85	2003	2008	2013					
Senegal	1960-65	1980-85	1992	1997	2005	2010	2014	2015	2016	2017
Sierra Leone	1970-75	1980-85	2008	2013						
Cameroon	1960-65	1975-80	1998	2004	2011					
Chad	1960-65	1985-90	1996	2004	2014					
Congo	1970-75	1980-85	2005	2011						
DRC	1970-75	1980-85	2007	2013						
Gabon	1965-70	1975-80	2000	2012						

Note: Cohorts grouped into 5-year groups

Fig.1: Gender gaps in the median age at 1st union and 1st sex (left), probability of 1st sex being premarital (right); oldest and youngest cohorts

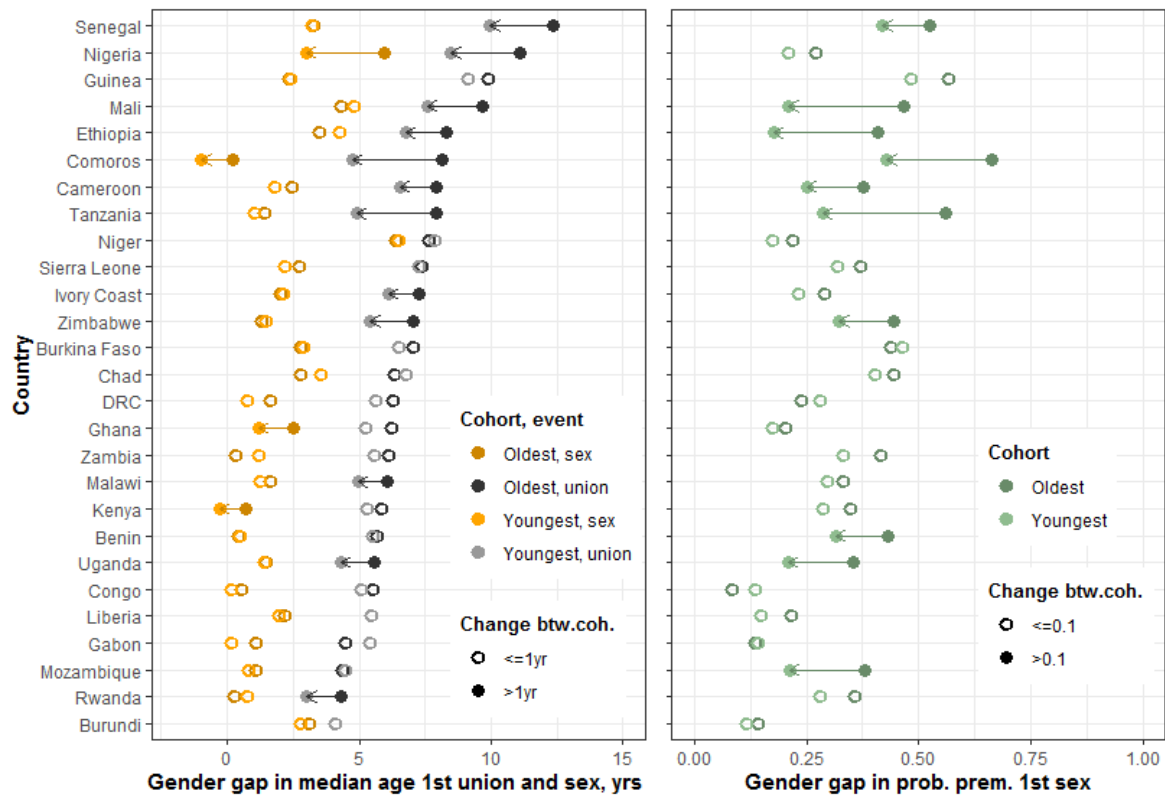
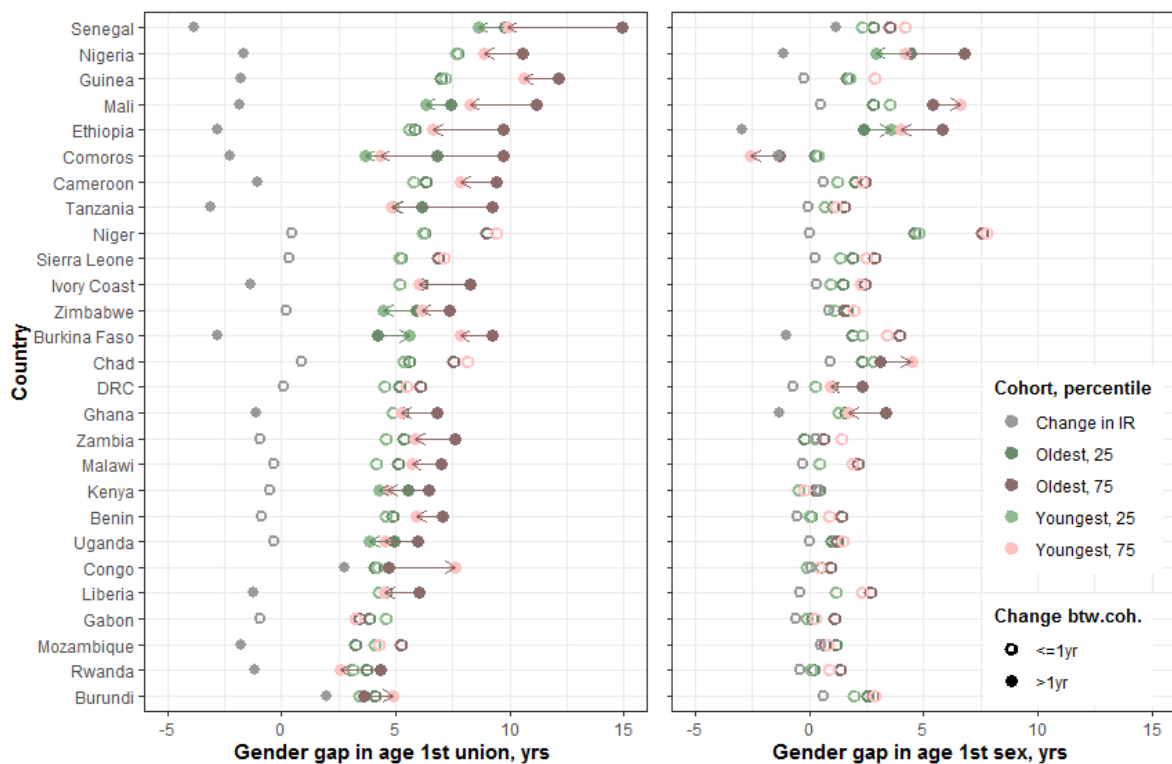


Fig.2: Gender gaps in the age at 1st union (left) and 1st sex (right): 25th and 75th percentile for oldest and youngest cohorts; change across cohorts in the interquartile range (IR)



Maps: Gender gaps in the median age at 1st union, 1st sex and probability of 1st sex being premarital, oldest (top) and youngest (bottom) cohorts for each country

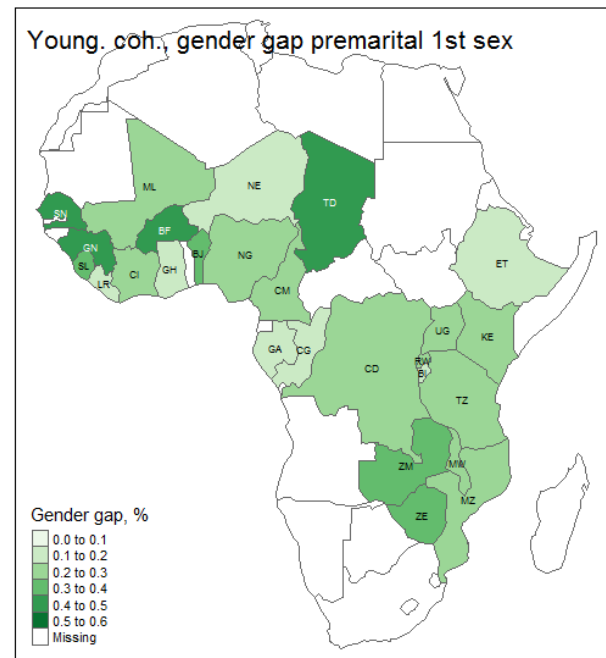
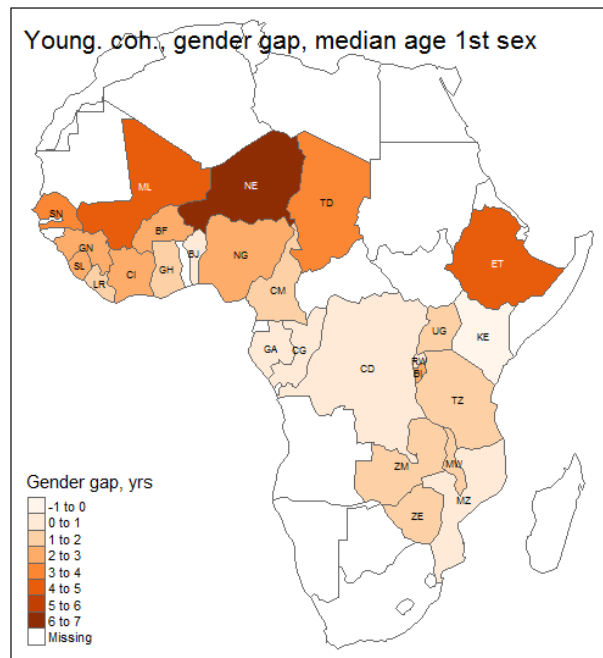
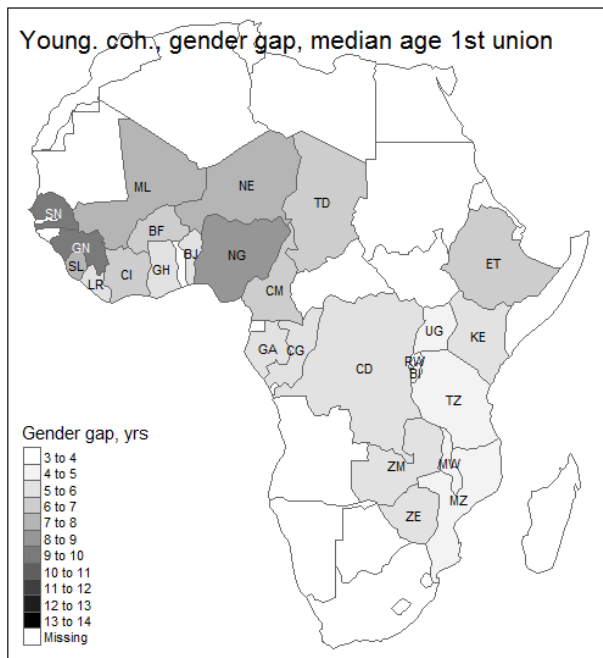
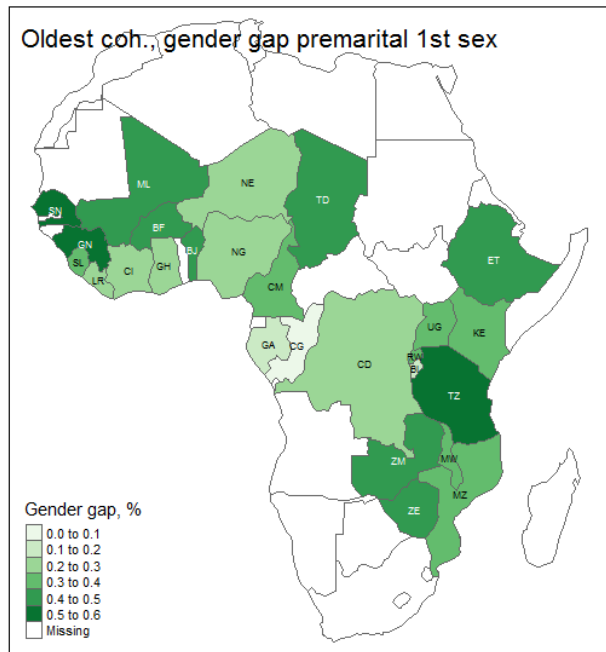
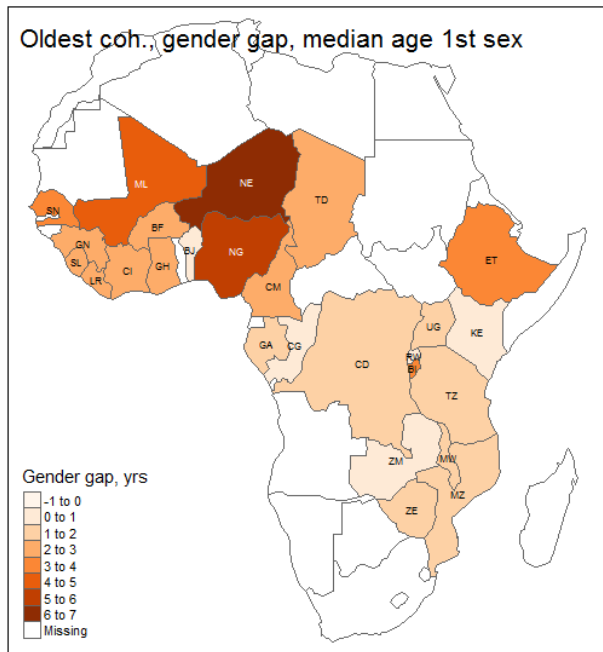
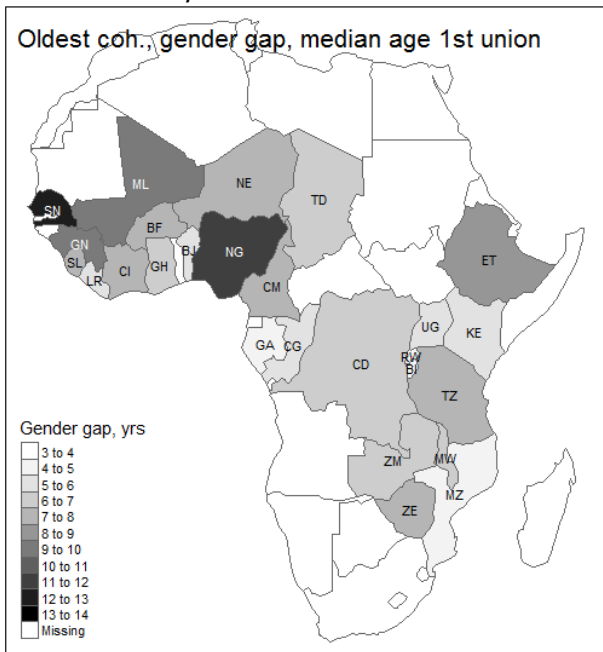


Fig.4: Age at 1st sex: median (top), 25th and 75th percentile, interquartile range (IR) (bottom); by gender; oldest and youngest cohorts

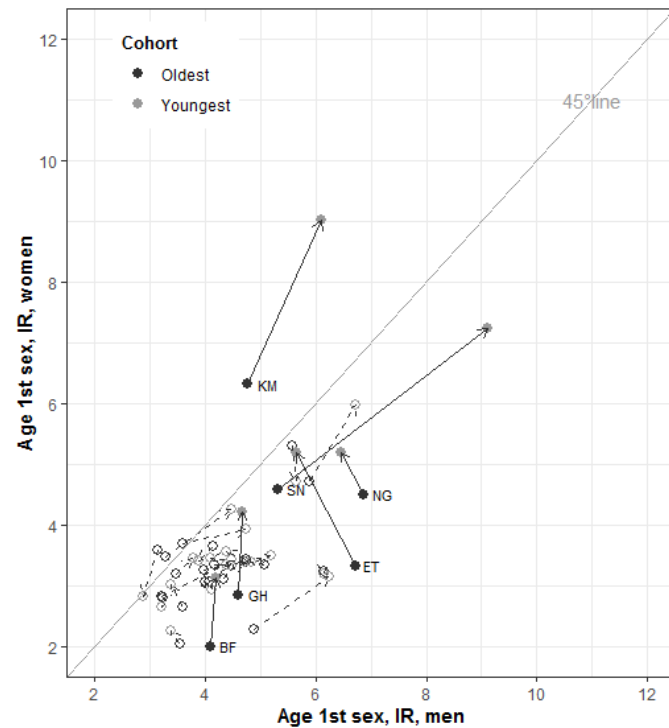
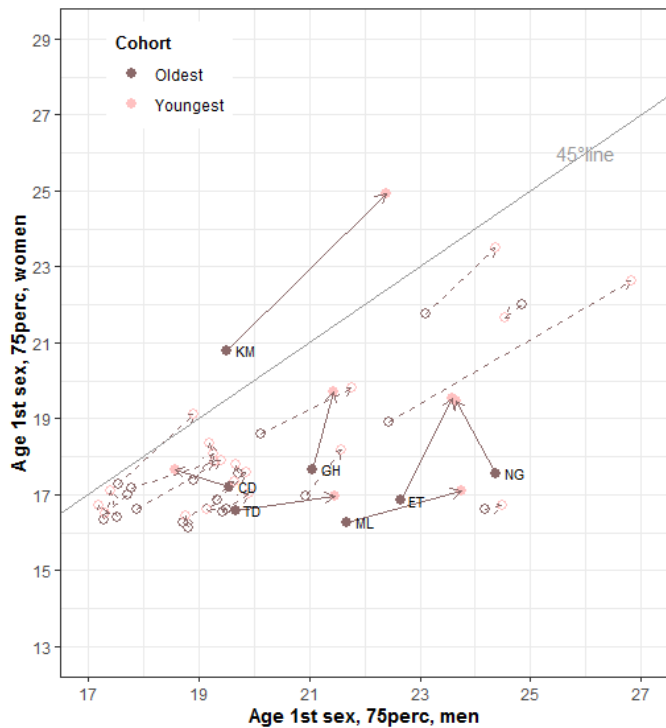
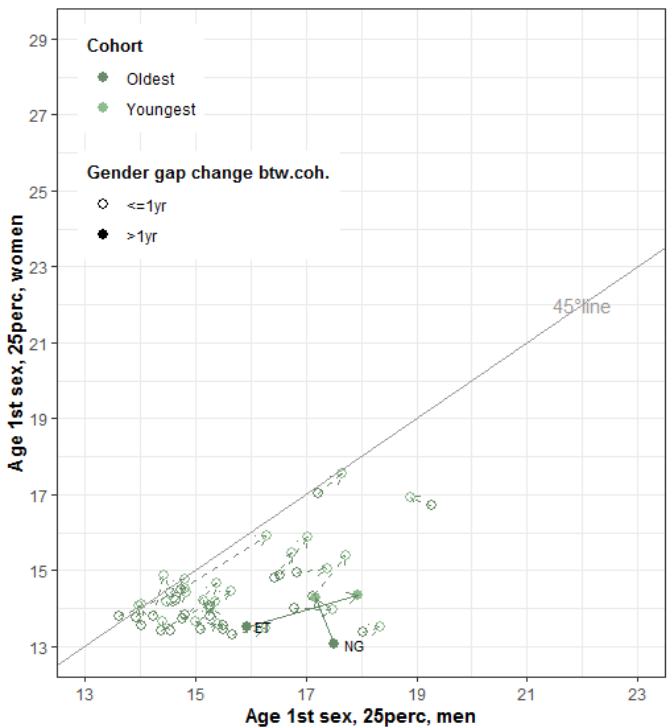
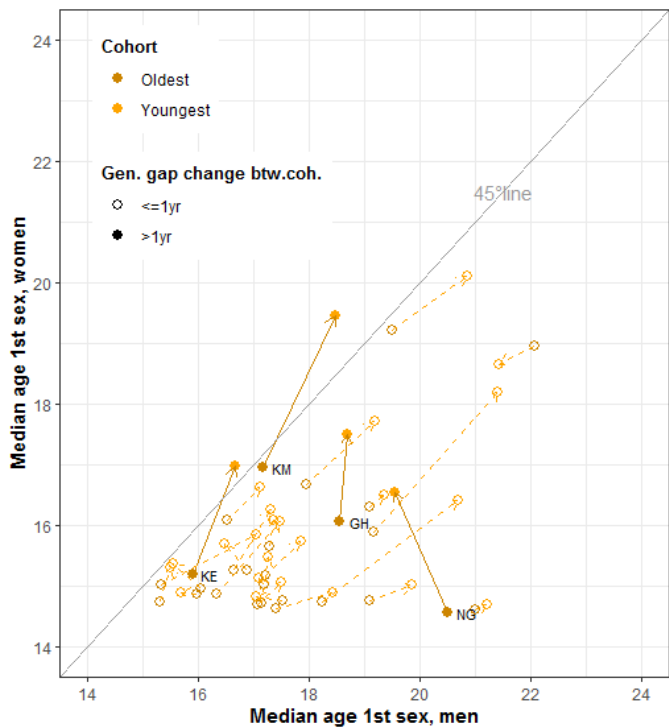
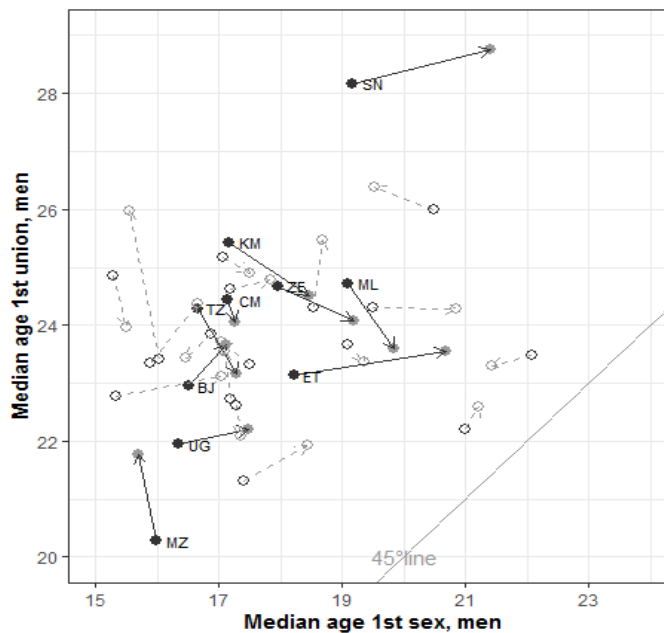
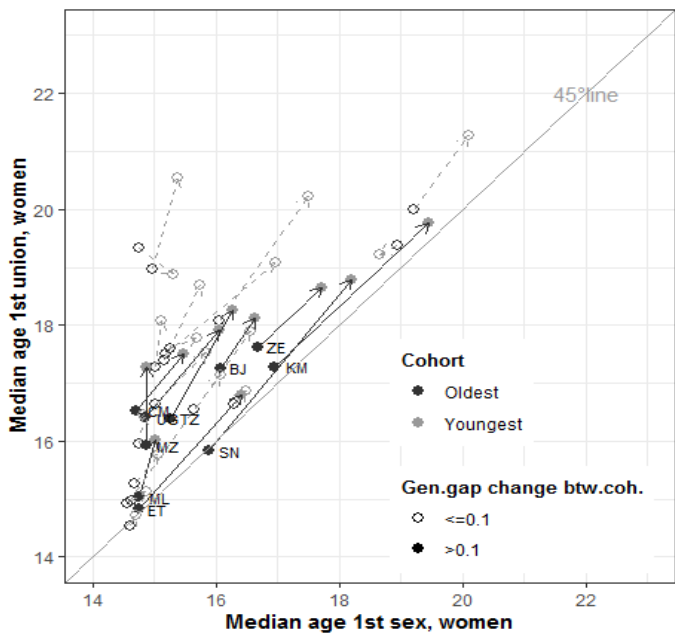
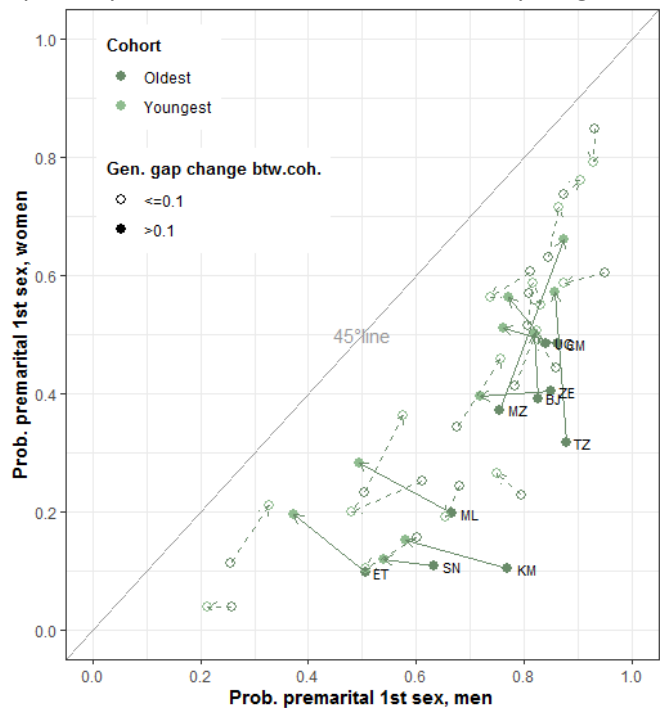


Fig.5: Probability of premarital 1st sex ; by gender; oldest and youngest cohorts (top). Relationship btw. changes in median age at 1st union and 1st sex, separately for men and women, oldest and youngest cohorts (bottom).



Tab.2: Gender gap in education level. Difference between men and women in: (i) the percentage of those who have any education and (ii) mean years of schooling (up to completed secondary level)

Country	Gender gap any education		Gender gap mean years schooling	
	Oldest cohort	Youngest cohort	Oldest cohort	Youngest cohort
Ethiopia	32,4	14,5	2,0	1,2
Comoros	33,6	12,7	3,2	0,8
Tanzania	34,4	5,1	2,7	0,3
Zimbabwe	13,8	0,2	2,5	0,3
Zambia	10,9	4,5	2,2	0,9
Malawi	23,1	2,0	2,3	0,5
Kenya	22,3	4,2	2,8	0,4
Uganda	24,9	1,9	2,4	0,2
Mozambique	31,3	16,5	2,3	1,4
Rwanda	11,3	3,0	1,2	0,4
Burundi	17,9	16,1	1,4	1,4
Senegal	11,5	18,2	1,1	1,6
Nigeria	22,6	17,1	2,7	1,9
Guinea	28,4	31,2	2,4	2,7
Mali	15,9	22,9	1,2	1,9
Niger	16,2	25,5	1,3	1,8
Sierra Leone	15,8	26,5	1,5	2,9
Cote d'Ivoire	22,6	19,8	2,5	1,9
Burkina Faso	11,1	19,4	0,7	1,4
Ghana	14,4	5,1	2,4	0,7
Benin	30,2	30,1	2,4	2,9
Liberia	28,9	16,0	3,0	1,7
Cameroon	14,7	11,5	2,0	1,2
Chad	22,2	25,2	1,8	2,1
DRC	15,6	11,4	2,9	2,3
Congo	3,5	4,0	1,7	1,1
Gabon	-3,4	-1,4	1,4	0,3

Note: Bolded percentages denote a decrease or reversal in the gender gap in education level

Fig.6: Relationship between the gender gap in education (top - any education and bottom - mean years of schooling) and gender gap in the median age at first union, examples of within country trajectories in three countries, all country-cohorts

