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Research Article

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Abstract

BACKGROUND
Research has shown that the prevalence of unmarried cohabitation has increased in most Latin American countries and that childbearing within consensual union, traditionally confined to low-income groups, is becoming socially acceptable among highly educated women.

OBJECTIVE
We focus on the increasing importance of childbearing within consensual union for overall fertility. We measure the relative contribution of births within marriage and births within consensual union to period fertility as a component of population change for 13 Latin American countries from 1980 to 2010.

METHODS
We use census data and the own-children method to estimate the contribution of marriage and consensual union to age-specific fertility rates, to cumulative fertility, and to the TFR.

RESULTS
In most Latin American countries the contribution of marriage to age-specific fertility rates has decreased over time, whereas the contribution of consensual union has increased steadily. In Argentina, Bolivia, Chile, Costa Rica, and Mexico the contribution of marriage to the TFR is still larger than the contribution of consensual union. In Ecuador and Uruguay they have become roughly similar. In Brazil, Colombia,

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Cuba, Panama, Peru, and Venezuela the contribution of consensual union to the TFR is larger than that of marriage.

CONCLUSIONS
In Latin America, fertility, as a component of population change, is less and less related to marriage and increasingly linked to consensual union instead.

1. Introduction

Latin America is known for its dual nuptiality regime. Marriage and consensual union have coexisted side by side in most countries of the region for centuries (Lavrin 1989; Quilodrán 1999; De Vos 2000; Castro-Martín 2002; Rodríguez Vignoli 2004; Esteve, Lesthaeghe, and López-Gay 2012). However, the prevalence of unmarried cohabitation has historically been heterogeneous in the region and it remains so nowadays: the share of consensual unions among all conjugal unions of women aged 15 to 49 currently ranges from about 20% in Chile to 74% in the Dominican Republic (Castro-Martín et al. 2011). An increase in the prevalence of consensual unions has been documented for most Latin American countries as of the 1970s and particularly from the 1990s onwards (Esteve, Lesthaeghe, and López-Gay 2012).

Due to its long-standing presence as a form of conjugal union and to the high level of social acceptance it enjoys, childbearing within consensual union is widespread in the region. This can be partly explained by the fact that consensual unions are not merely 'trial marriages,' typical of younger age groups. They are also prevalent in later stages of the life course. Moreover, childbearing within consensual union has undergone a remarkable increase in the past decades. The proportion of births to unmarried cohabiting parents has gone from 15% in 1970 to 39% in 2000 (Castro-Martín et al. 2011). Births from unpartnered mothers have also increased during this period, from 7% to 15%, which implies that nowadays nonmarital births are actually more common in the Latin American region than marital births.

In an effort to understand the changing family context of childbearing in Latin America, Laplante et al. (2015) compared the fertility patterns of women in consensual union and in marriage in 13 Latin American countries. They used census microdata from the four most recent census rounds and a methodological approach based on the own-children method in order to estimate age-specific fertility rates and cumulative fertility and total fertility rates within marriage and within consensual union. Their results showed that, in all countries examined, fertility was slightly higher within consensual union than within marriage. The age pattern of fertility was also found to be very similar in marriage and in consensual union. The largest difference could be

observed among women aged 30 to 45. This study also found that, in most countries, childbearing within a consensual union had also become increasingly common for highly educated women. This is a clear indication that the similarities in reproductive behaviour between marital and nonmarital unions are not confined to the socially disadvantaged but apply as well to the better-off. According to these results, the authors conclude that in Latin America, at least since the 1980s, women's childbearing patterns depend on their age and on their living in a conjugal relationship, but not on the legal nature of this relationship.

The approach used by Laplante et al. (2015) provides valuable insight into the social acceptability of childbearing within consensual unions. The conditional age-specific fertility rates (ASFRs), conditional cumulative fertility, and conditional TFR they use allow for comparing fertility patterns across conjugal status − i.e., for unpartnered, cohabiting, and married women − within a given social group − e.g., groups defined by education level. If the distributions of ASFRs, cumulative fertility, and TFR within marriage and within consensual union are similar for a specific social group, both conjugal states are likely to be acceptable for childbearing and childrearing among the individuals who belong to that group. According to their results, there is wide social recognition conferred on consensual unions and women apparently feel free to have children with their partner without being married. Highly educated women lag behind but follow the same tendency, although it is likely that the underlying motivations and meanings attached to cohabitation differ across social strata (Covre-Sussai et al. 2015).

However, this approach does not provide any information on the contribution of fertility within consensual union to overall fertility. In this paper, rather than focusing on the social acceptability of childbearing within consensual unions as in Laplante et al. (2015), we focus on the relative importance of childbearing within consensual union from the perspective of population change. More precisely, we measure the relative contribution of marriage and consensual union to fertility as a component of population change. To some extent, this effort implies establishing the importance of conjugal status in Latin America, just as the Princeton project did for the importance of marital status in Europe, distinguishing in that case marital and nonmarital fertility (Coale and Watkins 1986).

2. Data and methods

In many Latin American countries, vital statistics suffer from under-registration (Harbitz, Benítez Molina, and Arcos Axt 2010). Furthermore, with some exceptions such as Costa Rica, they do not provide information on whether unmarried mothers are living with the father of the child. As a consequence, children born of a mother living in a consensual union are not reported separately from those born of a mother who does not have a coresidential partner. In order to distinguish births to cohabiting mothers from births to unpartnered mothers, researchers must resort to census data or surveys with retrospective birth histories. All Latin American census sources contain reliable information on current conjugal status and include a separate category for consensual union (Rodríguez Vignoli 2011). Unlike data from retrospective biographical surveys, they are available for a large number of Latin American countries. They provide a workable alternative to vital statistics or biographical surveys when used with the own-children method of fertility estimation.

The own-children method was designed to study fertility using census data so that fertility could be related to characteristics collected by the census but not recorded in vital statistics (Cho, Rutherford, and Choe 1986). Using the own-children method allows us to identify recent births in consensual couples and in married couples. The original form of the method uses the distribution of the number of children less than five years old in the household conditional on the age of mothers aged between 15 and 49, grouped into five-year classes. We use a somewhat modified form based on the distribution of the number of children less than one year old in the household conditional on the age of mothers aged between 15 and 49, ungrouped.[5]

We use data from the IPUMS collection of harmonised census microdata files from the four most recent census rounds available (Minnesota Population Center 2014). Our selection includes samples ranging from 1980 to 2010 for 13 Latin American countries: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Ecuador, Mexico, Panama, Peru, Uruguay, and Venezuela.

In this paper, we use two measures introduced in Laplante and Fostik (2015): the contribution of each conjugal status to age-specific fertility rates (CASFR) and the contribution of each conjugal status to cumulative fertility (CCF). The first measure, the contribution of each conjugal status to age-specific fertility rates (CASFR), is computed as the product of the within conjugal status age-specific rate and the proportion of women of the same age in a given type of conjugal status. The sum of the contributions

[5] Since calculations are based on children aged up to one year, mothers' conjugal status may have changed since childbirth (mothers may have married or separated). However, since these transitions are not frequent during the first year after birth and they have offsetting effects, we can assume that mother's conjugal status at the time of census is a good approximation to mother's conjugal status at birth.

of each conjugal status to age-specific fertility rates is the age-specific rate. The second measure, the contribution of each conjugal status to cumulative fertility (CCF), is the sum over age of the contributions of each conjugal status to age-specific fertility rates. The sum of the contributions of each conjugal status to cumulative fertility is the cumulative fertility. The sum of the contributions of all conjugal statuses to overall fertility is the Total Fertility Rate. The value of the contribution of each conjugal status to cumulative fertility at age 49 is the contribution of the conjugal status to the TFR. Interested readers will find a detailed presentation of the two measures in Laplante and Fostik (2015).

Substantively, the contributions to age-specific fertility rates provide a description of the fertility, over her life course, of a 'synthetic woman' – the average woman of the synthetic cohort – who would have spent her reproductive years moving between being unpartnered, cohabiting, and being married. The contributions to the TFR provide a decomposition of the cumulative fertility of this synthetic woman. Over her life course she would have had exactly the same number of children as the period TFR, but using the contributions of each conjugal status allows us to detail the proportion of these children she would have had while having no coresidential partner, while cohabiting, and while being married.

The method and data we use have known limitations. The most obvious difficulties of the own-children method are establishing the relationship between mother and child from census records, census undercoverage of children and women, infant mortality, and children who do not live with their mother (Grabill and Cho 1965). However, Rindfuss (1976) compared estimates of USA fertility based on vital statistics with estimates based on census data and the own-children method and he concluded that the own-children estimations reproduced the trends in fertility, despite not reproducing the levels of vital statistics. In this analysis, the TFR calculated with the own-children method also underestimates the TFR obtained by direct estimation, but there is no reason to suspect that the degree of underestimation varies by conjugal status. In other words, the levels of fertility associated with marriage, consensual union, and living without a partner may be underestimated, but the underestimation is likely to be systematic and, consequently, the relative contribution of marriage and consensual union to overall fertility can be assumed to be reasonably accurate.[6]

Results are reported in one table and several figures. Given the importance of the proportion of women who are in a marital union and a consensual union according to age in the computation of CASFR and CCF, we report these proportions first.

[6] Using IPUMS data adds another limitation: the data do not allow taking multiple births into account. In the article which introduces the decomposition method (Laplante and Fostik 2015) the authors show that taking multiple births into account does not lead to different conclusions.

3. Results

Figure 1 displays the distribution of conjugal status according to age for women aged 15−49. It shows that, in most countries for which data are available for more than one census, the proportion of women of reproductive age living in a consensual union has increased steadily over time. There are two notable exceptions to this general pattern, Ecuador and Panama, where this proportion remained relatively stable between the early 1980s and the early 2000s, although it did increase afterwards. Panama is more of an outlier, as the proportion of women living in a consensual union was already large in 1980 – actually larger than in most countries in their most recent censuses.

In nearly all countries, the proportion of married women first increases steadily with age and then reaches a plateau. By contrast, the proportion of cohabiting women first increases with age, reaches its maximum, and then decreases − slightly in most countries − with age. In most countries, the proportion of women living in a consensual union increases as the proportion of married women decreases over time. By contrast, the proportion of unpartnered women does not typically diminish as the proportion of cohabiting women increases; in fact, in some countries, such as Colombia and Ecuador, both the proportion of women without a coresidential partner and the proportion of women in consensual union increase across censuses.

Figure 2 displays the estimates of the contribution of conjugal status to age-specific fertility rates of women aged 15−49. The most salient result from Figure 2 is that in all Latin American countries for which data are available for more than one census, the contribution of marriage to age-specific fertility rates has decreased over time. In parallel, the contribution of consensual union has increased steadily. In all countries the contribution of marriage reaches its peak at a later age than the contribution of consensual union. According to the most recent censuses, in some countries − Brazil, Colombia, Cuba, Ecuador, Panama, Peru, and Venezuela − the contribution of consensual union clearly dominates fertility before age 30.

Figure 1: Distribution of conjugal status according to age of women aged 15−49 living in selected Latin American countries, 1980−2010

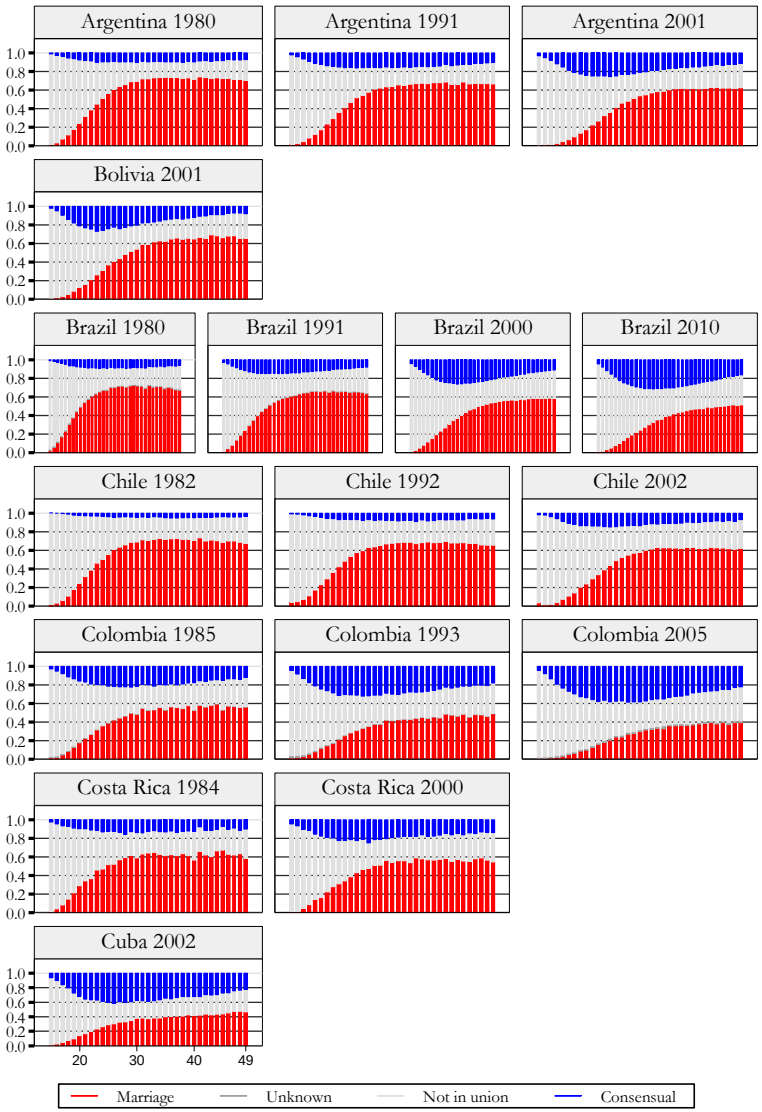
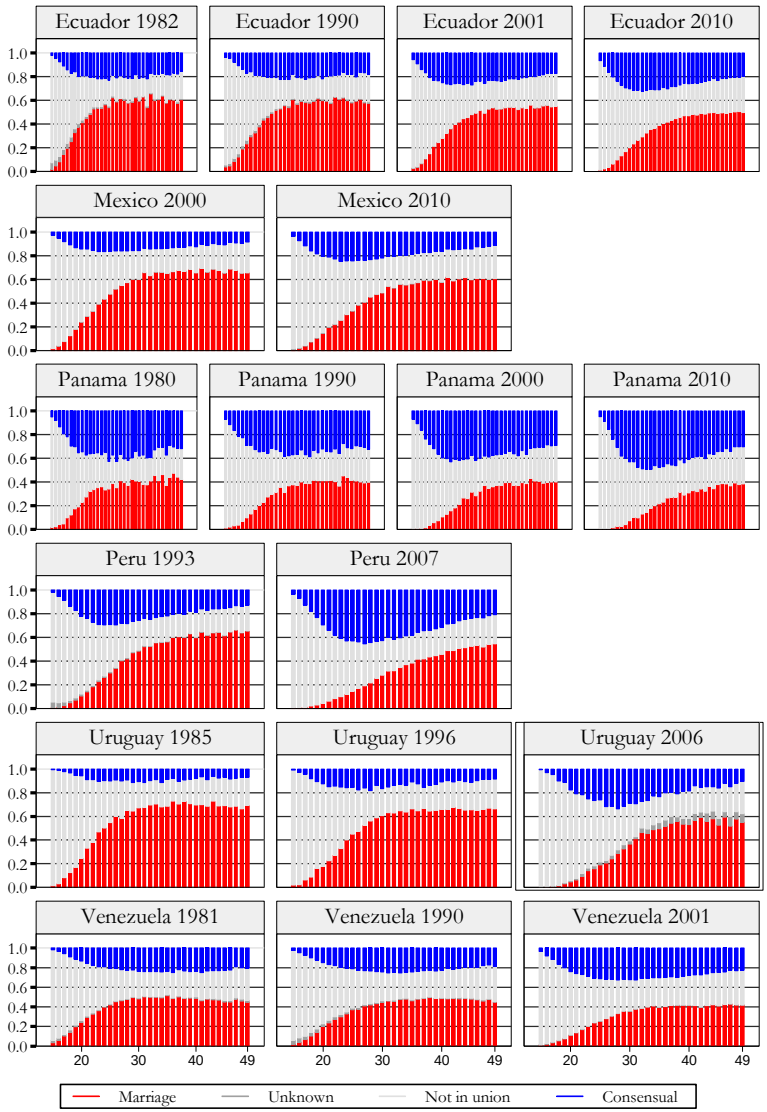
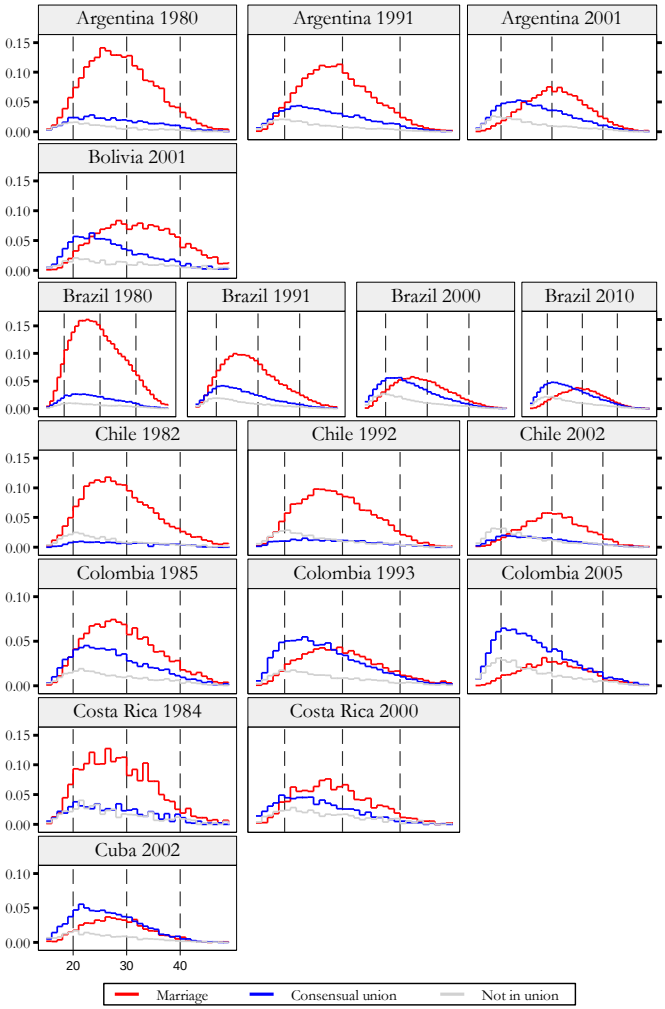


Figure 1: (Continued)



Source: Census microdata, IPUMS-International. Weighted estimation.

Figure 2: Estimates of the contribution of conjugal status to age-specific fertility rates of women aged 15−49 living in selected Latin American countries, 1980−2010



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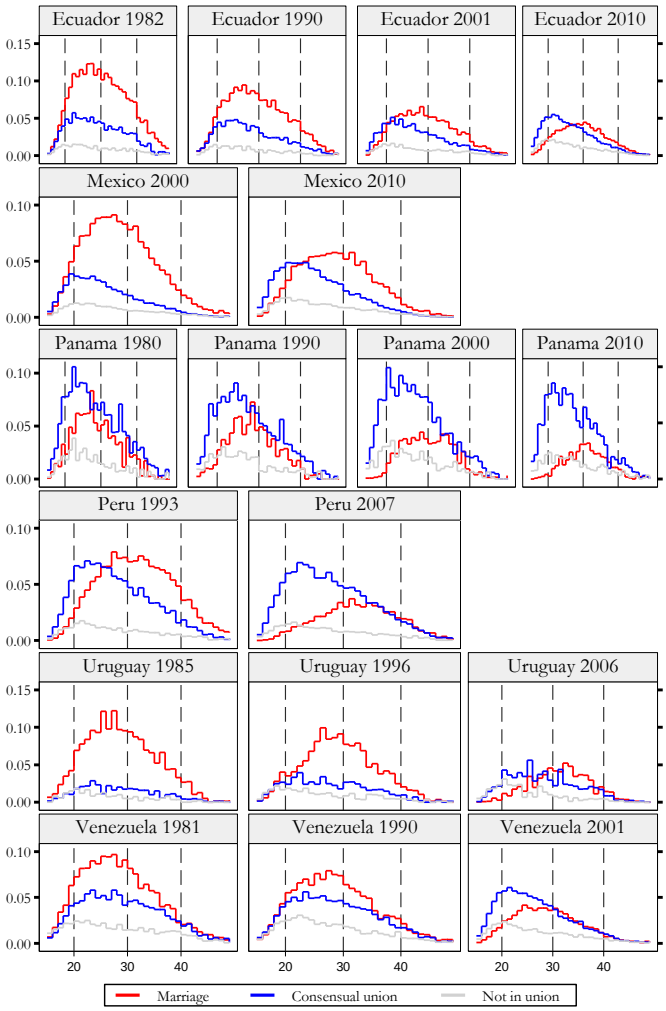


Source: Census microdata, IPUMS-International. Weighted estimation.

Table 1 reports the estimates of the contribution of each conjugal status to the total fertility rate for women aged 15−49. Contributions are reported as actual numbers and as proportions. They show that in some countries' most recent census − Argentina,

Bolivia, Chile, Costa Rica, and Mexico − the contribution of marriage to the TFR is still larger than the contribution of consensual union, although differentials have been narrowing steadily over recent decades. In Ecuador and Uruguay's most recent censuses, the contributions of marriage and consensual union are roughly similar. On the other hand, in Brazil, Colombia, Cuba, Panama, Peru, and Venezuela the contribution of consensual union to the TFR is larger than that of marriage; in Panama it was already higher in the 1980 census.

Table 1: Estimates of the contribution of each conjugal status to the total fertility rate of women living in selected Latin American countries

	Argentina			Bolivia	Brazil				Chile		
	1980	1991	2001	2001	1980	1991	2000	2010	1982	1992	2002
Total Fertility Rate	2.90	2.71	2.30	2.84	3.64	2.38	2.02	1.57	2.36	2.21	1.58
Contribution to TFR											
Marriage	2.24	1.72	1.11	1.61	2.97	1.54	0.89	0.56	1.87	1.60	0.86
Cohabitation	0.46	0.71	0.85	0.90	0.49	0.59	0.80	0.72	0.17	0.25	0.33
Not in union	0.21	0.27	0.34	0.33	0.18	0.25	0.33	0.29	0.31	0.36	0.39
Proportion of TFR											
Marriage	0.77	0.64	0.48	0.57	0.82	0.65	0.44	0.36	0.80	0.72	0.54
Cohabitation	0.16	0.26	0.37	0.32	0.13	0.25	0.40	0.46	0.07	0.11	0.21
Not in union	0.07	0.10	0.15	0.12	0.05	0.11	0.16	0.18	0.13	0.16	0.25

	Colombia			Costa Rica		Cuba	Ecuador				Mexico	
	1985	1993	2005	1984	2000	2002	1982	1990	2001	2010	2000	2010
Total Fertility Rate	2.27	1.87	1.89	3.02	2.23	1.51	3.70	2.73	2.11	1.98	2.30	1.96
Contribution to TFR												
Marriage	1.25	0.74	0.45	1.97	1.11	0.52	2.39	1.70	1.11	0.78	1.55	0.99
Cohabitation	0.74	0.87	1.03	0.57	0.72	0.77	1.02	0.81	0.77	0.86	0.55	0.71
Not in union	0.28	0.26	0.41	0.48	0.40	0.21	0.28	0.22	0.24	0.33	0.20	0.25
Proportion of TFR												
Marriage	0.55	0.39	0.24	0.65	0.50	0.35	0.65	0.62	0.52	0.40	0.67	0.51
Cohabitation	0.33	0.47	0.54	0.19	0.32	0.51	0.28	0.30	0.36	0.44	0.24	0.36
Not in union	0.12	0.14	0.22	0.16	0.18	0.14	0.08	0.08	0.11	0.17	0.09	0.13

	Panama				Peru		Uruguay			Venezuela		
	1980	1990	2000	2010	1993	2007	1985	1996	2006	1981	1990	2001
Total Fertility Rate	3.05	2.50	2.60	2.12	2.88	1.98	2.38	2.24	1.64	3.22	2.77	1.93
Contribution to TFR												
Marriage	1.00	0.77	0.63	0.41	1.45	0.59	1.80	1.39	0.64	1.68	1.31	0.66
Cohabitation	1.63	1.34	1.52	1.35	1.17	1.15	0.38	0.56	0.69	1.07	0.99	0.93
Not in union	0.42	0.39	0.45	0.36	0.26	0.24	0.20	0.29	0.30	0.47	0.47	0.34
Proportion of TFR												
Marriage	0.33	0.31	0.24	0.19	0.50	0.30	0.76	0.62	0.39	0.52	0.47	0.34
Cohabitation	0.54	0.53	0.58	0.64	0.41	0.58	0.16	0.25	0.42	0.33	0.36	0.48
Not in union	0.14	0.16	0.17	0.17	0.09	0.12	0.08	0.13	0.18	0.14	0.17	0.17

Note: Data from censuses of the four most recent census rounds. Estimates from the own-children method. Women aged 15−49. Census data from IPUMS international. Weighted estimation. As explained in the Data and Methods section, the own-children method underestimates the actual TFR, but should provide reasonable estimates of the contributions of each conjugal status to the TFR expressed as proportions.

Interestingly, in most countries the increase in the proportion of fertility from cohabiting women goes hand in hand with an increase in the proportion of fertility from unpartnered women.

Figure 3 reports the estimates of the contribution of each category of conjugal status to cumulative fertility. In some countries' most recent census – Argentina 2001, Bolivia 2001, Costa Rica 2000, and Mexico 2010 – the contribution of consensual union to cumulative fertility is slightly higher than that of marriage up to age 25 to 30, but that of marriage is higher than that of consensual union for older ages. Given that conditional ASFRs are roughly the same for consensual union and marriage in most Latin American countries, this is primarily a consequence of the higher proportion of young women living in consensual union than in marriage at the time of these censuses. In these countries, if cohabitation remains an acceptable childbearing context for women from younger cohorts as they move towards the end of their reproductive years, in the next census the contribution of consensual union to cumulative fertility may become higher than the contribution of marriage at all ages. Apparently, this is what happened in Brazil. In the 2000 Brazilian census the contribution of consensual union to cumulative fertility was higher than that of marriage only up to age 30. In the 2010 Brazilian census the contribution of consensual union to cumulative fertility was above that of marriage at all ages.

Figure 3: Estimates of the contribution of conjugal status to cumulative fertility of women aged 15−49 living in selected Latin American countries, 1980−2010

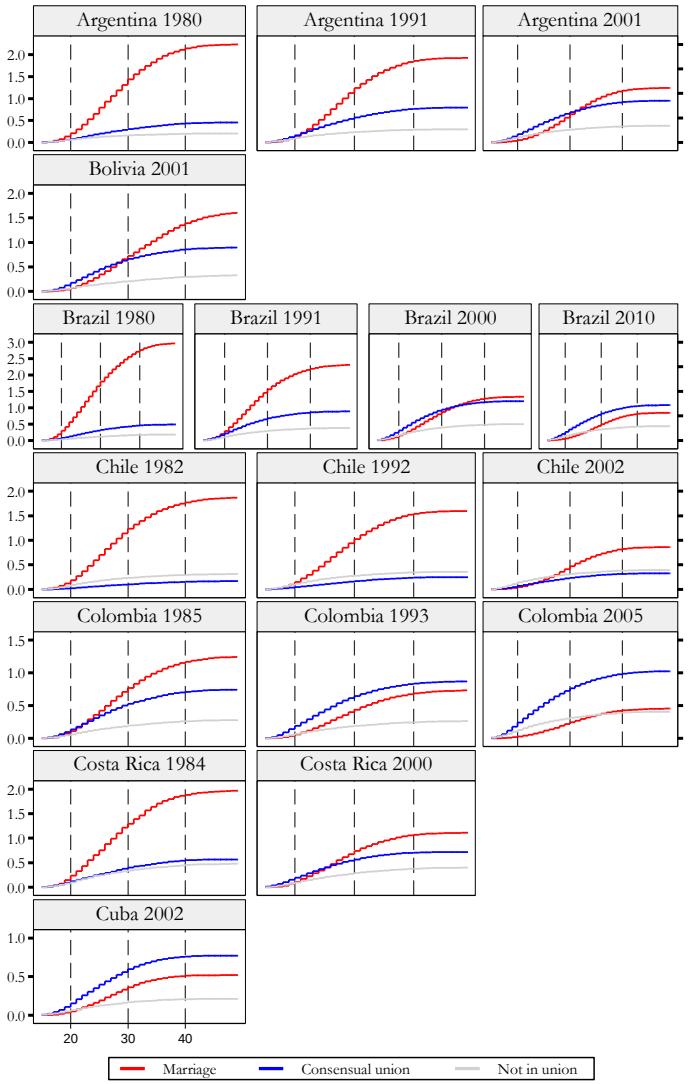
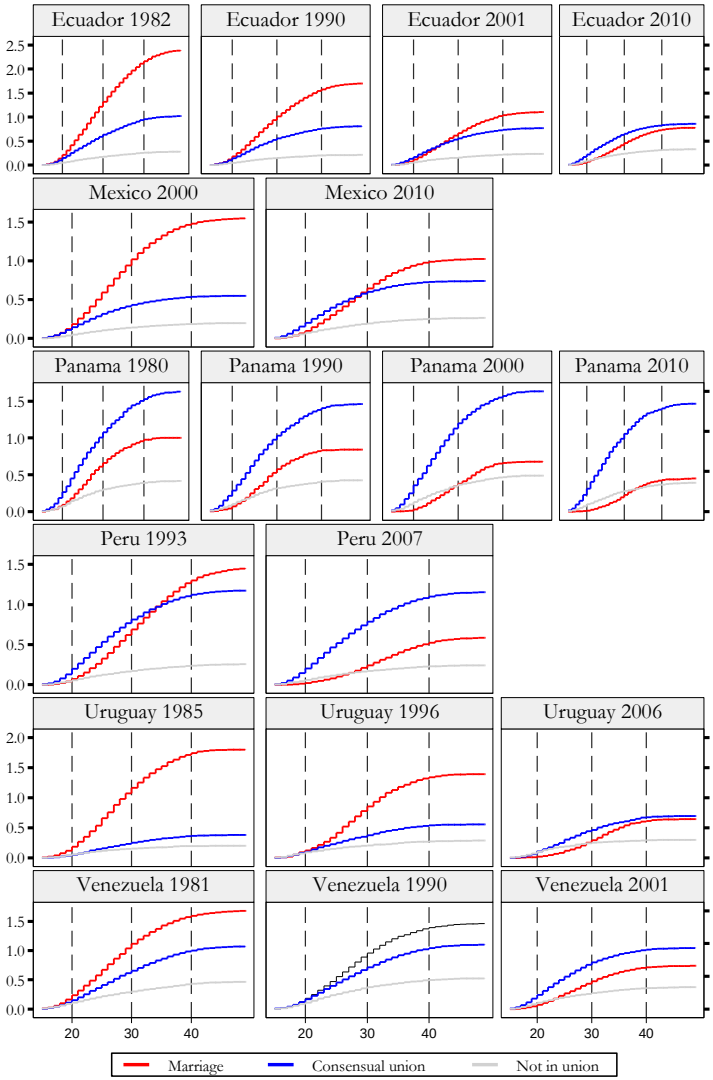


Figure 3: (Continued)



Source: Census microdata, IPUMS-International. Weighted estimation.

4. Discussion

During the past three decades, the Latin American region not only has experienced a substantial fertility decline − the TFR dropped from 3.95 in 1980−1984 to 2.15 in 2010−2015 (United Nations 2015) − but the relative contribution of births within marriage and within consensual union to overall fertility has also changed markedly. Due to the increasing proportion of women of reproductive age living in a consensual union and the similarity of childbearing patterns of married and cohabiting women, the proportion of overall fertility attributable to births to cohabiting couples has risen in all countries.

In nearly all Latin American countries the proportion of women living in a consensual union first increases with age, reaches its maximum, and then decreases − slightly in most countries − with age. This shape of the distribution of women living in consensual union may suggest two different interpretations: cohabiting couples tend to formalize their relationship through marriage over the life course, or the rate of entry into consensual union is higher among the younger generations than among the older ones. There is no simple way to choose one interpretation over the other without longitudinal data, and probably both are accurate.

In all Latin American countries for which we have census microdata, the relative contribution of childbearing within consensual union to total fertility has increased considerably during the past three decades. It has already surpassed the contribution of childbearing within marriage in 8 out of the 13 countries under study: Brazil, Colombia, Cuba, Ecuador, Panama, Peru, Uruguay, and Venezuela. Among the countries for which data from the 2010 census round are available, Mexico is the only one where the contribution of marriage is larger than that of consensual union. To the extent that living in a consensual union rather than being married keeps becoming more common among the youngest cohorts, the contribution of births within consensual union might exceed that of marriage in nearly all countries of the region in the not so distant future.

Fertility, as a component of population change, is becoming less and less related to marriage and more and more associated with consensual union in the Latin American region. Interestingly, fertility is also increasingly associated with not living in a conjugal union, and this association is not confined to adolescent ages. This is not exactly what we had anticipated from a substantive perspective. Given the remarkable rise in unmarried cohabitation and in the social acceptance of childbearing within consensual union in the region, one would have expected the increase in nonmarital fertility to decompose as an increase in fertility within consensual union and a stable or decreasing fertility among out-of-union women. What we found is somewhat different. The proportion of fertility occurring within consensual union has increased over the past decades, but the proportion of fertility occurring out of union has increased as well.

The underlying causes of this unanticipated increase in unpartnered motherhood are worth investigating further.

5. Acknowledgements

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