Fertility and educational pairing in Latin America: an analysis through cohort fertility

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Abstract

Many Latin America are marked over the years by a general fertility decline trend towards replacement level. In this process, couple’s education plays an important role in shaping individual’s behavior and, therefore, influences on marital and reproductive decisions. Past studies have pointed out that the educational expansion in the region was strongly related to women reproductive intentions, but little is known about the role of husband’s schooling herein. In this context, this work aimed to analyze the role of couple’s education attainment on cohort fertility of six countries in the region. Our results show relevant effects regarding males and females educational attainment on cohort fertility levels in all analyzed countries. This educational effect occurs especially when we consider the partner jumps to some education, i.e. from incomplete primary to complete primary education. We also confirm that great disparities in education level between couples affects more the levels of fertility.

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Introduction

In comparison to other developed regions of the world, Latin America has experienced a rapid fertility decline over most of its countries, between 1950s and 2000s (Merrick & Berquó 1983, Guzmán et al. 2006). Nowadays, almost all countries in the region are below or close to the replacement levels (Lima et al. 2017), but the fertility transition process occurred unevenly at different levels and paces across the region, which may be explained in great deal due to socioeconomic disparities across countries (Chackiel & Schkolnik 1996). However, not only socioeconomic developments are the key factors behind the general fertility decline in the region, and many other features played an important role in this process of change reproductive behavior. Hereby, we could cite the role of female sterilization, for example. Fertility control was already disseminated among higher education strata living in industrial and urbanized areas, while the fertility started to decline (Guzmán & Rodríguez 1993, Perpétuo & Wajnman 1998) and it spread rapidly to other less favorable social groups (Rodriguez 1996, Perpétuo & Wajnman 1998).

Notwithstanding, in many LA-countries, most recent trends of the fertility indicate decline also among less favorable social strata as well, and that has pushed the fertility rates in many places towards sub-replacement levels (Chackiel & Schkolnik 1996, Cavenaghi & Alves 2009, Castanheira & Kohler 2015, Lima et al. 2017). In fact, recent decrease in fertility rates throughout all economic groups can also be seen as a movement towards an actual realization of the "really wanted" number of children, by the adoption of modern contraceptive methods (Bongaarts 1990, Moreno 1996, Cavenaghi & Alves 2009, UN 2015a). Although, in many countries of the region the number of unwanted pregnancies and without much planning is still very high, specially among teenage women from lower socioeconomic strata (Edin & Kefalas 2005, Näslund-Hadley & Binstock n.d., Edin & Nelson 2013).

In parallel, fertility decline towards replacement levels went hand in hand with an educational expansion (OECD 2015), which itself has contributed to changes in reproductive behavior (Rios-Neto & Guimarães 2013, Castro-Martin & Juarez 1995). This was followed by a fertility polarization, characterized by a combination of high rates of childbearing at younger ages with increase rates in first birth at later reproductive
ages (Lima et al. 2017). Some scholars speculate that thanks to this educational expansion, the imperative of early childbearing might be over and a recent trend through motherhood postponement is risen in the region (Rosero-Bixby et al. 2009).

For women, the educational achievements in Latin America gave also the possibility of overcoming gender inequalities that once prevailed in the region (Messina 2002). Therefore, the educational attending seems to play a special role for women empowerment, especially in Latin America, region commonly absent of public policies aimed to improve gender equity (Messina 2002). In addition, female schooling provides crucial reproductive and contraceptive knowledge, changing women’s attitudes and behavior towards a more desirable fertility level (Jejeebhoy 1995, Castro-Martin & Juarez 1995).

In this context, several studies have been concerned with fertility decline under replacement levels and its consequences to population aging in Latin America (Chackiel 2006, Guzmán et al. 2006, Castanheira & Kohler 2015, Lima et al. 2017). In common, all these works usually focus their analyses on period fertility developments and little is known about cohort fertility trends in the region (Reher & Requena 2014), as well as the role of the partner’s education in women’s fertility (Nitsche et al. 2015). This is one of the aims pursued in this work, to get an understanding of historical fertility developments in Latin America based on cohort fertility analyses in association the couples education.

In addition to that, the rapidly changes in demographic dynamics in Latin America present many idiosyncrasies that are better explained in a cohort perspective, as the case of childbearing postponement (Rosero-Bixby et al. 2009, Nathan 2017). Thus, we argue that a cohort perspective makes also possible to evaluate the effect of socioeconomic differentials in social groups that experienced the certain events throughout their life course, for example, educational expansion, cultural and ideational changes etc.

Hence, this paper aims to study the changes of reproductive behavior of couples in Latin America throughout a cohort analyses. We investigate the effect of woman’s educational achievement on her fertility and, additionally, the influence of the partner’s education over women’s fertility rates. Hence, we focus our analyses on couple’s educational pairings. Using censuses data, we have reconstructed the cohort fertility
of 6 countries in the region, namely Argentina, Brazil, Chile, Mexico, Peru and Uruguay. These countries were selected due to the data quality of the available National Census (Guzmán et al. 2006). This group of countries also accounts for more than half of the Latin American population and they also show great heterogeneity in terms of population composition and socioeconomic development. Our main objectives here are: 1) evaluate differentials in cohort fertility when females and males are in the same education groups (educational homogamy); 2) Measure the influence of female education on fertility (hypogamous couples), and; 3) the role male education on his partner reproduction (hypergamous couples). In the next sections, we give an overview about past developments in fertility in the region, we also give a brief description about the data and methods, discuss the preliminary results and future steps of this work.

1 Background

1.1 Fertility Transition in Latin America

The decline of period fertility in Latin America dated between 1950 and 1960 and it was inserted in a process of “Global change of Fertility Behavior” (Caldwell 2006), characterized by an overall reduction of fertility levels around the world. The convergence of fertility schedules in the region happened due to a combination of factors, illustrated by many authors. In this process, they highlight the influence of the intensive process of industrialization and urbanization, expansion of the labor market, reduction in infant mortality rates, increased access to education together with expansion of the female labor force participation, reduction of populations involved in agrarian and rural activities, changes in gender relationships and greater autonomy for women, increase in consumption, wider range of consumer goods, expansion of telecommunication systems, and many other developments (Merrick & Berquó 1983, Faria 1989, Alves 1994, Guzmán & Bravo 1994, Bongaarts & Watkins 1996, Guzmán et al. 1996, Martine et al. 2002, Potter et al. 2002, Caldwell 2006). The spread of birth control made also a considerable contribution for this overall tendency towards a small family size and had a great impact in the reduction of higher births orders (Juarez & Llera 1996, Moreno 1996).

Due to the uneven pace and timing of decline, some scholars argue that the better
term to qualify this process is “demographic transitions” instead of one big transition (Schkolnik 2004a,b, Cavenaghi & Alves 2009). They believe that fertility decline affects differently social groups within each country, whereas the segments of population with low income and poor education are retarded in this process of fertility transition. But, recent trends showed that fertility levels in Latin America have declined sharply among less educated groups (Chackiel & Schkolnik 1996, Rodriguez 1996, Castro-Martin & Juarez 1995), pushing fertility levels to sub-replacement in some countries as we can see in Table 1.


<table>
<thead>
<tr>
<th>Country</th>
<th>TFR (1980-85)</th>
<th>TFR (2010-15)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argentina</td>
<td>3.15</td>
<td>2.30</td>
</tr>
<tr>
<td>Brazil</td>
<td>3.80</td>
<td>1.80</td>
</tr>
<tr>
<td>Chile</td>
<td>2.67</td>
<td>1.80</td>
</tr>
<tr>
<td>Mexico</td>
<td>4.25</td>
<td>2.30</td>
</tr>
<tr>
<td>Peru</td>
<td>4.65</td>
<td>2.50</td>
</tr>
<tr>
<td>Uruguay</td>
<td>2.57</td>
<td>2.00</td>
</tr>
</tbody>
</table>

These fertility levels around replacement level bring up new challenges to demographers, due to a diversity of trends around the world in terms of assortative mating, postponement of childbearing and educational differentials (Rosero-Bixby et al. 2009, Sobotka et al. n.d., Nitsche et al. 2015, Lima et al. 2017). Hence, this paper is an attempt to address some of these challenges for Latin America. We will give a special attention to educational differentials and its impacts on the region demographic trends.

1.2 The role of education on fertility transition in Latin America

Education plays an important role in the definition of individual behavior and has significant effects on life quality improvement and individual empowerment (McDonald 2000, Lutz 2010). Moreover, education is determinant of women’s reproductive behavior, because it provides human capital improvement, which has positive relationship with women’s labor force participation and modern contraception adoption (Jejeebhoy 1995, Arriagada 2002). It also shapes the tempo of childbearing, and it indirectly influences the definition of the ideal family size and marital selectivity patterns (Castro-Martin & Juarez 1995, Jejeebhoy 1995, McDonald 2000, Arriagada
Educational differentials are also important social marks in Latin America (Castro-Martin & Juarez 1995, Rosero-Bixby et al. 2009, Lima et al. 2017) and new features start to emerge in fertility studies. For example, the identification of social inequalities by analyzing age entry into motherhood: women with lower levels of schooling usually show higher fertility rates at younger reproductive ages, that in comparison to highly educated ones (Lima et al. 2017). In fact, teenage mothers are still a general public concern, because it is linked to many social and educational disadvantages (Näslund-Hadley & Binstock n.d., Vignoli 2014). Nevertheless, the educational expansion in the region seems to be one of the variables guiding recent fertility trends throughout replacement and sub-replacement levels. Hence, it is inevitable to study Latin America without considering the structural inequalities of the region, in which education is embedded.

To better illustrate, we see that the Latin American educational systems have experienced considerable improvements over the last 20 years. The primary education, for example, achieved more than 90% enrolment rates in 2000s (UNESCO 2014, OECD 2015). Nevertheless, secondary school enrolment still lags in Latin America in comparison to other regions of the world (between 70% and 80% enrolment rates), and in many countries it has not achieved an universal status yet. Tertiary education is still farther from that, representing enrolment levels lower than the average of the potential population (OECD 2015). In relation to other regions that were at the same development level in the past (Southeast Asia, for example), Latin America had gone through a slower educational progress, despite this last has contributed a lot for the decline of social inequalities over the last years (Lopez-Calva & Lustig 2010), including the reduction of gender gaps (Messina 2002).

Schooling has also great significance for understanding family formation, one basic element of demographic dynamics. Recent trends in educational development show that it impacts the determination of assortative marriage patterns (Schwartz & Mare 2005, Torche 2010, Esteve et al. 2012). For example, the hypergamy (or women married with a partner from higher educational level) decrease around the world (Esteve et al. 2012) suggesting an overcome of the male breadwinner model as women
educational attainment improves. Therefore, a good evaluation of the reproductive behavior of a population addresses not only the fertility trends, but also the nuptiality and socioeconomic trends for the comprehension of the modern family formation.

2 Data and Methods


The criteria for the selection of the countries were: 1) Availability of the necessary information for the study (questions related to “children ever born”, educational attainment, marital status, relation to household head, age, sex); 2) Sufficient time span between censuses to evaluate expressive changes in cohort fertility over time; and, 3) Different fertility decline paces among countries (following Guzmán et al. (2006) categorization of countries).

We selected four harmonized educational attainment levels available at IPUMS-International data collection: Less than Primary (LP), Primary (P), Secondary (S) and Tertiary (T). For the completed cohort fertility (CFR) analysis, we have selected in the households, couples whose women were aged 40-80 at the time of the census interview, e.g. we expect that they have already almost completed their fertility.

Taking into account that couples cohabitation is an universal phenomenon in Latin America (Lopez et al. 2010, Esteve et al. 2012) and the bigger influence of this kind of household arrangement represents to fertility levels (Laplante et al. 2015), also the small differences of reproductive behavior observed between married and in-union couples (Rosero-Bixby 1996), we have considered women in union, instead of married, at the time of the census interview. Nevertheless, one negative issue of this approach must be emphasized. We are not taking into account the union’s duration and its effect on fertility. Thus, we are assuming that no union disruptions have occurred until the end of the reproductive life of the women, or the influences of previous divorces are very small to women’s reproduction, and mostly of women’s children have borne inside the current union.
Assuming the mentioned conditions, cohort fertility rates were computed by equation 1,

\[ CFR_{F,M}^t = \frac{CHBORN_{F,M}^t}{W_{F,M}^t} \quad (1) \]

Where,

- \( CFR_{F,M}^t \): Cohort Fertility Rates for cohorts of women born in time \( t \) with an educational attainment level \( F \) married/in-union with a partner that reached an educational attainment level \( M \);
- \( CHBORN_{F,M}^t \): Children Ever Born to cohorts of women born in time \( t \) with an educational attainment level \( F \) married/in-union with a partner that reached an educational attainment level \( M \);
- \( W_{F,M}^t \): Total number of women from the cohort born in time \( t \) with an educational attainment level \( F \) married/in-union with a partner that reached an educational attainment level \( M \);

3 Results

Table 2 shows the relative distribution of female education across LA-countries, considering all women in union at the time of census interview. As we can see, in almost all nations, the share of women with primary and especially secondary education has significantly increased between censuses. The percentage of highly educated women has also gain weight in many countries throughout cohorts, with Brazil and Peru showing the greatest share of highly educated women in the last censuses considered. This table shows an evidence towards secondary education in the region, and a slightly increase in tertiary education attainment. Although, in absolute terms, the share women with only primary education is still high in all of those countries.
Table 2: Married and in-union women aged 40-80 composition by educational attainment. Source: IPUMS-International.

<table>
<thead>
<tr>
<th>Country</th>
<th>Census Year</th>
<th>Less Than Primary</th>
<th>Primary</th>
<th>Secondary</th>
<th>Tertiary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argentina</td>
<td>1980</td>
<td>54.76</td>
<td>37.26</td>
<td>7.26</td>
<td>0.72</td>
</tr>
<tr>
<td>Argentina</td>
<td>2001</td>
<td>19.73</td>
<td>47.39</td>
<td>27.49</td>
<td>5.39</td>
</tr>
<tr>
<td>Brazil</td>
<td>1970</td>
<td>93.10</td>
<td>3.84</td>
<td>2.66</td>
<td>0.39</td>
</tr>
<tr>
<td>Brazil</td>
<td>2010</td>
<td>56.30</td>
<td>19.61</td>
<td>15.29</td>
<td>8.80</td>
</tr>
<tr>
<td>Chile</td>
<td>1982</td>
<td>49.99</td>
<td>39.03</td>
<td>10.03</td>
<td>0.95</td>
</tr>
<tr>
<td>Chile</td>
<td>2002</td>
<td>26.09</td>
<td>43.16</td>
<td>26.92</td>
<td>3.84</td>
</tr>
<tr>
<td>Mexico</td>
<td>1990</td>
<td>66.56</td>
<td>27.40</td>
<td>4.64</td>
<td>1.40</td>
</tr>
<tr>
<td>Mexico</td>
<td>2010</td>
<td>54.00</td>
<td>35.30</td>
<td>7.37</td>
<td>3.41</td>
</tr>
<tr>
<td>Peru</td>
<td>1993</td>
<td>66.11</td>
<td>13.46</td>
<td>16.42</td>
<td>4.01</td>
</tr>
<tr>
<td>Peru</td>
<td>2007</td>
<td>48.78</td>
<td>13.53</td>
<td>27.99</td>
<td>9.70</td>
</tr>
<tr>
<td>Uruguay</td>
<td>1985</td>
<td>37.52</td>
<td>49.61</td>
<td>11.15</td>
<td>1.72</td>
</tr>
<tr>
<td>Uruguay</td>
<td>2011</td>
<td>12.28</td>
<td>56.43</td>
<td>24.28</td>
<td>7.01</td>
</tr>
</tbody>
</table>

On the other hand, also the percentage of women with incomplete primary education is still very high in several countries, especially in Brazil and Peru. We believe that this polarization in education might also reflect in polarized fertility shape, characterized by a combination of continuing high rates of childbearing at younger ages with a parallel increase in first birth rates at later reproductive ages, as pointed out by Lima et al. (2017).

Table 3 shows an expressive increasing in heterogamy among couples, for the selected cohorts from Latin American countries. As the proportion of homogamous couples declined mainly due to the increase in achievement of Primary and Secondary education, especially amongst women (Schwartz & Mare 2005, Esteve et al. 2012).
Table 3: Couples with women aged 40-80 composition by educational pairing type. Source: IPUMS-International.

<table>
<thead>
<tr>
<th>Country</th>
<th>Census Year</th>
<th>Homogamy (F=M)</th>
<th>Hypogamy (F&gt;M)</th>
<th>Hypergamy (F&lt;M)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argentina</td>
<td>1980</td>
<td>70.16</td>
<td>12.17</td>
<td>17.67</td>
</tr>
<tr>
<td>Argentina</td>
<td>2001</td>
<td>59.95</td>
<td>19.79</td>
<td>20.26</td>
</tr>
<tr>
<td>Brazil</td>
<td>1970</td>
<td>91.04</td>
<td>2.47</td>
<td>6.49</td>
</tr>
<tr>
<td>Brazil</td>
<td>2010</td>
<td>67.31</td>
<td>19.28</td>
<td>13.41</td>
</tr>
<tr>
<td>Chile</td>
<td>1982</td>
<td>66.60</td>
<td>12.66</td>
<td>20.74</td>
</tr>
<tr>
<td>Chile</td>
<td>2002</td>
<td>57.55</td>
<td>16.92</td>
<td>25.53</td>
</tr>
<tr>
<td>Mexico</td>
<td>1990</td>
<td>74.28</td>
<td>8.71</td>
<td>17.01</td>
</tr>
<tr>
<td>Mexico</td>
<td>2010</td>
<td>68.77</td>
<td>12.89</td>
<td>18.35</td>
</tr>
<tr>
<td>Peru</td>
<td>1993</td>
<td>68.82</td>
<td>7.31</td>
<td>23.87</td>
</tr>
<tr>
<td>Peru</td>
<td>2007</td>
<td>61.56</td>
<td>10.85</td>
<td>27.59</td>
</tr>
<tr>
<td>Uruguay</td>
<td>1985</td>
<td>60.56</td>
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<td>59.15</td>
<td>23.57</td>
<td>17.28</td>
</tr>
</tbody>
</table>

Hence, the increasing heterogamous couples in Latin America might be a reflection of the composition effect of education, e.g. people are achieving higher levels of education, mostly women, and moving towards more heterogeneous unions in terms of educational pairing. This phenomenon has been observed in almost all selected countries.

For the estimates, first, we compute the cohort fertility rates according to born cohorts of women classified by their educational achievements and also from their husbands. This was done to evaluate the effect of educational pairing on cohort fertility over time (figures 1 to 6). Due to small differences in the reproductive behaviour of the two highest educational groups (secondary and tertiary complete) and the observed small sample size in tertiary education in almost all countries, we have grouped these two categories to better visualize the cohort trends over time. As second analysis, we tried to decompose the effect of education improvement among couples by computing differentials of CFRs from specific born cohorts (1900-34, 1935-1954, 1955+), and comparing the effects of educational developments by fixing the partner’s educational level and changing the husband and wife’s schooling category (figures 7 - 10).

Figures 1-6 show the CFRs by birth cohorts from different educational pairings in the selected LA-countries. The results show very similar patterns between the countries, and we summarized the main findings over time.
Figure 1: Couple’s Cohort Fertility Rates by women birth cohorts - Argentina.

Cohort Fertility Rates by Educational Pairing of Couples – Argentina
Women Born in 1925−1969, five−year interval

Male Educational Attainment Level ● Less than Primary ▲ Primary ○ Secondary/Tertiary

Source: IPUMS−International
Figure 2: Couple’s Cohort Fertility Rates by women birth cohorts - Brazil.
Figure 3: Couple’s Cohort Fertility Rates by women birth cohorts - Chile.

Cohort Fertility Rates by Educational Pairing of Couples – Chile
Women Born in 1925−1969, five−year interval

Source: IPUMS−International
Figure 4: Couple’s Cohort Fertility Rates by women birth cohorts - Mexico.

Cohort Fertility Rates by Educational Pairing of Couples – Mexico
Women Born in 1925–1969, five-year interval

Source: IPUMS–International
Figure 5: Couple’s Cohort Fertility Rates by women birth cohorts - Peru.
Figure 6: Couple’s Cohort Fertility Rates by women birth cohorts - Uruguay.

Source: IPUMS-International
Argentina (figure 1) and Uruguay (figure 6), the forerunners in fertility transition in the region (Chackiel & Schkolnik 1996, Guzmán et al. 2006) show substantial differences in CFR levels, especially at the lower women educational strata. In addition, both countries presented considerable educational differentials according to female and male schooling, especially those at the “less than primary” educational category. In addition to that, these countries have exhibited an increasing trend in the cohort fertility rates among the female lower educational groups, while the highly educated strata had shown almost constant numbers around 2-3 children per couple. In both countries, the effect of the husband’s educational attainment on CFRs is more pronounced among women in the lowest educational category, and it becomes lesser visible as wives increase their years of schooling.

Brazil (figure 2) and Chile (figure 3) have experienced a considerable decline in CFRs through younger cohorts. For both countries, a shift from lower education attendance to any other educational level represents a considerable reduction in CFR, this happens if we consider as male as well female education. Notwithstanding, these two countries had also shown the greatest CFR differentials across husband’s educational attainment level, notably among older cohorts. In addition to, the cohort fertility rates were considerably higher for couples formed by men with incomplete primary schooling. Finally, we see that for women with secondary/tertiary education the differentials by partner’s schooling are reduced. The CFRs differentials by male schooling levels had decreased along with the progression through young cohorts and the generalized fertility decline in the two countries. This notable decline started among cohorts born in 1935-1940s, the same group exposed to the extensive process of urbanization in the region, health care services expansion, educational expansion, industrialization, the increasing access to effective contraceptive methods and many other socioeconomic developments (Merrick & Berquó 1983, Faria 1989, Lam et al. 1992, Martine 1996, Arriagada 2002, Guzmán et al. 2006, Caldwell 2006).

Mexico (figure 4) and Peru (figure 5) have also showed great reductions in CFRs among older cohorts, and also in-between female and male educational groups. Hence, we believe that two effects are relevant to explain the fertility decline in these countries, one is the time-effect (driven by other factors than education) and the

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1 Great deal of this education level is composed by illiterate people
educational-effect (compositional effect due to schooling expansion). Both countries have showed considerable fertility differentials by males’ educational level, except when we consider younger cohorts formed by couples with women with at least complete secondary education. In these last cases, the female schooling can be seen as a main determinant of the reproductive decisions within the family (McDonald 2000).
Figure 7: Cohort Fertility Differentials for shifts from each partner's educational attainment fixing one of them in the Less than Primary educational group.
Figure 8: Cohort Fertility Differentials for shifts from each partner’s educational attainment fixing one of them in the Complete Primary educational group.

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>LP =&gt; CP</td>
<td><img src="image1" alt="Graph" /></td>
<td><img src="image2" alt="Graph" /></td>
<td><img src="image3" alt="Graph" /></td>
</tr>
<tr>
<td>CP =&gt; CS</td>
<td><img src="image4" alt="Graph" /></td>
<td><img src="image5" alt="Graph" /></td>
<td><img src="image6" alt="Graph" /></td>
</tr>
<tr>
<td>CS =&gt; CT</td>
<td><img src="image7" alt="Graph" /></td>
<td><img src="image8" alt="Graph" /></td>
<td><img src="image9" alt="Graph" /></td>
</tr>
</tbody>
</table>

LP = Less than Primary, CP = Complete Primary, CS = Complete Secondary, CT = Complete Tertiary
F = Female Educational Attainment, M = Male Educational Attainment
Source: IPUMS – International
Figure 9: Cohort Fertility Differentials for shifts from each partner's educational attainment fixing one of them in the Complete Secondary educational group.

- **Less than Primary => Complete Primary**
  - Women cohorts born in 1900–1934.
  - Women cohorts born in 1955+.

- **Complete Primary => Complete Secondary**
  - Women cohorts born in 1900–1934.
  - Women cohorts born in 1955+.

- **Complete Secondary => Complete Tertiary**
  - Women cohorts born in 1900–1934.
  - Women cohorts born in 1955+.

LP = Less than Primary, P = Primary, S = Secondary, T = Tertiary
F = Female Educational Attainment, M = Male Educational Attainment
Source: IPUMS – International
Figure 10: Cohort Fertility Differentials for shifts from each partner’s educational attainment fixing one of them in the Complete Tertiary educational group.

Less than Primary => Complete Primary
Women cohorts born in 1900−1934.

Complete Primary => Complete Secondary
Women cohorts born in 1900−1934.

Complete Secondary => Complete Tertiary
Women cohorts born in 1900−1934.

Less than Primary => Complete Primary

Complete Primary => Complete Secondary

Complete Secondary => Complete Tertiary

Less than Primary => Complete Primary
Women cohorts born in 1955+.

Complete Primary => Complete Secondary
Women cohorts born in 1955+.

Complete Secondary => Complete Tertiary
Women cohorts born in 1955+.

LP = Less than Primary, P = Primary, S = Secondary, T = Tertiary
F = Female Educational Attainment, M = Male Educational Attainment
Source: IPUMS – International
Figures 7 - 10 present the CFR differentials according to shifts in partners’ schooling level as the other is fixed. This time, our concern is to compare the effects of male and female changes in educational attainment levels singly. We set three benchmark cohort groups to perform this comparison: 1) cohorts born in 1900-34 (pre-transition period); 2) cohorts of women born in 1935-54 (the beginning of the generalized change in Latin America reproductive behaviour); and, 3) women born after 1955 (still in fertility transition process).

Most striking result this time appears when we look at the husband’s education. This variable presents some importance for the couple’s reproductive decisions, especially if we consider women at the lower educated social strata. Additionally, the results show considerable and marked fertility differentials between the incomplete primary, complete primary and secondary education, and a strong similarity in CFRs between this last two educational groups, secondary and tertiary. The differences in shifts from complete secondary to tertiary education used to show more effect at older cohorts (born in 1900-34), and they become smaller among the most recent cohorts (women born 1955+). Hence, the highest effects from educational changes on CFR reduction are seen among couples with greatest educational level disparities, e.g. women with incomplete primary education married with men with tertiary schooling and vice-versa. But as the partner achieve “some education”, any jump from secondary to tertiary become less important.

However, in general, the effects of women’s shifts from educational groups are slightly higher than male’s effects, although there are some exceptions. Hereby, we may speculate that in places where family planning policies are nonexistent or not extended to all segments of society, the women education achievements improves the bargaining power of females and its influence on the choice of the “desirable” number of children within the household (Jejeebhoy 1995, McDonald 2000). Nevertheless, as highlighted by our last results, the male educational achievements also stands out as an important driving force of couple’s fertility intentions, and schooling is indeed one important element in couple’s fertility decisions in Latin America, as the region experiences continuous gains in schooling for both males and females. We also see that there is a substantial compositional effect regard the educational pairings that acts over the cohort fertility trends of Latin American couples.
4 Conclusions

The present article intended to evaluate the fertility transition of Latin America using a cohort perspective and analyzing males education role on fertility. This is an advance in terms of fertility studies in the region, as cohort fertility analyses have been quite absent in Latin America. In addition, cohort fertility has extraordinary advantages compared to period analyses, since it considers groups that have experienced similar events through the life course, such as the educational expansion observed in the region. In addition, look at males schooling in a marriage is the first attempt to evaluate men fertility intentions and its influence in couple’s reproductive decisions in LA-countries.

The results of our analyses present different patterns of cohort fertility in Latin America, consonant to different demographic and socioeconomic trajectories of the countries, and their the regional heterogeneity (Guzmán & Rodríguez 1993, Chackiel & Schkolnik 1996, Arriagada 2002, Guzmán et al. 2006). All selected Latin American countries had shown some effects of the partner’s educational achievement over CFRs. Both women and male educational attainments are important driving forces behind cohort fertility reductions, especially when we consider the couples jump to some education (from incomplete primary to complete primary education). With few exceptions, women educational effects over cohort fertility rates are higher than male, and among highly educated categories, in recent cohorts, these effects are quite similar. Furthermore, the highest effects from educational changes on CFR reduction are seen among couples with the greatest educational level disparities, e.g. women with incomplete primary education married with men with tertiary schooling and vice-versa. From here, we conclude that the partner’s achievement of “some education”, usually primary education, reduces the educacional effect from the jump of secondary to tertiary schooling, especially when we look at younger cohorts.

So, to have some schooling plays a very important role in couples fertility intentions in Latin America. Hereby, we may speculate that in places where family planning policies are nonexistent or not extended to all segments of society, the women education achievements improve their bargaining power and exert a stronger influence in the choice of the desirable number of children within the household (Castro-Martin & Juarez 1995, McDonald 2000, Messina 2002). Males education plays also a
significant role on fertility intentions of couples, but in lesser extent than females. The compositional effect of each partner’s education over union formations is a key element for understanding the marital fertility trends in Latin America. We also believe that as education continues to expand in the region, tertiary education will become the catalyst of other developments, for example the postponement of childbearing and perhaps more reduction in near future fertility.

References


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