

# FERTILITY AND CONTRACEPTION IN LATIN AMERICA: HISTORICAL TRENDS, RECENT PATTERNS<sup>1</sup>

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## ABSTRACT

Several Latin American countries are close to or have reached below replacement fertility, if not for the countries' average, at least for large socioeconomic or regional groups within the countries. Fertility rates have declined from over six children per woman to around two children in the last 40 years. The proximate determinants that had allowed this dynamic were essentially the high prevalence of contraception. Hence, we could easily conclude that people living in this continent have no problems in controlling their fertility, that is, they can keep it down and by using contraceptive methods. Nonetheless, the history and the trends on contraceptive use are not the same around the continent and a deeper look on data shows the enormous problems that still persist after all these years. The objective of this paper is to present a systematization of data on fertility and current trends in contraceptive use during the last 20 years in Latin American and Caribbean countries and to discuss some of the cultural, social and economic means that led these countries to have a different *method-mix* and to arrive at their current fertility levels and schedule. We observe that while the most educated and wealthiest populations are below replacement levels and display a small postponement of the age of first live birth, the less educated and poorest populations still have rates ranging from 6 to 4 children per woman and have more than 50% of their fertility concentrated at very young ages. In the most recent period, still there is a sharp decline in fertility rates in the region, and an important concentration at the younger age groups. Additionally, some countries presented an increase in fertility rates for women aged 15-19, a phenomenon not regularly seen during TFR decline, moreover in places where fertility is close to or below replacement levels. Regarding contraception, the overall patterns analyzed in these countries show that the range on used methods is rather very small, that the responsibility are still mostly over women's shoulder, the inequalities according to education, and place of residence are still very large, and the unwanted (or mistimed) fertility is very high, point to very inconsistent method use.

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## INTRODUCTION

In the not too distant past, studies tried to explain why fertility rates in several Latin American countries had reached such high levels and what would the consequences be, in terms of population growth, if those rates were to remain high for a long period of time. In less than 40 years, fertility rates have fallen to unexpected levels on average, and have fallen even lower for specific socio-demographic groups of the population in the region's largest countries. This has occurred despite the fact that resistance to the implementation of family planning programs was very strong in many countries and attracted very different views among several social and political segments. Nonetheless, for several reasons which we are still trying to fathom, in different cultural and socio-economic contexts in the region, women or couples wanted to have control over the number of children they had. The desire for a smaller family was strong among all populations and people sought different ways to keep down the number of children born, although not without consequences, mainly in terms of unequal access to the best methods of fertility regulation and with high rates of unsafe interruption of unplanned pregnancies.

This was not exactly the path followed by a few countries that, at the beginning of the 1960's, already had relatively low levels of fertility, as was the case in Argentina and Uruguay, a behavior only witnessed at the time in the more developed countries. Also, Cuba and Chile, to a lesser extent, are emblematic cases for many scholars. The better socio-economic conditions of those countries in the past would explain, in part, the lower rates of fertility, perhaps with the exception of Cuba, which, after the revolution, saw a significant increase in the average number of children per woman. However, the types of contraceptive methods and the forms of provision available to the population in those countries to regulate fertility, for stopping or for spacing, were not entirely known at that time. In fact, even after all these years, it has still not been adequately documented, due somewhat to the lack of consistent data, a situation we will discuss later in the paper.

For other countries with high fertility rates at the beginning of the 1960's, there was an interest in collecting better information to diagnose the situation and to produce data for better informed decisions, although for many organized social segments this was a way of controlling and not just getting to know the scenario at the time. Also, many different actions from the government or the private sector were put into practice to give couples access to family planning. Whatever the

diverse paths that government and non-governmental organizations have followed when faced with the issue of reproduction, currently all countries have moved over to fertility transition<sup>2</sup>. Some authors have stated that Latin American countries, more so than countries in any other region, currently enjoy great similarity in their levels and patterns of fertility (Henning, 2004). Indeed this must be the case because the average behavior of nations, whatever the socio-economic disparities in the region, with regard to fertility behavior, are very pronounced.

The analysis of fertility and contraceptive trends for the region as a whole are always, to some extent, restricted due to these historical facts. This paper is no different in this sense, but the intention is to provide general information on these topics that may serve as background for the discussions proposed in the session on *Fertility, Contraception, and Reproductive Health in Latin America*. The objective of this paper is to present a systematization of data on fertility and current trends in contraceptive use during the last 20 years in Latin American and Caribbean countries<sup>3</sup> and to discuss some of the cultural, social and economic means that led these countries to have a different *method-mix* and to arrive at their current fertility levels and schedule. The paper is divided into three sections: In the first part we present trends in fertility; in the second, several issues are discussed concerning current contraceptive use and differentials; and in the last session, we present some data on fertility and contraceptive use in the four countries that started fertility transition prior to the 1960's (Argentina, Uruguay, Cuba, and Chile).

## **METHODS AND DATA**

Studies on fertility trends, and explanations for the reasons that the LA population has gone through a fertility transition are manifold in the literature, particularly in the 1980's and the beginning of the 1990's. For a long time, the topic was not a top priority in demographic studies; however some idiosyncrasies regarding fertility levels, age patterns, socio-economic differentials etc., have put the subject back on the agenda. This paper makes use of several of these studies and results of research performed in the past, and more specifically, from papers presented at a

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<sup>2</sup> See Potter (1999) for a good comparison of the Mexican and Brazilian cases.

<sup>3</sup> For purposes of brevity, we will henceforth denominate Latin American and the Caribbean as LA.

major seminar on the subject held in Celade – *División de Población de la Comisión Económica para América Latina y el Caribe (CEPAL)*, in 2003 (United Nations, 2004).

The data used here come from several surveys on reproductive health and we have selected those which have been conducted since the 1980's. Most of them were conducted with the assistance of Macro International Inc. and more recently from the Measure DHS Project<sup>4</sup>. Several other surveys were carried out by national institutions or organizations with the collaboration of the CDC Project<sup>5</sup> (Centers for Disease Control and Prevention). Some of the information used in this paper was processed from the microdata, but the majority is available in the countries' survey reports. For the analysis of the first two sections, we selected 13 countries on the basis that they had at least one reproductive health survey during the 1980's, one during the 1990's, and have more recent data after 2000. In 2005, these countries represented 79.15% of the total population of LA, amounting to almost half a million people (440,499 inhabitants out of a total of 556,512), according to UN projections.

The fertility indicators used (TFR and ASFR) and the prevalence of current contraception are estimated, as proposed by the DHS methodological guide (Rutstein and Rojas, 2003), and are not presented here for reasons of space. In Table 1, we present all the data sources for each country selected for the analysis. For the fertility estimates, we follow the countries' suggestion in the national report, to use three or five-year windows to estimate rates. Where we have charted these estimates, we have selected the mid-point of the interval to plot the data; in other tables we refer to the survey year as reference.

## **FERTILITY TRENDS AND PATTERNS**

Explanations for the decline in fertility in LA have been explored in several national studies. Although there is no exact quantification of the effects of the determinants in the different countries, or for different regions within the countries, the literature points to some of the more significant determinants, that to some degree have helped to decrease fertility rates in the last 40 years in the entire continent, such as: Intensive process of urbanization, expansion of the labor market, reduction in infant mortality rates, increased access to education and average length of

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<sup>4</sup> Available at [www.measuredhs.com](http://www.measuredhs.com).

<sup>5</sup> Available at [http://www.cdc.gov/reproductivehealth/Data\\_Stats/index.htm](http://www.cdc.gov/reproductivehealth/Data_Stats/index.htm).

**Table 1: List of data sources by country. Latin America and the Caribbean.**

Country	Year	Survey name
1. Bolivia	1989	<i>Encuesta Nacional de Demografía y Salud– ENDSA</i>
	1998	<i>Encuesta Nacional de Demografía y Salud– ENDSA</i>
	2003	<i>Encuesta Nacional de Demografía y Salud– ENDSA</i>
2. Brazil	1986	<i>Pesquisa Nacional sobre Saúde Materno-Infantil e Planejamento Familiar – PNSMIPF</i>
	1996	<i>Pesquisa Nacional sobre Demografia e Saúde - PNDS</i>
	2006	<i>Pesquisa Nacional de Demografia e Saúde da Criança e da Mulher - PNDS</i>
3. Colombia	1986	<i>Demografía y Salud de Colombia – ENP</i>
	1995	<i>Encuesta Nacional de Demografía y Salud - ENDS</i>
	2005	<i>Encuesta Nacional de Demografía y Salud- ENDS</i>
4. Dominican Republic	1986	<i>Encuesta Demográfica y de Salud - DHS</i>
	1996	<i>Encuesta Demográfica y de Salud – ENDESA</i>
	2007	<i>Encuesta Demográfica y de Salud – ENDESA</i>
5. Ecuador	1987	<i>Encuesta Demográfica y de Salud Familiar - ENDESA</i>
	1999	<i>Encuesta Demográfica y de Salud Materna e Infantil – ENDEMAIN</i>
	2004	<i>Encuesta Demográfica y de Salud Materna e Infantil - ENDEMAIN</i>
6. El Salvador	1988	<i>Encuesta Nacional de Salud Familiar – FESAL</i>
	1998	<i>Encuesta Nacional de Salud Familiar – FESAL</i>
	2002/03	<i>Encuesta Nacional de Salud Familiar - FESAL</i>
7. Guatemala	1987	<i>Encuesta Nacional de Salud Materno Infantil -ENSMI</i>
	1995	<i>Encuesta Nacional de Salud Materno Infantil -ENSMI</i>
	1998/99	<i>Encuesta Nacional de Salud Materno Infantil -ENSMI</i>
	2002	<i>Encuesta Nacional de Salud Materno Infantil -ENSMI</i>
8. Haiti	1994/05	<i>Enquête Mortalité, Morbidité et Utilisation des Services – EMMUS II</i>
	2000	<i>Enquête Mortalité, Morbidité et Utilisation des Services – EMMUS III</i>
	2005/06	<i>Enquête Mortalité, Morbidité et Utilisation des Services – EMMUS IV</i>
9. Honduras	1987	<i>Encuesta Nacional de Epidemiología y Salud Familiar - ENESF</i>
	1996	<i>Encuesta Nacional de Epidemiología y Salud Familiar - ENESF</i>
	2001	<i>Encuesta Nacional de Epidemiología y Salud Familiar - ENESF</i>
	2005/06	<i>Encuesta Nacional de Demografía y Salud - ENDESA</i>
10. Mexico	1987	<i>Encuesta Nacional sobre Fecundidad y Salud – ENFES</i>
	1998	<i>Encuesta de Salud Reproductiva con Población Derechohabiente - ENSARE-IMSS</i>
	2003	<i>Encuesta Nacional de Salud Reproductiva – ENSAR</i>
	2007	<i>Encuesta Nacional de la Dinámica Demográfica - ENADID</i>
11. Nicaragua	1992/93	<i>Encuesta sobre Salud Familiar Nicaragua - ESF</i>
	1998	<i>Encuesta Nicaragüense de Demografía y Salud - ENDESA</i>
	2001	<i>Encuesta Nicaragüense de Demografía y Salud - ENDESA</i>
	2006/07	<i>Encuesta Nicaragüense de Demografía y Salud - ENDESA</i>
12. Paraguay	1987	<i>Encuesta de Planificación Familiar</i>
	1990	<i>Encuesta Nacional de Demografía y Salud - ENDS</i>
	1995/96	<i>Encuesta Nacional de Demografía y Salud Reproductiva – ENDSR</i>
	2004	<i>Encuesta Nacional de Demografía y Salud Sexual y Reproductiva - ENDSRR</i>
13. Peru	1986	<i>Encuesta Demográfica y de Salud Familiar – ENDES</i>
	1996	<i>Encuesta Demográfica y de Salud Familiar – ENDES</i>
	2004/05	<i>Encuesta Demográfica y de Salud Familiar - ENDES</i>

Sources: [www.measuredh.com](http://www.measuredh.com), [www.cdc.gov](http://www.cdc.gov), and data provided by the Data & Statistics Department at the Center for Disease Control and Prevention (CDC).

schooling, sustainable expansion of the female labor force, 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, growing welfare system benefits, amongst others (Faria 1989; Guzmán and Bravo 1994; Alves 1994; Guzmán et al. 1995; Bongaarts and Watkins 1996; Martine, Hakkert, Guzmán, 2002; Potter et al. 2002).

In accordance with these determinants, fertility differentials in the region relating to the level, starting point and pace of decline during fertility transition were not at all similar and attracted the attention of many authors, who prefer to talk about “demographic transitions” instead of one transition in the region. Schkolnik (2004) and Chackiel and Schkolnik (2004) draw attention to these different transitions that occurred amongst the LA countries, and moreover, among the different social groups within each country, where the segments of population with low income and poor education are retarded in terms of the process of fertility transition. The authors proposed a systematic country classification by type according to the stage of demographic transition, based on fertility rate levels. Based on this typology, LA had only one country in the incipient stage (high TFR 5.4 to 4.5) by 1995-2000; five countries in the moderate stage (4.4 to 3.5); nine countries with transition in process (3.4 to 2.5); four countries in the advanced stage (2.4 to 1.8); and one country in a very advanced stage (lower than 1.8). This situation has now changed and no country is classified in the first and second stages, that is, TFR above 4.4 children per woman. Moreover, in line with this typology, and the TFR projection hypothesis, by 2010, the largest concentration of countries would be grouped in the advanced stage (low TFR), representing 72% of the entire LA population.

According to Henning (2004), Latin American countries demonstrated differentials in fertility levels as far back as the middle of the 20<sup>th</sup> century, because, although the majority presented high fertility rates, some had already started fertility transition, such as Cuba, Uruguay and Argentina, which at that time had rates similar to developed countries, namely, lower than three children per woman. During the first half of the 1970's, fertility decline was already underway in the region, but fertility differentials increased due to different rates of transition. By the end of the 1990's, although the pace of decline in fertility rates had accelerated, it resulted in a reduction in differentials between the countries, pointing to a process of convergence in the level of fertility

rates a little above replacement levels. The latest revisions of the UN population projections assume that, in this century, the process of fertility rate convergence will continue and countries in the region will have approximately the same rates, which will stabilize a little below replacement levels, and moreover, that the rates will come in line with those of the developed countries (United Nations, 2007).

Notwithstanding this idea of convergence and internal homogenization among the countries in the region, and externally between the LA countries and developed countries, convergence cannot be taken for granted. It depends on a series of economic and social factors, and also specific characteristics in the reproductive behavior in each country, as well as the similarities and dissimilarities in the region. What seems to be true, however, is that the desire for fewer children has spread across all countries, in different regions and social strata.

Looking at the current level of TFR and age-specific fertility rates (ASFR), particularly recent trends, even country averages, can provide us with an idea about the future of fertility in the region. Although TFR estimates (and ASFR) are available from different sources and different periods in the entire LA region, in order to make comparisons of contraceptive use, presented in the next section, we will present here the rates only for countries that have survey data collection on contraception. Graph 1 presents the TFR for three periods for this group of countries.<sup>6</sup> As we can observe, for these 13 countries (that represent 79.2% of the LA population), the decline in fertility in the last 20 years or so continues to be very sharp, not just for the countries that had fertility above 4 or 5 children per woman, but also for those with TFR below 3. Hence, for this group of countries, we can see that the differences between rates are still quite large<sup>6</sup>. This occurred because countries with low fertility seem not to conform to the hypothesis of stalling at around 2 children per woman. LA countries seem to conform much more to the tendency in Mediterranean countries, that at present show lowest-low fertility rates and some are even moving below lowest-low, such as Italy, Spain, and Portugal.

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<sup>6</sup> The data collected in these surveys, which are based on very small sample sizes, may present problems, so they have to be analyzed with caution, but even given a margin of error, the trends cannot be mistaken (maybe with the exception of Ecuador).

The information in Graph 1 taken together with information regarding fertility rates according to place of residence and wanted fertility estimates (WTFR)<sup>7</sup> shows that there is still a great deal of room for fertility decrease in LA countries (Graph 2). The sharp urban-rural differences in fertility everywhere, which also occur with levels of education (not shown), allow us to speculate that, in the next few years, the urban-rural (and educational) differences in fertility will decrease, as has occurred in the countries that already have fertility below or close to replacement level, such as Brazil, and the Dominican Republic. Analyzing the WTFR estimates, we found more grounds for speculation on decreasing fertility to very low levels. For urban areas, WTFR is below replacement in most places, even in Bolivia and Haiti which still have TFR close to 4 children per woman, according to most recent data. Additionally, as fertility rates continue to decline, we can see in certain countries like Brazil, that wanted fertility drops even more markedly (in 1996 the WTFR was 1.8 and in 2006 it dropped to 1.6)<sup>8</sup>. In other words, it seems that LA has a demand for contraception that is not within everyone's reach, and that is a right that must be achieved in the region, in accordance with International agreements.

This hypothesis of very low fertility levels in LA, if achieved, will pose several issues for population policies, some of which are similar to those that European countries are facing right now. Moreover, due to the greater socio-economic inequalities in the region, these demographic facts can bring problems that are even more difficult to solve, for example, those involving problems of aging, that will occur in an inegalitarian society and at a very much faster pace. The fact that policy makers will have to face up to is that no matter what the differences in education or place of residence, women and couples in LA want to have far fewer children than the observed rates, and when the right to full access of contraception is realized, rates will drop even further. Given that the socio-economic scenario carries little probability of decreasing to low levels of inequality in the near future; public policies will have to take demographic events into

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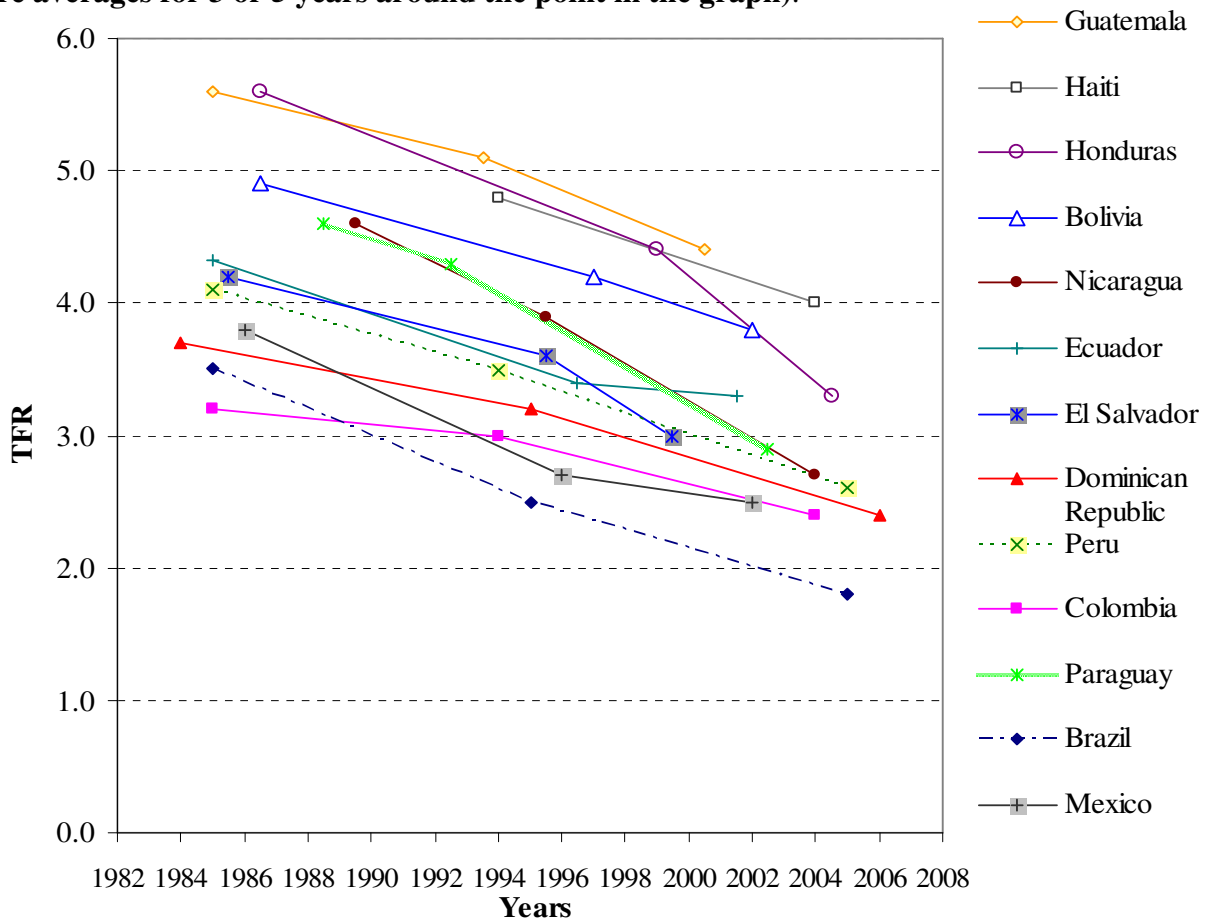
<sup>7</sup> We acknowledge that there are estimation problems relating to this indicator, however, as an indicator, we recognize its value as a substitute for an unfulfilled demand for fertility regulation. Although not without dispute, we have no reason to believe that uneducated, rural or poor women have a greater demand for much larger families than their counterparts, maybe with a few exceptions. Besides, Casterline (2007) asserts that the current methods used to calculate WTFR overestimate them.

<sup>8</sup> Although TFR is very low in Brazil, there is room for a percentage of non-wanted or mistimed pregnancies. According to the PNDS-2006, 54% of births were planned for a specific moment, 28% were planned for later (mistimed) and **18% were not wanted** (Berquó et. al., 2006). These figures show that, with the existence of efficient contraceptive use, both the timing and level of fertility in Brazil would have been different from that observed.



very serious consideration to find effective solutions to avoid escalating social inequality, including gender and generational inequalities.

**Graph 1: Trends in total fertility rates (TFR) in selected countries in Latin America (rates are averages for 3 or 5 years around the point in the graph).**

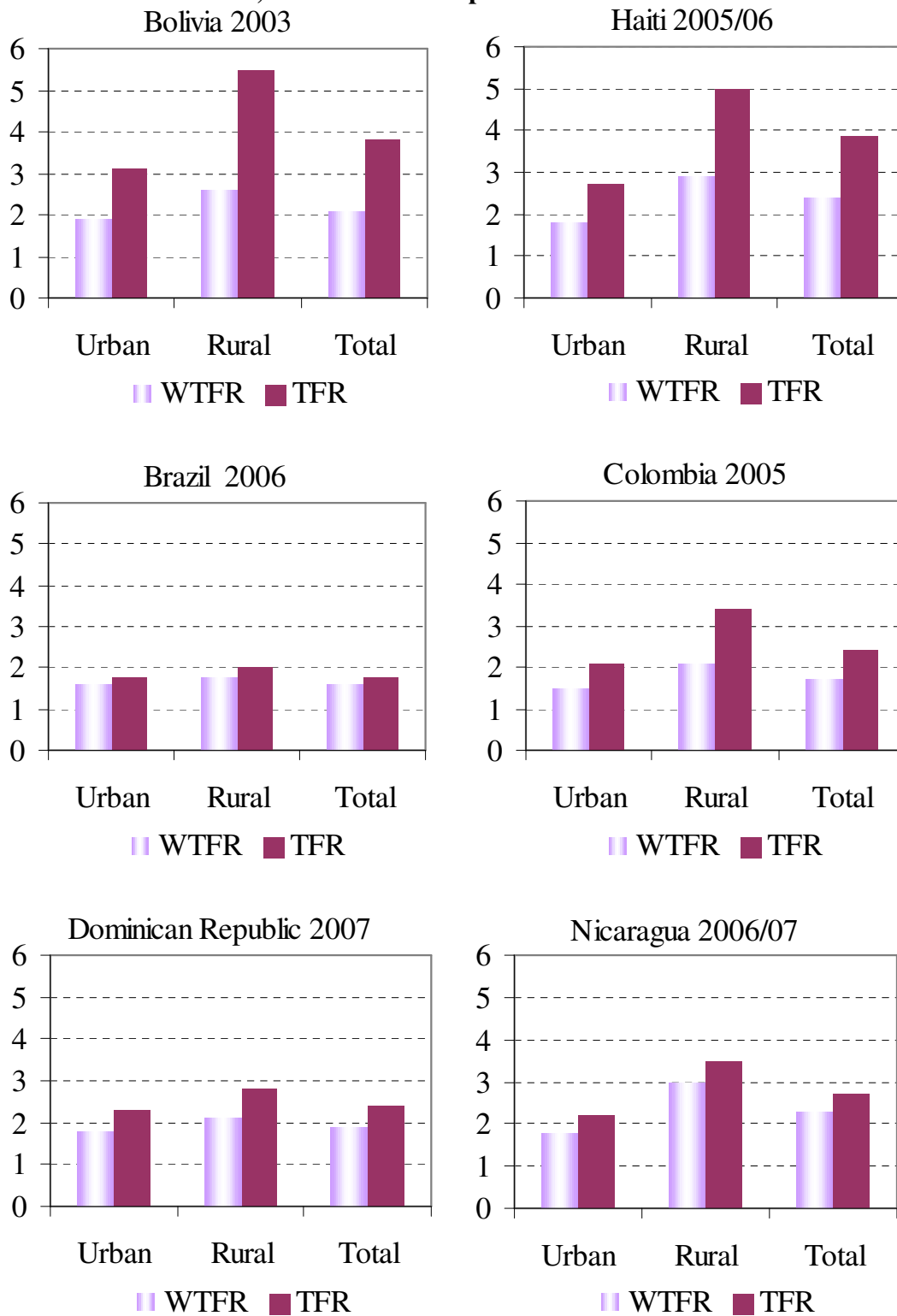


Source: Several National Reproductive Health Surveys (see Table 1 in Methods and Data section).

***Fertility schedules and the challenges for the region***

During the process of fertility decline in the LA countries, which is very well documented, it was observed that women in the more advanced reproductive age groups stopped having children, much more than spacing out children over the reproductive period or delaying the age of first birth. In other words, at the beginning of the 1960’s, the pattern of fertility rates in LA was very young. The current pattern of fertility in the region continues to demonstrate a concentration at the beginning of the reproductive period. Graph 3 shows the fertility schedule for the countries previously analyzed, for the most recent data available, from the reproductive surveys. Besides

**Graph 2: Total fertility rates observed and wanted for selected countries, according to place of residence and in total, in several recent periods.**

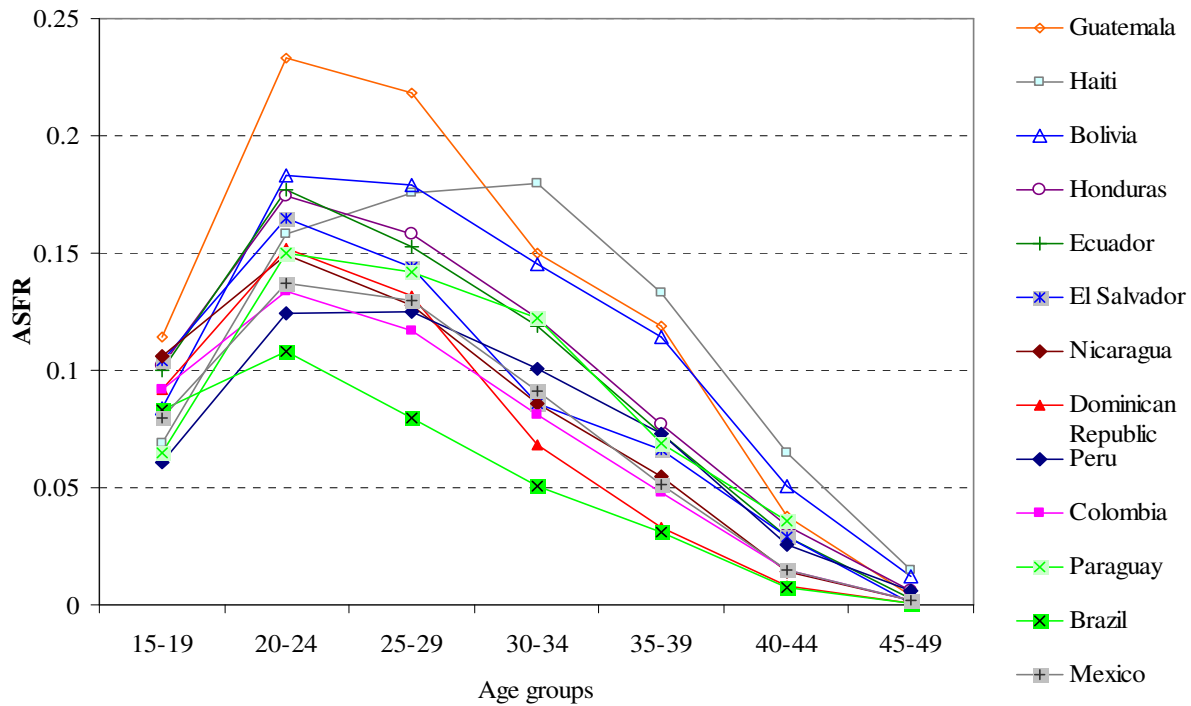


Source: Several National Reproductive Health Surveys (see Table 1 in Methods and Data section).

the young pattern, what initially attracts attention is that the countries with the lowest fertility rates still have the largest rates for women aged 20-24 years. Only Peru, which has a TFR of 2.6 children per woman, have an ASFR mode in the 25-29 age range, and among those with relatively high rates, only Haiti does not have the highest rate in the 20-24 age group (it is even later, 30-34 years old). Secondly, the high level of fertility rates below the age of 20 is at least very intriguing, where all countries demonstrate rates above 50 children per thousand young women (the lowest rates are for Peru, Paraguay and Haiti), and some countries present rates above 100 children per thousand women (the highest are Guatemala, Nicaragua, Honduras, El Salvador, and Ecuador).

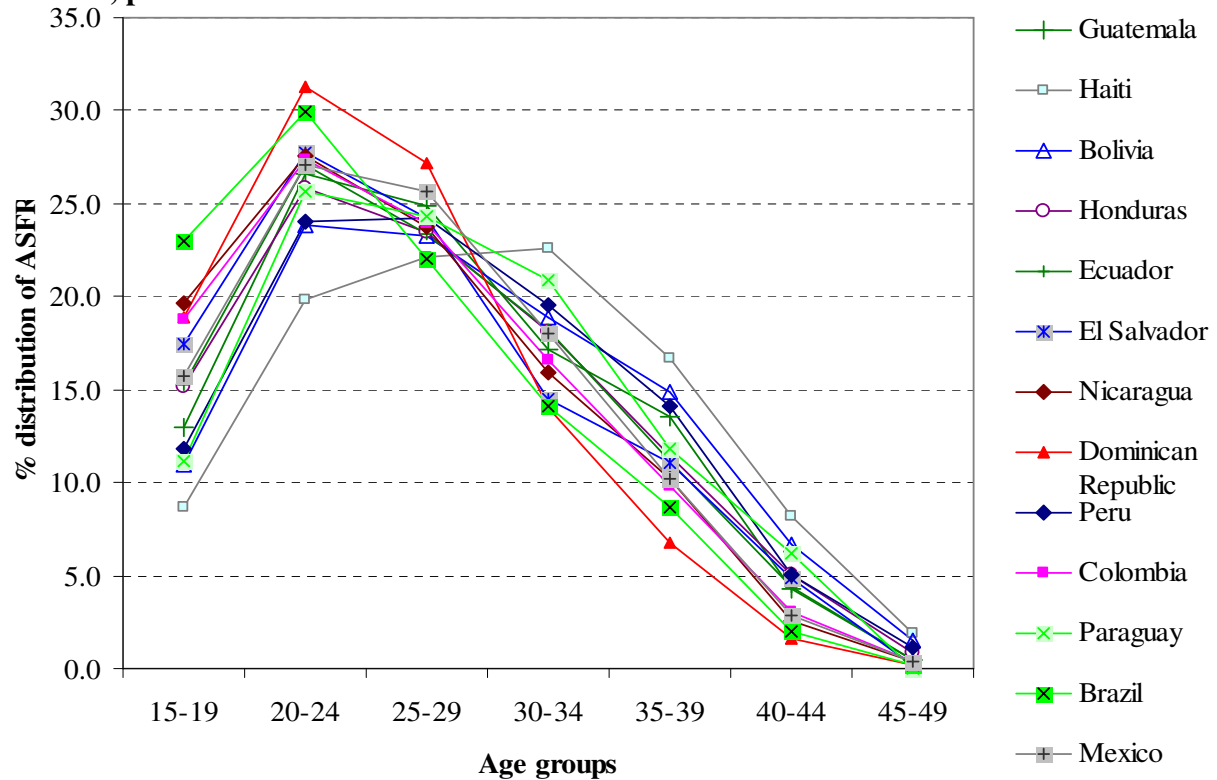
Another way to view the young pattern of fertility in the LA countries is by looking at the weighting of each age specific rate, that is, the relative distribution of the ASFR, which is presented in Graph 4. The first fact to note is that the sequences in which the countries appear in the figure are reversed in comparison with the previous graph, or in other words, the countries with the lowest rates in the region are the ones that have fertility currently concentrated at younger ages. Brazil attracts attention for having a TFR already well below replacement and the first two age groups are the most prevalent in the fertility distribution. For example, women aged 15-19 are contributing even more to live births than women aged 25-29. This fact leads us to think about what is happening in these countries where women (and men) should be finishing their education and entering the competitive labor market, they are actually having children; and at the ages at which women in developed countries are having children, in the countries analyzed here, they have already finished with reproducing.

**Graph 3: Age specific fertility rates for selected countries, Latin America, period 2002-07.**



Source: Several National Reproductive Health Surveys (see Table 1 in Methods and Data section).

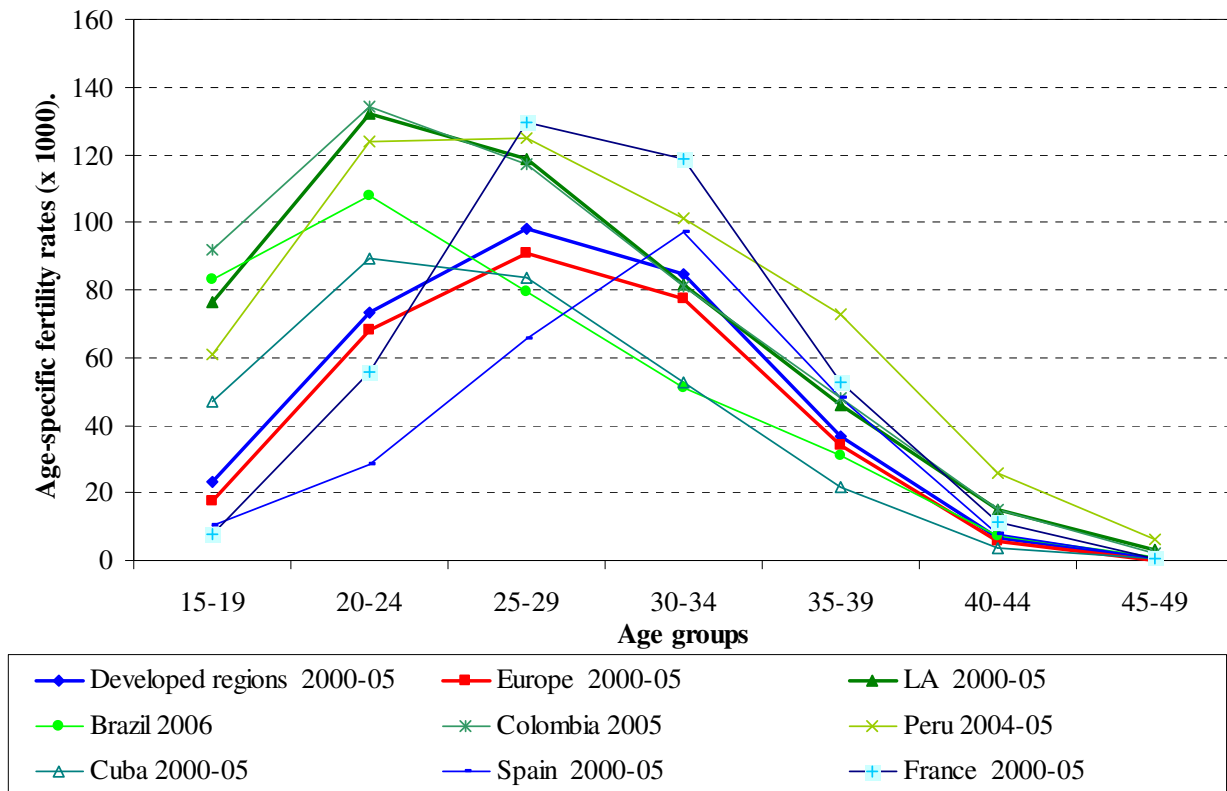
**Graph 4: Relative distribution of age specific fertility rates for selected countries, Latin America, period 2002-2007.**



Source: Several National Reproductive Health Surveys (see Table 1 in Methods and Data section).

The fertility rejuvenation process in the LA continent shows that reproductive behavior in the region cannot be identified with those of developed countries and with Europe in particular, which typically see couples postponing significantly the timing of their first child<sup>9</sup>. To get an idea of comparisons of fertility schedules in these regions, we present below age-specific fertility rates for some regions and countries (including a further source of information in order to show data for the regions as a whole). It is interesting to note that countries with a TFR close to replacement levels in Europe and those in the lowest-low levels in the Mediterranean, see delays in childbearing that sometimes extend to the 30-34 age range. In Latin America, no country presents this situation, even in a country with the lowest-low TFR such as Cuba, below 1.5, or Brazil with 1.8 children per woman.

**Graph 5: Age-specific fertility rates for selected countries and regions, period 2000-2006.**



Source: For the regions Cuba, Spain and France: Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, World Population Prospects: The 2006 Revision and World Urbanization Prospects: The 2005 Revision, <http://esa.un.org/unpp>, Friday, February 20, 2009; 12:55:54 PM. For Brazil, Colombia, and Peru, most recent Reproductive Health Surveys, in Table 1.

<sup>9</sup> In the literature, this postponement of marriage and foreshortened exposure to pregnancy, which mostly occurred within stable unions, was a strong proximate determinant in the regulation of fertility, and later, staying at school for a longer period of time kept adolescent fertility to lower levels.

When attempting to predict the future of fertility at younger ages in the LA countries, it could be argued that rates should decrease soon in LA, as happened in the more developed regions. Nonetheless, at least in the short to medium-term, we do not see that happening. The first two age groups currently represent around 50% of total fertility in LA but less than 30% in Europe or in the more developed regions. Although with some public policies, which could include full access to effective contraception for the adolescent population, fertility for this segment could decrease, such programs would only bring about a delay in the age of first birth for that population, maybe moving the first birth up to the next five-year age range (20-24). Hence, we argue that, if structural changes such as in the areas of education and the labor market are not put in place so that the young population is assured a better quality of life<sup>10</sup>, together with full access to reproductive health and particularly fully effective contraception, it is unlikely that the fertility schedule in LA countries will approximate that of the developed countries, where women aged 20-24 still have low fertility compared to the 25 – 29 age group.

To corroborate this premise, we are presenting in Graphs 6 and 7 a summarized way of observing the ASFR behavior for the first two age groups, comparing a period of around 20 years. The relative weighting of the ASFR for the youngest age group, 15-19 (and the level of TFR – the triangles in the graph) for the 13 countries shows that there was an increase in all of these countries (including those with the highest or lowest levels of fertility) in the period. The three countries with the biggest increase in the period were Brazil, Colombia, and the Dominican Republic respectively, in descending order of growth. Interestingly enough, they present the lowest TFR rates among those analyzed here. On the other hand, the behavior for the 20-24 age group is not the same (Graph 7). Out of the 13 countries, only seven had an increase in the relative weighting on the ASFR distribution, one showed a decrease (El Salvador), and five displayed almost constant behavior over the period of 20 years.

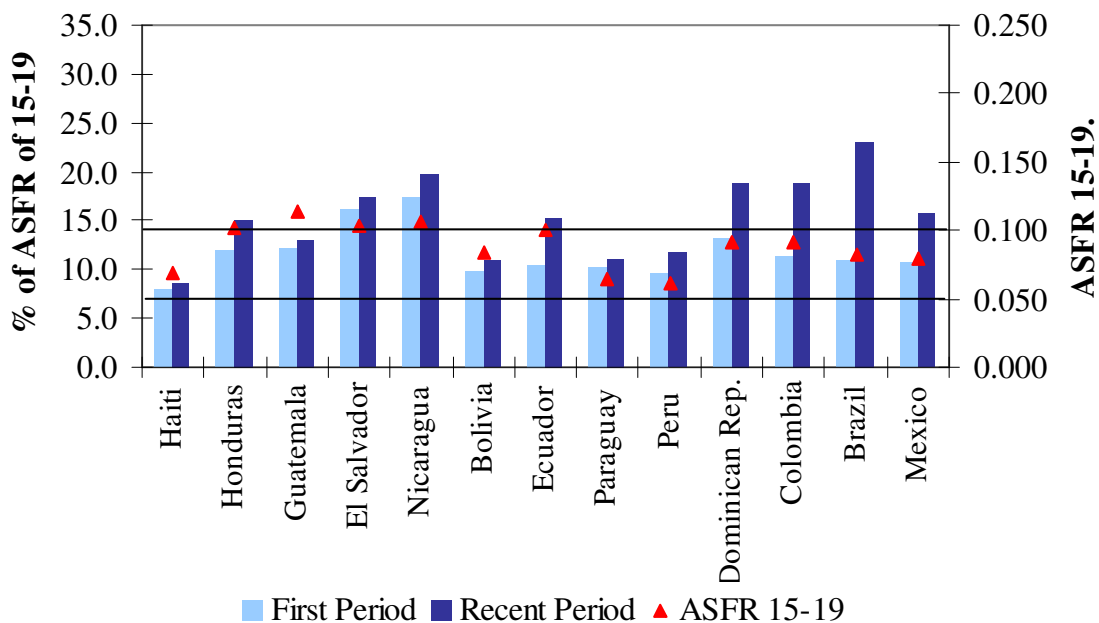
In order to understand what happens to fertility rates for young people in LA, and certain countries in particular, it is essential to analyze the process separately, in two parts: The timing of fertility on the one hand and the increase of ASFR 15-19, in some countries, on the other

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<sup>10</sup> Providing education and job opportunities to the young population does not signify just any kind of education or job. It has to be access to schooling and decent jobs that will really allow young people to have a different perspective on life. That is to say, plans that might include things that are different from the traditional early formation of family and a way out of perpetual poverty.

(Cavenaghi and Berquó, 2005; Rodriguez 2008). The forces and factors that determine or are related to one or the other are not necessarily the same, although they may be related. Some of the facts that did not reduce young fertility during transition in the LA countries are related to the structural economic conditions<sup>11</sup> (such as the effects of bad education and limited, informal and poor labor market participation), but much still has to be done to estimate the size of these effects and to identify others. With regard to the increase in fertility at young ages, in some countries it may be heavily related to the inability of families and the State to give the necessary support to the young population that is more open to earlier sexual initiation, and also the more frequent practice of sex after the initiation of sexual intercourse. Moreover, we must not forget that wealthier populations might have greater resources to interrupt unplanned pregnancies safely than would a poor, rural, and poorly educated woman. As Pantelides (2004, p.180) asserts, “*only in a social context that offers to the young population perspectives of progress that are successfully in compliance with the subject benefits of maternity ...the young would find it attractive to change behavior that leads to postponement in pregnancy, as other young populations have done*”.

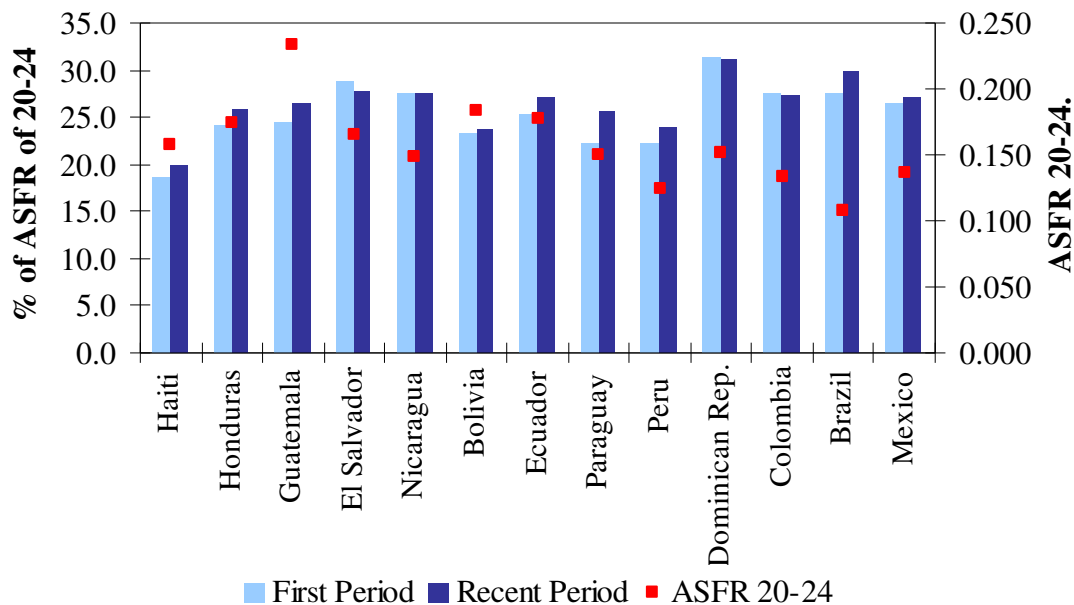
**Graph 6: Relative weighting (%) of the fertility rate and age-specific fertility rate for women aged 15-19, for selected countries in two periods (firstly in the 1980’s and more recently in the 2000’s), Latin American countries.**



Source: Several National Reproductive Health Surveys (see Table 1 in Methods and Data section).

<sup>11</sup> Put simply, it is likely that a couple would not wait longer to start a family if the kind of education and perspectives in the labor market do not bring more benefits or the hope of a better standard of living as a result of this postponement.

**Graph 7: Relative weighting (%) of the fertility rate and age-specific fertility rate for women aged 20-24, for selected countries in two periods (firstly in the 1980's and more recently in the 2000's), Latin American countries.**



Source: Several National Reproductive Health Surveys (see Table 1 in Methods and Data section).

From this quick analysis, the perspective is that fertility in the Latin American continent will be below replacement level – and in the near future, something similar to the average European fertility rate level, though with a rejuvenated age pattern. A possible recuperation of fertility levels in the future could occur due to the *Easterlin Effect*<sup>12</sup>. Nonetheless, there is no evidence, mainly outside the United States, that this effect has the capacity to recuperate fertility levels. Lutz et al. (2006), for example, studying the European case, show that mechanisms exist of different dimensions that self-reinforce the permanence of downward fertility trends, much below the replacement level. The authors called this process the low-fertility trap hypothesis, and argue that besides the *Easterlin effect*, which has an economic dimension, there are two other dimensions: Demographic and Sociological. The demographic dimension occurs simply because, if there are fewer potential mothers, there will be fewer children (*negative population momentum*); and the sociological dimension is due to the fact that younger cohorts would have

<sup>12</sup> The Easterlin effect establishes the existence of cyclical changes in demographic and social behavior as the result of fluctuations in birth rates and cohort size in the post-World War II period. That is, small cohorts would have enhanced chances in the labor market and would tend to get into stable relationships early and have more children than the other larger cohorts (Easterlin, 1961, 1968).



lower expectations of family size due to the lower fertility experiences they witness. In the current Latin American scenario, fertility rates are higher among the poorest and if their standard of living improves, their fertility will fall, due, for example, to the educational effects (and better access to contraceptive methods). Thus, in this situation the *tempo effect* would cause fertility rates to decline even more (Bongaarts and Feeney, 1998) in the short run. The big question is whether there will be a subsequent recovery in the *quantum of fertility* or whether many of these postponed births will end up not occurring, as currently seen in the European countries of the Mediterranean region (Lesthaeghe and Willems, 1999). Our viewpoint on this is that, for many countries in LA, if not for the average, the latter process is the most probable.

## **CONTRACEPTION PATTERNS AND DIFFERENTIALS**

Among demographers in LA there is no doubt that the proximate determinant that had most allowed for fertility decline was the high and increasing prevalence of contraception<sup>13</sup>, and that levels of contraceptive use in most countries in the region are high compared to others in different continents that present low fertility rates<sup>14</sup>. From this, one could easily conclude that most people living in this continent have no problems in controlling their fertility, that is, they can keep fertility down by using contraceptive methods. However, the reality is always more complicated than these simplifications. In this section, we propose to give a broad and updated picture of current contraceptive use in Latin America and to raise some issues for discussion on topics that LA scholars and policy makers should still be concerned about.

### ***Trends in current contraceptive use in LA***

Several studies have shown that the proximate determinants that allowed women to regulate their fertility in LA was contraceptive use (Bay et al. 2004), and less documented and measured but widely acknowledged, the intense use of pregnancy interruption (Martine, 1996; Guitérrez and Ferrando, 2004, Lener, 2008). Nuptiality indicators did not explain the decline in fertility, mainly

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<sup>13</sup> Although high contraceptive use and the effectiveness of modern methods explain the low levels of fertility, González Galban, *et al* (2007) asserts that effectiveness depends on age, and the authors found that for some Mexican regions, especially for young women, there are some restrictions on the use-effectiveness of contraception, also related to low levels of education.

<sup>14</sup> See Bay et al (2004) for the latest application of proximate determinants for several countries in LA.

due to a pattern of early union (marriage or consensual union), and show no significant changes in that pattern over the last 40 years.

It is not an easy task to summarize the trends in contraceptive use in Latin American countries, while commenting on all its specific characteristics and covering a period of over 20 years. Much has been done for each country separately, and detailed information can be obtained in the literature and also from some comparative reports (Khan, et al. 2007). Here we will merely point out some general trends in a comparative analysis, in a way that helps us to understand how women in the region have been able to regulate their fertility, since for us it is clear that structural social, economic, and cultural transformations that have occurred in recent decades have brought a desire for small families and access to contraceptive use, based on organized or unorganized family planning programs, since we believe that these programs only enabled couples to realize, up to a point, a desire that they already had to limit the number of children.

Since fertility transition had started by the end of the 1960's in several Latin American countries (Chackiel and Schkolnik 1992, 2004), by the mid 1980's, the prevalence of contraception among married women (or in-union) was already at a high level in the region: it was above 60% in countries like Brazil, Peru, Colombia, and Nicaragua<sup>15</sup> (Table 2). However, some other countries such as Haiti, Guatemala, and Bolivia presented low levels of contraceptive use, 18%, 23% and 30% respectively. These prevalence rates have increased everywhere, reaching a peak of 81% in Brazil, but remaining at 32% in Haiti according to the 2005/06 survey. In all the countries analyzed here, the largest increases occurred in the first analysis period (from the mid 1980's to mid 1990's), with the exception of Paraguay, where the jump was more visible in the second period (mid 1990's to mid 2000's), with a relative increase of 66% in 14 years.

Since the invention of the pill and other modern methods<sup>16</sup>, the expected behavior is that couples would switch from traditional methods, which generally present high failure rates, to modern methods. Hence the natural, expected trend is for the prevalence of modern methods to increase over time. This fact is true in all countries shown in Table 2: Prevalence of modern methods increases in all countries during the two periods analyzed. Conversely, why then does the

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<sup>15</sup> For Nicaragua and the Dominican Republic, we present data on contraceptive prevalence for the first period in 1990 and 1991, respectively.

<sup>16</sup> We consider modern methods as per current literature (the pill, IUD - Intrauterine Device, Injections, sterilization, condoms, and other vaginal methods), although some of them are not really 'modern' at all.

prevalence of traditional methods also increase in several countries? A closer look shows that the countries where modern methods increased most are exactly the same countries where traditional methods decreased throughout the period, and are exactly the same where fertility decline is sharper and reached the lowest levels. One answer may be that some population segments do not have access to, or do not use for health or religious reasons, modern contraceptive methods. Some countries such as Bolivia and Peru have more than 23% of married women (or in-union) using traditional or folk methods, which include withdrawal, periodic abstinence and sundry other folk methods<sup>17</sup>.

With regard to the type of modern method selected, the range of *method-mix* is very small for the region, mostly focusing on one or two methods. For the hormonal methods, that include pills and injections (Table 2), there is a growth in the percentage of married (or in-union) women using these methods and the most current data show that together they are more prevalent in 6 out of the 13 countries analyzed. Another method that concentrates most users is female sterilization, which shows a significant intensification and is the most frequent method in five countries, although in two of them the current use of the hormonal method is also high (Ecuador and Guatemala). In Brazil, a significant change occurred in which female sterilization was used for around 40% of married (in-union) women and the current data shows that female sterilization and hormonal methods are almost equally used amongst the modern methods, but male sterilization is also starting to see significant prevalence (5.1% in 2006). The third most employed method in LA countries is the IUD, which reaches significant numbers in Bolivia, Colombia, Ecuador, Paraguay, Peru and Mexico.

The initial choices or changes in the contraceptive methods used are very closely related to their effectiveness, their acceptance, but also very much tied into the provision of the methods. The hormonal methods in Latin America are available over the counter in the drugstore, mostly without prescription. Thus, where there is a lack of provision of publicly offered contraceptive methods, the market offers these to couples that can afford to pay for contraception. However, when the pill is sold without proper medical follow-up or recommendations, there may be an increase in certain side effects and a decrease in use-effectiveness. This seems to have occurred

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<sup>17</sup> Interesting to note that even in countries like Brazil, with very low fertility rates and high use of modern contraception, there is a considerable number of women (in a very small sample) that refer to methods that one might believe that women aged 15-49, in 2006, do not think of them as contraceptive methods any more (examples: taking a bath; washing with lemon, drinking water and jumping three times, and so on).

in Brazil where, with the large increase in the prevalence of contraceptives during the 1980's, the hormonal methods lost ground. Another important fact to take into account is that in countries with very low desired fertility and very young fertility patterns, the potential failure of a method is sometimes a risk that couples just cannot afford to take. So, switching to a more reliable method is more probable, regardless of the difficulties a couple may have to face in order to get them. Hence, a high concentration of sterilization should be of no surprise in the current context. What we could really bring into the discussion is why female sterilization was, and still is, the method, and not male sterilization? Several elements of gender inequality, mainly in relation to the responsibility for reproduction being passed down to the women, are part of the answer, as is the lack of accurate information, combined with folkloric beliefs, arising from *machismo* behavior are another big part of the answer. To change this situation, it may take specific efforts and well designed policies. On the one hand, the young pattern of fertility and the extended need for protection requires a better choice of contraceptive methods and in the light of failures, some of the alternatives, such as safe pregnancy interruption, should be available so that couples do not have to decide on sterilization at a very early stage of their reproductive lives. On the other hand, a more gender-shared responsibility for reproduction and the publication of accurate information about male sterilization must be emphasized.

In this sense, we can see that some male methods are recently appearing in this highly concentrated list of female contraceptive methods. The condom is rarely used as a form of contraception in the countries analyzed (except in the special cases in the following section), though it seems to appear in some countries and more concentrated at younger ages. Additionally, male sterilization starts to show significant percentages in Brazil and is modestly reappearing in Colombia. The most recent reproductive surveys were not able to detect this behavior as strongly as it is appearing in other recording systems locally. Future surveys will have to put efforts into qualifying this tendency and to find out the reasons for this increase, and whether it is sustainable in the long run.

**Table 2: Percentage distribution of currently married women by contraceptive method currently used, according to country and survey year. Latin America, 1989-2007.**

Country and survey year	Any method	Any traditional or folk method	Any modern method						
			Any modern method	Female sterilization	Male sterilization	Pill + Injections	IUD	Condom	Other
Bolivia 1989	30.3	18.0	12.2	4.4	0.0	2.6	4.8	0.3	0.1
Bolivia 1998	48.3	23.1	25.2	6.5	0.0	4.9	11.1	2.6	0.0
Bolivia 2003	58.4	23.4	34.9	6.5	0.0	11.6	10.2	3.9	2.7
Colombia 1986	64.8	12.3	52.4	18.3	0.4	18.8	11.0	1.7	2.3
Colombia 1995	72.2	12.9	59.3	25.7	0.7	15.4	11.1	4.3	2.1
Colombia 2005	78.2	10.0	68.2	31.2	1.8	15.5	11.2	7.1	1.4
Dominican Rep. 1991	56.4	4.7	51.7	38.5	0.2	9.9	1.8	1.2	0.2
Dominican Rep. 1996	63.7	4.4	59.2	40.9	0.1	13.4	2.5	1.4	0.9
Dominican Rep. 2007	72.9	2.8	70.0	47.4	0.0	17.6	2.1	1.9	1.1
El Salvador 1985	47.3	3.0	44.3	31.8	0.7	7.3	3.3	1.2	0.0
El Salvador 1998	59.7	6.3	53.4	32.4	-	17.0	1.5	2.5	0.0
El Salvador 2002	67.0								
Ecuador 1987	44.3	8.5	35.8	14.9	0.0	9.2	9.8	0.6	1.2
Ecuador 1994	56.6	10.9	45.9	19.8	-	10.7	11.8	2.6	1.0
Ecuador 2004	72.7	14.0	58.7	24.2	-	19.2	10.1	4.3	0.9
Guatemala 1987	23.2	4.2	19.0	10.3	0.9	4.4	1.8	1.2	0.4
Guatemala 1995	31.4	4.5	26.9	14.3	1.5	6.3	2.6	2.2	0.0
Guatemala 1998/99	38.2	7.3	30.9	16.7	0.8	8.9	2.2	2.3	0.0
Guatemala 2002	43.3	8.9	34.4	16.8	1.0	12.4	1.9	2.3	0.0
Haiti 1994/95	18.0	4.7	13.2	3.1	0.2	5.8	0.2	2.6	1.2
Haiti 2000	28.1	5.2	22.8	2.8	0.4	14.1	0.1	2.9	2.6
Haiti 2005/06	32.0	7.2	24.8	2.1	0.1	14.3	0.0	5.3	2.8
Honduras 1987	40.6	7.6	32.8	12.6	0.2	13.7	4.3	1.8	0.2
Honduras 1996	50.0	9.0	41.0	18.1	-	9.9	8.5	3.2	1.3
Honduras 2005	65.2	8.9	56.4	21.2	0.3	25.1	6.6	2.9	0.0
Nicaragua 1997/98	60.3	3.0	57.4	26.1	0.5	19.1	9.1	2.6	0.0
Nicaragua 2001	68.6	2.5	66.1	25.3	0.5	28.9	6.4	3.3	1.8
Nicaragua 2006-07	72.4	2.6	69.8	24.3	-	36.9	3.4	3.8	1.4
Paraguay 1987	37.6	8.6	29.0	4.0	-	17.1	5.1	2.3	0.5
Paraguay 1990	48.4	13.2	35.2	7.4	0.0	18.8	5.7	2.6	0.8
Paraguay 2004	72.8	12.3	60.5	11.5	0.1	25.4	11.5	11.9	0.1
Peru 1986	45.8	22.7	23.0	6.1	0.0	7.8	7.3	0.7	1.0
Peru 1992	59.0	26.2	32.8	7.9	0.1	7.6	13.4	2.8	1.0
Peru 1996	64.2	22.9	41.3	9.5	0.2	14.2	12.0	4.4	1.0
Peru 2000	68.9	18.5	50.4	12.3	0.5	21.5	9.1	5.6	1.5
Peru 2004	71.3	23.7	47.6	10.3	0.4	21.7	5.6	8.4	1.2

Country and survey year	Any method	Any traditional or folk method	Any modern method						
			Any modern method	Female sterilization	Male sterilization	Pill + Injections	IUD	Condom	Other
Brazil 1986	66.2	9.7	56.5	26.8	0.8	25.8	1.0	1.7	0.5
Brazil 1996	76.7	6.5	70.3	40.1	2.6	21.9	1.1	4.4	0.1
Brazil 2006	80.6	3.5	77.1	29.1	5.1	28.7	1.9	12.2	0.1
Mexico 1987	52.7	8.1	44.6	18.7	0.8	12.6	10.2	1.9	0.6
Mexico 1998	67.4	11.6	56.0						
Mexico 2006	69.4	4.9	64.5	36.6	1.7	8.7	11.9	5.7	0.3

Source: Several National Reproductive Health Surveys (see Table 1 in Methods and Data section).

### *Differentials in Current Contraceptive use*

The absence or omission of the State in the majority of Latin American countries, with regard to the right to reproductive health and in the implementation of family planning programs, or more broadly speaking *reproductive planning programs*<sup>18</sup>, has a clear consequence not only for the *method-mix*, which concentrates on a few methods, but also causes very significant differentials in contraceptive prevalence according to population groups. Table 3 presents current contraceptive use for married (or in-union) women and the *method-mix* distribution for the most recent data for many countries by levels of education and place of residence.

It is noticeable in this distribution (Table 3) that women living in rural areas and with no education (which are highly correlated) present the lowest levels of contraception use, and the difference from the better educated women living in urban areas is mainly due to modern contraceptive use. In other words, for traditional methods, with some exceptions, there are not many differentials in the prevalence of contraceptive use in these groups. Nevertheless, modern contraceptive methods are more frequent among the more educated and those living in urban areas. As a consequence, we clearly see important differentials in fertility rates among these groups. What attracts our attention, however, are the cases of Mexico, Colombia, and the Dominican Republic for example, where differences in the prevalence of modern methods among all these groups are not so pronounced. What might have caused this different outcome? Not a lot of thought and research is necessary to see that poor women in those countries have

<sup>18</sup> By the term *reproductive planning* program we mean a program that includes all age ranges, sex, nuptiality situations, etc. because the term family planning is linked first and foremost to the province of marriage (or union) and mostly understood as women's "matters".

better access to modern methods than their counterparts in other countries. In the case of Mexico, the role of the state in organizing family planning programs could have made the difference. In Colombia, this role was not played by the state, but by private and organized practices. In the Dominican Republic, and most recently in Brazil, it is a combination of public and private provision, not an organized family planning program.

The differentials according to the method are also significantly different among these countries. For female sterilization there is no one common pattern. Sterilization is more frequent among the less educated who live in rural areas in Colombia, the Dominican Republic, Brazil, and Guatemala. On the other hand, it is more frequent among the most educated and urban areas in Bolivia, Honduras, Paraguay and Ecuador, though the urban-rural difference is more evident than with educational groups. In the other countries analyzed, there are no significant differentials among these population groups. The same comparison for the prevalence of pill and injections shows how these two methods and sterilization are on “opposite sides” in accordance with “women’s choices” in some countries. There, an increase in education means a decrease in the use of sterilization and an increase in use of the pill and injections. But also, there is a tendency for the pill and injections to be more frequent as education increases, the same results being observed for the IUD. Condom use also appears to be more related to greater education and women living in urban areas, and presents significant frequency for women with secondary schooling in Haiti (12%), Brazil, Peru, and Paraguay, compared with other methods.

As mentioned before, the provision of methods is an extremely key issue in understanding their current use. From the socio-economic differences observed in the prevalence of contraception by methods, the importance of provision is clear. It is widely recognized and documented in the reproductive health survey reports for most of these countries, that women claim they get the pill and condoms mostly from the private health sector (mostly drugstores). The supply of female sterilization is mostly through public provision, with few exceptions. In the words of a good reproductive planning program, the state should provide the best means for men and women in order to fulfill their reproductive rights, however, in practice, women and men in the region are far from having that right guaranteed, since the data indicates that all these countries have problems making available all contraceptive methods to the entire population, mainly those who need them most.

**Table 3: Percentage distribution of currently married (or in union) women by contraceptive method currently used, according to country and survey year. Latin American countries, 2003-2007.**

Country and survey year	Women's Education and place of residence	Any method	Any traditional or folk method	Any modern method	Any modern method					
					Female sterilization	Male sterilization	Pill + Injections	IUD	Condom	Other
Bolivia 2003	No education	33.6	15.8	17.8	4.0	0.0	8.7	2.6	0.7	1.8
	Primary	55.1	24.8	30.2	5.6	0.0	11.9	7.8	1.9	2.9
	Secondary or higher	69.5	23.1	46.4	8.5	0.1	11.6	15.8	7.7	2.7
	Urban	64.0	23.7	40.3	8.1	0.1	11.3	13.0	5.4	2.5
	Rural	48.0	23.0	25.0	3.6	0.0	11.9	5.2	1.1	3.1
Colombia 2005	No education	67.1	9.7	57.4	39.3	0.3	6.7	4.4	3.6	3.0
	Primary	78.5	11.0	67.5	36.5	1.1	13.7	9.9	5.0	1.3
	Secondary or higher	78.7	9.5	69.1	27.8	2.3	16.9	12.3	8.4	1.4
	Urban	78.8	9.7	69.1	31.1	2.3	14.9	11.6	8.0	1.3
	Rural	76.7	11.1	65.6	31.6	0.6	16.7	10.1	4.7	1.9
Dominican Republic 2007	No education	69.8	1.8	68.0	54.8	0.0	10.4	1.5	0.3	1.1
	Primary	75.2	1.9	73.3	56.1	0.0	14.2	0.8	1.3	0.8
	Secondary or higher	71.2	3.7	67.4	39.3	0.1	21.1	3.3	2.6	1.2
	Urban	72.4	3.5	68.9	46.3	0.1	16.7	2.7	2.2	1.0
	Rural	74.0	1.5	72.5	49.7	0.0	19.6	0.8	1.2	1.2
Haiti 2005/06	No education	24.5	6.0	18.5	2.7	0.1	11.8	0.0	0.8	3.1
	Primary	31.9	6.8	25.1	1.9	0.2	15.9	0.0	3.5	3.4
	Secondary or higher	40.4	9.0	31.4	1.8	0.1	15.3	0.0	12.6	1.8
	Urban	36.0	7.6	28.3	2.1	0.1	15.1	0.0	9.3	1.7
	Rural	29.2	6.9	22.3	2.2	0.2	13.8	0.0	2.5	3.6
Honduras 2005	No education	55.5	9.7	45.7	19.0	0.4	21.2	3.9	1.0	0.0
	Primary	64.6	9.0	55.5	21.2	0.1	26.7	4.9	2.2	0.0
	Secondary or higher	69.9	8.2	61.6	21.7	0.5	22.4	11.6	5.3	0.0



Country and survey year	Women's Education and place of residence	Any method	Any traditional or folk method	Any modern method	Any modern method					
					Female sterilization	Male sterilization	Pill + Injections	IUD	Condom	Other
	Urban	69.9	7.6	62.3	24.6	0.3	24.0	9.2	3.8	0.0
	Rural	60.8	10.1	50.7	17.8	0.2	26.3	4.1	2.1	0.0
Brazil 2006	No education	75.8	4.4	71.4	50.9	0.4	13.5	0.0	6.6	0.0
	5-8 years of education	81.4	2.4	79.0	28.1	5.0	30.6	1.9	13.4	0.0
	Secondary or higher	81.9	5.0	76.9	20.5	10.9	26.7	3.3	15.4	0.1
	Urban	80.9	3.6	77.3	28.2	5.8	28.2	2.2	12.9	0.0
	Rural	78.8	2.9	75.9	32.7	2.0	31.5	0.5	9.2	0.0
Peru 2004	No education	57.2	26.3	31.0	10.6	0.7	16.4	2.1	1.2	0.0
	Primary	68.1	27.0	41.1	11.6	0.2	22.8	2.1	3.6	0.8
	Secondary	74.6	22.9	51.7	9.4	0.3	24.9	6.7	9.1	1.3
	Urban	74.2	21.0	53.2	11.5	0.5	20.7	7.7	11.4	1.4
	Rural	66.3	28.3	37.9	8.3	0.2	23.3	2.1	3.3	0.7
Paraguay 2004	0-2 years of education	61.1	13.5	47.6	17.0	0.0	22.7	5.2	2.7	0.0
	7-11 years of education	74.1	11.9	62.2	9.6	0.0	25.8	13.7	13.0	0.1
	12 or more	80.1	12.7	67.4	12.6	0.1	24.8	14.4	15.3	0.2
	Urban	76.5	12.3	64.2	13.3	0.1	23.3	13.5	13.9	0.1
	Rural	67.4	12.3	55.1	8.8	0.2	28.4	8.6	9.0	0.1
Guatemala 2002	0-1 years of education	30.4	9.0	21.3	0.0	0.6	15.5	1.4	2.8	1.0
	5 years of education	45.7	11.6	34.1	24.0	0.5	8.5	0.8	0.3	0.0
	6 or more	27.8	8.1	19.7	12.5	0.3	6.2	0.1	0.5	0.1
	Urban	56.7	9.6	47.3	23.1	1.9	15.0	3.4	3.6	0.3
	rural	34.7	8.5	26.2	12.8	0.3	10.7	0.9	1.5	0.0
Nicaragua 2006/07	No education	65.7	0.9	64.8	22.9	0.0	35.4	1.9	2.3	2.3
	4-6 years of education	71.7	2.3	69.4	23.4	0.0	39.6	2.5	2.7	1.2
	Secondary	74.7	3.6	71.1	23.1	0.0	37.9	4.4	4.7	1.0

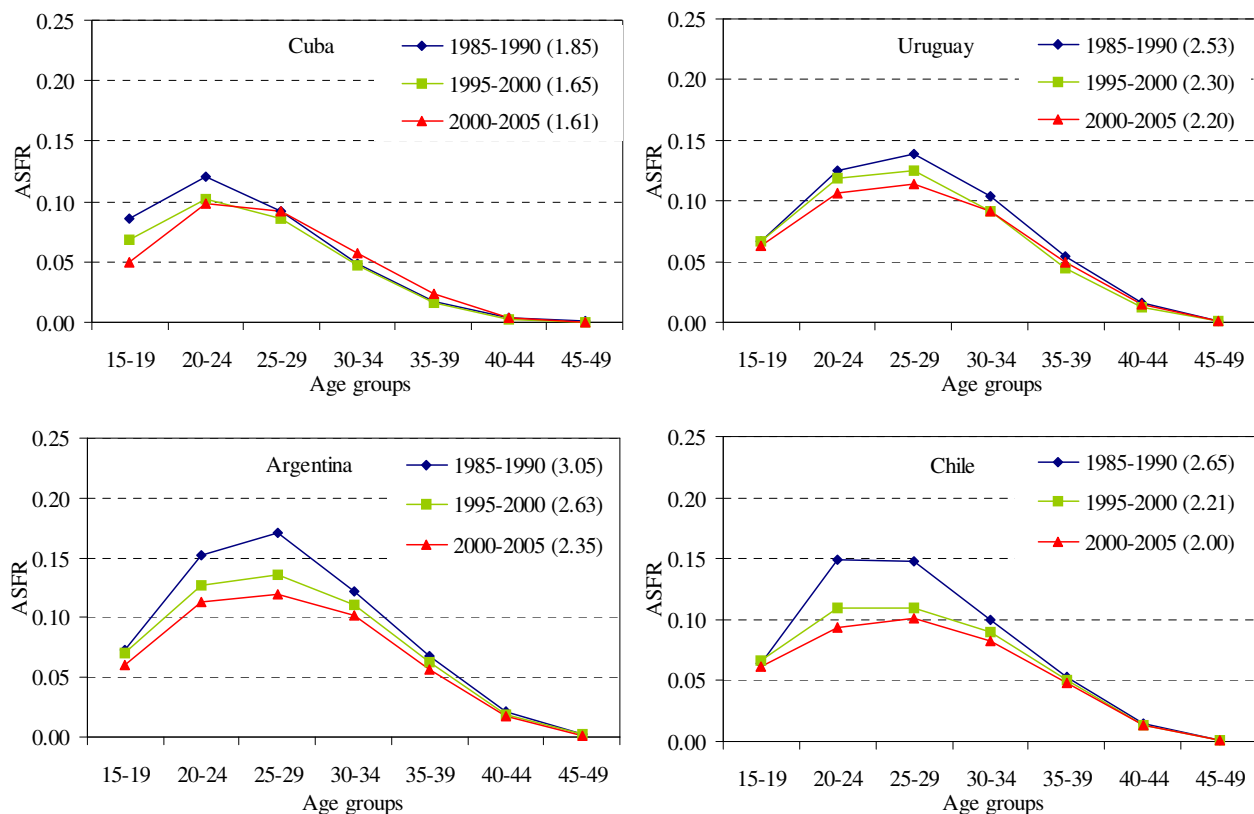
Country and survey year	Women's Education and place of residence	Any method	Any traditional or folk method	Any modern method	Any modern method					
					Female sterilization	Male sterilization	Pill + Injections	IUD	Condom	Other
	Urban	74.9	3.6	71.3	28.9	0.0	31.4	4.9	4.9	1.2
	Rural	69.5	1.5	68.0	19.0	0.0	43.4	1.6	2.4	1.6
Ecuador 2004	No education	51.0	12.8	38.2	24.1	-	7.3	5.7	0.1	1.0
	Primary (completed)	69.9	12.7	57.2	21.5	-	21.4	10.3	2.6	1.4
	Secondary (completed)	78.5	13.0	65.5	23.7	-	22.6	11.0	5.5	2.7
	Urban	76.6	12.8	63.8	25.5	-	20.3	11.1	5.6	1.3
	Rural	67.1	13.9	53.2	22.3	-	17.6	8.8	2.5	2.0
	No education	55.2	4.0	51.2	39.9	0.0	3.9	5.2	2.2	0.1
	Primary (completed)	65.4	4.2	61.2	39.0	1.0	7.5	9.8	3.8	0.1
Mexico 2006	Secondary (completed)	71.9	4.8	67.1	34.5	1.6	9.7	14.5	6.6	0.3
	Urban	73.2	5.1	68.1	38.4	2.0	8.6	12.6	6.1	0.4
	Rural	57.5	4.2	53.3	30.1	0.4	9.2	9.5	4.1	0.0

Source: Several National Reproductive Health Surveys (see Table 1 in Methods and Data section).

## ARGENTINA, URUGUAY, CHILE, AND CUBA: SPECIAL CASES

Several reasons compelled us to analyze these four countries together, but the two main reasons are the greater similarities they have in fertility transition and, mainly, the difficulties in obtaining data on trends and differentials of contraceptive use. Graph 8 shows the age-specific fertility rate distributions for three periods in Cuba, Uruguay, Argentina, and Chile, and the corresponding TFR in each period. From the first period (1985-1990) analyzed, we can see that TFR was very low, compared to other Latin American countries, nonetheless, with the exception of Cuba, which was already below replacement level in this period, the other three countries did not see a decline in fertility as significant as the other countries analyzed in the previous sections. On the other hand, with regard to the patterns of fertility, without exception, they present a rejuvenated age distribution, with high ASFR at 15-19 years of age, although Cuba presented a significant decline in the period, from 86 to 50 births per one thousand women aged 15-19 years and Uruguay and Chile some indication of a small increase in the 1990's.

**Graph 8: Age-specific fertility rates (and TFR), selected countries according to period 1985-2005.**



Source: Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, World Population Prospects: The 2008 Revision, <http://esa.un.org/unpp>, April 1, 2009; 1:35:15 PM.

The same factors that initiated fertility transition in other countries are cited as the determinants of low fertility in these countries; additionally, Alfonso (2004) affirms that the volume and type of immigration (European) were part of the explanation for the low levels of fertility even before the 1960's, besides the social and economic comparative advantages these countries had in the region. After the 1960's, with the implementation of family planning programs and the availability of modern methods in the entire region, these countries follow a different story compared to the majority of other countries. In Argentina, Uruguay and Chile, a combination of factors caused a difficult process of family planning implementation, among which we might mention the already low levels of fertility, combined with a low population density, political interests, and a strong religious influence. Hence, reproductive rights were not an important part of the agenda, and we can clearly see the results in the current levels of fertility, contraceptive prevalence and *method-mix*. In Cuba, on the other hand, the political process, after the installation of the revolutionary government, took Cuba along a different road with regard to reproductive rights.

Table 4 shows the prevalence and *method-mix* of current contraceptive use among married (or in union) women in these countries for the most recent data available. As we can see, the percentage of contraceptive use of any method is high, but even for Cuba, it is not the highest in the region, and Chile and Argentina have lower prevalence than countries like Peru, Colombia, Nicaragua or the Dominican Republic, and in addition, more than 13% of contraceptive use in Argentina involves traditional or folk methods. Interestingly, moreover, fertility rates are maintained at a lower level compared to those countries<sup>19</sup>. The permanent methods, female or male sterilization, are not so frequently used in these countries, again with the exception of Cuba, which presents an amazing concentration of methods that need medical intervention and follow-up, the IUD (43%) and the second most used method is female sterilization (19%). In Uruguay and Argentina, the high prevalence of condom use attracts attention, attaining 31% of contraceptive use in Uruguay, and secondly the high use of the pill and injections, all methods that are readily available over the counter at drugstores. The frequency of IUD use in these two countries is also significant, which is a counterweight to the very low levels of sterilization. In Chile, sterilization is also seldom used, the hormonal methods and IUD being the most frequently employed. Again, we can see that, as in the other countries analyzed, the *method-mix*

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<sup>19</sup> Facts that might explain the lower levels of fertility might include the use of pregnancy interruption and a more use-effective contraception due to a better educational attainment; however, more detailed and accurate information is needed to confirm this assertion.

in each country tells a different story in terms of the availability of methods and the means women and couples had to regulate their fertility, but at the same time, all of them probably tell the same story of sexual and reproductive rights not readily available to the population throughout history.

Regarding the provision of methods in these countries, the story is not too different from the countries with high fertility, with the exception of Cuba where, according to Alfonso (2004), the historical organization of the public health system and the implementation of an organized family planning program provided the entire population with access to contraception, without differentials in access. In the case of Argentina, the story is very different because, until recently, the state did not have an organized program, and moreover, had laws forbidding the practice of sterilization (López, 2005). Just recently, a law giving consent to voluntary sterilization was approved, but there is still no national program that provides the entire range of methods to the population (Cecchetto et al., 2007). In the beginning in Uruguay, the story was similar to that of Argentina, but since 1996 the state has been providing free contraceptive methods (not permanent, but includes emergency contraception). However, a report on the monitoring of the health system in Uruguay shows that there is a lot of inequality in terms of access to health and methods, and a shortage of methods offered by the services due to logistical problems with the distribution (MYSU, 2007). In the case of Chile, although there is an existing family planning program, access to contraceptive methods is restricted, voluntary sterilization is not a free option, and although laws on abortion are the strictest in the world, it is widely documented that the country has the highest rates in the region.

**Table 4: Percentage distribution of currently married women (in union) by contraceptive method currently used, selected countries and survey year, 1989-2007.**

Country and Survey year	Any method	Any traditional or folk method	Any modern method	Any modern method						TFR
				Female	Male	Pill + injection	IUD	Condom	Other modern	
Cuba (2000)	73.3	1.3	72.1	19.0	0.0	4.6	43.5	5.0	0.1	1.63
Uruguay (2004)	77.0	2.2	75.0	5.5	0.4	23.9	12.7	31.3	1.2	2.20
Argentina (2001)	65.3	13.3	63.8 <sup>a</sup>	-- <sup>b</sup>	-- <sup>b</sup>	30.4	9.5	22.3	1.6	2.35
Chile (2001)	60.7	2.7	57.9	5.7	0.0	23.9	21.7	6.5	0.1	2.00

<sup>a</sup>: The prevalence includes a combination of methods, hence it does not add up to total prevalence.

<sup>b</sup>: Sterilization is practiced, but since it is not technically permitted, the figures are not presented in the survey.

Source: World Contraceptive Use 2007. United Nations • Department of Economic and Social Affairs • Population Division ([www.unpopulation.org](http://www.unpopulation.org)).

## **FINAL REMARKS**

If in the past demographers imagined that fertility rates would stall at around an average of two children per woman, now they are not sure at what level it will stop falling. There are some high educational segments or entire metropolises that already present fertility regimes below one child on average. Is this also the future for Latin America and what other kinds of demographic and economic issues will be linked to this? While these are important questions and need some answers or the studying of hypotheses, at present, we have other more pressing issues regarding fertility behavior that must be discussed and that need a good deal of attention from public policies upon which we would like to remark.

While the most educated and wealthiest populations are below replacement levels and display some postponement of the age of first live birth, the less educated and poorest populations still have rates ranging from 6 to 4 children per woman and have more than 50% of their fertility concentrated at young ages, less than 24 years old. From the statistical point of view, we can examine these as two different issues: One relating to the level of fertility and the other related to the fertility schedule. From the sociological or economic point of view, we can separate and analyze them as issues related to different behaviors in socio-economic groups. From the demographic point of view we have to explore and understand them as related issues, and to investigate why, in different cultural and socio-economic contexts, population segments present such different results in terms of fertility levels and schedule.

In respect of fertility levels, we see on the one hand that the number of childless women and the number of one-child parents are increasing of late in some countries. Rosero (2004), analyzing data for large metropolitan regions with data from around 2000, draws our attention to what he calls a new phenomenon for Latin America, that is, the “larger proportions of women that totally renounces to maternity (around 15 to 20%)” (p. 84). For example, in Brazil in 1996, 8.8% of women at the end of their reproductive life (45-49) had no children and by 2006 this estimate jumped to 13.4%. In addition, 7.7% of women aged 45-49 had only one child whereas the estimate 10 years on is 14.3%. This tendency is similar to what has happened in other countries with low fertility regimes (Breton and Prioux, 2008). These groups that present lowest-low rates of fertility (or zero) seem to show a desire for a somewhat larger number of children than

actually observed, if conditions were different, thus we would say that their family planning behavior ends up not meeting fulfilled demand due to a *lack of the desired fertility*. On the other hand, groups that currently have high rates of fertility, though still decreasing, have shown that access to fertility regulation presents several difficulties in many countries. In most of those cases, data show that their fertility demands are not met due to an *excess of the desired fertility*. Both situations must be addressed and policies should try at best to regulate them.

Concerning the fertility schedule, as we have seen, Latin America is also witness to a different demographic phenomenon compared to many European countries. In the more developed countries, a common pattern was low fertility rates at younger ages, and by the time countries finished fertility transition, a consistent decline was seen in fertility for all age groups, including younger ages. The declines in each age group were not uniform, for several reasons, but decreases for younger groups, 15-19 and 20-24, were observed everywhere, reducing fertility for the first two age groups to very low levels. That is, by the end of fertility transition, women had fewer children and at even later ages. In LA, even countries with fertility below replacement level did not follow that path: Women had fewer children and were concentrated at younger ages. Ferrando (2004) shows that for LA, on average, from the 1950's to the 1970's, although there was a small decline in fertility rates, there was no change in the fertility distribution by age. For a later period, 1995-2000, with a sharp decline in fertility rates in the region, there was an important concentration with the younger age groups (the mode changing from 25-29 to 20-24), what demographers have been calling fertility rejuvenation. Additionally, in the most recent period, some countries presented an increase in fertility rates for women aged 15-19, a phenomenon not regularly seen during TFR decline, moreover in places where fertility is close to or below replacement levels. This situation also needs urgent policies, which lie more within the realm of structured public policy.

The prevalence of contraception by methods is very concentrated in a small range of methods in each country, and represents significant differences in the “choices” made to regulate fertility in each country. Moreover, the difference in the types of methods by educational status or place of residence shows that couples (still mostly women) in LA countries do not have an easy task to get effective contraception, and moreover are dealing with the consequences of ineffective methods. Hence, although there are great similarities in reproductive behavior in Latin American

and Caribbean countries regarding the timing of childbearing and also the move towards low-fertility rates, the different socio-economic groups in each country or even similar groups in different countries had to “find” a way to keep their wanted fertility levels down, sometimes paying a very high “price”. Policy makers and the State cannot overlook this situation as some have done in the past, and must also face these issues within the sphere of human rights.

Finally, Latin American history and the current situation concerning reproductive health rights and access to contraceptive methods should serve as examples to policy makers, organized political institutions, academics, non-government organizations, religious groups and every individual in the other continents, that it is a good reproductive health program that will reduce fertility, within the principles of human rights, when the population has a minimum level of education and equality of gender to take informed decisions of their own.

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