

Demographic transformations and inequalities in Latin America

Historical trends and recent patterns

Latin American Population Association – ALAP

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organizer

1st. Edition
Rio de Janeiro, Brazil
2009



United Nations Population Fund

1994 - 2009
CIPD/15 Conferencia internacional sobre
la población y el desarrollo



First edition, 2009, Rio de Janeiro, Brazil

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ISBN 978-85-62016-07-3

Administrative Secretary: Rua André Cavalcanti, 106, sala 502, Bairro de Fátima. Rio de Janeiro. RJ. Brasil. CEP 20231-050

Tel./Fax: +55-21-22422077, <http://www.alapop.org>.

Cover Design and Diagramming	Traço Publicações e Design – Fabiana Grassano e Flávia Fábio Assistent: Carlos Fábio
Idiom Reviewer Part III	Geoffrey Fishwick
Cover illustration	Shutterstock Images

Printed in São Paulo, Brazil by Mundo Digital Gráfica e Editora

D383

Demographic transformations and inequalities in Latin America / Organization of Suzana Cavenaghi. – Rio de Janeiro: ALAP, 2009.

368 p.

Includes bibliographies.

ISBN 978-85-62016-07-3.

1. Demography – Latin America. 2. Migration. 3. Fertility. 4. Family Planning. 5. Aging. I. Cavenaghi, Suzana. II. Latin America Population Association.

CDU: 314(8=6)

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Presentation

Presentation

This book is part of ALAP's research series (*Serie Investigaciones*) that was created in 2008 as a means to disseminate the knowledge gained in the conferences and seminars organized by the Association. With the support of the United Nations Population Fund (UNFPA), we have already published seven (7) volumes of this series covering a variety of topics such as migration, aging, reproductive health, poverty and vulnerability, family and the environment. This volume, which brings together papers on most of these topics, is the first to be published in English. All the subjects analyzed here serve as a basis to accomplish more equitable human development and are part of the concerns expressed in the Programme of Action from the International Conference on Population and Development (ICPD) of 1994. In 2009, as part of the celebrations to mark the 15th anniversary of this conference, once again with the support of the UNFPA, which ALAP greatly acknowledges, we are publishing this volume whose commitment is to further advance in the topics of the conference. We are also indebted to all authors that agreed to put in the required effort to make this publication available in so short a period of time.

The events that gave rise to the idea for this publication were the sessions ALAP was invited to organize in 2009 for the meeting of the Population Association of America (PAA) in May 2009 and for the International Union for the Scientific Study of Population (IUSSP) in September 2009. ALAP acknowledges and is enormously appreciative of the invitation received from the PAA International Outreach Committee and from IUSSP council to organize these sessions, for two main reasons. Firstly, because our Association is in its infancy and only started its activities a short while ago and the organization of these sessions and the subsequent discussion rendered the work being developed in Latin America in the field of demographics more conspicuous. Secondly, because this was an invaluable opportunity for demographers from Latin America and the Caribbean (LAC) to exchange experiences with demographers around the world expanding research

boundaries. In this sense, a sequel to these contacts provided the opportunity for an interface with other regional associations, such as the African and Asian associations. As a result, ALAP has invited these associations to organize a regional session during the next ALAP Conference and we are working together to expand the interfaces between the association's members. We expect that both the reading of this book and further developments from these joint activities might bring insights and encourage more contact and research development among demographers around the world as well as within our region, which are also in need of more comparative studies.

Suzana Cavenaghi

President 2009-2010

ALAP

Introduction

Demographic transformations and inequalities in Latin America

Demographic transformations and inequalities in Latin America

Suzana Cavenaghi

The Latin American demographic dynamic has changed profoundly over recent decades. By looking at the trends and levels of some indicators we can predict more important shifts in the future. The consequences of these past and current changes will unquestionably affect Latin Americans' lives, all the more so now they are bonded to global transformations and facing harsh climate change. The region is recognized as the most unequal, economically speaking, and the differences in trends and levels of almost all demographic indicators closely reflect the enormous inequalities in scenarios of high rates of poverty. On the other hand, there has been a lot of progress in several areas and most of this progress has a direct or indirect effect, brought about by the demographic transformations. These demographic transformations and current inequalities offer major challenges to planners and policy makers and demographers have to be up-to-date to inform correctly about the trends, levels and relationships among all the socio-demographic issues. This book *Demographic transformations and inequalities in Latin America: Historical Trends and Recent Patterns* deals with some of these issues, analyzed by experts in each topic. But before proceeding any further, as everything else in life, it is crucial to share some stories behind the scenes that gave rise to this book.

The original idea of bringing these topics together in the book, as mentioned previously, came from discussions that took place following an invitation ALAP received from the Population Association of America (PAA) and the International Union for the Scientific Study of Population (IUSSP) to organize sessions at their conferences in 2009. For these sessions, we had a limitation on the number of subjects to bring to the discussion, but they were chosen based on certain premises. First and foremost, the topics were selected with the purpose of creating an opportunity for members of the associations to learn more or follow up on important demographic

changes happening in Latin America and the Caribbean (LAC). Additionally, and it comes as no surprise to many scholars, most LAC countries had received a seal of “graduation” for funding purposes and accordingly the support for research, for building capacity and for other programs of actions had almost evaporated in no time, hence we would like to illustrate with the current demographic situation why this loss of funding would pose a problem in the future, faced with the still frail and unconsolidated institutions we have in our member states. Moreover, if nothing else, LAC history and the path it has followed in its demographic dynamics, on the one hand, would show and serve as a good example of the considerations policy makers and others must take into account in order not to repeat the same mistakes in other regions. On the other hand, it would enable us to learn more about the policies and processes experienced in the region, looking mainly at the real needs of the population. With that in mind, we proceeded to organize these two sessions, for which we very much appreciated the insights and broad experience of Dora Celton, President of ALAP at the time.

Firstly, we realized that it was important to show the trends in fertility and contraceptive use in LAC, since it was commonly believed that fertility and contraception were no longer crucial issues for Latin American families. Nonetheless, it was important to stress, amongst other things, that although fertility was reaching replacement levels in several countries, some were still lagging behind; that even within low fertility countries there are large socio-economic and regional differences in the level of fertility; that the fertility schedule is very different when compared to developed countries’ fertility schedules and it poses enormous consequences and still needs to be explained; that the burden of regulating fertility still falls on the woman, even more so in contexts of very low fertility, also posing major gender issues; that access to contraception has not yet been adequately regulated and the consequences of misuse or lack of use has been devastating for women who wanted no more children, forcing major issues of public health due to unsafe pregnancy interruption. Moreover, the population was experiencing all these events at the same time as large sections of the population were already facing the demographic challenges of below replacement fertility. In order to discuss all these issues, we organized a session on *“Fertility, Contraception and Reproductive Health in Latin America”*, presented at the PAA Meeting in April 2009 in Detroit. All the papers presented at this session are in Part II of this book. The session was commented by Jose Miguel Guzmán, who made an excellent suggestion concerning the provision of information on family planning policies in different countries and compared it to the results in fertility level, fertility schedule and distribution of contraceptive use in these countries. Although this was a challenging suggestion, we carried out part of it for the publication of this book by

inviting reproductive health specialists from a large number of LAC countries, to write a brief account of the family planning laws and practices of the last 40 years in their respective countries. The results of this endeavor are shown in Part III of the book and raise very interesting issues. The relationship among each family planning context, the current context of fertility levels, schedules and use of contraception in each country is a major task that still needs to be addressed.

Secondly, we felt it to be commendable to put together a debate on some of the main demographic issues LAC is facing, mainly aimed at discussions on population policies and public policies to alleviate poverty and decrease inequality. Among these topics we selected urbanization and the rise of metropolises, international migration, fertility and reproductive behavior and aging to be discussed at the session organized at the IUSSP Conference in September 2009, in Marrakech. The session title was *"Demographic transformations, convergences and inequalities in Latin America: what the future holds?"* and boasted much respected specialists in the field. For the discussion of the papers, we invited an expert from outside the region, Ian Pool, from New Zealand, who has presented some very important points for discussion and has done us the honor of presenting his written comments in this book. As regards the organization of the book, we decided to present the papers from this session in Part I, although they were actually discussed later in the year, because they raise discussions on broader topics.

In brief, what are some of the points of common knowledge concerning the major demographic trends in LAC? Mainly that the demographic transition is underway and almost complete in every country. Life expectancy has increased almost to the same levels reached in developed countries. Fertility rates have declined from over six children per woman to around the replacement level in the last 40 years. At the same time, migration from rural to urban areas has created large cities with huge socio-economic heterogeneity. Changes in age structure and composition become visible very rapidly, and although there is convergence in all the demographic events in LAC at the average national level, there remain enormous inequalities. International migration is a major issue for some countries, but for most there is still only incipient movement. The papers presented in this book will emphasize some of these large demographic and urban transformations in all Latin American countries, beginning with the growing urbanization, which facilitated many other changes, and which we believe is one of the bigger challenges for the future of LA development. International migration was a second topic selected for discussion because it is an event currently experiencing profound change and may be a source of major confrontation in the future. The third topic explores the tendencies in terms of fertility rates and reproductive behavior, which

reveals the difficult road to lower fertility that women and couples have trodden to fulfill a basic right to access to reproductive health, which was so heavily stressed in the ICPD Programme of Action. This topic is analyzed in more depth in Part II and III of the book, showing some still unresolved issues. The fourth topic discussed is population aging which, in the absence of major economic transformations in the near future, has great potential to create major social problems within the current context of social inequality. We then summarize some of the issues discussed in the chapters in Part I and II and then proceed to discuss some of the main concerns unleashed by the reading of these short histories of family planning laws and practices in the 12 countries; these are concerns that must be addressed in order to achieve the full development of reproductive health in the future in the LAC region.

Part I of the book named *“Demographic transformations, convergences and inequalities in Latin America: what the future holds?”* starts with the topic of urban growth and urban mobility in the region, which confer major challenges for the future, in terms of reduction of poverty and inequality. In Chapter 1, **José Marcos P. da Cunha** and **Jorge Rodríguez Vignoli** present information and discuss issues that are related to the fact that LAC is the most urbanized among the developing regions and basically due to a large population concentration in very large cities. This fact confers some advantages all of which relate to the availability of urban services and goods, as long as we are not talking about the quality of these services, and several disadvantages, mainly related to a disorderly growth that has occurred on account of virtually non-existent expansion planning and due to migration from rural to urban areas, including massive sections of the poorer population, over the last few decades. The authors provide a diagnosis of major trends in urban growth in the region as a whole and, pointing to the cases of the larger cities, they draw attention to the need for specific public policies designed to tackle the obstacles that cause large sections of the population to be left out of full human development and proper access to basic human rights.

In Chapter 2, the paper by **Alejandro I. Canales** focuses on international migration in the region within a contemporary global context and suggests future important transformations in the region. The author identifies and analyzes two large flows of migrants from LA. The largest, most widely studied flow to the USA, and another which has become more prominent in recent years, to Spain. These flows originate in different countries and the migrants have different characteristics, as the author points out. Although still more economically and labour-driven, the migration from LA has become larger and more diverse. As the author states, international migration is not only intensifying but it is also becoming more extensive and the

analysis of these two flows reveals important new trends. Several other migrant destinations from LA can already be seen, but more importantly, some LA internal flows are also becoming visible and this points to future transformations that are knocking on LA's door and are the consequences of transformations in the region, but it is mainly due to the lack of economic transformations leading to development that does not accompany the demographic transformations. To follow these new transformations, though, we need to produce data which is adequate, reliable, and as accurate as possible, which is still a major challenge to data producers since it is a very complex event that needs international cooperation in order to produce comparable information.

In Chapter 3, **Laura Rodriguez Wong** revisits a well documented trend in Latin America, since it has been the center of demographic attention in recent decades, namely fertility rates. Rodriguez provides a very good summary of the different characteristics and trends in fertility decline in Latin America that have been attracting the attention of many scholars; these include the high rates of adolescent fertility, the socio-economic inequalities through to adequate contraceptive access, the high rates of unwanted fertility, and the high incidence of unsafe abortions. The author draws our attention to the different durations of demographic transition in some countries and to the importance of taking this into account in public policy implementation. The author anticipates an even steeper decline in fertility in the region, which will extend the duration of the relative demographic advantages, economically speaking, due to the age structure of the population, but warns that the burden of the aging process will be heavier if no economic measures are advanced. This leads us to consider that fertility decline imposes some challenges for the future due to age structure transformations, but it also brings with it some advantages such as having smaller cohorts of young population, and this has to be brought into the policy agenda. We would add that, if population age structures matters for policy implementations, the volume of population in each age group also matters, and in some local contexts it matters even more than the relative age distribution for specific policy design and implementation. As the author asserts *"having more time experiencing low TDR [total dependency ratio] due to the lessening in the volume of live births is an opportunity to optimize use of resources, whatever they may be"* (p. 126).

The process of population aging in LA is discussed in Chapter 4 by **Gilbert Brenes-Camacho**. This subject imposes major challenges for some LA countries in the future, due to the speed of the demography transition and, as a consequence, the short period of time in which the older population will grow in relative and absolute numbers. The author discusses these challenges, showing the differences between

countries and goes on to make some policy recommendations, mainly regarding social security coverage, where LA is facing serious problems at the present time due to its design and also to unusually large participation in the informal labour market, amongst other issues. Yet again, it is important to mention that the aging process in LA is not unique in the world, but what it is very specific is that aging is already happening, and will happen faster, in a context of a very unequal society, where access to education, health, job markets and many other social and cultural human rights are denied to large sections of the population.

In Part II of the book, the papers are mainly related to fertility and contraceptive use. This part was named after the PAA session *"Fertility, Contraception and Reproductive Health in Latin America"*. Chapter 5, by **Suzana Cavenaghi** and **José Eustáquio Diniz Alves** show a panorama of fertility transition from the mid-1980's to the most recent data in the current decade and the method-mix of contraceptive use in several LA countries. The authors draw attention to the fact that fertility decline and the increased use of modern methods has occurred in diverse settings, or in their own words *"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"* (p., 162). Additionally, the authors draw attention to the fact that the uncompleted implementation of comprehensive reproductive planning left out not only the poorest in the population but also young women. Although the current use of contraception is high in almost all countries, with some exceptions, first use mostly occurs after the first experience of sexual intercourse and most often after the first pregnancy or live birth, leading to a high prevalence of mistimed births, as well as the interruption of pregnancy, by unsafe or safe abortions. Another important trend observed, relating to the previous statement, is the occurrence of a very young pattern of fertility schedule even in countries that are well advanced in fertility transition.

An excellent picture of the rates of unwanted and wanted births is presented in Chapter 6 by **John B. Casterline** and **Jennifer A. Mendoza**, providing a variety of indicators with historical trends and the most recent patterns for all LA countries that have data available. The figures are shockingly high even for countries that have already arrived at lower fertility rates. The authors conclude that, overall, one third of births are unwanted although there is large variability amongst countries. The pattern in general shows that the unwanted rates are higher where total fertility rates are higher, corroborating the analysis presented in the paper by Cavenaghi and Alves that contraceptive use, mainly the modern and most effective ones, are not within the reach of all socio-economic classes and all age groups. Another important

feature discussed is that recent estimates of wanted total fertility rates are all below replacement level, without any exceptions in these countries, which amounts to more than 70% of the population in the region. Hence, it is not hard to conclude that, if reproductive rights were achieved for all groups, LA total fertility rates would already be below replacement level.

In Chapter 7, **Luis Rosero-Bixby**, **Teresa Castro Martin** and **Teresa Martin Garcia** show a new trend already observed amongst very educated women concerning fertility preferences. At first glance, the title of this chapter (Is Latin America starting to retreat from early and universal childbearing?) would seem to be somewhat incongruous when set against the reproductive picture portrayed in the previous chapter, because it looks for and finds patterns of women retreating from motherhood. However, it merely illustrates the variety of behaviors and different sets of issues in the demographic transformations in the region. While access to reproductive health is still not within the reach of women who want to have only a few children or who want space between births, already significant portions of the population do not want to have any children. As the authors discussed, there are a lot of constraints that may explain the tendency for women to retreat from motherhood amongst the very well educated (college educated or higher) and gender inequalities, at all levels, largely account for explanations for this behavior. This new transformation in the demographic arena, together with larger proportions of women desiring to have only one child poses major challenges for some LA countries in the future.

In Chapter 8, **Maren Andrea Jimenez** and **Jorge Rodriguez Vignoli** present a careful and outstanding exploration of the set of reproductive health indicators for monitoring the Millennium Development Goal for the universal access to reproductive health. The authors contend that, though including this target was a great improvement on the previous targets, the indicators used for monitoring reproductive health are still limited. The authors explore and propose some indicators that should be monitored but recognize that the challenges imposed by data limitations are serious and have to be overcome. Among many other very interesting analyses, the authors conclude that the social and economic inequalities in LA, the limited access of the young population to reproductive health and the omission of men in reproductive matters are barriers to achieving comprehensive access and the exercise of reproductive health in the region.

Part III of this book brings a very interesting set of short stories about family planning policies, legislation and practices, as told by specialists in reproductive health across the region. The stories include countries in different stages of fertility transition but most tell of a similar trajectory in the implementation of norms and laws that could guarantee full realization of reproductive rights. The first general

observation that may be made, concerning these 12 countries, is that the legal implementation of family planning is recent, although fertility transition started on average 40 years ago, and in most countries these laws are not fully implemented in practice or did not have an effective guarantee of reproductive rights, because among other reasons, the laws do not cover all segments of the population, or they omit some contraceptive methods, or do not include conception as well as contraception, or because it is very recent¹, with less than 3 years of regulation, or a combination of these factors. The second, more generalized comment that may be made is that, in most countries, the State has not taken responsibility for offering contraception and conception methods (Costa Rica is a fine exception for contraceptive methods as is Cuba, due to the political regime), or limited the types of contraception offered, and instead, non-governmental organizations took the place of the State, at least at the beginning of fertility transition. The third comment and one that causes most concern is that, looking at the path that each country has followed, it becomes clear that national institutions or organizations responsible for the implementation, regulation and monitoring of the laws or norms are very weak and there is no assurance that it can endure economic or political crises.

A complete reading of these stories is worthwhile, hence we do not go into detail about specific aspects of the various countries here, only some general notes are required. Firstly, it is interesting to find out about the situation in Argentina and Uruguay, which at the beginning of the 1960's already had low rates of fertility compared to other countries in the region. It is remarkable to note that access to modern contraception in these two countries had been so strict and the biggest burden was on the population to regulate its own fertility, frequently having to resort to abortion. Moreover, in Argentina and Uruguay, the implementation of laws to regulate family planning access took a longer time than in the other countries that economically or politically were lagging behind in the 1970's and 1980's. Cuba is somewhat different, mainly due to the political regime and the fact that abortion was performed in government institutions, although it was not legally regulated for many years. There are only a handful of countries where the private sectors or NGOs can be identified as being the pioneers in family planning (Panama, Venezuela, Peru, Brazil, Paraguay, Colombia, Honduras), however they differ in terms of the path subsequently followed, where some saw the State taking a large part of the responsibility for providing family planning (as in the first three countries mentioned), others have relied on the private sectors, mainly pharmacies (Brazil and Paraguay), and others are still very dependent on the NGO's and other private

¹ Or proper regulations are still lacking, as in the case of Haiti.

organizations (Colombia and Honduras). In Costa Rica, as mentioned previously, the government took action from the beginning of fertility transition not only to provide contraception, but also had norms and legislation regulating access. The case of Haiti is somewhat different, even recently the country has seen a very complicated situation regarding family planning programs, lacking State action and policies and enjoys scant participation by the NGOs, and only more recently has it invested more effectively in family planning. The common thread though is that the most needy population in these countries have an unfulfilled need for family planning that cannot be ignored in the future.

The richness of each chapter of the book will, at the same time, show very important aspects of demographic changes and some challenges to overcome in the region, and we expect that it will instill in the reader the desire to find out more about what will happen to our region in the future. As drawn to our attention by the comments of Ian Pool, the word transformation describes very well what has happened to Latin America in the last 40 years. Compared to the world's transformations in regard to population, we can add the adjective "rapid" to this. We believe that this fact makes LA demographic transformations an even bigger challenge for policy makers. To make it even more difficult, the different pace and timing of these transformations by socio-economic groups result in different responses government and institutions have to deal with in order to be more effective in diminishing the differences. Demographers are urged to collabourate and should be willing to participate more closely in public policy diagnoses and implementation and monitoring of programs that allow for human development in a fairer world.

Parte I

Demographic Transformations, Convergences and Inequalities in Latin America: what the future holds?

Urban growth and mobility in Latin America¹

José Marcos P. da Cunha²

Jorge Rodríguez Vignoli³

Abstract Latin America (LA) is the most urbanized region in developing world. This is not due to a statistical fiction, but to an actual agglomeration of its population in cities, many of them very large (1 million or more inhabitants). This feature has at least two consequences. On one hand, many indicators of the Millennium Development Goals (MDGs) provide a greater degree of progress in comparison with other regions in developing world. Considering the nature of these goals, concentration in cities facilitates the achievement of the MDG's. On the other hand, for LA countries, it is in big cities or metropolitan agglomerations where social problems are more complex, and also where we can find the largest concentrations of poverty. Despite some empirical hypotheses of demographic and economic decentralization from large urban agglomerations, these areas still remain the arena of the greatest challenges facing our societies. Accordingly, monitoring MDGs indicators in the region should be segmented by area of residence (rural and urban) and city size. Thus, further analysis taking into account differences within metropolitan agglomerations, must be considered. Historically, migration has had a central role on the demographic growth of LA cities; therefore, an understanding of changes in trends of the spatial distribution of the population must include a detailed analysis of migration. By studying migration processes it is possible to understand, at least in part, the consequences of the intense process of urbanization in LA countries. Indeed, the phenomena of metropolitanization (or demetropolitanization as suggested by some authors) to some extent, is a reflection of migration dynamics. The same can be said regarding internal problems of the metropolitan areas. Hence, based on censuses data for some key Latin America countries, this paper will provide evidence on several of these issues and draw attention to the challenges of measurement, analysis, and public policies involved.

¹ Paper presented at the XXVI IUSSP International Population Conference, Session 143 (Demographic transformations, convergences and inequalities in Latin America: what the future holds? - Latin American Population Association), September 27 to October 2, 2009, Marrakech, Morocco.

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Introduction

The urbanization process in Latin America (LA) - or at least in a significant part of the region - was accelerated in the early 1950's. The impulse came from transformations in both society and economy resulting from an industrialization strategy promoted by the governments from most LA countries. This strategy was named "internal development" or "import substitution", although most recently a newer - in our opinion a more acute term has been developed "*State led industrialization*" (Ocampo, 2001: 8). This strategy promoted urban activities (industry and services) and favored "modernization" of countryside investments. Both changes involved a dynamic economic growth in cities and the creation of a large workforce surplus in rural areas of countries.

This urbanization process has different characteristics from those achieved in the current developed countries, in which urbanization, industrialization and economic development were concomitant and synergistic. Although, industrialization has contributed to Latin America's modernization and has facilitated social achievements that positioned the region in compliance with most of the MDG's requirements, its progress was detached, at least partially, from an economic, social and institutional progress such as the one experimented by the current developed countries. On the other hand, this minor development involved a cumulative deficit in infrastructure, resources and regulations that caused the urbanization and Latin American cities' functionalities be marked by poverty, precariousness, informality and anomy. The 1980's were particularly hard to cities in the region, since adverse effects of "structural adjustment" policies carried out during this period in response to the "debt crisis", were concentrated on them. The adjustment impact was such that, by the end of that decade and the beginning of 1990's the levels of urban poverty had increased considerably and a number of cities faced critical conditions (Rodriguez, 2002, Cunha, 2002). However, the past 15 years have been less severe to cities, dismissing the catastrophic projections made at the beginning of the 1990's (urban and metropolitan "apocalypse"), even though these cities still record a complex accumulation of problems and weaknesses.

One of the factors that contributed to attenuate the pressure on cities and metropolises was the demographic change. In fact, until the 1980's, accelerated metropolitan growth seemed unstoppable. However, from the beginning of the 1990's doubts emerged on its continuity. Furthermore, some researchers suggested that the reduction of the pace of spatial concentration of the population and economic production be sustained, but without a significant loss of the importance of metropolises (Rodriguez and Martine, 2008; Cunha, 2002; Rodriguez 2002).

The changes in migration patterns, in particular internal migration, were fundamental to this moderation of the process of metropolitan growth. On one hand, there was a strong reduction –although not reversal, since net migration from the countryside persists – of rural to urban migration. On the other hand, and perhaps most importantly, internal migration no longer predominantly operates at the level of large regions (or, from here on forward referred as, MAD: Major Administrative Divisions), but instead primarily consists of the exchange between municipalities (referred to in this article as MIAD: Minor Administrative Divisions) within the same MAD. Likewise, it seems that the crisis that ravaged Latin American metropolis in the 80's and 90's also led to an increase in the relevance of return migration.

The data analysis presented in this study suggests that in terms of urban population share, the most populated regions or the most influential in Latin American countries – in general, the regions where the national capitals are located - have experimented losses, but it is difficult to support that Latin American cities system are facing a significant demographic decentralization process. Regardless, this study demonstrates that important changes do exist and a more complex city system is emerging as well as a more diverse migration pattern.

Urbanization and its demographic reality

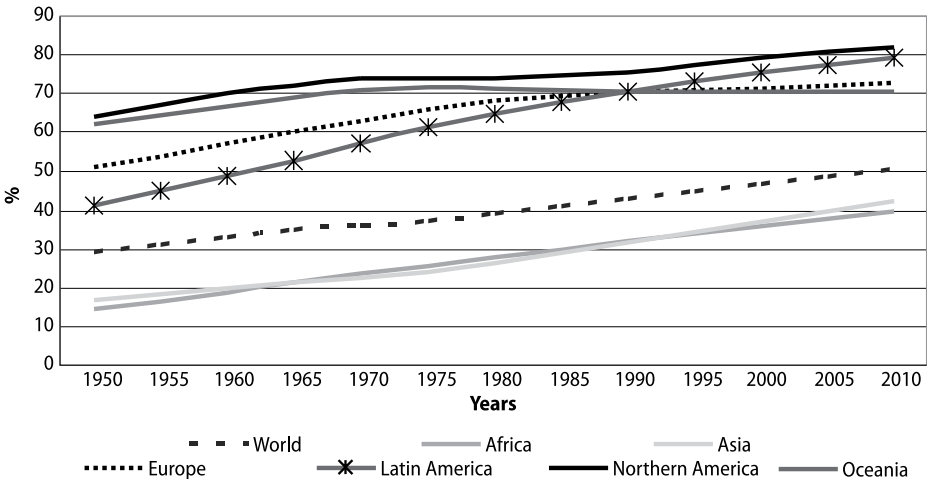
Latin America and the Caribbean⁴ is the world's most urbanized developing region. This is due to a real migration revolution that occurred during the last seven decades of the 20th century. In fact, 1950's levels of urbanization in Latin America and the Caribbean were lower than those registered in developed regions (North America, Europe and Oceania). In less than 40 years, the region reached urban levels of Europe and Oceania, thanks to rural exodus which generated an explosive urban growth. Subsequently, in the past 20 years, urban growth slowed down due to demographic transition and the reduction of emigration from the countryside. Nevertheless, rural exodus has continued, and so has urbanization. Currently, 80% of the region's population is urbanized, a level surpassed only by Northern America, as can be seen in figure 1.

Expressions such as over-urbanization and hyper-urbanization have been used to describe the region's high levels of urbanization without accompanying the level of economic and social development typical of industrialized countries (Rodríguez

⁴ The term Latin America and the Caribbean refers to the 42 countries and territories identified by LACDC as comprising the region. The term Latin America refers to the 20 countries identified by LACDC as making up the subregion (17 on the mainland and three Caribbean island territories: Cuba, Dominican Republic and Haiti). For further information, see LACDC (2005a) or Guzmán et al. (2006).

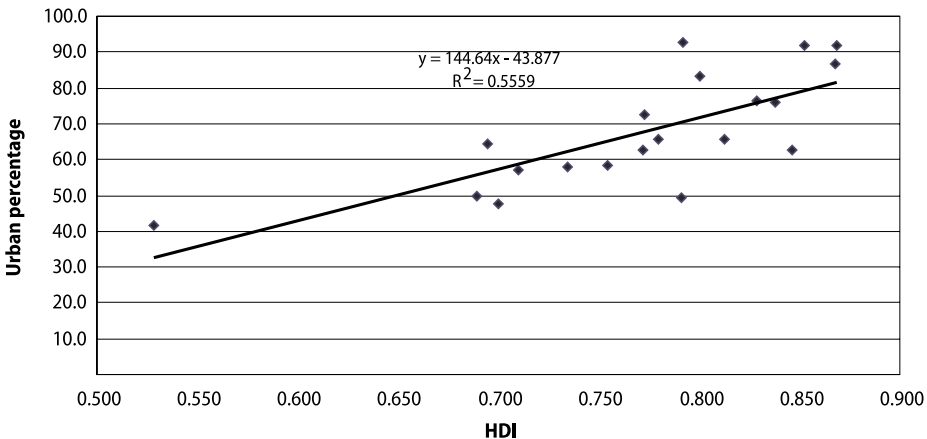
and Martine, 2008). Although it cannot be questioned that the region is quite below the developed regions in terms of per capita income, productivity and poverty, the over-population hypothesis can lead to an erroneously negative evaluation of the Latin American urbanization. In fact, the region demonstrates a positive relationship between urbanization and development, as illustrated in figure 2. Indeed this figure shows that, on average, the most urbanized Latin American countries tend to present higher levels of human development.

Figure 1. World and regions: percentage of the population in urban areas, 1950-2010



Source: 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 2007 Revision, <http://esa.un.org/unup>.

Figure2. Latin America (20 countries): HDI and Urban percentage, 2005



Source: LACDC (www.cepal.org/celade) and UNDP (www.undp.org).

On the other hand, the lack of an official definition of “urban” in the region (Cohen, 2006) raises some doubts as to the validity of this high urbanization level, since this high urbanization level may be the result of a “statistical fiction”. However, in purely demographic terms, Latin American urbanization is undeniable. The evidence for this comes from data monitoring the diversity of national definitions of “urban”, which identify undeniable urban localities in order to avoid problems of consistency in comparisons (Montgomery et al., 2004). Calculations for a group of 18 countries in the region with data from 2000 round of censuses,⁵ indicates that 62% of the region’s total population and 81% of urban population were living in cities with 20,000 or more inhabitants (CELADE-Population Division of ECLAC, 2007).

Urbanization has continued to advance even though the development model changed to one that has granted more economic leadership to rural areas. In effect, the latter is the *locus* of primary product production for world exports, precisely the engine of the model of openness and deregulation imposed in the 1980’s. In spite of this, rural population has been shrinking in absolute terms since 1990. Given this population’s natural growth, there seems to be a significant net rural emigration (specific evidence on the scale of net migration from the countryside will be provided in a subsequent session). It is therefore possible to conclude that the new development model has not increased the population’s growth rate in rural areas. This should come as no surprise, as the region had already experienced agricultural modernization processes that resulted in migratory outflows between 1940 and 1980 (Alberts and Villa, 1980). Although there has been an agricultural revival since mid-1980s- expressed in a slight increase in added value from agricultural production within total GDP (ECLA, 2005) and a steady share of the total GDP between 1990 and 2008 (ECLAC, 2009, BADECON link <http://www.cepal.org/estadisticas/bases/>). This has mainly been based on large farms and forestry industry that tend to push out traditional farming. Furthermore, the labor demand of these industries is highly seasonal, and is therefore, often met by urban workers (LACDC, 2005b).

Thus, there are no signs of counter-urbanization in the region, or does this seems likely to be triggered by productive activities. As in Europe, if counter-urbanization were to occur, it would be the result of housing related forces promoted by technological progress, improved infrastructure and connectivity, and changes in population’s structure and people’s purchasing power (Gans, 2007; Ferras, 2007). In other words, an eventual return to the countryside would not represent a return to agriculture, but rather a decision to combine the quality of life in rural settings

⁵ Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominican Republic Ecuador, Guatemala, Haiti, Honduras, Mexico, Nicaragua, Panama, Paraguay, Bolivarian Republic of Venezuela and Uruguay, which combined represent 95% of the region’s current population.

with the employment, education and leisure opportunities in nearby urban areas. Moreover, it is difficult to conceive of a high quality life in the region's rural areas, as long as social indicators remain below those of urban settings (LACDC, 2007 and 2005b).

In summary, the argument on the validity of the level of urbanization in Latin America is unnecessary from the demographic point of view; however, the discussion on the form of this process is totally valid, particularly the structure of the city system and the configuration of its metropolises (inside and its surroundings). Both topics will be discussed in the following sections.

Notwithstanding, to accept the urbanization process as an irreversible feature in the region, does not imply that rural areas should be forgotten. In particular, in some Southern American and in most of Meso-American and Caribbean countries, this areas are still socioeconomically and demographically very relevant. Additionally, there is an extensive amount of literature produced in relation to new forms and characteristics of rural social and economic systems; as well as the increasing interconnection between urban and rural areas.⁶ Although there is an intense debate related to this topic, there is consensus (some of which is not recent) between those who highlight the existence of a rural - urban gradient and not a dichotomy, the emerging urban life in rural environments due to higher residential density and built landscape, and the formation of complex habitats that integrate rural and urban environments; similarly, the current Latin American countryside vision significantly differs from that of the past (associated with traditionalism and neglect) even though it's quality of life indicators are inferior to those in cities.

(De)Concentration, (De)Metropolitanization, Concentrated Deconcentration: What is Latin America's Situation?

Background

In general, globalization and productive restructuring trigger changes in the distribution of productive activities in geographical areas producing significant effects on the pattern of population settlement and migration flows. This topic has been considered by several researchers, although from different perspectives, such as the following: Sassen (2007 and 1991); Wong-Gonzales (1990); Harvey (1993); Benko (1996); Castell (1999); Yusuf, Evenett and Wu (2000).

⁶ The "new rurality" debate and its relation to urbanism is an open discussion and has been the subject of many researchers. Please refer to: Ruiz and Delgado, 2008, Hugo et al. (2001), Hayami, (2000), Silva (1997 and 1999), Cunha and Rodríguez (2001)

This research does not aim at providing a detailed debate on the impact of productive deconcentration itself. However, it is important to highlight some of the important points of this discussion. A study on Latin American urban characteristics showed that there is a broad and complex discussion on the existence of a deconcentration process in the region (Cunha, 2002). The same analysis pointed out that although some studies and evidence existed on the impact of globalization and productive restructuring on the decentralization process of economic activity and the spatial distribution of the population in countries such as Mexico, Chile and Brazil, there were also some indications of the contrary. Although it is true that “globalization reinforces the regional specialization strategy” (Pacheco, 1998: 257), it cannot be denied that, as Mills (2000: 69) indicates, “globalization reinforces the benefits of large urban areas”.

According to Benko (1996:52) “the different stages of the production process are located in spatial differential modes, implying its technological characteristics and the level of qualification they require. Highly technical complex activities and the executive functions are reserved to central regions, while repetitive tasks, less qualified, that requires considerable workforce, are relegated to the periphery” (free translation).

In other words, when we refer to this question, it seems that we need to consider Won-Gonzales (1990:21)’s warning that “dispersion tendencies or the concentration of, cannot be generalized” once that “they vary from one productive sector to another... and also within the different productive segments from the same sector...”. Furthermore, the author emphasizes that dispersion/concentration patterns can also vary from time to time, which demonstrates the difficulty to establish a unique pattern of the territorial impact of globalization.

What does the data tell us in this question? Has there been a demographic deconcentration in Latin America, particularly in the metropolises? Are there any indications, from the demographic point of view, of the existence of such a process? This is the point of discussion in next section.

Strengthening deconcentration

The urbanization process in Latin America has been historically linked to the formation of large urban and metropolitan agglomerations, generally, established in the main city, usually the country’s capital. Nowadays, from the point of view of the evolution of the relative distribution of the population between major administrative divisions (MAD), the fact is that there is no clear evidence of a sustained process of demographic deconcentration in Latin American countries, except for a few.

According to the systematized information taken from DEPUALC database (Spatial Distribution of Population and Urbanization in Latin America and the

Caribbean) created and maintained by LACDC (www.cepal.org/celade/depualc/) in countries like Argentina, Chile, Panama and Uruguay, over 40% of the population live in metropolitan MADs, (where the main city and/or capital is located), while in other countries of the region (like Brazil, Colombia, Ecuador, Mexico and Venezuela (Bol. Rep.)) this concentrated pattern did not exist. As it is shown further on, for many Latin America countries, the city network is much more complex and involves much more of the national territory.

It is also evident that trends of population concentration taking place in different metropolitan MADs differ. Data from Table 1 show that, between 1980 and 2000, in Chile, Costa Rica, Ecuador, Panama, Paraguay and the Dominican Republic, an increase of the relative participation of corresponding MAD was registered in national population. In the rest of countries included on table 1, there is stability in the concentration process or a slight reduction of metropolitan density.

As Cunha (2002) stated, it is in fact “premature to claim that the demographic concentration that has taken place in the region, in the past 40 years is suffering a conclusive reversion of significant proportions”. This same research underlined that “in the majority of Latin American countries, the metropolitan region (or the region’s capital when MADs were not constituted yet) still presented an equal or even larger increase than the country’s, at least up to the 80’s”. Indeed, this trend can be observed in Table 1.

It is also important to consider that even in countries where the main metropolitan region has grown slower than the national population, which is the case of Argentina, Bolivia, Brazil, Mexico, Nicaragua and Venezuela (Bol. Rep.), it does not mean that the metropolitan agglomeration phenomenon has stopped or simply disappeared. Data from DEPUALC reveals that in many countries in spite of the reduction of total increase, there are large agglomerations expanding faster than national average. For example: Cordoba, San Miguel de Tucuman and Mendoza in Argentina; Belo Horizonte, Curitiba, Brasilia, Fortaleza and Salvador in Brazil; Temuco, Puerto Montt and Antofagasta in Chile; Cali and Bucaramanga in Colombia; Guayaquil in Ecuador; Monterrey, Guadalajara, Puebla, Juarez City in Mexico; Trujillo and Arequipa in Peru; Maracay, Maracaibo, Valencia and Barquisimento in Venezuela (Bol. Rep.) (Cunha, 2002).

Consequently, empirical evidence suggests that the decreasing importance of main cities or metropolitan regions of countries cannot only be substantiated on demetropolitanization, demographic deconcentration; or the so called counter-urbanization as defined by developed countries. Gradual loss of importance of the greatest metropolises within the national population is not such a relevant phenomenon; however, the most interesting fact has happened in other agglomerations of smaller size, which have undergone a considerable population increase.

Table 1. Latin America and the Caribbean: Distribution of the population according to Metropolitan MADs and the rest of the country; and the average growth rate per year of the national population, Metropolitan MADs and the rest of the country, 1980-2000

Country	Census round			Annual growth rate (per cent)		
Province/State/Region						
Region Metropolitan/Region/City	1980	1990	2000	1970-1980 (*)	1980-1990	1990-2000 (**)
Argentina	100.0	100.0	100.0	1.8	1.6	1.1
Province Buenos Aires + Federal Capital	49.3	47.7	45.8	1.6	1.2	0.7
Federal Capital	10.5	9.1	7.6	-0.2	0.1	-0.7
Rest of the country	50.7	52.3	54.2	2.0	1.9	1.4
Bolivia	100.0	100.0	100.0	1.6	2.1	2.9
La Paz Province	29.6	28.4	28.4	1.7	1.6	2.4
La Paz	17.4	17.2	17.2	3.2	2.7	2.7
Rest of the country	70.4	71.6	71.6	1.6	2.3	3.1
Brazil	100.0	100.0	100.0	2.5	1.9	1.6
State of São Paulo	21.0	21.5	21.8	3.5	2.1	1.8
MR de São Paulo	10.2	10.1	10.1	4.7	1.8	1.5
Rest of the country	79.0	78.5	78.2	2.2	1.9	1.6
Chile	100.0	100.0	100.0	2.0	1.6	1.2
Metropolitan Region of Santiago	38.1	39.4	40.1	2.6	2.0	1.4
Santiago	34.9	35.8	35.7	3.4	1.9	1.3
Rest of the country	61.9	60.6	59.9	1.7	1.4	1.1
Colombia	100.0	100.0	100.0	1.6	2.2	1.9
Depto de Cundinamarca + Special District of Santa Fé de Bogotá	19.3	19.9	21.7	2.4	2.6	2.6
Bogotá	14.8	15.8	17.5	3.0	3.0	2.8
Rest of the country	80.7	80.1	78.3	1.4	2.1	1.7
Costa Rica	100.0	100.0	100.0	2.4		2.9
San José Province	36.8	35.3	35.3	2.3		2.6
San José	25.1	27.1	27.1	3.7		3.4
Rest of the country	63.2	64.7	64.7	2.4		3.0
Ecuador	100.0	100.0	100.0	2.8	1.5	2.0
Pichincha Province	17.0	18.1	19.8	4.3	2.0	2.8
Quito	10.6	11.4	11.6	4.7	2.0	2.2
Rest of the country	83.0	81.9	80.2	2.5	1.4	1.8
El Salvador	100.0	100.0	100.0		1.7	0.8
Depto de San Salvador	20.6	29.5	27.3		3.3	0.2
San Salvador	20.6	29.5	27.3		3.3	0.2
Rest of the country	79.4	70.5	72.7		1.1	1.0
Guatemala	100.0	100.0	100.0	2.0	2.5	3.8
Depto de Guatemala	21.7	21.8	22.6	2.1	2.5	4.3

(continue)

(continued)

Country	Census round			Annual growth rate (per cent)		
Province/State/Region						
Region Metropolitan/Region/City	1980	1990	2000	1970-1980 (*)	1980-1990	1990-2000 (**)
Guatemala	19.3	19.0	19.1	1.8	2.4	3.9
Rest of the country	78.3	78.2	77.4	2.0	2.5	3.7
Honduras	100.0	100.0	100.0		4.4	2.9
Depto Francisco Morazán	17.1	18.4	18.1		5.1	2.8
Tegucigalpa	10.3	12.7	12.5		6.4	2.8
Rest of the country	82.9	81.6	81.9		4.2	2.9
Mexico	100.0	100.0	100.0	3.3	2.0	1.8
Federal District and the State of Mexico	24.5	22.2	22.3	4.4	1.0	1.9
Mexico City	21.0	18.6	18.0	4.5	0.8	1.5
Rest of the country	75.5	77.8	77.7	3.0	2.3	1.8
Nicaragua	100.0	100.0	100.0		3.6	1.7
Depto de Managua	25.1	24.6	24.6		3.4	1.4
Managua	19.8	19.2	19.2		3.4	1.4
Rest of the country	74.9	75.4	75.4		3.6	1.7
Panama	100.0	100.0	100.0	2.4	2.6	2.0
Panama Province	44.8	46.0	48.9	3.4	2.9	2.6
Panama	33.8	36.3	43.0	3.0	3.3	3.7
Rest of the country	55.2	54.0	51.1	1.6	2.4	1.4
Paraguay	100.0	100.0	100.0	2.4	3.2	2.2
Depto Central (including the District Capital de Asunción)	31.4	32.9	36.3	3.1	3.7	3.2
Gran Asunción	27.1	28.3	31.0	3.3	3.7	3.1
Rest of the country	68.6	67.1	63.7	2.1	3.0	1.7
Dominican Republic	100.0	100.0	100.0	3.1	2.2	1.8
National District	27.6	30.1	31.9	6.0	2.9	2.5
Santo Domingo	23.4	22.1	25.1	6.3	1.7	3.3
Rest of the country	72.4	69.9	68.1	2.2	1.9	1.5
Uruguay	100.0	100.0	100.0	0.6	0.6	0.3
Depto Montevideo-Canelones	56.7	56.5	55.9	0.7	0.6	0.2
Montevideo	51.1	50.3	47.4	0.8	0.5	-0.4
Rest of the country	43.3	43.5	44.1	0.4	0.7	0.5
Venezuela (Bol. Rep.)	100.0	100.0	100.0	3.1	2.5	2.2
Federal-Miranda District	24.1	22.0	19.4	2.5	1.4	1.1
Caracas	18.2	15.3	12.5	1.9	0.5	0.3
Rest of the country	75.9	78.0	80.6	3.3	2.8	2.5

Source: LACDC, DEPUALC.

(*) For Bolivia, Honduras and Nicaragua, the data period is 1970/90 considering that the 1980 census was not carried out.

(**) For Costa Rica, the data period is 1980/2000 considering that the 1990 census was not carried out.

Although this topic deserves more profound research, this first look shows that there are not clear signs of the counter-urbanization phenomenon as in Europe and the United States (Champion, 1998). Although in the last decades some countries

like Brazil, Costa Rica, Guatemala, Nicaragua, Cuba, Mexico and Venezuela (Bol. Rep.), experienced a slight degree of demographic deconcentration towards other regions, the metropolitan phenomenon is still alive and predominant in the regional scenario.

In summary, Latin American countries tend to present a characteristic concentration of population in big cities, as it will be discussed further on; therefore, this feature is not likely to suffer any noteworthy modification whatsoever.

Demographic primacy in the big cities

Historically speaking, urbanization in Latin America has been concentrated in large cities characterized by a population growth above national average and a disorderly physical expansion (Guzmán et al., 2006). Indeed, until 1970's, urbanization and concentration in the largest city (or in the two largest cities like in Brazil, Ecuador and Honduras) used to be an overlapping phenomena in most countries of the region. As in the case of urbanization, the internal development and overinvestment models centered in the main city were held responsible for the fact that Latin American urbanization accumulated in only one or two cities (Alberts and Villa, 1980).

Meanwhile, the change of the development model generated expectations of deconcentration (Cunha, 2002). This came across with several other processes taking place since the 1980's, namely decentralization, industrial reallocation, downsizing of public apparatus (concentrated in the main city), signs of crises in major cities and a series of public policies aimed at promoting such deconcentration (LACDC, 2005a; Dupont et al., 2002).

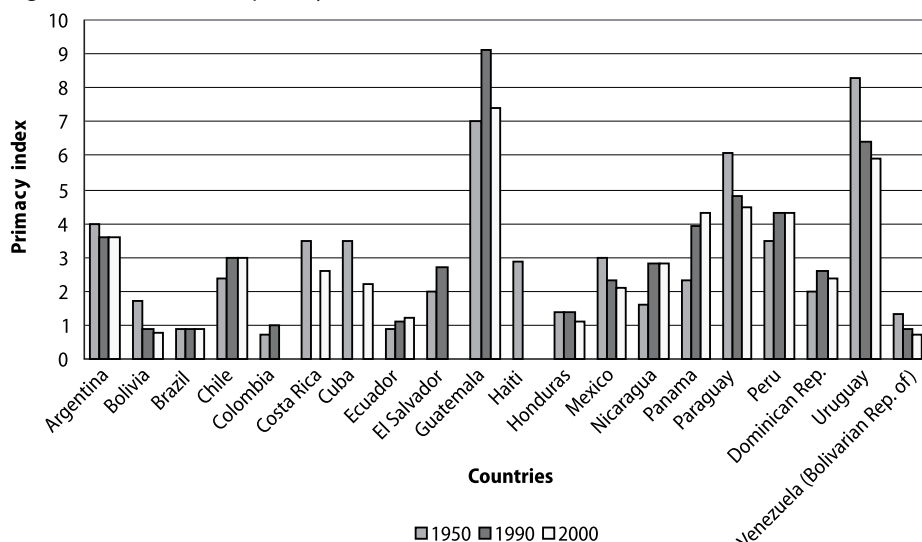
The evidence available suggests that these factors have had an impact, as the trend for higher demographic dynamism in the main city is on the wane. Although it is not yet clear, whether large cities account for a smaller proportion of the total population; they are definitely losing significance in terms of urban areas. The primacy ratio⁷, from the last census period, indicates an increase in only two countries and a decline in the majority of cases, sometimes significantly; and in some other cases, it switches the historic upward trend of the main city's power of attraction (figure 3). Nevertheless, this fact does not end the discussion, since a few researchers have claimed that the drop of the demographic growth in big cities is the result of the expansion influences towards urbanization. Whereas, this feature is not recognized by the traditional geographic definitions of big cities – which have remained obsolete not applying new large-scale interactive patterns of megalopolises and

⁷ The ratio of the population of the largest city over the population of the next three largest cities combined.

millionaire cities – the reduction of the primacy ratio, could be a statistical fiction then. Furthermore in this research, this issue will be discussed and analyzed with the hypothesis of “concentrated deconcentration”.

The traditional pattern of urbanization concentrated in one or two major cities has made permanent effect in the region in addition to worldwide scale impact of the high primacy ratio present in the majority of these countries. Among the resulting consequences are the extensive number of megalopolises that are now located here⁸, and the large proportion of the population living in cities with over one million inhabitants.

Figure 3. Latin America: primacy index, 1950, 1990 and 2000



Source: DEPUALC database. (www.cepal.org/celade/depualc/).

The data on table 2 indirectly show that most countries have a network of large-sized cities that cover a significant part of the nation's total population. In fact, it is perceived that cities with 500 thousand inhabitants or more represent, in percentage, more than a third of the countries involved. As previously pointed out, in large countries like Argentina, Brazil, Venezuela (Bol. Rep.), places where the MAD continuously lose significance – the largest amounts of the population live in the big cities.

The table also reveals, that cities with population over 500 thousand reduce their relative importance in only a few countries. It is a fact, the cities' network in

⁸ Megalopolises are cities of 10 million or more inhabitants. In 2005, while the regional population represented 8.6% of the world population, it accounted for almost 30% of the world's megalopolises (United Nations, 2006).

Latin American countries exhibit increasing complexity as intermediary cities gain more importance; however, it is unlikely that big cities are losing their leadership in the demographic, socio-economic and political fields.

Table 2. Percentage evolution of the relative weight of big cities Latin America, selected countries 1980-2000

Country	One million or more		500 to 999 thousands		500 thousand and more	
	% in 2000	Evolution 1980/2000(*)	% in 2000	Evolution 1980/2000(*)	% in 2000	Evolution 1980/2000(*)
Argentina	40.2	-2.5	7.8	-0.9	47.9	-3.5
Bolivia	30.6	9.3	6.2	1.8	36.9	11.1
Brazil	33.6	1.8	3.5	1.1	37.1	2.9
Chile	35.7	0.8	9.8	-0.1	45.5	0.6
Costa Rica	27.1	5.3	-	-	27.1	5.3
Ecuador	29.5	3.5	-	-	29.5	3.5
Guatemala	19.1	-0.2	-	-	19.1	-0.2
Honduras	12.5	2.2	11.3	3.8	23.8	6.0
Mexico	30.1	-1.1	8.8	1.7	38.9	0.6
Nicaragua	19.2	-1.3	2.7	-0.2	21.9	-1.5
Panama	43.0	9.1	-	-	43.0	9.1
Paraguay	31.0	3.9	-	-	31.0	3.9
Dominican Republic	25.1	1.7	5.9	1.3	31.0	3.0
Uruguay	47.4	-3.8	-	-	47.4	-3.8
Venezuela (Bol. Rep.)	26.5	-3.5	13.3	0.9	39.8	-2.6

Source: ECLAC (CELADE), DEPUALC database.

(*) Periods vary according to countries. For Bolivia, Honduras and Nicaragua the period refers to the 70's and 2000's.

City System and its Structure according to the Categories of Population Size

In order to study the regional system of human settlement in detail, several size categories were created. (See Table 3 and figures 4 and 5).⁹ Cities with 20 thousand or

⁹ The categories are: (a) "millionaire" cities (1 million or more inhabitants); (b) large intermediate cities (between 500,000 and 1 million inhabitants); (c) medium-sized intermediate cities (between 50,000 and 500,000 inhabitants); (d) small intermediate cities (between 20,000 and 50,000 inhabitants); and (e) small urban areas (with between 2,000 and 20,000 inhabitants).

more inhabitants are counted individually.¹⁰ Smaller urban areas are added together rather than counted individually. The population in places with fewer than 2,000 inhabitants or dispersed populations are counted as residual.

This information was used to create table 3, which shows the number of areas over 20 thousand inhabitants by census and size category. Regional urbanization has clearly involved a striking expansion and diversification of the city system, as between 1950 and 2000 the region moved from 314 to 1,851 cities with more than 20 thousand inhabitants.¹¹ This more complex urban network forms a social and territorial basis that is more conducive to regional development, given the long-term disadvantages associated with top-heavy urban systems (Davis and Henderson, 2003). Although the number of “millionaire” cities also increased (sevenfold between 1950 and 2000) expansion has suffered a slowdown in the 1990’s. Furthermore, the limited number of cities in the following inferior category suggests that no major increase be expected in the present decade. Medium-sized intermediate cities (50,000 to 500,000 inhabitants) and smaller intermediate cities (20,000 to 50,000 inhabitants) are growing fast in terms of number of nodes, which confirms the trend towards a more robust and complex urban system.

Table 3. Latin America and the Caribbean: number of cities in each size category, census rounds 1950 to 2000

Size category	1950	1960	1970	1980	1990	2000
1,000,000 and above	5	11	19	26	37	45
500,000 to 1,000,000	6	13	17	25	32	40
100,000 to 500,000	51	75	132	191	224	276
50,000 to 100,000	62	111	154	197	294	378
20,000 to 50,000	190	307	446	627	831	1,112
Total cities with 20,000 and above	314	517	768	1,066	1,418	1,851

Source: Spatial Distribution of the Population and Urbanization in Latin America and the Caribbean (DEPUALC).

Note: Countries included in the table by Census round.

Census round 1950: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Dominican Republic, Venezuela (Bol. Rep.).

Excluded: Uruguay (There was not census in this round).

Census round 1960: Argentina, Brazil, Chile, Colombia, Costa Rica, Cuba, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Dominican Republic, Venezuela (Bol. Rep.), Uruguay.

Excluded: Bolivia and Haiti (There was not census in this round).

¹⁰ These cities can therefore be identified and monitored over time using longitudinal analyses. Although this type of analysis has been carried out for specific countries (CELADE, 2007), this will not be done here as such a region wide vision goes beyond the scope of this document.

¹¹ Figures shown in table 3 are not fully comparable since the year of available censuses differs from country to country.

Census round 1970: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Dominican Republic, Venezuela (Bol. Rep.), Uruguay.

Census round 1980: Argentina, Brazil, Chile, Colombia, Costa Rica, Cuba, Ecuador, Guatemala, Haiti, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Dominican Republic, Venezuela (Bol. Rep.), Uruguay.

Excluded: Bolivia, El Salvador, Nicaragua (There was not census in this round).

Census round 1990: Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, El Salvador, Guatemala, Mexico, Nicaragua, Panama, Paraguay, Peru, Dominican Republic, Venezuela (Bol. Rep.), Uruguay.

Excluded: Costa Rica, Cuba, Haiti, Honduras (There was not census in this round).

Census round 2000: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Ecuador, Guatemala, Haiti, Honduras, Mexico, Nicaragua, Panama, Paraguay, Dominican Republic, Venezuela (Bol. Rep.), Uruguay.

Excluded: El Salvador (data unprocessed yet), Peru (data unprocessed yet).

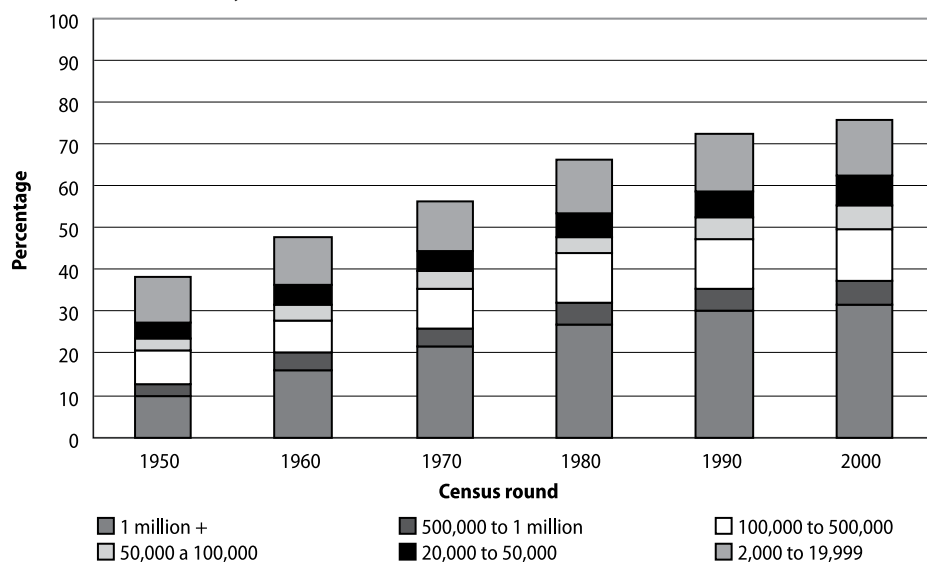
Advanced urbanization and the rise in the number of nodes in each size category of the urban system have increased the relative proportion of all categories within the total population (figure 4). “Millionaire” cities doubled their share to reach extraordinary proportions on a worldwide scale: almost one out of three inhabitants of the region lives in such cities. Therefore, figure 4 shows that, the increase significantly slowed in these cities in the 1990’s, growing at a slightly higher rate than the total population’s growth rate. In contrast, the current situation shows a wider representation of intermediate cities, which substantiates the hypothesis of diversification (more population than urban centers). Finally, the smallest category of the urban hierarchy is also highly relevant, with an abundance of areas with 2,000 and 20,000 inhabitants, often resembling the countryside rather than the rest of the city system.

The main finding of the study of the urban system’s internal structure (see figure 5) was the fast growth of intermediate cities, especially in the past 30 years. Indeed, the proportion of the urban system represented by “millionaire” cities has remained stable at 40% since 1970, while the share of small locations (fewer than 20,000 inhabitants) has fallen from 22% to around 19%, following two decades of decline (such places represented almost 30% of the urban population in 1950). This means that 40% of the urban population lives nowadays in intermediate cities (subdivided into large-intermediate, medium-intermediate and small-intermediate).

In summary, although urbanization in the region is naturally concentrated in cities, the form of concentration is diversifying. This is because intermediate cities are growing faster than “millionaire” cities. That inconsistency may well be due to a difference in natural growth or migratory growth, which is decisive for the purpose of analysis and policymaking. This point will be addressed in more detail further on,

to provide a definitive answer on the migratory attraction of countries with largest cities, and particularly megalopolises.

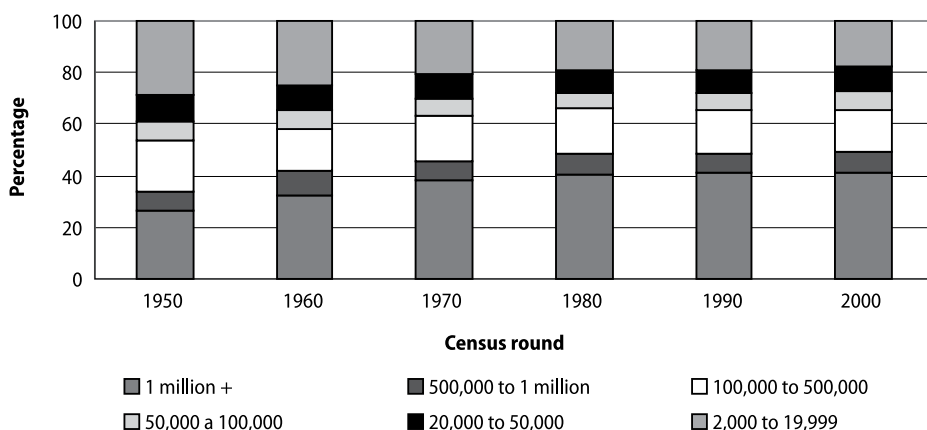
Figure 4. Latin America and the Caribbean (selected countries): percentage of total population, by size of locality, 1950-2000



Source: Spatial Distribution of the Population and Urbanization in Latin America and the Caribbean (DEPUALC).

Note: The list of countries included in each census round is found in table 3.

Figure 5. Latin America and the Caribbean (selected countries): percentage of urban population by size of locality, 1950-2000



Source: Spatial Distribution of the Population and Urbanization in Latin America and the Caribbean.

Note: The list of countries included in each census is found in table 3.

The preceding discussion is not aimed at denying the existence of a tendency – which is still restrained – towards the deconcentration of the population from the big metropolitan areas, and above all, from the big Latin American cities. It is true that growth of metropolises has suffered a decline beyond the effects of demographic transition, what might suggest a drop in migration. Along these lines, economic transformations taking place in these countries and their subsequent effects have strongly contributed to the reallocation of both productive activities and jobs. Although such changes have not seriously affected the dynamics and socio-economic leadership of the main metropolis and its *hinterland*¹² (i.e. big cities are still receiving large migration flows from the rest of the country) they have indeed seriously reduced their ability to retain population, triggering a significant increase of emigration and a boost return migration¹³.

However, what is reinforced in this text is the relative and limited character of this process. The information obtained from some of the countries suggests that this is not a process towards a significant “demetropolitanization”, “internalization”, or “deconcentration” of population; instead, it is a process towards a regional redistribution of the less-concentrated population. This assertion seems to be correct in Mexico (Chavez and Guadarrama, 2007; Pimentel, 2000) and Brazil (Baeninger, 2000 and 1997) where trends and regional increases, beyond the major metropolises, are observed; however, a significant demographic concentration level is maintained in intermediate and large cities, particularly in urban agglomerates of larger size.

Migration and Major Cities

In this section we carry out a preliminary analysis of the three largest cities in 10 selected countries of the region. For value-added analysis, substantial distinctions are made to identify specific migratory patterns for each group between age-groups.

The results in table 4 demonstrate that the top of the urban system remains attractive, as most cities continue to register net immigration. In countries such as Bolivia, Ecuador, Honduras, Panama and Paraguay (almost all of them have an urban percentage below the regional average) the most populated city (or the two most

¹² Lencioni (1996) discussing the industrial non concentration thesis in the São Paulo MR case, clearly asserts “the metropolis of São Paulo deconcentrates as denial of the mechanisms of concentration and affirms its centrality ... it is a process of centralization of capital that consolidates the hegemony of big business ... and uses spatial dispersion mechanisms—instead of concentration mechanism as a way of structuring space, no longer concentration”(p.207). For Chile, de Mattos (2001) finds a trend towards reconcentration around the MR of Santiago.

¹³ With regard to return migration, see: Lattes (1995) for the Buenos Aires case; Negrete (1999) for Mexico City and Cunha and Baeninger (2000) for São Paulo.

populated) are still major hubs of attraction and therefore remain macrocephalous or bicephalous.¹⁴ However, one in every three cities registers net emigration, which suggests that this situation (never heard of in the region before the late 1980's) might be spreading among the main cities of the region.

Most of the region's post-net emigration metropolises (cities with 5 million or more inhabitants) date from the 1980's (Rodríguez, 2004). This turnaround is due to diseconomies of scale and the shift of urban investment into other areas (UNFPA, 2007; Montgomery, 2004). Other factors include difficulties of governance and the proliferation of urban problems such as: lack of public safety, traffic congestion and pollution. Overall, these cities continue to receive strong inflows of immigrants even though, their ability to retain population has significantly decreased.

The above is directly related to the hypothesis of "concentrated deconcentration" (whereby people migrate to nearby zones, cities or regional sprawls as part of a process of suburbanization (Diniz, 2007)); thus these flows were subdivided into the following two categories: nearby-migration or faraway-migration (table 4). The main conclusion reached is that "concentrated deconcentration" seems to be operating only in the metropolises of Brazil, as net emigration from Greater São Paulo and Greater Rio de Janeiro was indeed exclusively due to exchanges of people with other municipalities within the same state, while both agglomerations continued to gain population from migratory exchanges with other states. In all other countries, large cities posted net emigration in terms of nearby or faraway-migration or just the latter, which suggests an effective but unclear deconcentration. In several cities that remain hubs of attraction, the pattern of migratory exchange fits with the hypothesis of concentrated deconcentration, and matches the processes of suburbanization. This is the case of Guatemala City, Quito, San Pedro Sula and Heredia.

The current situation of a few capitals is remarkable, such as La Paz and Mexico City, where despite of their net out-migration with other regions in the country, they remain attractive to nearby migrants.

Two key conclusions arise from table 4. The first is that there is significant variability both among and within countries with regard to the levels and indicators of net migration in big cities and the composition of the latter according to nearby and faraway balances. The second is that total net migration (derived from migratory exchange between the city and the rest of the country) does not necessarily indicate the real attraction of cities, since for some of them, there seems to be "concentrated deconcentration" processes taking place, which we shall refer to further on.

¹⁴ In the last two cases, the primacy ratio may be falling (see figure 3), while the concentration of the urban system in the two main cities may be rising.

Table 4. Selected countries of Latin America (10): Immigrants, emigrants, and net migration according to migration proximity, circa 2000

Country and year	Metropolitan agglomeration	Immigration			Out-migration			Net migration		
		Nearby	Faraway	Total	Nearby	Faraway	Total	Nearby	Faraway	Total
Bolivia, 2001	La Paz	51,783	34,358	86,141	25,591	59,094	84,685	26,192	-24,736	1,456
	Santa Cruz	29,369	81,164	110,533	28,619	36,485	65,104	750	44,679	45,429
	Cochabamba	8,256	45,151	53,407	10,840	45,255	56,095	-2,584	-104	-2,688
Brazil, 2000	São Paulo	129,298	654,994	784,292	471,321	543,906	1,015,226	-342,022	111,088	-230,934
	Rio de Janeiro	47,353	240,349	287,703	97,251	219,463	316,715	-49,898	20,886	-29,012
	B. Horizonte	159,925	71,304	231,229	116,799	51,768	168,567	43,126	19,536	62,662
Chile, 2002	Santiago	26,359	200,933	227,292	58,251	218,758	277,009	-31,892	-17,825	-49,717
	Valparaíso	12,487	54,053	66,540	11,102	46,280	57,382	1,385	7,773	9,158
	Concepción	19,037	30,303	49,340	18,372	38,793	57,165	665	-8,490	-7,825
Costa Rica 2000	San José	3,082	40,008	43,090	2,795	54,247	57,042	287	-14,239	-13,952
	Heredia	3,461	17,337	20,798	5,717	10,605	16,322	-2,256	6,732	4,476
	Cartago	3,969	5,782	9,751	3,256	3,523	6,779	713	2,259	2,972
Ecuador, 2001	Quito	15,695	97,133	112,828	45,444	44,181	89,625	-29,749	52,952	23,203
	Guayaquil	29,449	78,739	108,188	17,809	46,243	64,052	11,640	32,496	44,136
	Cuenca	7,606	18,002	25,608	4,491	9,081	13,572	3,115	8,921	12,036

(continue)

(continued)

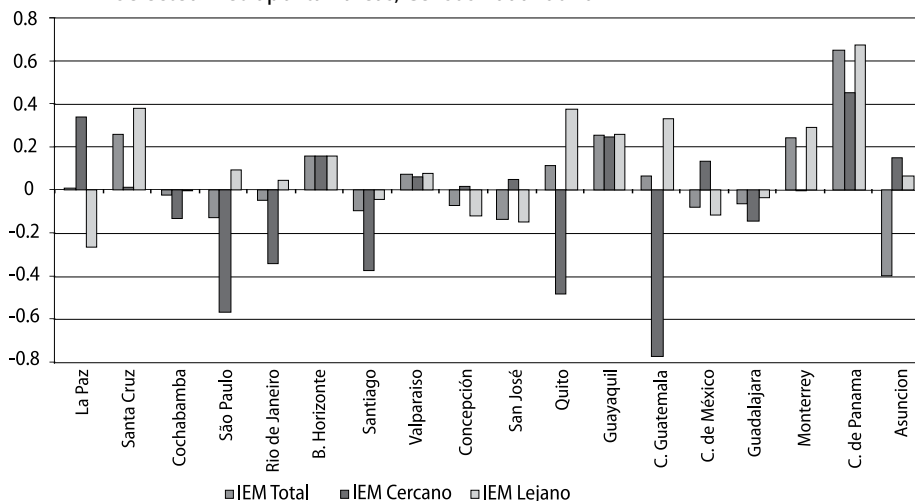
Country and year	Metropolitan agglomeration	Immigration			Out-migration			Net migration		
		Nearby	Faraway	Total	Nearby	Faraway	Total	Nearby	Faraway	Total
Guatemala, 2002	C. Guatemala	4,574	85,931	90,505	36,061	43,289	79,350	-31,487	42,642	11,155
	Quetzalten	4,077	3,373	7,450	3,180	3,165	6,345	897	208	1,105
	Escuintla	2,024	2,198	4,222	2,594	4,336	6,930	-570	-2,138	-2,708
Honduras, 2001	Tegucigalpa	5,704	29,672	35,376	4,518	19,406	23,924	1,186	10,266	11,452
	S. Pedro Sula	5,122	31,874	36,996	16,603	13,504	30,107	-11,481	18,370	6,889
	La Ceiba	1,533	7,595	9,128	1,340	6,441	7,781	193	1,154	1,347
Mexico, 2000	C. de Mexico	81,668	344,476	426,144	62,695	436,427	499,122	18,973	-91,951	-72,978
	Guadalajara	24,933	78,094	103,027	33,412	84,232	117,644	-8,479	-6,138	-14,617
	Monterrey	15,352	98,476	113,828	15,492	54,048	69,540	-140	44,428	44,288
Panama, 2000	C. de Panama	9,840	94,421	104,261	3,700	18,240	21,940	6,140	76,181	82,321
	Colón	2,659	7,574	10,233	546	7,918	8,464	2,113	-344	1,769
	David	9,788	4,428	14,216	4,099	9,200	13,299	5,689	-4,772	917
Paraguay, 2002	Asunción	8,694	88,618	97,312	20,214	65,349	85,563	-11,520	-24,736	11,749
	C.del Este	5,056	19,922	24,978	6,906	20,241	27,147	-1,850	44,679	-2,169
	Encarnación	4,619	3,892	8,511	5,834	6,265	12,099	-1,215	-104	-3,588

Source: Rodríguez (2009).

Another way to show the diversity of migratory behavior of main cities is the analysis of the Migration Effectiveness Ratio (MER)¹⁵, which, as the name suggests, attempts to capture the phenomenon's dimension, beyond volume and intensity; it aims at determining the efficiency level an area obtains in its migratory process. The figure 6 shows this ratio applied both to total migration and to nearby and faraway migration for regions with gross migration figures (the sum of immigration and emigration) above one hundred thousand migrants. It is worth pointing out, that all countries considered in the Table 4, are represented.

The situation is completely diverse making it feasible to indentify situations where big cities prove little efficiency (they lose much more population than gain) with nearby exchanges, as is the case of Sao Paulo, Rio de Janeiro, Santiago, Quito and the city of Guatemala. There are opposite cases like La Paz and Panama City, which gain more than lose through nearby migration. With regard to the MIE calculated on faraway migration, it is perceived that these areas present more efficiency; the most outstanding cases are Quito, Monterrey, Santa Cruz, Guatemala City and Panama. The two big exceptions would be Asuncion and La Paz, which lose fairly more population to other parts of the country than they gain.

Figure 6. Migration effectiveness ratio according to type of migration
Selected metropolitan areas, Census 2000 round



Source: Based on Table 4.

¹⁵ The Migration effectiveness ratio is calculated upon the quotient resulting from net and gross migration. Its values vary from -1 (no efficiency) and + 1 (highly efficient). The index allows to evaluate how efficient an area is with regard to the migratory process involved. Therefore, it should not be interpreted as an indicator of attraction or rejection level. Values approaching 0 might imply the existence of significant migratory circulation; in other words, despite of low migratory balances, these areas would present large number of exchanges of people: immigrants or emigrants. That is the case of the central municipalities of the metropolitan regions.

Nevertheless, it is interesting to observe that the majority of the MRs present MIEs very close to zero, bringing into light one of the most appealing features of our metropolitan regions: even the MIEs showing either net losses of population or little inflow are high-circulation areas of population. This proves, in our opinion, the need to revitalize the discussion about concentration/ deconcentration, or more specifically metropolitanization or demetropolitanization.

Notwithstanding, we cannot assure that there is a unique trend in Latin America related to the concentration or deconcentration of population, especially with regard to the role of the metropolitan regions.

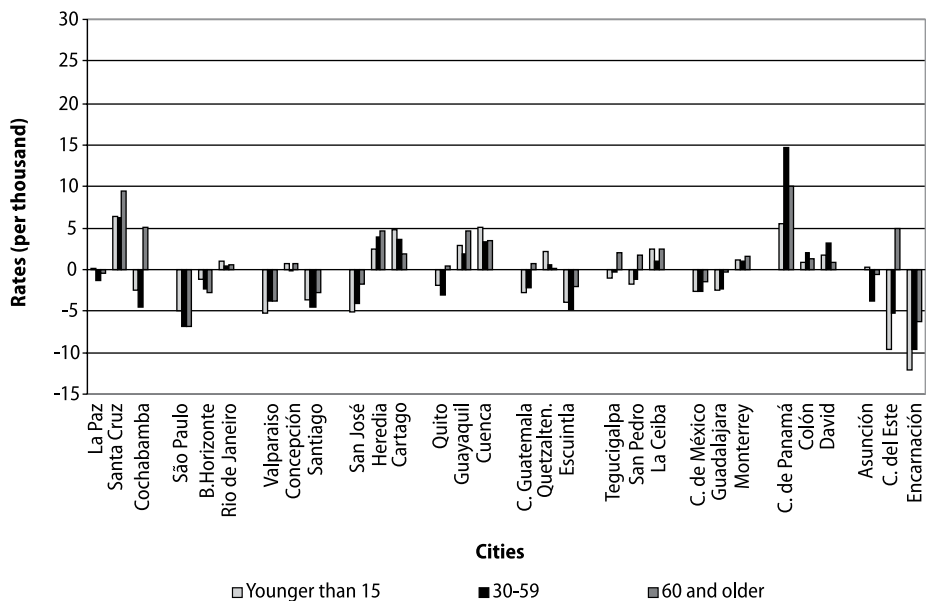
If we consider the age distribution (figures 7.A to 7.D), an expected but never empirically documented pattern emerges. As a matter of fact, it is only possible now to process the census' microdata in a fluent and flexible way, necessary to build the database of the graphics. The graphics are eloquent: the attraction to main cities differs according to age group, especially in the past few years. Young people (between ages of 15 and 24) have remained attracted, and the expulsion of population predominates in the other age groups. That is why the disparity between graphics 7.A and 7.B is notable and significant: only the minority of the examined cities loses young population through migration (in almost all the cases the 25-29 age group), meanwhile, the majority of these cities expulse children, the young and elderly¹⁶. In the 1990's censuses, the disparity was not so marked, since there were fewer expulsive cities.

In any case, the results of figures 7.A-7.D highlight the fact that young people of the region have a special relation with main cities, considering that almost none of them register net youth emigration, opposing the net emigration rates of population from other age groups (and the total figure). Some of these cities lose young population through the process of population exchange in the region (nearby migration) or with the rest of the country (faraway migration). Despite this, the migratory attraction level remains low. Sao Paulo and Santiago de Chile are examples of cities losing attractions for young people within the regional context (the rest of Sao Paulo State and the rest of the Metropolitan Region, respectively); however, they remain fairly attractive to young people from other states and regions of the country. On the contrary, Concepcion in Chile remains attractive to young people in the region, but loses young population in the exchange process with other regions of the country.

¹⁶ This suggests family movements, supporting the previous research on emigration in large metropolitan centers, especially migration heading to the outskirts or the frontier areas (Rodríguez, 2009; Cunha, 1995, 2000 and 2006).

The attraction of cities to young population depends on a range of factors, including major education infrastructure, a labor marketplace open to young workers and a wider range of housing alternatives. A detailed analysis of the ‘economic’ activity of youngsters immigrating and emigrating from cities suggests that the key factor depends on each city. The counterpoint between Sao Paulo and Concepcion (Chile) is illustrative. In the first case, young immigrants have a student ratio lower than young emigrants and non-migrants, therefore, their labor participation ratios are higher. In the other case, young immigrants have a student ratio much higher than young emigrants and non-migrants. For that reason, the range of attraction factors are configured according the characteristics of each city, such as the labor market for young immigrants of Sao Paulo, and the presence of an advanced educational infrastructure for young immigrants¹⁷ in Concepcion.

Figure 7.A. Latin America, 10 countries, three main cities: Net internal migration rates (per thousand) according to age groups (under15 years, 30-59 and 60 and more) Census 2000



¹⁷ The figures are not presented in this text due to space; however, the figures available cover the three main cities of more than 10 countries of the region (census round 2000).

Figure 7.B. Latin America 10 countries, three main cities: Net internal migration rates (per thousand) according to selected age groups (15-19, 20-24 and 25-29)
Census 2000

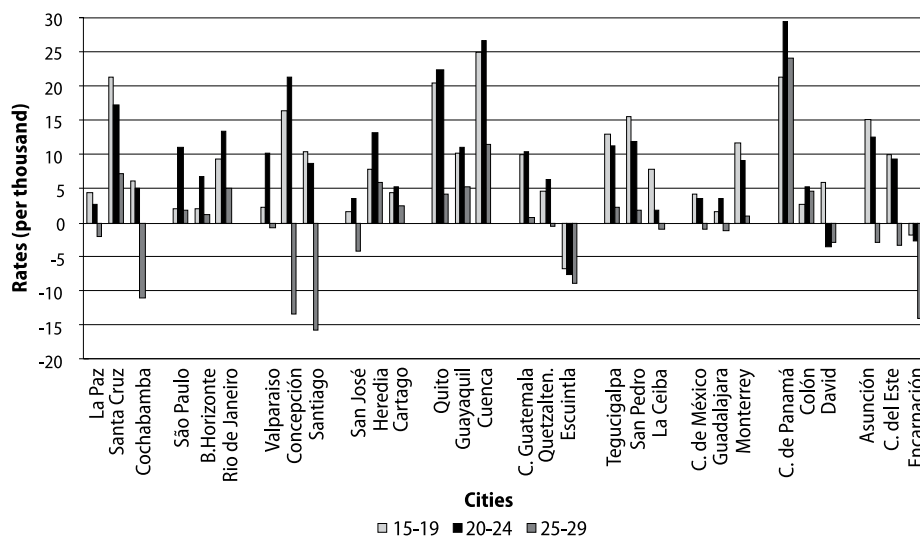


Figure 7.C. Latin America, 9 countries, three main cities: Net internal migration rates (thousands) according to age groups (under 15 years, 30-59 and 60 and más años)
Censos ronda 1990

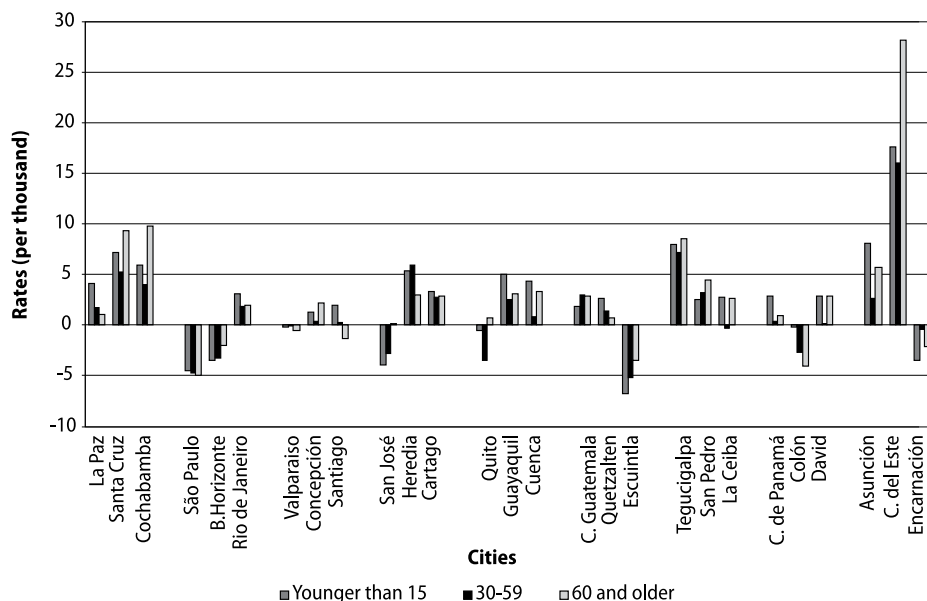
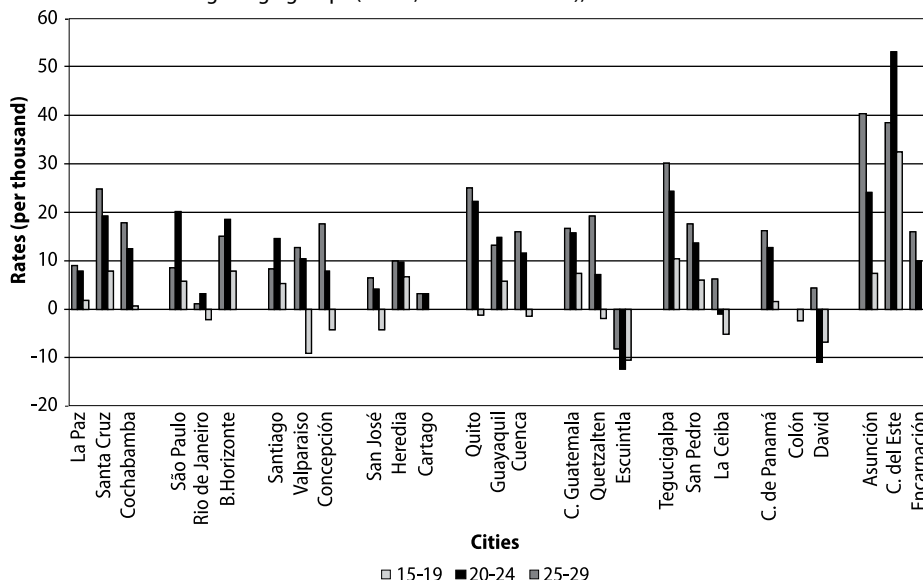


Figure 7.D. Latin America, 9 countries, three main cities : Net internal migration rate (thousands) according to age groups (15-19, 20-24 and 25-29), Census 1990



Expansion of the Periphery and Residential Segregation according to Socio-Economic Status in the Latin American Metropolises

Another feature of Latin American urbanization is the faster growth of metropolitan peripheries than city proper: in all metropolitan areas or large agglomerations of Latin American countries, the largest population increase is registered in the peripheral areas. On the other hand, the population growth rate of the city proper is fairly reduced, and even negative in a few cases (Rodriguez and Villa, 1998, United Nations, 1993 and 1991, Garza and Schteingart, 1984, Cunha, 2000). Since vegetative growth of the city proper continues to be positive, this pattern of peripheral expansion demonstrates the relevance of net in-migration in peripheral areas.

As we consider the level of demographic concentration reached by big cities, the process of reallocation and territorial expansion seems to be an inevitable phenomenon due to a variety of factors. In the first place, the ways of using and distributing land, which depend on the relationships (very often uneasy) established between the real estate sector, the state and society (Gottdiener, 1993) involving changes in land prices and modifications of built areas, which lead demographic occupation. In this regard, public power (sometimes by omission of actions) is a

relevant player in this process because it selectively supports real estate projects, promotes its own vision of a metropolitan future, carries out public housing policies – for instance: massive construction of social residences in peripheral areas of the Chilean cities is a key figure of this aspect – or puts in practice some regulations (and excludes others) with regards to the occupation of certain areas.

One important element to understand the expansion of large urban agglomerations is the reallocation of productive activities, which impact not only the employment sector, but also residential localization. Notwithstanding this process of productive reallocation, there is a debate in the region: although some activities have proved to be dispersed – particularly commercial activities following the typical United States patterns of shopping centers or Malls –, other activities, such as finances and services, oriented to serve businesses and individuals, have not yet shown any sign of dispersion. In addition, in some places like Santiago de Chile, a sustained existence of economic activity historically concentrated in the traditional city center now extends east, where most of the high income population of the city lives (Rodríguez, 2008).

Metropolises' remodeling and the interurban residential displacements

Two major processes of metropolitan reconfiguration have brought into light the residential segregation by socioeconomic status (SRS) in the region.¹⁸ On one side, is the persistent peripheral expansion of Latin American metropolises. As can be inferred from the previous paragraph, this expansion is no longer due to waves of immigrants or vegetative population growth. In fact, centrifugal forces have operated for many decades through the movement of poor people towards the outskirts of the city. More recently physical displacements of affluent families to specific areas in the periphery, some of them within the elite historical niche, others away from it, and some others located in historically poor or semirural areas. The latter movement has been nominated as “rur-urbanization” which has brought Latin American cities closer to upper and middle class typical suburbs of the United States.

¹⁸ SRS denotes unequal distribution in the metropolitan territory of socio-economic groups. Within the metropolis' context marked by socio-economic inequalities that could be expressed, either combined or isolated, in: (i) long physical distance between these groups; (b) constitution of socio-economically homogeneous and asymptotic groups (possibly distant) among them; (c) absence or lack of social interaction among the members of the different socio-economic groups.

The other relevant process of metropolitan reconfiguration in the past years has been the recovering of deteriorated areas, most of them in central areas, referred to as gentrification.¹⁹ This recovery, which does not necessarily mean redensification, is the result of real estate market and public programs (or a combination of both). It has caused opposing socio-urban effects, particularly, the dyad made by the revaluation of real state and expulsion of traditional poor dwellers. Despite the positive impact on the city, gentrification could, in some cases aggravate socio-spatial segregation, as this process could restrict the spaces allocated to low-income population even more.

Maps 1, 2 and 3 and table 5 illustrate the impact of metropolitan migration on metropolitan reconfiguration²⁰. In these three cities there is a loss of population taking place in central²¹ municipalities vis a vis a strong growth in peripheral municipalities, some of which have become more populated than the metropolitan areas (in particular the GSMA).

In the SPMR case, although the primacy of the central municipality is more distinguishable than the other two considered cases as a result of its territorial size (Sao Paulo municipality represents almost 59 % of the SPMR's population), this does not mean that the SPMR is left out of the peripheral expansion process. Although peripheral movement may apparently be less intense, in terms of spatial units' size of comparison, there is no doubt that such movement towards the periphery is as intense in Sao Paulo as it is in Santiago and Mexico.

It is perceived from Table 5 that the population's evolution is closely linked to intra-metropolitan migration, since the municipalities that are losing more population, coincide with those that have larger net intra-metropolitan emigration. The opposite occurs in municipalities which gain more population. Summarizing, in the 1990's, the simple correlation between inter-census growth rate of population and net intra-metropolitan migration reaches 0.96 of the GSMA, 0.82 in the AMSP and 0.60 in the MCMZ, the last of which drops due to two or three exceptionally fast growing peripheral municipalities – Zumpango, Texcoco and Teoloyucan – but, showing low intra-metropolitan migration rates.

¹⁹ "The restoration and upgrading of deteriorated urban property by middle-class or affluent people, often resulting in displacement of lower-income people" (www.thefreedictionary.com/gentrification).

²⁰ Due to limited space, only the maps of Greater Santiago Metropolitan Area, Mexico City Metropolitan Zone and the Sao Paulo Metropolitan Region can be shown. Also, the table shows the emblematic counties and municipalities in terms of intra-metropolitan population and migration growth.

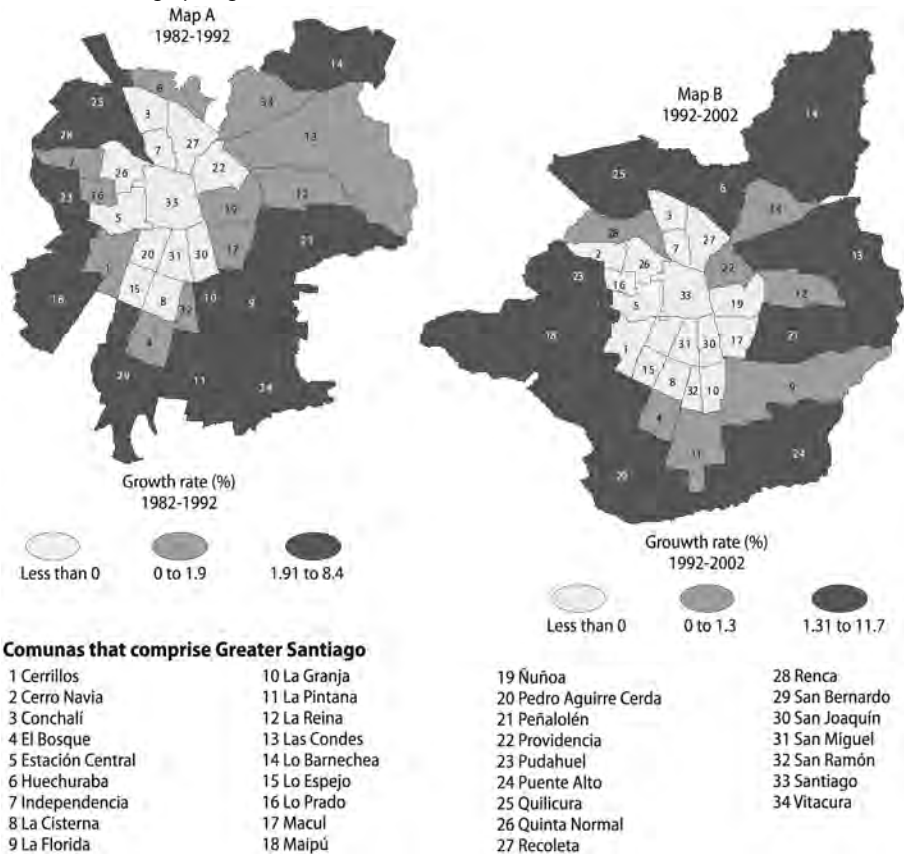
²¹ Sao Paulo is excluded due to the large size of its central municipality.

Table 5. Greater Santiago Metropolitan Area (GSMA), Metropolitan Zone of Mexico City (MZMC) and Metropolitan Region of Sao Paulo, (SPMR) 1990's: Demographic growth rate, net migration and migration rate and net intra-metropolitan migration rate for municipalities according to its centrality condition (location)

Metropolitan Agglomeration	Type of municipality	Municipality	Population growth rate 1990's	Net intrametropolitan migration	Net intrametropolitan migration rate (per 1000)
GSMA	Central municipalities that lose population	Quinta Normal	-1.1	-9,095	-2.0
		Conchali	-1.4	-11,641	-2.0
		San Joaquín	-1.6	-8,036	-1.8
	Fast growing peripheral municipalities	Puente Alto	6.1	69,006	3.6
		Maipú	6.6	44,576	2.4
		Quilicura	11.7	33,674	7.6
MZMC	Central municipalities that lose population	Cuauhtémoc	-1.5	-30,078	-1.3
		Gustavo Madero	-0.4	-77,190	-1.4
		Miguel Hidalgo	-1.5	-25,842	-1.7
	Fast growing peripheral municipalities	Ixtapalaca	9.5	70,317	6.7
		Tultepec	6.8	12,904	3.5
		Tlittitlan	5.7	47,688	2.8
SPMR	Central municipalities that lose population	São Paulo	0.9	-280,309	-0.5
		Osasco	1.6	-5,103	-0.2
		Santo André	0.6	-498	0.0
	Relative central municipalities (but with significant peripheral areas) that gain population	São Caetano do Sul	-0.7	-3,272	-0.5
		Guarulhos	3.5	44,538	0.8
		São Bernardo do Campo	2.4	23,627	0.7
	Fast growing peripheral municipalities	Ferraz de Vasconcelos	4.5	13,513	1.9
		Francisco Morato	5.3	9,854	1.5
		Itaquaquecetuba	5.8	28,371	2.1

Source: Demographic censuses of Chile, Mexico and Brazil.

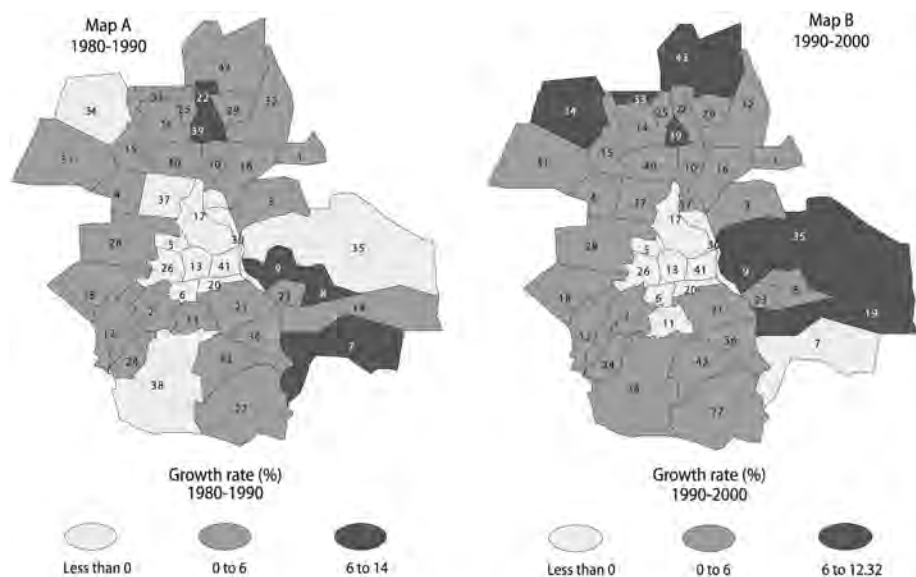
Map 1. Greater Santiago Metropolitan Area (GSMA): Municipalities according to the inter-census demographic growth rate, 1982-1992 and 1992-2002



Source: Published Demographic Censuses.

Notes: 1) Changes in maps respond to the inclusion of census districts in 2002, which were excluded in 1992, for being 'rural' or for not having existed by that time; 2) Maps' elaboration by Daniela Gonzalez.

Map 2. Metropolitan Zone of Mexico City (MCMZ): Municipalities according to the inter-census demographic growth rate: 1980-1990 and 1990-2000



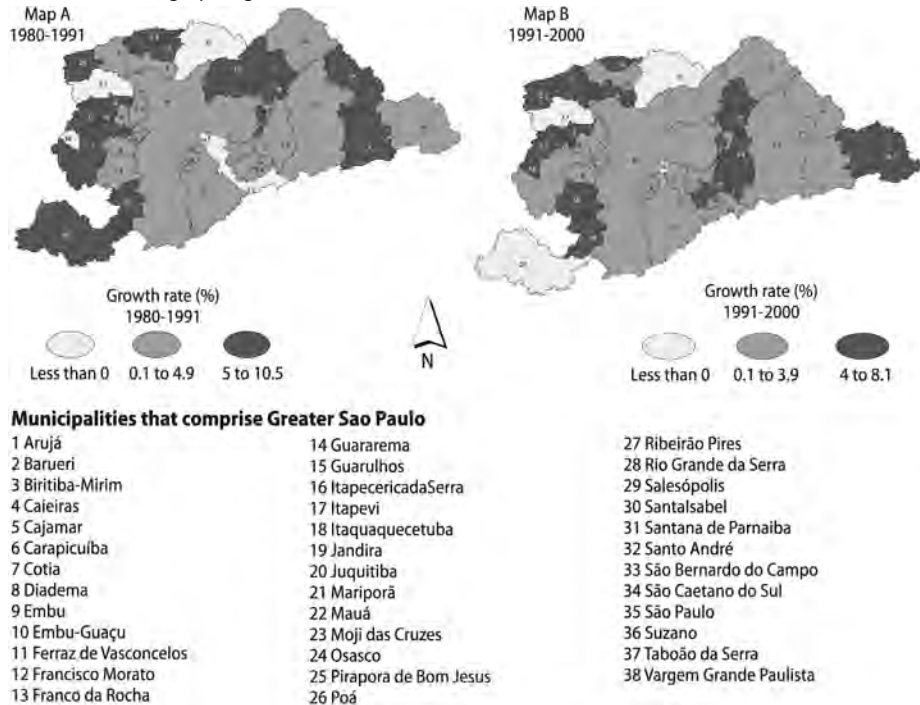
Municipalities that comprise metropolitan zone of Mexico city

1 Acolman	11 Coyoacan	21 Iztapalapa	31 Nicolas Romero	41 Venustiano Carranza
2 Alvaro Obregon	12 Cuajimalpa de Morelos	22 Jaltenco	32 Tec Amac	42 Xochimilco
3 Atenco	13 Cuauhtemoc	23 Lapaz	33 Teoloyucan	43 Zumpango
4 Atizapan de Zaragoza	14 Cuautitlan	24 Lamagdalena Contreras	34 Tepotztlan	
5 Azcapotzalco	15 Cuautitlan Izcali	25 Melchor O Campo	35 Texcoco	
6 Benito Juarez	16 Ecatepec	26 Miguel Hidalgo	36 Tlahuac	
7 Chalco	17 Gustavo Madero	27 Milpa Alta	37 Tlalnepantla	
8 Chicoloapan	18 Huixquilucan	28 Naucalpan	38 Tlalpan	
9 Chimalhuacan	19 Ixtapaluca	29 Nextlalpan	39 Tultepec	
10 Coacalco	20 Iztacalco	30 Nezahualcoyotl	40 Tultitlan	

Source: Published Demographic Censuses.

Note: Maps' elaboration by Daniela Gonzalez.

Map 3. São Paulo Metropolitan Region (SPRM): Municipalities according to the inter-census demographic growth rate: 1980-1990 and 1990-2000



Source: Published Demographic Censuses.

Note: Maps' elaboration by Daniela Gonzalez.

Metropolitan redesign and socioeconomic residential segregation

From these two transformation processes currently taking place in the region's metropolises, two opposing hypotheses emerge. One of them points towards the elite's redistribution (by suburbanization, gentrification and the advance of a fractal city) and, accordingly, a reduction in the distance between different social strata in some city zones, which tends to reduce the SRS, or at least its scale. The other one points to metropolitan duality – between the part of the city where the dynamic economic activities are located as well as affluent groups live, and in the other, where lagged economic activities are located and poor people live.

There are several concerns in relation to SRS: it weakens the finances of poor municipalities, it affects residents in poor areas through “neighborhood effect” that could be adverse due to a deficit of infrastructure, services, social capital (contacts) or cultural capital (codes), or the relative absence of role models, or the stigma of

residing in a poor neighborhood. This hinders social integration since it is associated with lack of interaction between socioeconomic groups and it is linked with poor-governance and anomie in the “segregated” poor areas. Due to this, it is considered a mechanism that tends to reproduce poverty and inequalities, as well as erodes urban governance and metropolitan development. Such association leads to the conviction that SRS is one of the factors that has contributed to social inequalities in the region’s cities.²²

Three determinants of SRS need to be theoretically distinguished and, if data permits, separately quantified: a) selective migration according to socioeconomic status; b) vegetative growth of the different social groups; and (c) structural²³ change. Part of the analysis on the trends in SRS’s trends has concentrated on structural change; the latter is related to the principles of social mobility, which could alter the modality and intensity of SRS, with no geographic displacement involved.²⁴ In general, these analyses lead to the hypothesis of increasing SRS because both signal that elites remain isolated or closed from other social groups, and that mobility stagnates in lower and middle social strata. The other side of the analysis has underlined the role of the migratory flows, which can directly remodel the pattern of SRS’s²⁵ pattern. Several of these analyses give credit to the SRS reduction hypothesis, or at least to its scale, as a result of the emerging urban displacements, particularly the displacements of the elite from their residential area. It is relevant to identify and

²² However, the division of social groups within the city could also be due to cultural affinity reasons (for example, national, ethnic or linguistic proximity) and in this case, the term segregation would be wrongly used.

²³ In theory, the change in the social composition of each subdivision within one city could be divided into these three sources making it possible to estimate the contribution of each. However, there are theoretical dilemmas and practical problems. Even the simplest calculation, the one presented in this document associated on selectivity migration involves assumptions with regard to the invariability of the analyzed attributes over time, and it is also subject to the known limitations of census’ migration questions; for example, the loss of intermediate movements (for more details, see Rodríguez 2009, 2007y 2004b). Furthermore, to estimate the vegetative growth of social groups requires information on births and deaths from each one. Consequently, this can only be achieved with vital statistics, which tend to have omission or quality problems in Latin American countries. Finally, structural change corresponds to the modification of the attributes of those non-migrant individuals who survive along the period of analysis. Rigorously, it implies a follow-up and retrospective analysis, unlikely to happen in the region. The other possibility is to use the two subsequent censuses in order to do cohort follow-up (by age and specific characteristics) although in general such follow-up is affected by migration and mortality. Whatever the case, the last component could be obtained as a residual if the others are well calculated. In summary, breaking down the socioeconomic change of cities is an analytical and empirical challenge for which we lack reliable data sources.

²⁴ An extreme, but intuitive example is that of the sudden process of income redistribution which significantly and simultaneously reduces extreme poverty and wealth. Any segregation measure over the extreme poor would be affected by this change without any physical movement of poor people within the city.

²⁵ SRS depends on the socioeconomic composition (selectivity) of the in and out flows, from and towards the metropolises regarding the origin and destination. If the selectivity of the intra-metropolitan migration operates on the principal of “affinity”%affluent people migrate to up-scale areas and poor people migrate to poorer areas% then intra-metropolitan migration would tend to worsen SRS; on the contrary, if it operated on a principle of “diversity”, it would tend to attenuate it.

quantify the determinants of the trends of the SRS, both for the benefit of academic knowledge and for public policy design.

In fact, the intervention directed to influence SRS should act through proximate determinants, which, with the variable temporalities, redefine the levels and modalities of SRS. But such proximate determinants respond to a specific set of policies, programs, incentives or rules. In this sense, changing the selectivity of intra metropolitan migration (to impact SRS through this intermediate variable) requires different actions to those should the objective be to influence the SRS through the modification of the differential vegetative growths rates of the city's different socioeconomic groups.

Thus, for many years there was only a little research on residential segregation, basically because detailed geographical information was needed. The access to census' micro-data and above all, the technological instruments to processing them, and the combination of data and geography through the GIS has particularly started to modify this situation. For the past 10 years there has been an outburst of quantitative research on residential segregation. One of the most notable aspects of this research has been the discrepancy amongst them. Some have found a rather trend of decreasing SRS, measured through Duncan index of dissimilarity, in the GSMA, whereas, others have found a contrary trend in Sao Paulo and Campinas (Cunha and Jimenez, 2006) in Brazil, Mexico City and Montevideo (Rodriguez, 2008).

A recent work by Rodriguez (2008) discusses in detail the empirical trends of SRS in four major cities and examines the relationship between these tendencies and migration, particularly intra-metropolitan migration. Although the results involved only four of out of the 40 "millionaire" cities in the region, his conclusions suggest areas for future research and could also be applied to those used in this article. They are the following:

- The different SRS levels between cities questions the existence of a "regional pattern" in relation to SRS; notwithstanding, all cities share some characteristics such as the depopulation of the city center, rapid peripheral expansion and the precarious state of the latter;
- Dissimilar trends among cities prevents the formation of a "dominant regional path";
- The high sensibility of the estimates according to socioeconomic indicators and the measurement of SRS questions categorical statements or those based on only one attribute or procedure;
- The variable effects of migration on SRS – measured by new and elegant techniques – weakens general hypotheses on this relationship

Conclusions

This research is aimed at evaluating the tendencies of urbanization and the structuring of city systems in Latin America, as well as analyzing the elements of one of its main components, the internal migration. The final goal is to update the perspectives on these matters, which sometimes rely on outdated evidence.

Relatively recent figures confirm - which are also useful for the comparison of countries - that high urbanization level is an unquestionable fact in the region, although the process takes place differently in each country, both in intensity and form. It is shown how in the last 40 years, Latin America has suffered huge transformations, not only in the spatial reallocation of the population between the country side and the city, but also between cities and regions. These transformations were expressed in the consolidation of metropolization (one out of three Latin Americans live in a city of 1 million or more inhabitants) showing complexity and diversification of the urban network. As a result, the continuous pull of big cities is parallel to higher dynamism in intermediate cities, which explains the current reduction of primacy in most countries.

The process of urbanization and the diversification of the city systems led to the predominance of migration between cities (over the historical countryside to city flow), and to a growing heterogeneity of such processes, highlighting the flows coming from the big cities heading to suburbs, nearby places, or more distant cities.

The 1990's and 2000's have been underlined by important structural changes in LA, such as the incorporation of domestic economies to the world's economy and public programs aiming at reducing poverty level thus, improving infrastructure and economic recuperation compared to the tough 1980's. Although, recuperation has presented oscillations and has not yet reduced inequality, it has allowed for increase of investment levels, promoting a physical expansion of cities faster than its demographic growth. In light of such transformation, a lot of discussions on the deconcentration and demetropolization hypotheses have taken place. The data analyzed show a moderate trend in this direction, more significant in some countries than others, where the main cities lose significance with regard to the other cities, not subject to the counter-urbanization process itself. Consequently, this deconcentration process strengthens the city system, although it is deemed to be partial and moderate. Thus, there are legitimate doubts on its sustainability, and according to our conclusions, it is far from becoming a threat to the protagonism of large urban agglomerations.

The data clearly confirms that, despite the reduced growth of metropolitan areas they still concentrated a significant fraction of the population in most of Latin American countries. That is why we also find a concentration of major social, economic and demographic problems (and challenges) of the region.

Due to the continuing relevance of metropolitan areas, some of their phenomena become priority matters. Among them, the following: their intense physical expansion; the socio-economic residential segregation, related to the acute and persistent social inequalities of the countries in the region; the processes of metropolitan restructuring; and certain public policies (housing for instance). Based on three examples of metropolitan areas in Chile, Mexico and Brazil, it is proved, that constant physical expansion (even higher than its moderate demographic growth) is the result of the outflow of mainly poor families coming from the central or pseudo-central areas to the outskirts of cities. The key problem of this horizontal expansion seems far more serious than the experience obtained from the main cities' suburbs in the United States, because in Latin American cities it takes place in a context of inadequate infrastructure and poor finances. Hence, the demographic growth of faraway counties or municipalities, with less accessibility and infrastructure, aggravates the impacts of poverty in Latin American cities, which is predominantly peripheral.

Such effects, briefly covered in this paper, question the lack of an integrated vision in planning and governing cities. As clearly stated in the arguments, it is true that socioeconomic residential segregation has different features and distinctions from country to country; however, this phenomenon is found in all of them. As such it should be addressed not only with a research that explores its causes and effects, but also, and most importantly, with concrete actions towards its reduction. To let the city be structured on market requirements (especially real estate market) would definitely not contribute for the achievement of more just, sustainable and productive cities. The action of the state, citizen participation, regulations aiming at reducing inequalities in living standard and the coordination of local authorities, are crucial components to the welfare of metropolitan population.

The study of urbanization of Latin America requires more than recognizing the diversity of situations, ranges and consequences of population concentration in the cities. We should also be aware that becoming a more urbanized region will make the upcoming challenges more complex for the cities, particularly in the labor market, public services and infrastructure. A vision based on updated and systematic evidence, as well as, rigorous and integrated analysis is needed to face these challenges. This is still not enough; political will is also needed, since the problems associated with governability, social and environmental precariousness, and metropolitan insecurity and segregation, requires integrated policies and programs, specific state interventions, coordination of local authorities, public-private association, and the citizen participation. Researchers can promote all this, however, politicians and the civil society shall be held responsible to materialize it.

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Current view of international migration in Latin America¹

Alejandro I. Canales²

Abstract International migration is not a new phenomenon in Latin America but we have seen it undergo substantial changes in recent years. For decades, Latin America was thought of as a region that primarily received immigrants, with the exception of Mexico and some of the Caribbean countries. Also, although intraregional migration has always been of considerable magnitude, it has generally been considered as a phenomenon focused on only some countries. However, important changes have occurred in the region since the 1980s, which have resulted in new forms and migratory patterns. In contrast to past eras, international migration has not only intensified but rather extensified. As a result, migratory flows have diversified in their origins, destinations, and forms due to the cumulative processes called globalization. This paper offers a panorama of international migration in Latin America. The first section analyses the characteristics of Latin American migration, compared to other international migratory fluxes. We provide information about the three main migratory fluxes: the traditional migration towards the United States, the emergent migration to Europe (mainly to Spain), and new dynamics of migration inside the region. In the second section we turn back to the analysis of the relationship between migration and development, in order to study two relevant phenomena: the role of international migration in receiving countries and the role of Latin American migration in sending regions. We conclude with a general reflection on the new era of international migration in the contemporary globalised world, and the role of Latin American migration in this world context from the viewpoint of sending countries and regions.

¹ Paper presented at the XXVI IUSSP International Population Conference, Session 143 (Demographic transformations, convergences and inequalities in Latin America: what the future holds? - Latin American Population Association), September 27 to October 2, 2009, Marrakech, Morocco.

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Introduction

International migration is not a new phenomenon in Latin America but we have seen it undergo substantial changes in recent years (Pellegrino, 2003). For decades, Latin America was thought of as a region that primarily received immigrants, with the exception of Mexico and some of the Caribbean countries. Also, although intraregional migration has always been of considerable magnitude, it has generally been considered as a phenomenon focused on only some countries.

However, important changes have occurred in the region since the 1980s, which have resulted in new forms and migratory patterns. In contrast to past eras, international migration has not only intensified but rather *extensified*. As a result, migratory flows have diversified in their origins, destinations, and forms due to the cumulative processes called globalization (Canales and Montiel, 2007).

Accordingly, we can discuss four aspects which manifest the diversity and complexity of international migration in Latin America. These are namely:

1. Formerly a region which received immigrants, Latin America has become an important zone of emigration, especially to the developed nations. This fact can be referred to as a great march from the South to the North. Although the United States has become the principal destination of Latin American emigration, there are also important flows directed to Europe (Spain, principally) and Japan. It is estimated that in 2002, 760,000 Latin Americans immigrated to the United States, and at the same time, another 230,000 went to Spain. In both cases, Latin Americans represented 50% of the total immigrants in those countries (Canales, 2006).
2. Intraregional migration has also diversified and increased. Since the 1980s, new migratory routes have arisen, with new destinations and emigration countries. Simultaneously, some countries have become transitory stops for emigrants (Villa and Martínez, 2001; CEPAL, 2002). In this new context, we can no longer catalogue countries in simple and static terms. Frequently, a country is both the origin of emigration and the destination of intraregional immigrants as well. In this way, intraregional migration becomes more complex as it incorporates a growing multiplicity of migratory situations and forms.
3. We should also note the growing complexity and diversity of the different forms of migration. We need to add other types of definitions to the already classic ones of permanent and temporary migration. Examples of these are: circular migration, cross-border migration, returns migration and undocumented migration, among others.
4. Finally, we need to recognize the diversity of people that actually migrate (Pujadas and Massal, 2005; Pedonne, 2006). Examples of this are the migration

of women, indigenous populations, and family migration (children and senior citizens, primarily), among others. The participants of the migratory flow have become more visible. This is true in the case of women, whose immigration for many years was invisible, subsumed and associated with male migration.

All these changes demonstrate the increasingly complex and diverse patterns of migration routes. This raises the need to reconstruct our views and approaches to the analysis and understanding of this phenomenon. Considering the above, the objective of this text is to document, with recent statistical information, the characteristics of Latin American emigration to Spain and The United States and to record it into the great march from the South to the North. This will allow us to appreciate the diverse migratory forms and their participants.

We present a panoramic vision of contemporary international migration in Latin America. Particularly, we begin with an analysis which allows us to contextualize Latin American migration within the framework of the so-called new era of global migration (Castles and Miller, 1993). Secondly, we will focus on a comparative analysis between Spain and The United States, both of which are currently the principal destinations of Latin American emigrants. This comparative analysis is based on migration volumes, as well as the socio-demographic profiles of the migrants and their insertion into the labor force.

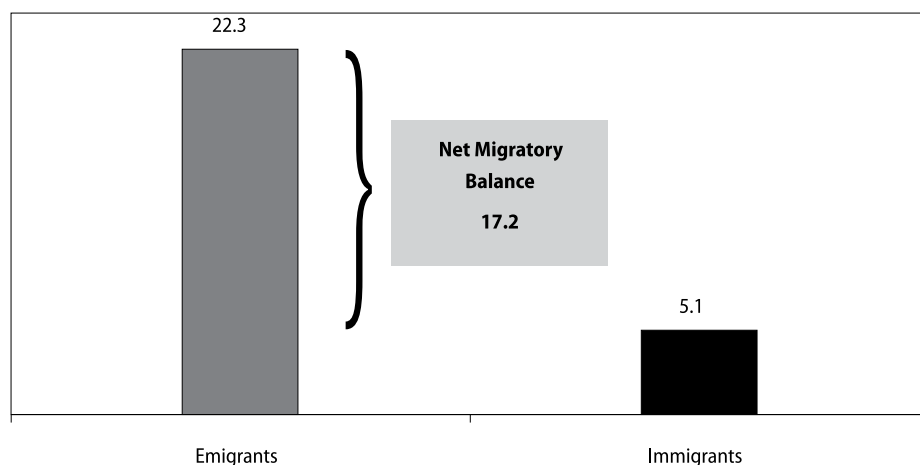
Latin American Migration in the Contemporary Global Context

The current view of Latin American international migration is radically different than the one that prevailed 100 years ago in the region. At the beginning of the 20th century, Latin America, together with North America (USA and Canada) and Australia were the international immigrants' principal destinations (Delauney and Tapinos, 2000). In all these cases, the immigrants sought to benefit from expansion capitalism. On the other hand, at the dawn of this new millennium, Latin America is now one of the main regions of population expulsion to the principal economies of the developed world - United States, Europe, and to a lesser extent, Japan (Pellegrino, 2003).

By the year 2000, there were 22.3 million Latin Americans residing in a country that was not the one of their birth. Of these, 19.2 million lived in a country outside of Latin America, while the other 3.1 million became intraregional migrants. This means that they lived in Latin America, but not in their birth country. In contrast, in the same year, there were only 5.1 million international immigrants in all of Latin America. Of this group, only 2 million came from countries outside of the region, while the other 3.1 million belonged to the above-mentioned intraregional group

(Figure 1). Subsequently, we can identify and describe three basic aspects regarding Latin America's role and profile in the contemporary migratory situation at the international level.

Figure 1. Emigrants, Immigrants, and Net Migratory Balance (in millions), Latin America (circa 2000)



Source: Global Origin Data Base, Updated March, 200. The Development Research Centre on Migration, Globalisation and Poverty. University of Sussex.

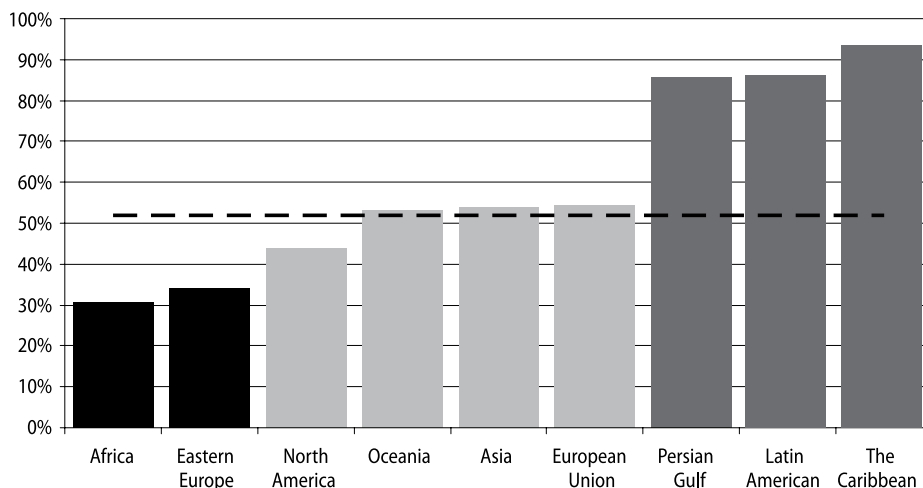
Intra and Extra-regional Emigrants

Globally, it is estimated that there were 175 million international emigrants around the year 2000. Of these, 48% were migrants that moved within their region of origin (intra-regional migrants), and the other 52% were extra-regional migrants. This was the case in Oceania, Asia, The European Union, and to a lesser degree, North America. Meanwhile, in Africa and Eastern Europe there was a greater prevalence of intra-regional migration than extra-regional movement. Specifically, while the Africa and Eastern Europe are important expulsory population regions, extra-regional emigration represents less than a third of the total emigration in those zones (Figure 2). In other words, more than two thirds of their emigrants move to another country within the same region.

In contrast, Latin American migration presents a very different pattern. In this case, much like the Caribbean and the Persian Gulf, more than 85% of Latin American emigrants (19 million people) move to a country outside of their region of origin. However, Latin America is the region with the second highest volume of

extraregional emigrants. It is second only to Asia, which has 33 million migrants. In fact, Latin American generates 21% of extraregional emigration, while the Caribbean and the Persian Gulf supply only 2.8% and 1%, respectively. In addition, although Asia generates the greatest volume of extraregional emigrants (34%), they represent less than 1% of the population of that continent. The 19 million Latin American emigrants, in contrast, represent 3.8% of the continent's population. This places Latin America as the region with the highest rate of extraregional emigration in the world.

Figure 2. Extraregional emigration as percentage of total, according to major international regions (circa 2000)



Source: Global Origin Data Base, Updated March, 200. The Development Research Centre on Migration, Globalisation and Poverty. University of Sussex.

The data indicate that the emigratory pattern in Latin America is very different from the rest of the world. The predominance of extraregional movements in the region indicates Latin America's important role in contemporary international migration. This process can be understood more clearly within a globalization framework. In other world zones with higher internal and intraregional movement, factors such as environment, history and regional powers appear to have a greater influence.

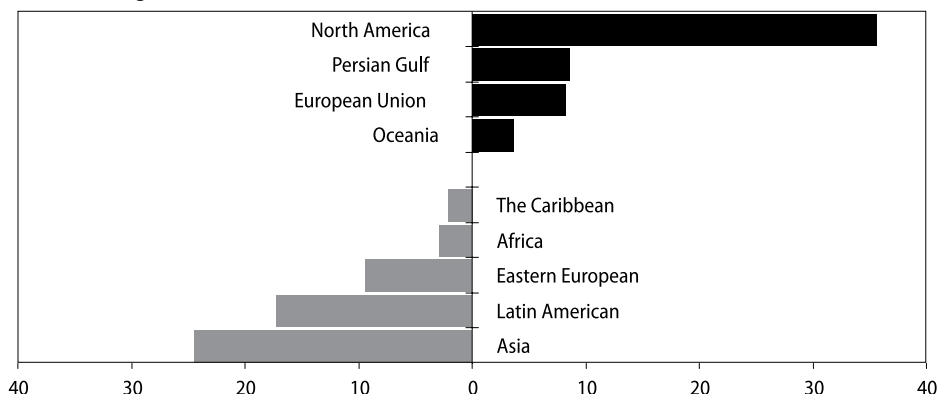
From South to North: Migratory patterns in the global economy

Net Migration (NM) gives us another indication of contemporary international migration. Observing Figure 3, we can clearly identify net emigration regions

in opposite of the net immigration regions. The population expulsion regions are part of the third world: Asia, Latin America, Eastern Europe, Africa, and the Caribbean. In contrast, the regions that attract population belong to the developed world: North America, The European Union, and to a lesser extent, Oceania. The Persian Gulf countries are the exception to this rule. This can be explained by the importance of petroleum in the region and its important strategic role in the global economy.

Figure 3 shows that we can define contemporary international migration as a great march of the southern hemisphere workforce to the more developed north. Latin America, not only participates in this great movement, but it actually supplies almost one third of the net interregional migrants. This places Latin America as the region with the second highest net global emigration, after Asia.

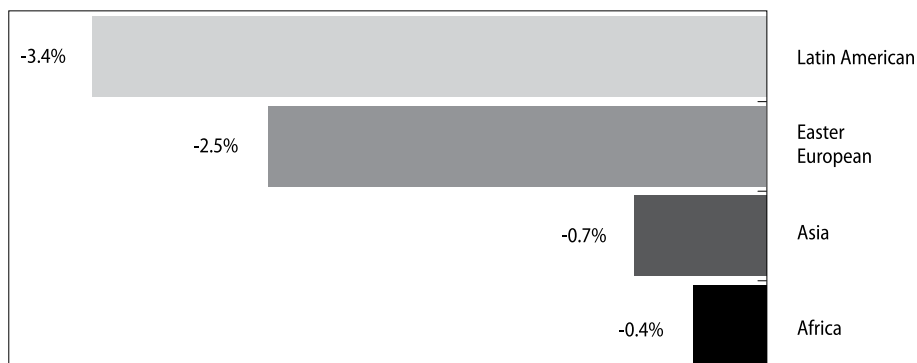
Figure 3. International Net Migration (Millions of people), according to the major international regions (circa 2000)



Source: Global Origin Data Base, Updated March, 2009 The Development Research Centre on Migration, Globalisation and Poverty. University of Sussex.

Latin America has a negative net migration balance about 17.2 million people. This means that the region has the second highest absolute population loss globally. It is preceded only by Asia which has a negative net migration balance of 24 million people. The importance of Latin American international migration is especially clear when we look at net international migration rates. As it can be observed in figure 4, Latin America has the highest relative rate among regions that have high net emigration volumes. Latin America's Net Migration represents 3.4% of their total population. In contrast, Asian and African Net Migration represent only 0.7% and 0.4%, respectively. Eastern Europe is the only other region with a relatively important net migration rate (2.5%). However, it is still lower than the one in Latin America.

Figure 4. Net Migration Rates, according to the major regions of international emigration, (circa 2000)



Source: Global Origin Data Base, Updated March, 2009 The Development Research Centre on Migration, Globalisation and Poverty. University of Sussex.

As a result of net international emigration, Latin America has a negative net migration balance to all other regions in the world. As it can be seen in table 1, there are more Latin Americans in all other regions of the world than there are immigrants from the same areas in Latin America. Along with the Caribbean countries, Latin America maintains a negative net migration balance with the rest of the world.

Table 1. Immigrants, Emigrants and Net Migration, according to the major international regions, Latin America (circa 2000)

Regions	Emigrants	Immigrants	Net Migration
Total	19,197,414	2,004,727	-17,192,687
North America	15,511,756	479,205	-15,032,551
The Caribbean	218,227	36,059	-182,168
Union European	1,805,653	1,129,452	-676,201
Eastern European	245,790	56,578	-189,212
Asia	980,327	270,006	-710,321
Persic Gulf	155,346	2,387	-152,959
Africa	197,102	24,896	-172,206
Oceania	83,213	6,144	-77,069

Source: *Global Origin Data Base, Updated March, 2009* The Development Research Centre on Migration, Globalisation and Poverty. University of Sussex.

An Overview of Contemporary Global Migration

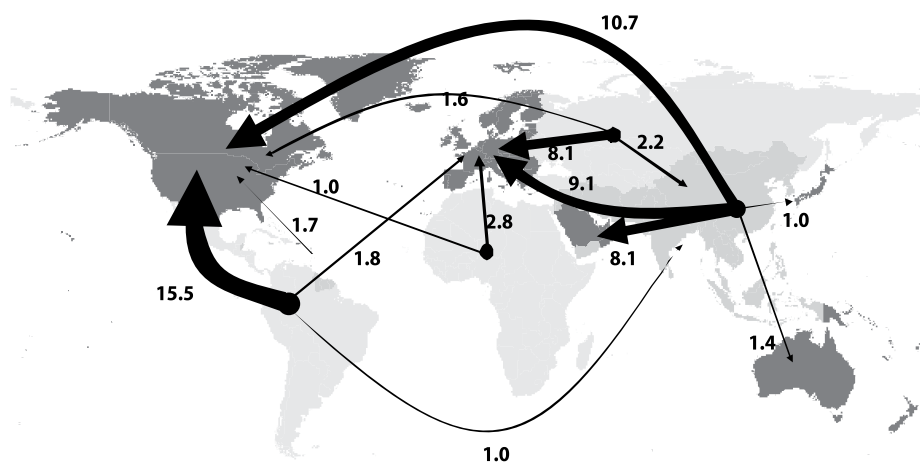
The panoramic view of contemporary global migration, available in Map 1, shows us that there are a great variety of migratory flows. This gives us the general

impression of the globalization of the process. Specifically, there are large migratory flows from almost all of the less developed regions of the world into practically all areas and countries of the more developed ones.

A detailed analysis shows that global migration is composed of a great variety of local flows. Through this, we can establish the migratory specialization of each region. For example, Africa has a clear concentration of migrants in the European Union. Effectively, there were 2.8 million Africans living in the European Union in the year 2000. This figure represents more than two third of all extraregional African emigrants. Furthermore, approximately two thirds of these migrants lived in only three countries: England, Germany, and France.

There is a similar situation with Eastern European extraregional emigration. In this case, more than 60% of these emigrants are residents in European Union countries (Germany, primarily). This concentration of migration is even greater in Latin America. Approximately 80% of Latin Americans immigrate to North America (mainly The United States). At the same time, just another 10% (1.8 million people) reside in a European Union country (principally Spain).

Map 1. Migratory flows among large international regions
Millions of people, circa 2000



Source: *Global Origin Data Base, Updated March, 2009* (version 4). The Development Research Centre on Migration, Globalisation and Poverty. University of Sussex.

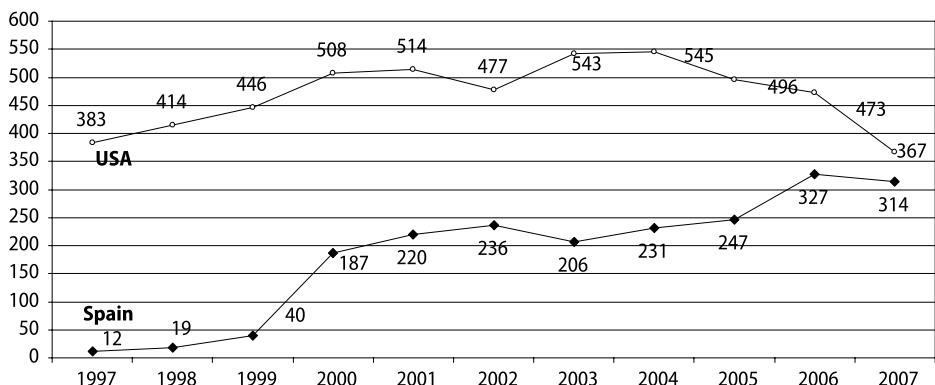
Only Asian emigrants move to a greater variety of destinations. Basically, one third of them live in North America, another 30% relocate to The European Union, while 25% reside in the Persian Gulf. This represents not only a greater variety of destinations, but also a more homogenous distribution.

In summary, with the exception of Asian emigration, there is a generally high origin-destination concentration in contemporary international migration. It is clear that contemporary South-North migration has its roots in globalization. Also, global migration is composed of a large variety of locally determined flows. Each one of these flows defines a singular migratory experience. However, when put together, they make a common pattern of global mobility.

USA and Spain: Current Latin American Immigration

Until the year 2000, the United States was, without a doubt, the main destination of Latin American extraregional emigrants (Villa and Martínez, 2001; Pellegrino, 2003; Canales, 2006). However, Europe, especially Spain, has become a second front for Latin American emigration in recent years. At the end of the 1990s, the USA received Latin American emigrants at a ratio 17 times greater than Spain. In other words, for every one Latin American that migrated to Spain, there were another 17 that moved to The United States. This began to change in the year 2000. Between the years 2000 and 2005, the ratio shifted to 3:1, i.e. for every 3 emigrants that moved to the United States, one migrated to Spain. Furthermore, this ratio was reduced to the point that by the year 2007, Latin American emigration to the USA was only 17% greater than that of Spain. If the trend continues, it is likely that this situation could be inversed in the future. However, this could depend on how the global economic crisis affects migrants and their host countries (Figure 5).

Figure 5. Latin America, 1997-2007. Annual Migratory Flow to the United States and Spain (Thousands of people)

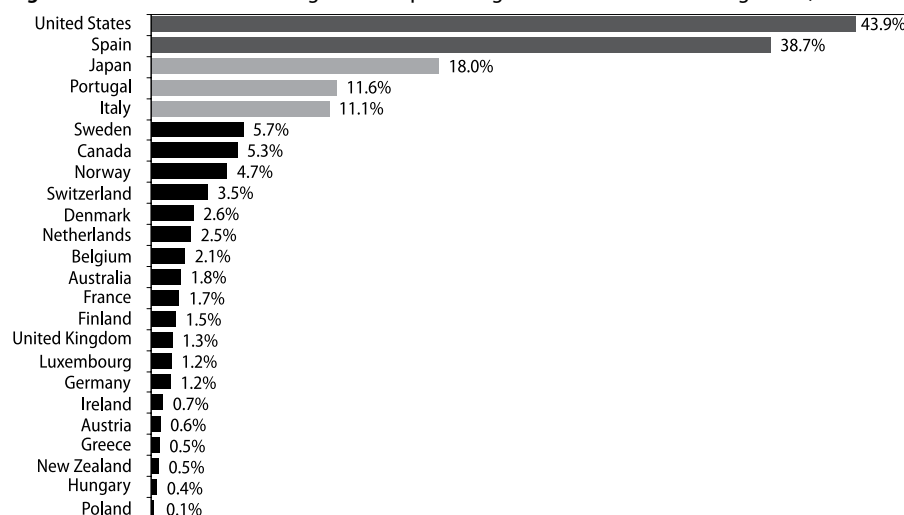


Source: INE, *Españā, Padrón municipal de población*, and Census Bureau, USA, *Current Population Survey*, March Supplement.

The predominance of the USA as a destination for Latin Americans is due to Mexican migration to that country. In fact, if we exclude Mexico from this analysis, we can see that other countries' migration to Spain has surpassed their migration to the United States since 2001. Actually, since 2006, migration to Spain is almost double than to the USA. During the biennium 2006-2007, 840,000 Latin Americans immigrated to the United States (473,000 in 2006 and 367,000 in 2007). Of these, 530,000 came from Mexico and only 310,000 came from the other 19 countries in the region. At the same time, 641,000 Latin Americans immigrated to Spain (327,000 in 2006 and 314,000 in 2007). In the Spanish group, only 12,000 emigrated from Mexico and 629,000 came from other Latin American countries.

These data indicate that Spain and the United States are the two principal destinations for Latin American migrants. This is mirrored by the fact that Latin Americans are the largest groups of migrants that these countries receive. Around the 2005 year, 44% of all immigrants in the USA and 39% in Spain were from Latin America. In contrast, Latin American migrants composed only 18% of the immigrant population in Japan, less than 12% in Portugal and Italy, less than 6% in Sweden, Canada and Norway, and the numbers were almost insignificant in other OECD countries (Figure 6). However, in Latin America not all countries have the similar migratory patterns. We can identify markedly different migratory patterns for each region and country. On the one hand, Mexicans and Central Americans have a very strong tendency to immigrate to the United States. On the other hand, South Americans show a strong preference for Spain.

Figure 6. Latin American Immigrants as a percentage of OECD countries Immigrants. (Circa 2005)



Source: OECD. <www.stats.oecd.org>.

In the first case, between 2000 and 2006, more than 97% of the emigrants from Haiti, Mexico, El Salvador and Guatemala migrated to the United States. The population that emigrated from these countries to Spain or another European country is almost statistically insignificant. There was a similar situation in Honduras for the same time period. There, 84% of its emigrants went to the United States while only 16% migrated to Spain. Similarly, in Cuba there is a strong preference for the USA. Although immigration to the United States is not as strong as it once was and immigration to Spain has become more and more frequent, the ratio was still 3:1 in favor of the United States during the period of 2000 to 2006.

This situation is reversed in the case of South American emigrants. At the aggregate level, less than 30% of South Americans migrate to the United States. Instead, they show a strong preference to emigrate to Spain (and Portugal in the case of Brazil). In Peru, emigration to Spain was almost double than to the USA during the period 2000-2006. Also, in Argentina and Colombia, the ratio was 3:1 in favor of Spain. It is worth noting that the Colombian case is particularly striking, because until a few years ago, most Colombian emigration was aimed at the United States and to a lesser extent, Venezuela.

This preference for Spain is even more pronounced in the cases of Ecuador and Uruguay. In both countries, emigration to Spain was five times greater than to the United States. Ecuador is the country that has had the greatest migratory flow to Spain. As a matter of fact, from 2000 to 2006 almost one in four Latin Americans that arrived in Spain was from Ecuador. Bolivia is perhaps the most extreme case. Between 2000 and 2006, Bolivian emigration was nine (9) times greater to Spain than to the United States. Specifically, more than 200,000 Bolivians immigrated to Spain while only 21,000 went to the United States. Finally, Brazil, Venezuela and the Dominican Republic have a more mixed immigration profile. There, emigration to Spain and the United States was proportionally similar and almost equally divided. Brazil is a special case because emigration to Portugal is as important as Spain. At first glance, Brazilian emigration to the USA appears to be double that of Spain. But, if you consider Portugal, the situation is almost equal.

This migratory specialization is illustrated in Map 2. Here we can fully and clearly identify at least three large migratory regions. Mexico, Central America, Cuba and Haiti show a clear emigratory preference for the United States. In contrast, South American migrants, with the exceptions of Chile, Venezuela and Brazil, strongly prefer to move to Spain. There is also a third area where both migratory destinations are equally important. These countries are: Brazil, the Dominican Republic and Venezuela. Finally, there are the countries which have very low levels of emigration. They are: Costa Rica, Panama, Nicaragua and Chile.

Map 2. Latin American Countries According to Principal Destinations of Recent Emigration (2000-2006)



Source: INE, España, *Padrón municipal de población*, 2001 a 2007, and Census Bureau, USA, *Current Population Survey*, March Supplement, 2000 a 2006.

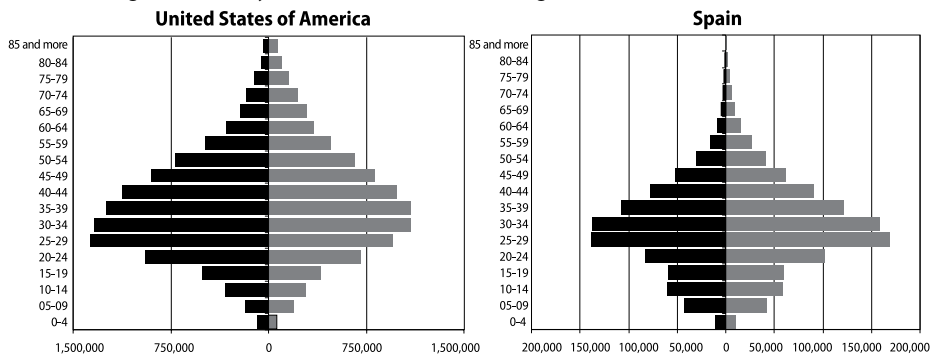
Socio-demographic Profiles of Latin American Migrants

The socio-demographic profile of Latin American immigrants in Spain and the United States shows fairly heterogeneity, depending on the region and country of origin. In some cases the emigrants are primarily male and have a low level of education; in other situations, there are a high proportion of female migrants while in others, we see the participation of senior citizens. The last one indicates that we are talking about a migration which renews itself very slowly. In this section, we give a brief socio-demographic characterization of Latin American immigrants using three measures: age structure, sex and level of education.

Age Structure

Generally, Latin American migration follows the classic age pattern in that the majority of the emigrants are young, economically active adults. This is true in both the United States and Spain. Figure 7 shows that the large majority of the migrants are between the ages of 20 and 49 years old. In Spain, more than 71% fall in this category and approximately 65% in the United States. This is true for men and women. This age structure reflects the fact that Latin American migration to Spain and the United States is essentially labor-based. Also, the absence of youngster migrants reinforces this idea. Family migration is really very low and statistically insignificant.

Figure 7. The United States of America and Spain, 2008
Age Structure by Gender of Latin American Migrants

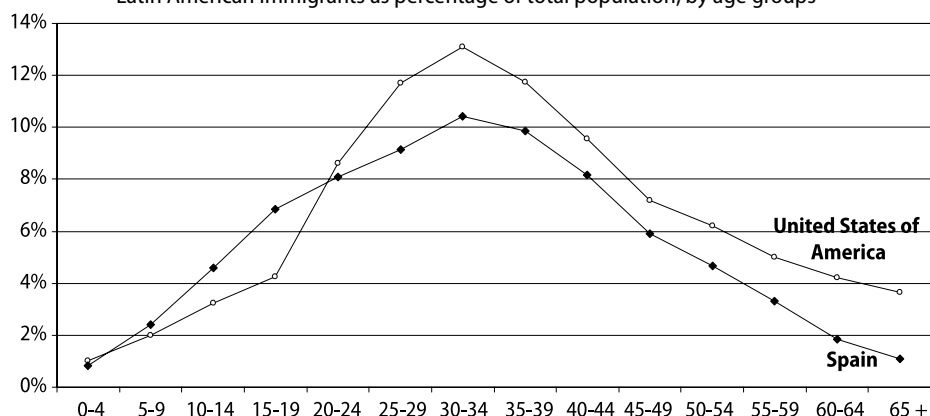


Source: INE, España, *Padrón municipal de población*, 2008, and Census Bureau, USA, *Current Population Survey*, March Supplement, 2008.

Since the majority of Latin American migrants are young, they have made a large contribution to the population dynamics of both Spain and the United States. Latin American immigrants between the ages of 25 and 35 constitute 10% and 12% of the resident populations of the same age group in Spain and the USA, respectively. This means that in Spain, 1 in 10 people between these ages is a Latin American immigrant. In the United States, this figure is approximately 1 in 8.

This highlights the large contribution that Latin American immigrants have made to the growth of the populations of young people in Spain and the United States. Since the end of the 20th century, both of these countries experienced the final stages of the Demographic Transition, a phenomenon that occurs primarily in the absolute and relative reduction of children and young people, as direct result of declines in fertility and birth rates. In fact, Spain's fertility rates actually fell below the population replacement level (Adsera, 2006; Lee, 2003; Pérez, 2003; Cooke, 2003.)

Figure 8. United States of America and Spain, 2007
Latin American immigrants as percentage of total population, by age groups



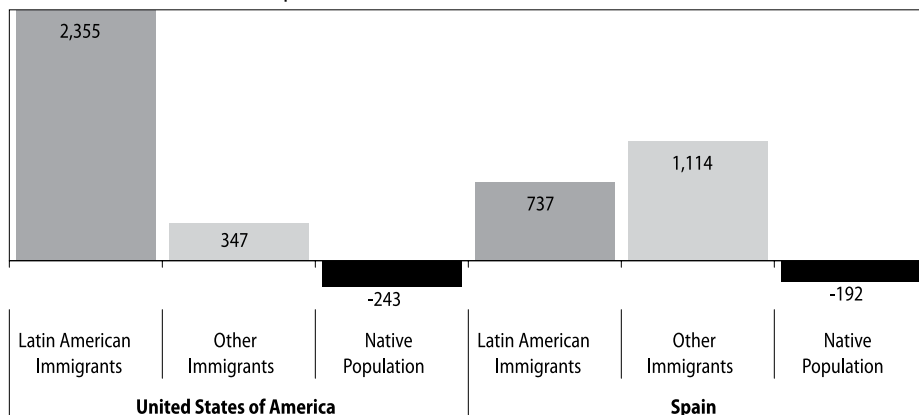
Source: INE, España, *Padrón municipal de población*, 2008, and Census Bureau, USA, *Current Population Survey*, March Supplement, 2008.

Without international immigration between 2002 and 2007, in both countries the populations of people between 20 and 49 years would have been reduced significantly. Specifically, the native populations would have been reduced by almost 192,000 people in Spain and 242,000 in the United States if the immigrants had not arrived. This is important because these are the people who are at the height of their productive and reproductive capacities.

The immigration of young Latin Americans has not only compensated for the declining fertility and birth rates, but it has also caused important growth in the populations of this age group (United Nations, 2001; Domingo i Valls, 2006). Effectively, the immigrants between the ages of 20 and 49 increased the population by 2.7 million people in the United States and by 1.8 million in Spain. Thus, between 2002 and 2005, the population of 20 to 49 year old increased by 2% and 8.5% in the United States and Spain, respectively.

These data show that international immigration greatly contributes to the demographic sustainability of the populations of the United States and Spain. The structural importance of this age group population rests in two complementary factors. First, they are the demographic base that supports the biological reproduction of all human populations. And second, in this age group has the largest proportion of economically active population in each country. Both factors are the basis for demographic, social and economy reproduction of every society.

Figure 9. The United States of America and Spain, 2002-2007.
Population Growth of 20 to 49 Year-Olds, by Migratory Status
(Thousands of People)



Sources: INE, España, Padrón municipal de población 2002-2007, and Census Bureau, United States of America, Current Population Survey, March Supplement, 2002-2007.

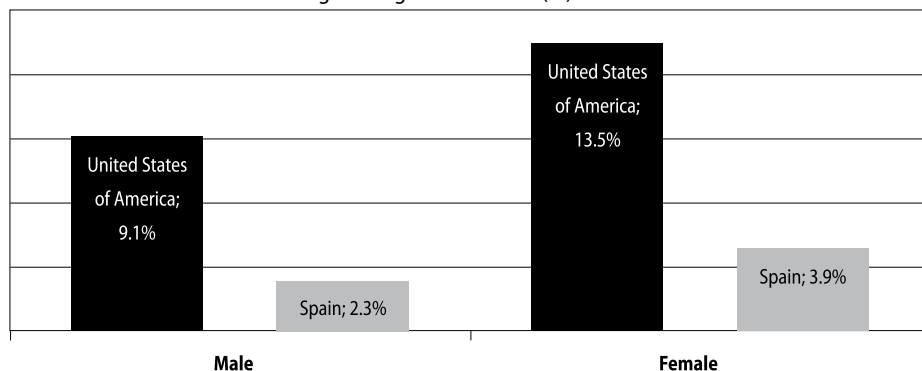
In Spain and the United States, immigration fulfills a similar transcendental demographic function. However, it is true that there are certain specific differences to take into account. In the USA, the contribution of immigrants is based mainly on ones from Latin America. However, the situation in Spain is more balanced. In the USA, Latin American immigrants have contributed with 87% of population growth of the group of 20 a 49 year-olds while in Spain, that number is only 40% for the same population. In other words, the contribution of Latin American immigration to demographic reproduction, society and the economy in the United States is indisputable. Spain, in contrast, has received a wider variety of immigrants, principally of African and European origin. This can be explained by the fact that Latin American immigration to Spain is a relatively recent phenomenon compared to that of the United States.

The longer tradition of Latin American immigration to the United States is also reflected in other indicators as well. One prominent indicator is the number of Latin American immigrants over 60 years old in both Spain and the United States. Labor migration is concentrated among young and active participants. We begin to see the natural aging process of the immigrant population over time, which is then reflected in a higher number of elderly subjects who had immigrated years before. Subsequently, we can expect a low proportion of Spanish immigrants to be over 60 years old, since Latin American immigration to that country is a relatively new phenomenon. In contrast, we can expect that

there will be a higher proportion of elderly immigrants in the United States, since this country has had an extensive history of Latin American immigration.

The data support this hypothesis (Figure 10). In Spain only 3% of all Latin American immigrants are over 60 years old. In the United States, on the other hand, 9.1% of the male migrants and 13.5% of the female one are over 60 years old. In other words, 1 in 10 Latin American male migrants and 1 in 7 females are over the age of 60 in the USA, while in Spain the over 60 years old immigrants are much smaller. Only 1 in 40 men and one in 25 women are over 60 years old.

Figure 10. United States of America and Spain 2008
Latin American Immigrants Aged 60 or Older (%)



Sources: INE, España, *Padrón municipal de población* 2008, and Census Bureau, United States of America, *Current Population Survey, March Supplement*, 2008.

The difference in the age structure regarding migrants over 60 years old indicates two different and complementary situations. In the case of the United States, the higher presence of migrants over 60 years old reflects the longer migratory tradition and history of Latin American emigration to that country. This is reflected to a certain degree in the aging of the permanent immigrants to the USA. However, the high presence of 20-49 year olds also indicates that Latin American immigration to the United States is constantly renewing itself. There is 150 year-old tradition of Latin American migration to that country (Durand and Massey, 2003). It is also true that this process has been cyclical and that has increased significantly in recent decades.

While there has always been Latin American emigration to Spain, it is only in the last decade that it has become statistically significant. This is due to two factors. Until the late 1980s, Spain was not a migratory attraction country. To the contrary, it was a country with high emigration to other countries, especially other European ones (Domingo I Valls, 2006, Cabré, 1999). Also, Latin American migration

was concentrated to the United States until the beginning of the 1990s. In 1996, Latin American migrants represented less than 0.5% of the resident population of Spain. That figure actually reached almost 5% in 2008. The immigration rate of Latin American increased almost ten times in only 12 years.

Sex composition on Emigration

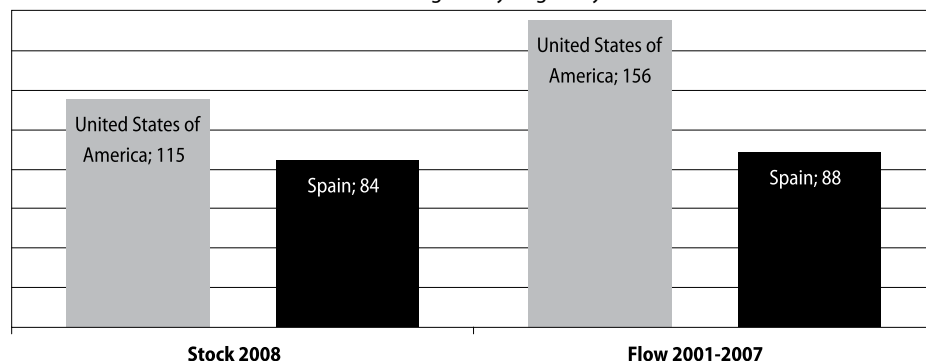
One demographic dimension which distinguishes and characterizes the migratory process is the varying participation that men and women have in each flow. Sometimes there are flows which are primarily female and at other times, principally male. There are also flows which are characterized by equal sex distribution. The difference in the sex composition of a migration is usually the result of the labor conditions and social integration in the destination country and how these conditions affect men and women, which are primarily defined by gender relations. Controlling for sex helps us to understand how varying social conditions affect people, especially women, in every sphere of social life (In our case, migration). We can observe divisions based on gender relationship in the case of Latin American migration.

Comparisons of sex ratios (Number of males per 100 females), shown in figure 11, from the Latin American migrations to Spain and the United States give us an impression of the differences in their gender compositions. If we observe the accumulated stock or the recent flows (2001 to 2007) of migrant residents in both countries, we can clearly see that there was a higher participation of female migrants to Spain while in the United States there was a greater male participation. Among the Latin American migratory stock in Spain, there were only 84 men for every 100 women while in the USA, the situation was inversed. In that country, there were 115 men for every 100 women. These differences are even more marked in the case of the recent migratory flow. In Spain, the ratio has not changed a lot, with fewer than 90 men for every 100 women. However, in the United States the sex composition difference has increased to more than 150 men for every 100 women.

As it can be observed, Latin American migration to the United States is primarily masculine in nature while Spanish immigrants tend to be female. This greater presence of female migrants in Spain (and in general, the rest of Europe) has been widely documented in diverse texts and research (Pedonne, 2006). This female predominance can be explained by Latin American women's incorporation into the service industry, especially caretaking (children, elder people, and sick people, among others) and domestic service (housecleaning). This incorporation has been dubbed as the transnationalization of the maternal and industry care (Hondagneu-Sotelo, 2001; Herrera, 2005).

The predominance of male migrants in the United States can be explained by the long-standing migratory tradition of Mexicans and Central Americans who tend to work as agricultural or construction day-laborers. These are economic sectors which are traditionally and overwhelmingly male (Bustamante, 1997; Canales, 2007).

Figure 11. The United States of America and Spain, 2001 to 2008
Sex Ratio of Latin American Immigrant by Migratory Form



Sources: INE, España, Padrón municipal de población, 2001 to 2008, and Census Bureau, United States of America, Current Population Survey, March Supplement, 2001 to 2008.

The different behaviors of the migrants (stock and flow) in both countries illustrate a second level of differentiation in the dynamics and migratory behavior of men and women in the United States as opposed to Spain. The first level of differentiation is in the sex ratios, seen above. The second level refers to the sex composition among the stock and flow in both countries. In Spain, there are hardly any differences in this sense. However, in the USA, the sex ratio in the flow is markedly higher than that the one prevailing in the stock, although in both, there is a male predominance (Figure 11).

In the United States, more than 60% of the Latin Americans that arrive every year are male and less than 40% are female. However, this relationship begins to modify when we talk about permanent migrants. Of this group, only 53% are men and 47% are women. These differences indicate that Latin American women have a greater propensity to establish permanent residency in the United States. In contrast, Latin American men are less likely to do so. Indeed, if these propensities to settle in the destination country (U.S. in this case) are different, then there should be significant differences in sex ratio between the flow and stock migration.

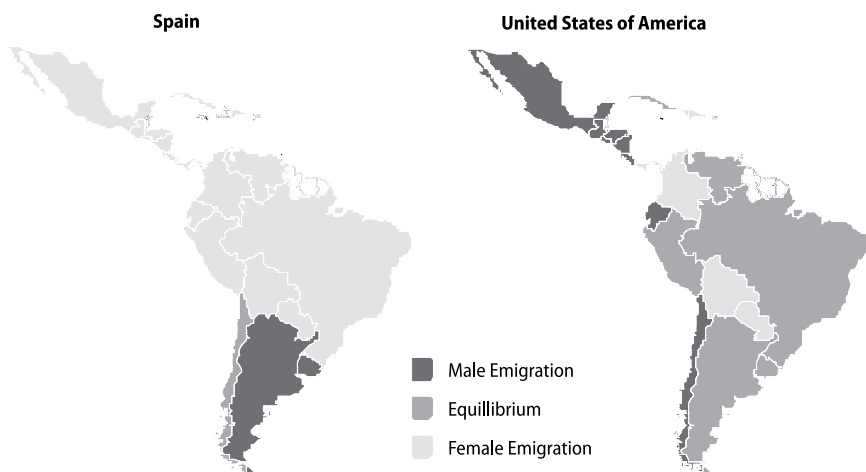
These observed differences illustrate the different migratory behavior between Latin American men and women in the United States. More men than women tend to migrate to the United States. However, among those same migrants, the women are more likely to establish permanent residence there. In contrast, men tend to have a circular and temporary migration and eventually they return to their communities of origin.

In the case of the United States, this different migratory pattern is, to some degree, expected, especially if we consider the importance of Mexican and Central American migration. Their migration has traditionally been temporary and circular. It is well-known that temporary migration is essentially masculine in nature. This is reflected in the high masculine sex ratio which prevails in the annual flow. However, the return of these migrants would significantly reduce the differences in the sex ratio of the stock.

In contrast, apparently, there are no significant behavioral differences between the migratory flow and stock in Spain. This indicates that men and women have a similar propensity to establish permanent residence and/or return to their countries of origin. In other words, whether the propensity is to go or stay, it is practically the same for men and women. With no doubt, this is an important behavioral difference between Latin American emigrants to Spain and those that head to the United States.

A specific analysis of sex differences in migration by origin-destiny country offers us a regional view of these variations (Map 3). In the case of Spain, in general, there is a pattern of feminization, with the exceptions of Argentina, Uruguay, and to a lesser extent, Chile. In the other countries, there is a clear domination of female emigration to Spain. Actually, in El Salvador and the Dominican Republic, women represented almost two thirds of those countries' total emigration to Spain.

Map 3. Sex composition of emigration to Spain and the United states of America, according to countries of origin
Latin America, 2006-2008



Sources: INE, España, Padrón municipal de población, 2006 to 2008, and Census Bureau, United States of America, Current Population Survey, March Supplement, 2006 to 2008.

When discussing Latin American emigration to the USA, there is a more heterogeneous situation. Along with countries that show a high masculine predominance, there are also countries which have a highly feminized migration as well. In the first case, there are the countries that have a long-standing tradition of migration to the United States. They are: Mexico, El Salvador, Honduras, Guatemala and Ecuador. In the second case, there are countries that also have a long history of migration like: Colombia, The Dominican Republic and Haiti.

It is interesting to contrast migration selectivity by sex based on the specific Latin American country of origin, as shown in table 2. First, there are countries where migration to both countries is primarily female. This is the case of Colombia, The Dominican Republic, Bolivia, Paraguay and Panama. Furthermore, the migration sex ratio in these countries is less than 80 men for every 100 women. That is, more than 56% of these migrants are female. There are also countries where the migratory pattern is divided. Specifically, in some countries, there is a pattern of feminine migration to Spain and masculine migration to the United States. These countries are: Ecuador, Guatemala, Honduras, Mexico, Costa Rica, El Salvador and Nicaragua.

Table 2. The United States of America and Spain, 2006 to 2008
Sex Ratio of Latin American Immigrant, according Country of Origin

The United States of America				SPAIN		
Male	Equilibrium	Female		Male	Equilibrium	Female
Guatemala 171	Argentina 104	Haiti	92	Argentina 107	Chile 99	Ecuador 94
Honduras 134	Uruguay 104	Colombia	79	Uruguay 105		Venezuela 88
Mexico 125	Venezuela 101	Dominican Rep.	77			Peru 87
Chile 123	Brazil 99	Bolivia	77			Costa Rica 87
Costa Rica 121	Peru 99	Paraguay	63			Cuba 81
Ecuador 118	Cuba 96	Panama	59			Panama 79
El Salvador 110						Bolivia 78
Nicaragua 105						Mexico 78
						Colombia 76
						Guatemala 71
						Brazil 69
						El Salvador 64
						Dominican Rep. 58
						Paraguay 53
						Honduras 52
						Nicaragua 51

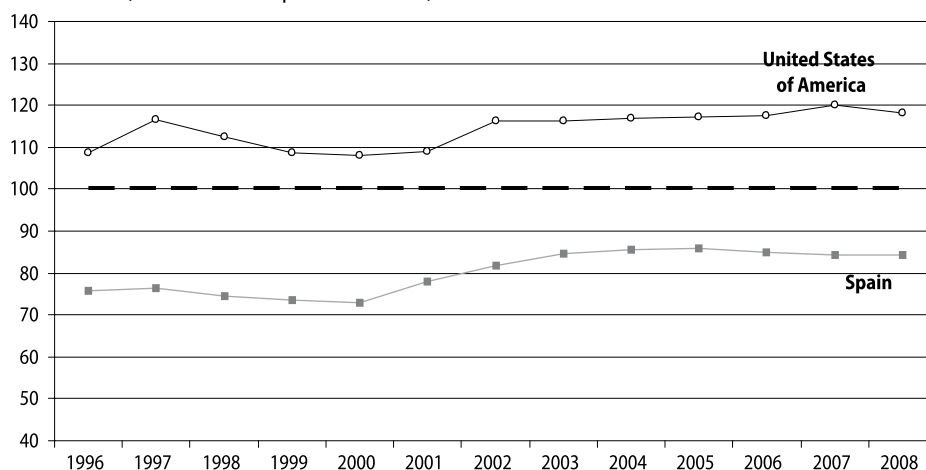
Sources: INE, España, Padrón municipal de población, 2006 to 2008, and Census Bureau, United States of America, Current Population Survey, March Supplement, 2006 to 2008.

There are countries where the emigration to Spain is masculine while it is feminine in nature to the United States or vice versa. In other situations, emigration is

primarily male to both countries. In addition, other countries have a more balanced migration pattern or they have a masculine pattern to the United States but a more equal pattern to Spain (in the case of Chile). Others have a more feminine emigration to Spain, but it is more balanced to the United States (Venezuela, Brazil, Peru and Cuba). Finally, still others have a masculine emigration pattern to Spain, but it is more balanced to the United States. This is the case in Argentina and Uruguay. In all of these situations, there is a migratory pattern which tends to be more masculine or feminine, but only to one of the destination while the other one tends to have a more equal gender balance.

Finally, it is worth noting that over the long term, the sex ratio has been relatively stable although there have been some cyclical variations which do not alter the structural pattern, as it can be observed in figure 12. In the United States, for example, the sex ratio has maintained itself at more than 115 men for every 100 women since the mid '90s. It was only from 1999 to 2001 that the sex ratio dropped somewhat, but this never indicated a feminization of the migration pattern. Something similar but inversed has occurred in the case of Latin American emigration to Spain. Here, the sex ratio has always been less than 85 men for every 100 women, although it has modified a bit in recent years.

Figure 12. United States of America and Spain, 1996-2008
Sex Ratio of Latin American Immigrants
(Number of Men per 100 Women)

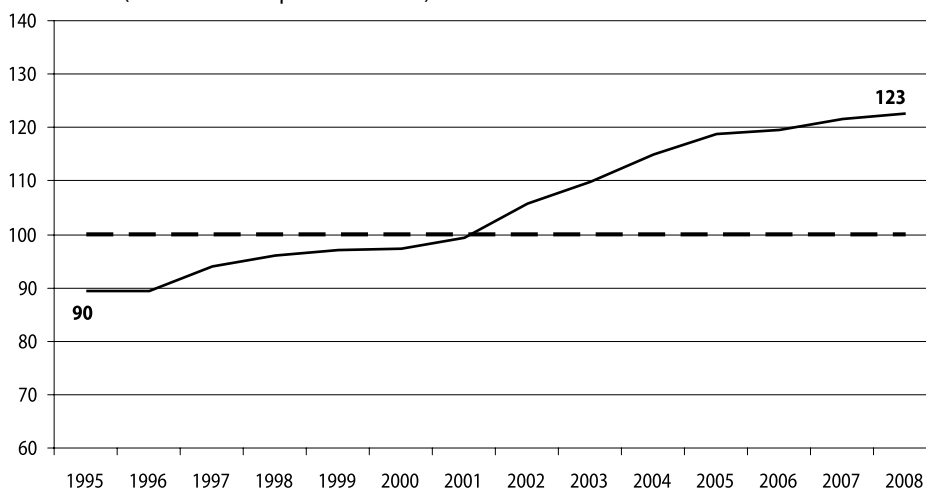


Sources: INE, España, Padrón municipal de población, 1996 to 2008, and Census Bureau, United States of America, Current Population Survey, March Supplement, 1996 to 2008.

The relative stability of the sex ratio indicates that there are structural differences between Latin American emigration to the United States (more masculine) and

emigration to Spain (more feminine). Furthermore, the stability of this pattern applies to almost all the countries in the region. The only exception to this is Central American emigration to the United States (Figure 13). Here, emigration was markedly feminine in the mid '90s and it has been markedly masculine in the last few years. From 1995 to 1996, the sex ratio was 90 men for every 100 women, while that same ratio has been more than 120 men per 100 women since 2006.

Figure 13. United States of America, 1995-2008
Sex Ratio of Central American Immigrants
(Number of Men per 100 Women)



Sources: Census Bureau, United States of America, *Current Population Survey, March Supplement, 1995 to 2008*.

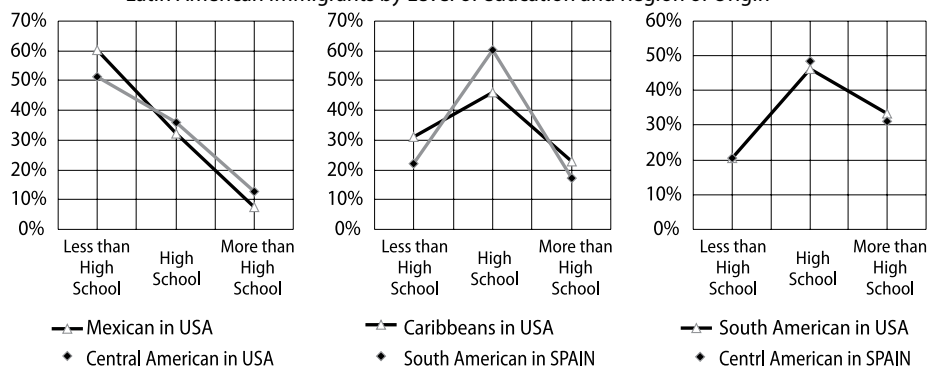
Level of Education

Migrants' educational level is also a factor of the migratory selectivity and differentiation which characterizes individual flows. Indeed, we can describe migration flows in terms of the average level of education of the migrants. This allows us to analyze and compare the specific characteristics of each migration flow. Furthermore, by comparing migrants' average level of education compared to the norm for their own country or society of origin; we can analyze the level and type of selectivity which prevails in migration flows. For example, there are countries and regions where the selectivity is in favor of those who have high levels of education and there are ones in which the opposite situation is true.

There appear to be three types of migration flows from Latin America to the United States and Spain in which this type of analysis is appropriate. In the first case, the migrants from Mexico and Central America who go to the United States

overwhelmingly have very low levels of education. This is true compared to both other Latin American migration flows as well as compared to migrants from other regions too. Here, 60% of Mexicans and 51% of Central Americans have not finished high school. Furthermore, only 8% of Mexicans and 13% of Central Americans have some post-secondary education (Figure 14).

Figure 14. United States of America and Spain, 2007
Latin American Immigrants by Level of education and Region of Origin



Sources: INE, España, *Padrón municipal de población*, 2007, and Census Bureau, United States of America, *Current Population Survey*, March Supplement, 2007.

In contrast, compared to other Latin American emigrants, the South American migrants who immigrate to the United States and the Central Americans who move to Spain, tend to show higher than average levels of education. In both cases, nearly one third of the migrants have university or professional studies (although not necessarily completed). Additionally, almost half of them (between 46% and 48%) have finished high school. Furthermore, only 20% of these migrants have less than high school studies.

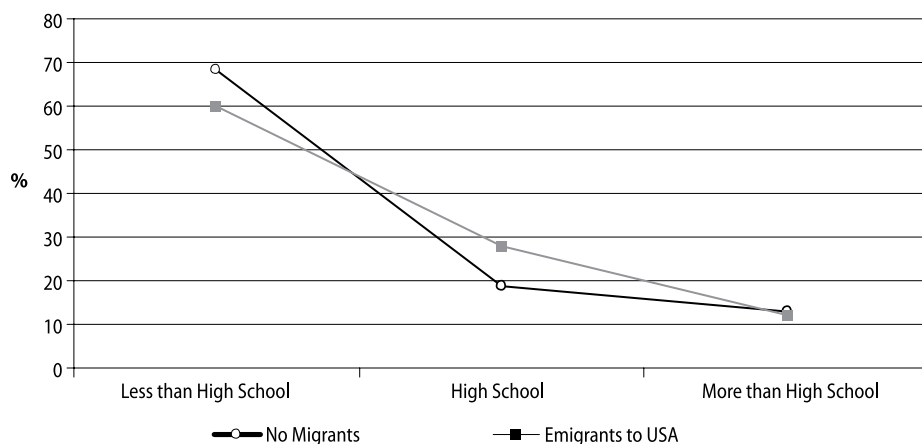
Finally, the South Americans that migrate to Spain and the Caribbean that go to the United States tend to have an intermediate level of education. In other words, their level of education is much higher than the Mexicans and Central Americans in the USA, but lowers than the second group from South America and Caribbean. Specifically, there are a high percentage of migrants who have finished high school but not a particularly large number of people who have professional or university studies.

Considering these facts, it is interesting to compare the educational profile of the South American migrants that go to the United States in relation to the ones that go to Spain. While the immigrants in Spain demonstrate a high level of education, the ones that immigrate to the United States have an even higher one. This difference is due to at least two factors. The first one is the longer migratory tradition of South Americans going to the United States. The second factor is due to the differences in

the countries of origin of the South Americans who go to Spain as opposed to those who go to the United States, as we saw above.

However, despite these differences, it is very interesting to note that in almost all these cases, the migrants have a higher level of education than the prevailing one in the Latin American population. Overall in Latin American America, there is a descending curve of education. That is, as students progress through their educational trajectory, fewer and fewer students continue their studies. The differences between countries can be quite pronounced depending on whether the major turning point of the curve is in middle school or high school.

Figure 15. Mexico, 2007. Population over 25 Years Old, by Educational Level and Migratory Status



Sources: Census Bureau, United States of America, *Current Population Survey, March Supplement, 2007*, and INEGI, Mexico, *II Censo de Población, 2005*.

Even though Mexican migrants have the lowest levels of education, we can still see migratory selectivity in this group. As it can be observed in figure 15, the proportion of emigrants with low levels of education (less than high school) is smaller than that of the Mexican population as a whole. Also, the proportion of migrants that have an intermediate level of education is higher than that of non-migrants. Finally, among migrants and non-migrants, the proportion of individuals that have high levels of education (more than high school) is very similar in both groups.

Labor Participation of Latin American Immigrants

In spite of the differences of Latin American emigrants in regard to levels of education, age and sex, most of the migrants face similar labor conditions in their destination countries. The migrants face similar working conditions which are

marked by social exclusion and vulnerability. In this regard, an analysis of the socio-economic profile of migrants will allow us to illustrate the precarious economic and living conditions of many of the Latin American emigrants. In the following section, we will present statistics on job position and income levels of Latin American immigrants in Spain and the United States.

Economic Participation

Latin American migration to Spain and the United States is essentially driven by labor and economic factors. This is the reason that we see very high levels of participation among economically active adults. It should be noted that this high level of economic activity occurs across all levels of education, as we documented above. However, when we compare the labor situation of men and women, we see important differences (Figure 16).

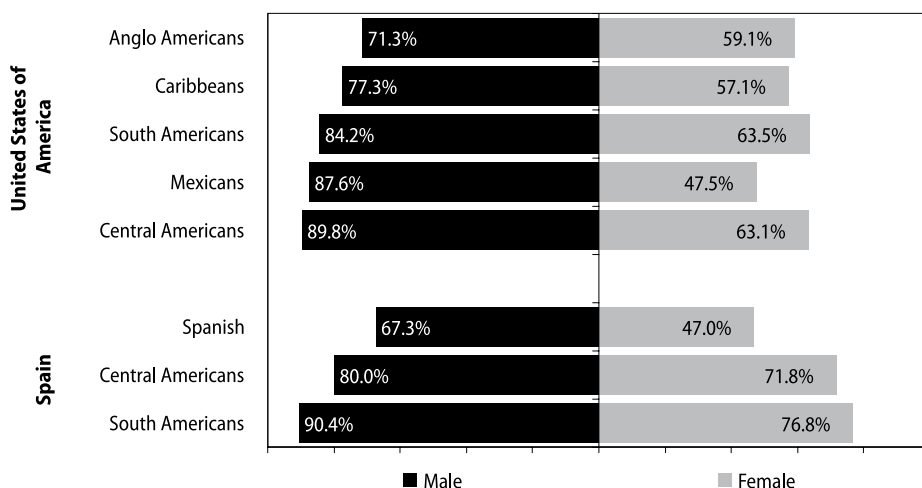
Latin American male immigrants systematically demonstrate a higher than average level of participation in the labor market than the native populations of Spain and the United States. In Spain, South American male migrants have a labor participation rate of 90% and Central Americans and Caribbeans have an 80% rate. Both these statistics are far higher than the 67% of the native Spanish population. The situation is similar in the United States. Mexicans and Central and South Americans have an average participation rate which is between 13 and 19 percentage points higher than Anglo-American men. Only the Caribbean male immigrants (Cubans, Dominicans and Haitians) have a rate which is closer to the average for Anglo-Americans. Even so, it is still six points higher.

The situation is somewhat different for women, however. In Spain, there is a similarly high level of female immigrant participation in the labor force while in the USA there is greater heterogeneity among the female migrants according to country and region of origin. In the Spanish case, all female Latin American emigrants maintain a high level of economic participation, generally above 70%. However, in contrast, only 47% of native Spanish women of working age actually participate in the labor force. So, the differences between native and immigrant women appear to be larger than the male ones when we discuss women's economic activity in Spain.

The situation is very different in the United States. Participation appears to be driven by region of origin. Female immigrants from Central and South America show around 5% higher level of economic participation than native Anglo-American women. In contrast, Caribbean women show levels of employment that are very similar to the native one. Finally, Mexican female immigrants have a level of

economic participation that is much lower than other immigrants' levels as well as that of Anglo-American women.

Figure 16. United States of America and Spain, 2007
Economic Activity Rates, by Migratory Status and Sex



Source: Ministerio del Trabajo, Spain, Encuesta de Población, Primer Trimestre, 2007, and Census Bureau, United States of America, Current Population Survey, March Supplement, 2007.

In both countries, as you can see, there is sex differentiation when we discuss Latin American male and female immigrants' employment rates. In Spain, both male and female migrants have levels of economic activity that are much higher than the national average. In contrast, in the United States, this is true only for male immigrants. There, the situation is more heterogeneous for women, but in general they tend to have a level of economic participation which is similar or lower than the national average.

The case of Spanish highlights the particular situation of female immigrants in which they have employment levels that are much higher than the national average, especially for women. This is very relevant to the fact that Latin American migration to Spain is markedly female in nature, as we previously discussed. This means that we are talking about a migration that is female and labor-based.

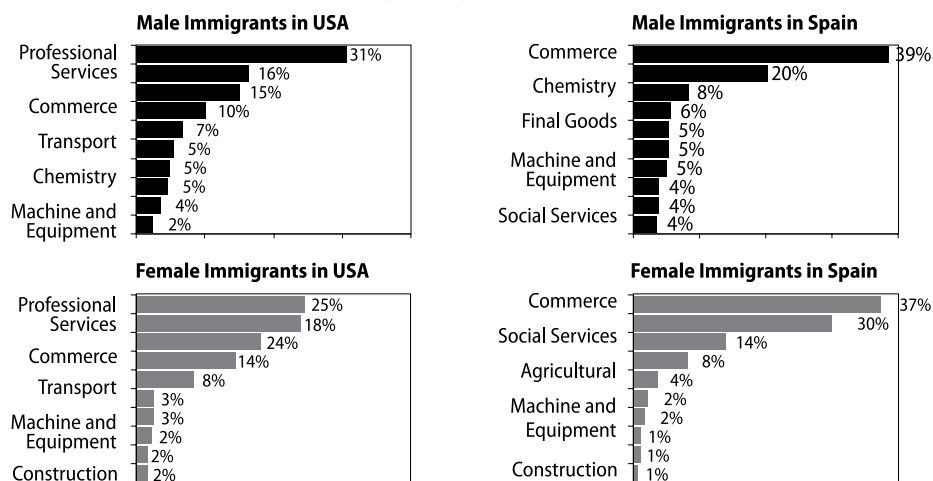
Employment

The previous data clearly illustrate the hypothesis that Latin American migration is essentially motivated by occupational factors. By the same token, the migrants are exposed to conditions of vulnerability and insecurity that characterize the changes in the labor market in the developed nations. These changes occurred due to processes

of globalization and labor flexibility. They are marked by the segmentation and polarization of different occupations and the employment structure itself (Canales, 2007, Sassen 1998). In this context, it is important to take note of sex differences regarding employment conditions and how they are reconfigured in the case of Latin American immigrants.

Firstly, we can see that in both Spain and the United States, Latin American migrants tend to work in very specific employment sectors. The men work predominately in the construction industry. This industry employs 31% of the male migrant work force in the United States and 39% in Spain (Figure 17). The labor situation for Latin American women is more heterogeneous. In the United States, almost 50% of them work in professional and social services. Another 18% work in personal services industry. These are very different fields, especially in terms of remuneration and labor conditions. Without a doubt, professionals have better labor conditions than in the social and personal services. These differences are probably due to the fact that immigrants from South America tend to have higher levels of education than the ones from Mexico and Central America. Therefore, South Americans are more likely to have a professional career while Mexican and Central American women are more likely to work in the personal services (Canales, 2006).

Figure 17. United States of America and Spain, 2007
Latin American Immigrant by Employment Sector and Sex



Sources: Ministerio del Trabajo, Spain, *Encuesta de Población Activa, Primer Trimestre, 2007*, and Census Bureau, United States of America, *Current Population Survey, March Supplement, 2007*.

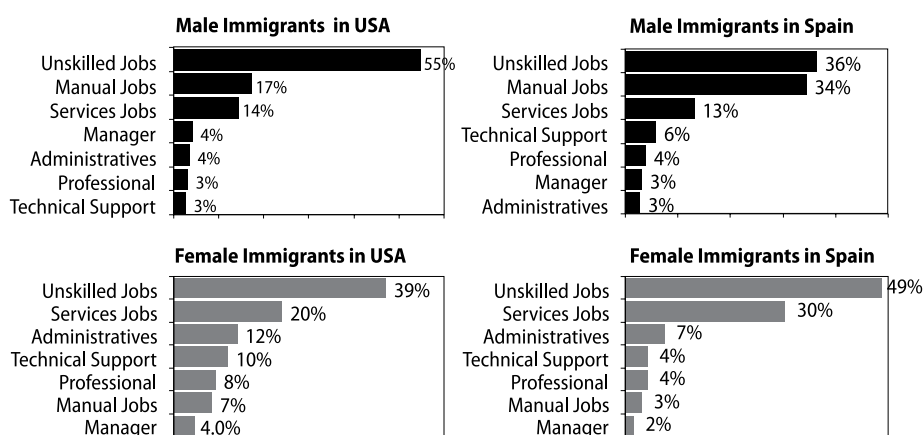
In Spain, on the other hand, also shown in figure 17, only 14% of the Latin American immigrant women work in professional services, 37% are employed in the personal services and 30% work in the commercial sector. Compared to the United

States, there is greater concentration into fewer labor sectors and there is also greater homogeneity in employment. This could be due to the fact that when compared to the USA, Latin American migrants come from a smaller group of countries, which could explain this greater homogeneity in employment.

These figures are important because these are the employment sectors which have high levels of job insecurity that make the migrants more vulnerable economically. To illustrate this, we can analyze the type of occupations in which Latin American immigrants work (Figure 18). In this regard, the data speak for themselves. In almost all cases, the majority of the jobs available were for unskilled labor. In the United States, 33% of the Latin American men and 39% of the women were employed in these kinds of jobs.

In Spain, the employment situation is somewhat different and more polarized in terms of sex differences. On the one hand, 47% of Latin American women work in unskilled positions and other hand, only 27% of men do so. Subsequently, unskilled jobs are not the norm for Latin American men. As a matter of fact, 34% of them can be classified as skilled manual laborers (probably in construction). This higher participation in more skilled labor positions is probably due to the fact the men employed in these positions are from South American countries. As we saw before, these immigrants are more likely to be recent migrants, come from fewer countries, and tend to have an intermediate to high level of education which then qualifies them for better position.

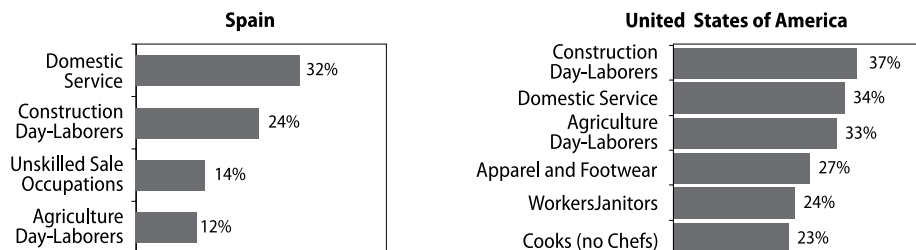
Figure 18. United States of America and Spain, 2007
Latin American Immigrants by Occupation and Sex



Sources: Ministerio del Trabajo, Spain, *Encuesta de Población Activa, Primer Trimestre, 2007*, and Census Bureau, United States of America, *Current Population Survey, March Supplement, 2007*.

In addition to these differences, it is interesting to note the influence that Latin American immigration has on particular occupations in both Spain and the United States. In the case of the United States, for example, Latin American immigrants compose 37% of day-laborers in construction, 34% of domestic workers, 33% of agricultural workers, and 27% of all employees in the textile and shoe industries (Figure 19). In Spain, as well, Latin American immigrants compose 32% of domestic service workers and 24% of day-laborers in the construction industry. These large contributions of workers illustrate the dependency that certain industries in both countries have on Latin American immigration. The case of domestic service workers is especially important because it directly highlights not only migratory differentiation, but also social class distinctions that limit and contextualize Latin American immigrants' social and economic integration into the societies of the developed world.

Figure 19. United States of America and Spain, 2007.
Latin American Immigrants in Selected Occupations



Sources: Ministerio del Trabajo, Spain, *Encuesta de Población Activa, Primer Trimestre, 2007*, and Census Bureau, United States of America, *Current Population Survey, March Supplement, 2007*.

Conclusions

International migration is one of the best examples to illustrate structural inequalities between the countries and regions associated with globalization. Latin America is not immune to these processes. Actually, the mobility of its population has contributed to the diversity and ever-increasing complexity of migration patterns. As we can see, one of the most relevant facts about Latin America is that it has changed from being a region that once attracted migrants to a region of emigration, contributing to the great march from the South to the North. This mirrors world population movements in this era of globalization.

Effectively, Latin American migration has not only intensified, but rather it has *extensified*. This is true in terms of its origins, destination countries and its migration forms. Until the 1970s, Latin American emigration was almost exclusively intra-regional and it was primarily among neighboring countries. Today, in contrast, we

can observe two important modifications. First, these intra-regional movements have spread beyond cross-border flows. Secondly, emigration has increased exponentially towards the developed world, especially the U.S., and more recently in Europe, Japan and Australia (Pellegrino and Martinez, 2001).

In this paper, we have used recent statistical information to document the characteristics of Latin American emigration to the United States and Spain. As we have seen, these two countries are the primary destinations of Latin American emigrants. To this effect, we have seen that this new emigration is directly linked to changes in the production structure and labor markets in the developed economies. These changes are a result of the processes of employment polarization and segmentation in a globalized world. In this sense, the integration of immigrants into the U.S. and Spanish economies is constrained by the contractual processes of deregulation and labor flexibility of markets, giving rise to new forms of labor differentiation and segregation (Stalker, 2000).

Indeed, different forms of labor flexibility directly affect the structure of occupations, employment levels and wages, as well as labor relations. The international employment structure has been transformed to favor part-time jobs, working at home and other forms of outsourcing. This inevitably leads to job insecurity and increased vulnerability of workers to these new labor market operating conditions (Castells, 1998).

This resulting heterogeneity is the basis for new forms of polarization and segmentation of labor markets. They result in different forms of exclusion, discrimination and social segregation which affect migrant workers, among others (Sassen and Smith, 1992). In particular, the strategies of flexibility and labor deregulation are the basis for new types of employment for the migrant population. Therefore, this situation has direct implications on the dynamics of migration and their changes in the last decade. The structural situation allows us to explain not only the growth of migration, but also its new forms, socio-demographic profiles and employment conditions, all of which we have documented above.

In general, there has been an increase in emigration in all Latin American countries, though not in the same proportions. Without a doubt, Mexican migration is the largest. This group currently contributes more than 60% of Latin American emigrants to the United States. However, there are two facts we should take into account. First, emigration from even small countries is increasing. This is the case of El Salvador, which has the highest per capita emigration rate to the United States in Latin America. Also, Ecuador has the largest volume of migrants to Spain. Secondly, in contrast to Mexican migration which is almost exclusively to the United States, the situation in the rest of Latin America is more complex. Europe has become a

destination which is equally or more important than the United States for Dominicans, Ecuadorians, Colombians, and more recently, Argentines. Similarly, Japan is now an important destination for Brazilians and to a lesser extent, Peruvians.

The socio-demographic profile is complex and diverse. In general, Latin American emigration is labor-driven. It essentially involves young, economically active adults aged 15 to 39. However, there have been some exceptions. The most extreme case is that of Cuban migration, which was renovated in the last decade as a result of the crisis affecting the Cuban economy in the nineties. However, the new influx has not been enough to reverse the aging process of the Cuban population that now lives in the United States.

Accordingly, there is wide diversity in the composition of migrant populations. Migration to Spain is principally female in nature, while in the United States, the situation is more heterogeneous. Mexican and Central American migrants in the United States are primarily male. In contrast, Dominican, Haitian, Colombian, Bolivian and other South American emigrants to the United States tend to be female.

In terms of the employment of Latin American immigrants, the situation is not very diverse. In particular, we note that, with some exceptions, Latin Americans tend to be exposed to varying conditions of precarious employment and occupational segregation. In this regard, we presented data which allow us to document three different aspects of this particularly vulnerable labor situation.

- First, Latin American immigrants have a systematically higher level of economic participation than the native populations of both Spain and the United States.
- Second, this high level of employment is frequently marked by job placement in positions which are unstable, precarious, and unskilled.
- Finally, this high level of employment insecurity and vulnerability means that Latin American migrants often have lower levels of social protection and more instability. They are strongly affected by deregulation and the precariousness of their working conditions since they often find themselves employed in domestic service as well as the agricultural and construction industries.

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Evidences of further decline of fertility in Latin America – Reproductive behavior and some thoughts on the consequences on the age structure¹

Laura L. Rodríguez Wong²

Abstract Recent evidence on fertility suggests that the decline trend did not decelerate and stabilized at the replacement level as expected and a number of countries have TFR already below replacement level. The adolescent fertility showed constant and relatively high rates until around 2000, but it shyly shows some decline now. The question is whether this decline is homogeneous or the gap between highest/lowest social classes is broadening. Given the young fertility age patterns and the awareness that, in general, adolescent fertility is a social burden, one can expect meaningful changes in the teenagers' reproductive behavior. Vulnerable adolescents may continue to present high risk of unwanted pregnancies, since unfortunately this is how it has been up to now, even among most developed settings. However, if the average adolescent delays age at maternity, the TFR will significantly fall in the short/medium run. If and when women will make up for the postponed maternity is a matter of deep research and guesses. The desire for fewer children, important proportion of unwanted fertility and high incidence of abortion also point out to a further fertility decline in Latin America. In addition, although incapability to implement reproductive preferences is frequently related to a higher number of actual children than the desired, it is also related to having fewer children than the desired number. Both are matters of concern on the subject of reproductive rights. A natural consequence of acute reduction in the size of new generations will be heavily felt when these generations enter the labor force to support the economy and the older population. Elderly Dependency Ratio will then grow more proportionally in 20 years time from now, assuming that fertility has fallen more than expected. Steeper fertility decline will make the demographic bonus to last longer, but the burden may be heavier.

¹ Paper presented at the XXVII IUSSP International Population Conference, Session 143 (Demographic transformations, convergences and inequalities in Latin America: what the future holds? - Latin American Population Association), September 27 to October 2, 2009, Marrakech, Morocco.

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... As countries get richer, their population's age and their birthrates plummet. And this is not just a problem of rich countries: the developing world is also getting older fast. Falling birthrates might seem beneficial, but the economic and social price is too steep to pay. The right policies could help turn the tide, but only if enacted before it's too late" Longman (2004: 1).

Introduction

Several decades of research on the Latin American demographics has been barely enough for policy-makers to notice the great age structure transition that the Region is going through. This change, as it is known, is due fundamentally to an impressive fall in the number of children that women have.

One of the demographic challenges related to the fast fertility decline and the great age structural transition is the absolute size diminution of new cohorts. This change, we know, will destabilize intergenerational relations in the short, medium and long run and bring demographic, socioeconomic and political consequences and challenges that are not yet well understood.

We present recent evidence of the fast fertility decline experienced throughout the continent and suggest that TFR will soon end up well below the replacement level for almost all Latin American countries regardless of any socioeconomic constraints³.

The paper shows firstly, the impact of fertility decline in the size of the new generations in Latin America (2010-2050). Next sections present recent estimates and some aspects of the reproductive behavior in the continent, namely, the young fertility age pattern and early motherhood trends and patterns of contraception and reproductive preferences. Levels of incidence of unsafe abortion are also mentioned. After an overview of reproductive behavior, we explain why very low fertility levels in Latin America are expected. Finally, the paper includes some comments on the consequences of further decline of fertility in the age structure.

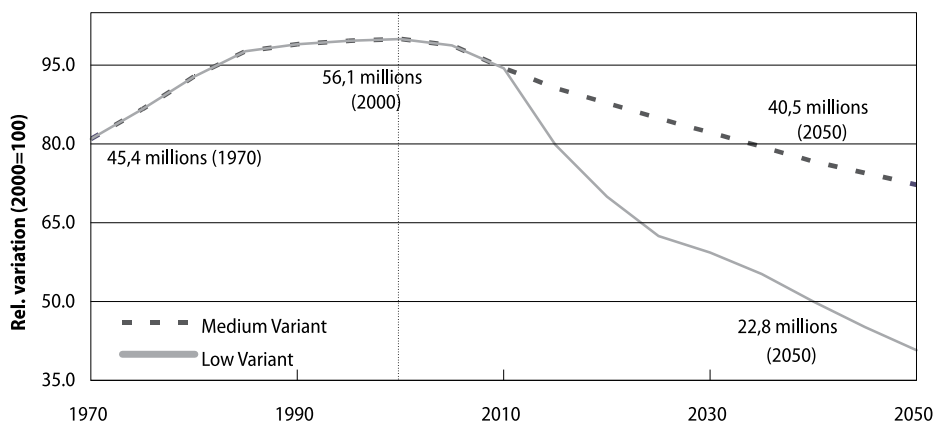
The Size of the New Generations in Latin America (2010-2050)

Reduction in the absolute number of births is more evident now due to two demographic circumstances. Firstly, there is the current age structure: the relative small size of cohorts currently in reproductive ages born in the seventies and eighties, when fertility started to decline in Latin America. Secondly, there is the continuation of this trend more accentuated perhaps over the recent years, mostly since 2000.

³ Table in Annex 1 with data on Human Development Index, Gini Indexes for income and fertility levels gives a picture of the socio-economic condition and degree of disparity in the Region.

Data from the United Nation Population Division, Figure 1, shows children at age 0-4 in the whereabouts of 45 millions in Latin America in 1970. The number increased by 25% approximately and tended to stabilize around the nineties. By 2000, this age group had 56 million children at its peak. After that, the annual growth rate (r) became negative for the first time since reliable statistics were available ($r = -0.2\%$ for the period 2000-2005). A further lost is expected over the following quinquennium ($r = -0.9\%$ for the period 2005-2010). Thus, this age group would have 3.1 million less children in 2010 than in 2000 if fertility implied in the UN forecast prevails.

Figure 1. Relative variation of the size of population aged 0-4 according to two fertility variants (1970=100%), Latin America and the Caribbean (1970-2050)



Source: 2009 - UN Population Division <http://esa.un.org/unpp/index.asp>.
Numbers refer to the population aged 0-4.

Different reproduction levels hypotheses implicit in the forecast produces important difference in the expected cohort size of new generations coming in to define the population age composition. Despite any assumptions, however, the size of this population group is expected to shrink. According to UN estimates, by 2050 the medium variant will produce 15.6 million less than in 2000, or about half of its size whether low variant hypotheses is considered. In this case, in the short term, next generation sizes will sharply shrink thus the 1970 size will be reached again perhaps before 2015. This trend is similar among sub regional groups; number of live births in South America that shares two thirds of the total population of the Continent may reach 1970 values sooner than other groups under the low variant hypothesis (Annex 2).

Generations already born, as we know, will vary its original size due to mortality and migration, whose impacts –keeping *normal and current* patterns– have minor role. The age structure of the future population in Latin America then, will change due to a quite large extent to the size of the generations to be born. What remains unclear is whether fertility will accentuate its downwards trend, thus new generations size will be even smaller than the figures considered in the current forecast.

The next section will present some characteristics of the reproductive behavior associated with the further decline of the fertility levels that occurred recently despite expectations on deceleration of such decline.

Fertility Estimates

Before entering the second decade of the XXIth century, Latin America will probably have a Total Fertility Rate (TFR) around the replacement level with relatively small gaps among sub-regions and countries (Table 1).

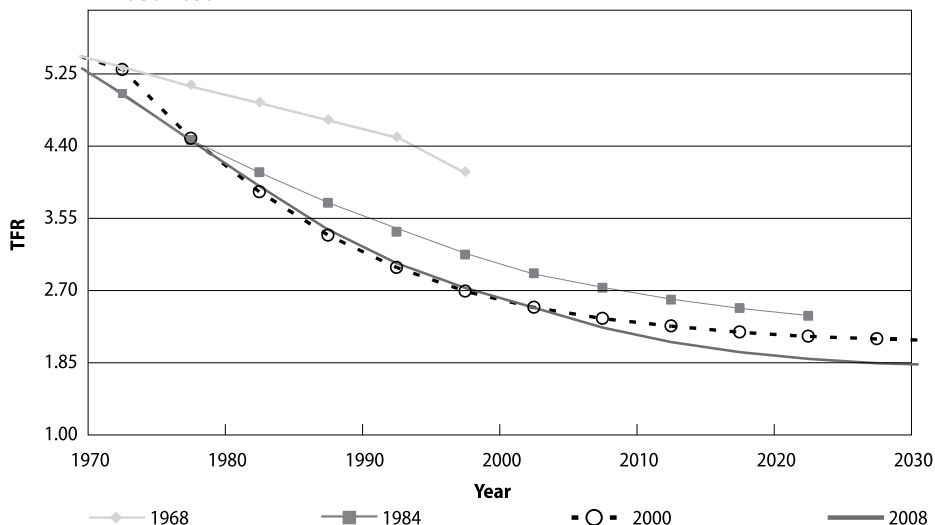
Related to previous trends, it is well recognized now that most demographers did not foresee the dramatic downward trend that fertility levels registered in the developing world after onset of fertility transition (Bongaarts and Bulatao, 2000; Carvalho and Brito, 2005). Fertility projections made from the late 1960s onwards, particularly for developing countries, were generally higher than the subsequent trends. Forecasts did expect some changes in Latin American, but they were quite conservative. Using the 1968 United Nation publications for instance, the medium-variant hypothesis expected the TFR to be 4.1 children per woman in 2000, well above actual values (Figure 2). After that, forecast made in 1984 incorporated most evidences of fertility decline in the Region observed from specific surveys from late seventies, but also failed to catch the 2000 reality.

More recently, comparison of the 2000 and 2008 forecast also suggests that after having the former incorporated all evidence of continuous fertility decline in the Region, it did not predict further decline as suggested by the latter whose ultimate average TFR stabilizes at 1.85 after 2025⁴. Similar comment applies to the 2009 estimates by the Population Reference Bureau (PRB, 2009).

⁴ Last UN revisions on fertility for the period 2000-2005 are more attached to reality since they incorporate evidences given by the censuses from the 2000 wave.

Recently, evidence from other sources than demographic censuses suggests that fertility decline in Latin America is sharper perhaps than the implicit in the 2008 United Nation Revision (United Nations, 2009) if medium variant hypothesis is considered.

Figure 2. Total Fertility Rate according to forecasts made in selected years, Latin America, 1950-2030



Source: UN (1973; 1986; 2001; 2009) - In all cases, medium variant hypothesis is considered.

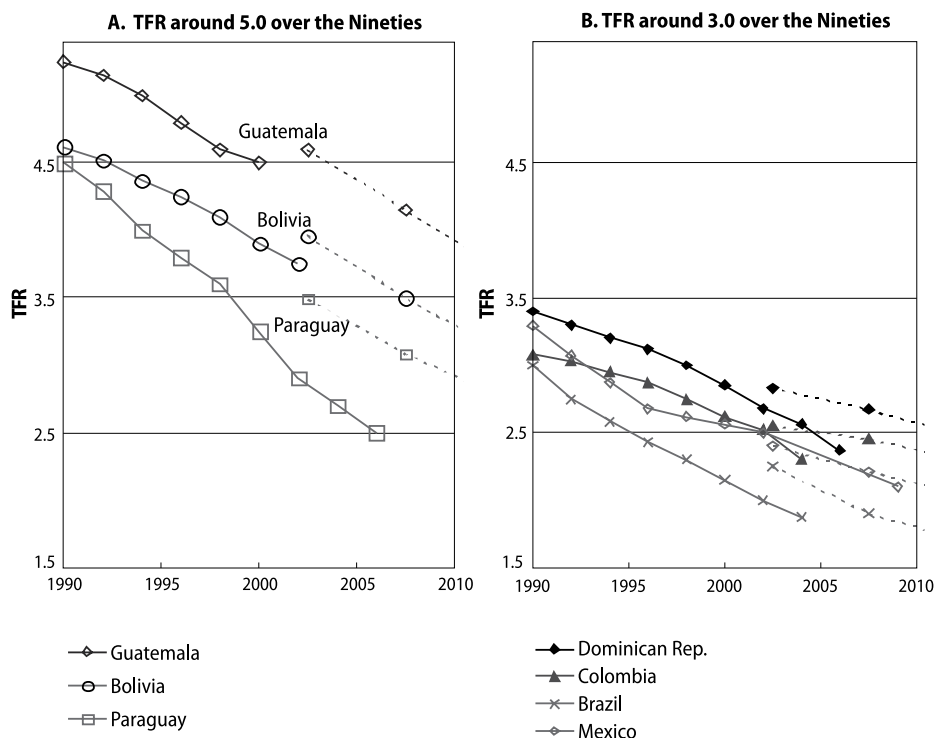
Figure 3 compares TFR from several countries using recent estimates produced by specific surveys and those produced by the UN Population Division (2009) considering only the medium variant hypothesis. Panel A presents selected countries with relatively high fertility levels over the nineties while Panel B present countries with lower fertility. Both clearly show dramatic changes, but trend somehow differs if sources are considered.

Guatemalan survey produced a TFR around 4.5 for the year 2000. The forecast suggests that average level for the period 2000-05 would be 4.6. Similarly, Paraguay recent HRS estimates that TFR is around 2.5 for the year 2005 while UN forecast is 3.5 for the period 2000-05.

On panel B, the comparison pattern is similar. Dominican Republic Survey for instance, produced a TFR of 2.6 and 2.4 for the years 2004 and 2006, respectively; however UN TFR is 2.8 for the quinquennium 2000-05. According to this forecast, values below 2.5 are expected to be reached after 2010. Greatest discrepancy appears when comparing Brazil and Colombia, having the latter a TFR below 1.9 for 2006 according to the last Brazilian specialized survey (Berquó et al., 2008). The

Population Reference Bureau also seems to overestimate TFR for these three cases (PRB, 2009).

Figure 3. Total Fertility Rate according to different sources, selected Latin American countries, 1990-2010



Note on Sources:

Dot lines refer to 2009 UN Population Division estimates (<http://esa.un.org/unpp/index.asp>).

Otherwise, figures were collected from the Health and Reproductive Surveys (HRS) project <http://www.cdc.gov/reproductivehealth/surveys>; Demographic and Health Survey project <http://www.measuredhs.com>; Ministério de Saúde; Encuesta Nacional de la Dinámica Demográfica Mexicana⁵, Cavenaghi and Alves, 2009.

Also, when comparing values resultant from reliable vital statistics, differences remain. Three examples are given: TFR after year 2005 is said to be 1.9 in Chile (Chile, 2006); 2.04 in Uruguay (Peri and Pardo, 2008) and 1.4 in Cuba (ONE, 2008). According to the UN forecasts, the values mentioned for Chile and Uruguay would be reached after 2010. In the case of Cuba it will never be.

⁵ Mentioned in Juárez et al. (2009).

Diversity of fertility decline in Latin America is well documented elsewhere thanks to a large extent to the efforts of international community supporting the DHS and RHS projects and good use of 2000 national censuses data⁶.

In South America, countries with relatively different socio-economic backgrounds like Brazil, Mexico, Chile and Uruguay are below replacement level already, though Brazil like most other countries started the fertility decline trend before the seventies, when their TFR was over 5 children per women and Uruguay was more like a European-look-alike country with low fertility levels since 1950 or before. In Central America and the Caribbean onset of fertility transition took longer and remained above the Continent average. Two peculiar exceptions are Costa Rica, where decline trend emerged quite early, and Cuba with already low levels by 1950. There is no country in the Caribbean or Central America with constant fertility levels by now.

As seen before, recent fertility surveys for several countries indicate that after decades of decline, the downward trend has steeped with fertility around the replacement level over the recent years. There are also strong evidences that urban areas –specifically, capital and metropolitan cities have by the end of this decade TFR around 1.5 or below (Rosero, 2004; Wong and Bonifacio, 2008).

In general, it is enough to say that with the exception of six countries with TFR above 3 cpw by 2005⁷, the average level for Latin America by 2010 will probably be around 1.85 – the values considered in the low variant hypothesis, instead of 2.1, considered in the medium alternative. The below replacement level will probably be reached due to a further and sharper decline as suggested by trends in Figure 3 that included the most recent evidence. Different from a preannouncement stall as it has been the case for about two thirds of sub-Saharan countries (Bongaarts, 2007).

Divergence between most recent evidence from the fertility surveys and forecasts suggests that, again, foreseen decline trend and estimates of cohorts to be born have been rather conservative. Thus, it looks plausible that fertility levels in Latin America could be nearer to the so-called *low-variant hypothesis* than the medium variant (Table 1). In support of this understanding we can see Brazil's TFR of 1.85 –the most populate and highly unequal socio-economic country– and Cuba's

⁶ See as a primary example, reports available at:

DHS: <http://www.measuredhs.com>

HRS: <http://www.cdc.gov/reproductivehealth/surveys>

CEPAL/CELADE - Serie Población y Desarrollo:

http://www.eclac.cl/cgi-bin/getProd.asp?xml=/celade/agrupadores_xml/aes4.xml&xsl=/agrupadores_xml/agrupa_listado.xsl

⁷ The countries are Haiti, Paraguay, Bolivia, Honduras, French Guyana and Belize. They represent all together 5.7% of the total population of Latin America in 2005.

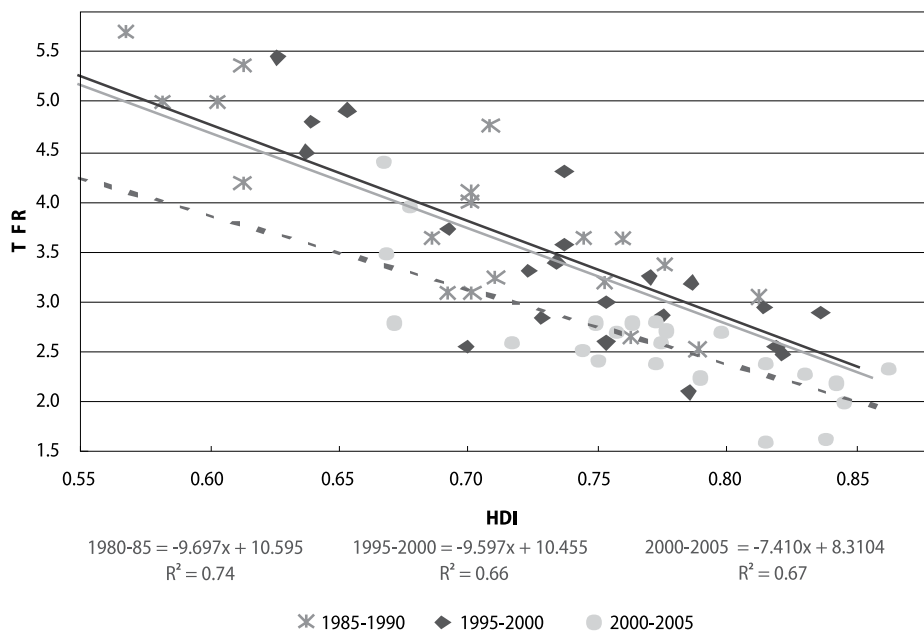
TFR of 1.5 – a country which endured long economic hardship periods. Whether values predicted under this hypothesis (TFR near 1.3) will prevail until 2020 will need to be given further attention.

Table 1. Total Fertility Rate considering Medium and Low Variant Hypothesis from the UN Population Division estimates, Latin America and the Caribbean, selected periods between 2000 and 2050

Period	TOTAL		Caribbean		Central America		South America	
	TFR according to variant:							
	Medium	Low	Medium	Low	Medium	Low	Medium	Low
2000-2005	2.50		2.51		2.66		2.43	
2010-2015	2.09	1.85	2.30	2.05	2.27	2.02	2.00	1.75
2020-2025	1.85	1.40	2.15	1.65	2.04	1.54	1.81	1.31
2045-2050	1.82	1.32	1.90	1.40	1.85	1.35	1.80	1.31

Source: 2009 - UN Population Division <http://esa.un.org/unpp/index.asp>

Figure 4. Total Fertility Rate (TFR) and Human Development Index, Latin America and the Caribbean (1985 - 2005)



Note: Straight lines refer to a linear adjustment. Dot line corresponds to period 2000-2005.

Source: PNUD - Human Development Index - http://hdrstats.undp.org/buildtables/rc_report.cfm - UN Population Division (2008 Revision) - DHS and HRS Surveys (Data in Annex 1).

It is also sensible to expect the Continent to continue on the convergence trend with relatively small deviation as Shawn (2007) has found for other regions in the world. One further support for this prognosis is the evolution of the association between socio-economic development and the reproduction levels expressed through the Human Development Index and TFR, for instance. Figure 4 shows the negative correlation between HDI and TFR for the eighties and nineties, which is consistent with the significant proportion of decline in fertility that very often had been attributed to social progress. For the recent period however, although relationship remains (See R^2) the contribution is less evident as TFR interval tends to narrow.

Reproductive Behavior and Perspectives of Change in Fertility Trends in Latin America

Previous items demonstrate that in general terms, fertility levels have steeped declining trend in most of Latin American countries after 2000. Either the pattern applies to countries that were already at low levels, like Brazil and Colombia, which were supposed to stabilize around the replacement level, or to countries that entered the fertility transition later than sooner, such as Guatemala and Paraguay did.

This section considers some relevant aspects that may have important contribution in the insurgence of the fertility decline trend. To this purpose, some specific aspects of the reproductive behavior such as young fertility and implementations of reproductive preferences are considered.

The young fertility age pattern and early motherhood trends

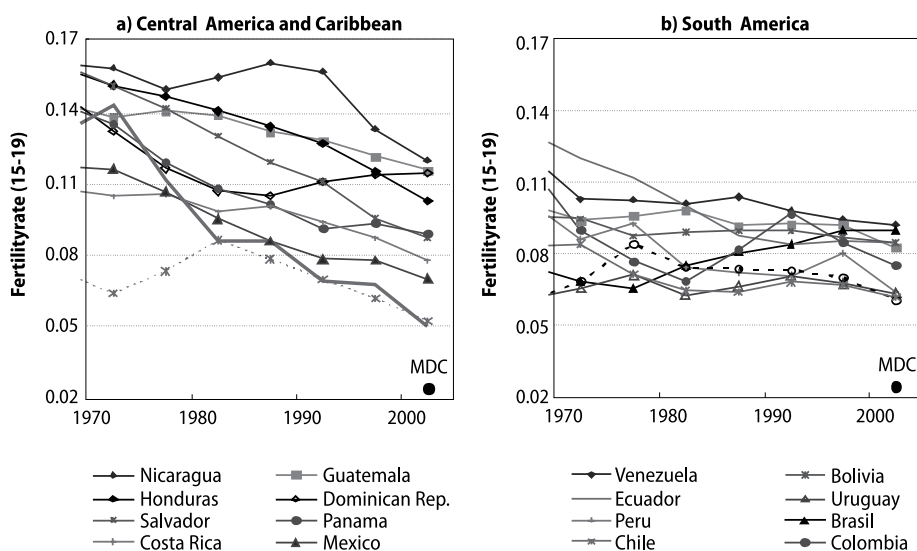
An important trace of Latin America demographics is that fertility decline did not delay onset of childbearing, as one would expect given historic experiences. Simultaneously, recent evidence analyzed by Rosero et al. (2009) shows a somehow paradoxical increased trend of motherlessness among women below age 30 in most Latin American countries. Both aspect are considered next in order to understand the sharper fertility decline after 2000.

Adolescent Fertility

Fertility below age 20 did not reach the same intensity as other ages and it is considered a social burden. Teenagers reluctance to adhere to the general declining trend was evident in the comparative analysis of data from reproductive surveys for the nineties (Rutstein; 2002) when most Asian countries had lower adolescent fertility rates than those from Latin America.

Review of specific rates for ages 15-19 over the period 1970-2005 shows no clear downward trend (Figure 5). As for Central America, relatively high fertility rates decreased in most countries up to the eighties, when values become somehow erratic. In any case, if Cuba and Haiti are set aside fertility decreased around 20% over the period in this set of countries. By the beginning of XXIth century, these countries had a fertility teenager rate oscillating between 120 to 60 live births per 1,000 women aged 15-19.

Figure 5. Total Fertility Rates for women aged 15-19, Latin America (1970-2005)



Source: Data from CELADE (Latin American and Caribbean Center of Demography) http://www.eclac.cl/celade/proyecciones/basedatos_BD.htm (Accessed 06/09/2009 - At 21:43).

In South America –with the exception of Ecuador with the highest adolescent fertility in the seventies– values were downwards up to the eighties and increased afterwards. This is the case, for example in Brazil, Colombia and Peru where the population share is nearly 70% of this sub-region. More specifically, increase took place frequently among the youngest young. Data for the nineties analyzed by Rodríguez-Vignoli (2003) shows that parity among girls aged 17 or less increased in Bolivia, Brazil, Chile, Ecuador, Panama, Paraguay and Uruguay⁸.

Altogether, the interval where adolescent fertility moves is rather constant over the period, between, say 100 to 70 live births per 1.000 women aged 15-19; far from

⁸ In Uruguay, parity at age 16 in 1996 was twofold the value from 1985. At age 15 it was fivefold (Rodríguez-Vignoli (2003: 24-27).

levels present in more developed context where fertility rate for this age group is around 20 ‰ and very often well below 10 ‰.

Because of this behavior and the dramatic fall at other ages, share of young fertility in the whole reproductive process became prominent. It increased from less than 10% to nearly 20% once older women diminished fertility rates up to ten times or more in less than three decades. As noted then by many authors, the whole process characterizes Latin American as a Region with a quite young age fertility pattern. In fact, a comparison of age fertility distributions among the nearly 200 countries of the UN projections shows Cuba with the fifth youngest pattern in the world (25.2 years). Six countries of important population share in the Continent are among the 10% of countries⁹ with the youngest age fertility pattern (Mean age of 27 years or less)¹⁰.

The extremely young age fertility pattern caused great concern among researchers and social institutions given the undergoing fast fertility decline throughout the Continent that reached almost all social classes by 2000-05. In fact, if fertility decline is a general phenomenon, then constant trend among young women, already an average indicator, would imply very high fertility among important population segments inside this age group. Also, if they are already a vulnerable population because of their age and high fertility levels are typically from those at the lowest social stratum, one can only expect extremely high reproductive patterns among poor adolescents¹¹. A number of authors confirmed that most vulnerable populations by socioeconomic criteria present higher teenager fertility than any other population segments¹² education being the most accusing indicator of such discrimination. The main reason would be that access to reproductive health care is the most difficult for them. The last Nicaraguan survey conducted in 2007 gives a typical example of the gap considering education background: adolescent fertility in the highest quintile of wellbeing is 46 ‰. The counterpart rate for the lowest quintile is nearly four times (159 ‰) (INIDE, 2008). However when considering young women with higher education, the rate falls to 22 ‰ against those without education whose rate is ten times higher (221 ‰)¹³. Brazilian data for 2006 also shows that the wider gap considering several socio-economic indexes corresponds

⁹ According to data from the 2008 Projections (UN, 2008) those countries are: Brazil and Colombia (South America) and Panama, Costa Rica, Salvador, and Dominican Republic (The Caribbean and Central America).

¹⁰ It is important to say that the distribution of age at childbearing, because of the relatively young age distribution of the population at reproductive ages, is also slightly younger than the average for the LDC.

¹¹ Characterization of young Latin American population at risk of high fertility can be seen in: Rodríguez-Vignoli (2008); Di Cesare (2007), and Guzmán et al. (2001).

¹² Rodríguez-Vignoli (2008) makes a comprehensive review on this issue.

¹³ Data published in: Encuesta Nicaragüense de Demografía y Salud (2008: 94).

to education (Berquó et al, 2008). Although inverse association between education and teenager fertility was widely documented, (See for instance Gupta and Leite, 1999) it is striking that the relationship shows no changes up to now.

Theories about young's failure to react to the classic socioeconomic determinants for dropping their risk of having a live birth run from truncated modernization (Rodriguez Vignoli, 2008) to early sexual initiation (Di Cesare, 2007) and family values supporting adolescent maternity (Fussell and Palloni, 2004). In general, they point out the negative implications for the girl such as missing opportunities for better education and skills and the impotence for breaking the vicious circle of generational poverty. In addition, it is widely recognized that adolescent pregnancy is a multifactorial phenomenon with individual, psychosocial and socio-cultural dimensions even in developed contexts. Narring and Sharma, (2006), for instance mention as an important lost link to incorporate adolescents in the low fertility regime the socio-cultural barriers not yet understood by policy makers. It has been found in both developed and developing contexts that sexually active girls may neglect contraception because the opposite would imply gender and generational conflicts. The use of contraception would be indicative of an active sexual life where they are expected to either keep abstinence in respect of parental values or play a passive role in their partner relationship (Szasz, 2008).

Finally, recent data signals that fertility may have fallen significantly also in this age group having perhaps, important role in the sharper fall of general fertility mentioned before. Recent evidences for the accentuated undergoing young fertility pattern are from El Salvador (2008), Paraguay (2008) and Brazil (2006). In the Brazilian case, household surveys report teenager fertility around 50‰ over four consecutive years now (2004 to 2007)¹⁴, against the constancy values around 80-90‰ during the eighties and nineties.

If the most recent evidence signals downwards trend, it is worth evaluating whether a sound convergence to low levels or a wider gap is on the way. It is also worth remembering that even in developed countries high fertility levels among adolescents from the most socially vulnerable populations did not respond to social policies intended to postpone or avoid early pregnancies. In the current Latin American context, where the age of the first intercourse is constantly reducing, cultural gender and generational relationships do need to be considered if a change is desirable. The perverse consequence of mishandling such policies would be increments in unwanted pregnancies among teenager and young women. Social

¹⁴ Estimated from PNAD (*Pesquisa Nacional por Amostra Domiciliar*) for years 2005-06-07. (<http://www.ibge.gov.br/home/estatistica/populacao/trabalhoerendimento/pnad2007/default.shtm>)

inequalities, says Rodriguez-Vignoli (2008), are more pronounced in the case of early childbearing than in total fertility.

Motherhood trends

Despite unchanged teenager fertility at least until 2000 and in accordance with the general downward trend, a relevant study by Rosero et al., (2009) found that the proportion of women under age 30 having a first child, i.e., that become mothers dropped significantly in most Latin American countries over the inter-census period 1990-2000. The trend is confirmed by the authors' usage of updated information that is also supported by most recent data (Annex 3). The proportion of women with no live births at ages 25-29 and 30-34 for countries with data around 2005 indicated – with the exception of Dominican Republic – an increment over the inter-surveys period. Colombia and Brazil show increase that is more significant for ages 25-29. Furthermore, the latter group shows that nearly a third of these women do not have children. In addition, it should be remembered that in this country, teenager fertility appears to be downwards.

The increase in childlessness at central ages of the reproductive span (quoting Rosero et al., 2009) deserves attention on at least two dimensions. First, its impact on the total fertility and on the total population. Second, whether this has to do with ideational attitudes and therefore with second demographic transition patterns (since motherhood is still an almost universal value in Latin America and its low prevalence is an indicator of the Second Demographic Transition). Both dimensions are related since postponement of age at motherhood may contribute to a further decline of fertility either as a tempo or quantum effect. Delaying the onset of childbearing may imply an instantaneous fall in the period TFR. If we take the case of Cuba, where both low total fertility levels and high young fertility are matters of national concern, postponement of motherhood at early ages would imply a TFR of say 1.1 - 1.3 in the very short time¹⁵. The same simulation for Brazil gives a TFR of 1.5.

Assuming that postponement is just a period behavior without changes in the cohort decisions, i. e. a woman will end up with the number of children she was supposed to have – only at a later age – then an increase in the period-fertility in the medium run may be expected. As there will be cases where women cannot catch up their delayed pregnancy, which would be the case if postponement takes too long a fall in the cohort-fertility should then be expected as well. Rosero et al. (2009),

¹⁵ TFR in Cuba, for 2007 is 1.43 children per women. ASFR at ages 15-19 is around 40/50 per thousand. Assuming that social programs induce the rate to a fall of about 10/15 per ‰ TFR would be just above 1.0

quoting Rindfuss and Bumpass (1976) regarding developed context remind us the well-documented fact that, in general, “later means fewer” children if any.

Contraception and reproductive preferences

Implementation of reproductive preferences and access to contraception are reproductive rights very clearly established in the Program of Action approved at the International Conference on Population and Development in 1994. Most Latin American governments adhered to these principles with more or less emphases and important support from development agencies (ECLAC, 1998). This attitude made possible to reduce number of children that women have and so the gap between actual and desired fertility, a result that is more perceived, perhaps, by the end of current decade. This section describes general trends of both contraception and reproductive preference as main components of recent fertility changes.

Contraceptive prevalence

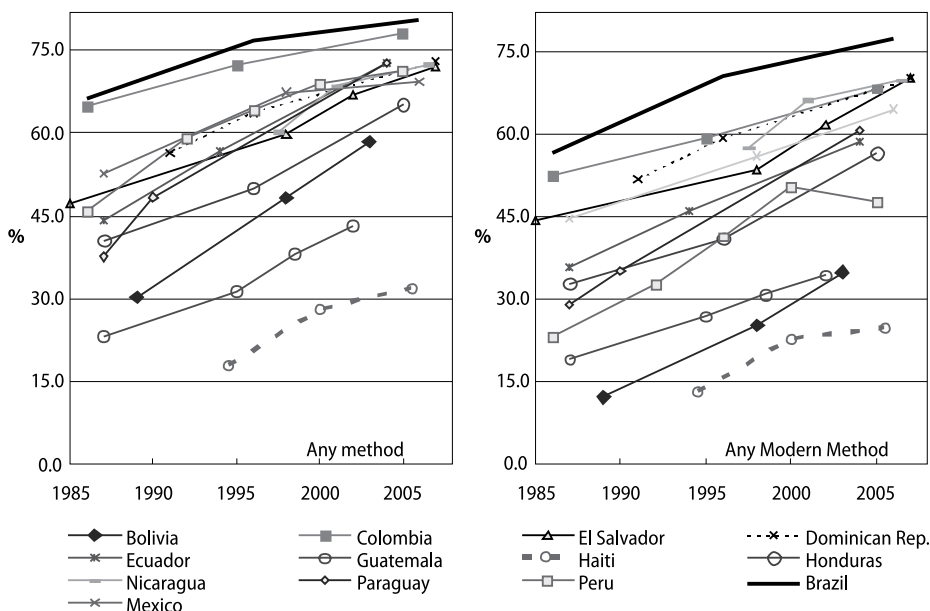
The use of contraception is accepted as one of the most important proximate determinants of fertility decline (Bongaarts, 1982) and for Latin America, its prevalence is relatively high by the end of the current decade. Comparison across time, showed, at least since the eighties, accentuated increase trend in the use of modern contraceptive methods (Figure 6). While contraception prevalence was about 60% among married women before 2000, information available for periods after 2005 shows prevalence near to 75% for a significant number of Latin American countries¹⁶. This group includes both large-size countries (Brazil, 2006; Colombia, 2005; México, 2006) and those with previous low prevalence (Salvador, 2007; Paraguay, 2008; Nicaragua, 2007).

Important to note, on the one side, that the gap observed for the nineties tends to narrow, although it is still considerably wide and persistent. Brazil and Colombia have had high prevalence of contraception since the beginning and countries like Bolivia, Guatemala and Haiti remain at the lowest levels. The existence of a convergence trend is also supported by preliminary analyses done by Stupp et al. (2009). Albeit focusing only Central America, they find that heterogeneity in contraception use is explained by the heterogeneity in the socio-economic context among the countries considered (Salvador, Guatemala, Honduras and Nicaragua). Their preliminary results also find that recent evolution towards convergence at better social conditions

¹⁶ Data were collected from <http://www.cdc.gov/reproductivehealth/surveys> (Reproductive and Health Surveys); <http://www.measuredhs.com> (Demographic and Health Surveys; Brazil: PNDS, 2007 – Ministério da Saúde; Cavenaghi, and Alves, 2009; Juarez et al., 2009).

explains fast increase, and convergence, in the contraception prevalence. In any case, the upwards trend is determined by increment in both traditional and modern methods; contribution from the latter, however, is always slightly higher than from the former with the exception of Peru (Figure 6).

Figure 6. Percentage of married women using any contraceptive methods and any modern methods, Latin American and Caribbean countries (1985-2005)



Source: From table published by Cavenaghi and Alves (2009) and Rodríguez-Vignoli (2008).

As it is usual when a large set of populations is considered, a large degree of diversity is expected. Share of effective methods like sterilization and hormone-based method represents almost all married women of reproductive age in the case of Dominican Republic, Brazil and Mexico. Countries with important share of traditional methods are basically those of the Andean Region, which in turn, are among the poorest countries in the Continent.

Another important aspect of the Latin American contraceptive pattern is the difference according to socioeconomic status among countries. Social inequalities, using years of education, may not be a strong determinant for contraception access as figures presented by Cavenaghi and Alves (2009) suggest: Brazil, widely recognized for its excessive unequal income distribution does not reflect such inequality in contraception use; although less educated women use less contraception than the most educated, proportions are similar ranging from 75% for the former to 82%

for the latter. Poorest countries like Bolivia, on the other hand, show important disparities: the proportion of less educated women using contraception may be half of those more educated, although all together, prevalence in Bolivia was quite low in 2005 (below 60%). Similar pattern corresponds to Haiti. It is worth noting that being poor countries have important proportion of women with no education.

In addition, there are countries with high prevalence of effective contraceptive methods, which may explain recent further decline of the TFR thanks to adequate access to reproductive health care despite presence of unequal income distribution. Again, Brazilian case is worth remembering: there was an important homogenization process in several social strata and better quality of the contraception use that included both men and women; male contraception use *"reached the two digits"* (Perpetuo and Wong, 2009), a quite exceptional fact in the *macho* Latin American society. Homogenization is also the case in Mexico according to Mendoza (2009): contraceptive practice increased proportionally more in rural areas and among women with no education and indigenous population, thus gap between groups at the extremes of the social scale narrowed by 2006. As increment was due mostly to use of modern contraception, gaps in fertility should be expected to narrow.

Convergence of contraception use at relatively high level is also supported by findings in Central America. Siow (2009), by reviewing governs plans and based on data presented by Stupp et al. (2009), concludes that *"Family planning improvements made over the past two decades by Central American countries have enabled the poorest segments of the population greater access to contraceptives and family planning services. Further efforts in strengthening existing programs would help ensure contraceptive security and further close the equity gap"*.

On the other hand, there are also populations where lack of adequate access to contraception is an important deterrent for fertility decline. Concerning traditional methods, as highest prevalence is found among poorer countries, population in the most vulnerable social stratum have high fertility and high failure rates given the weak effectiveness of traditional methods. Two Andean countries (Bolivia and Peru) show the highest prevalence in traditional methods in the Continent (23 and 24% respectively). Symptomatically, in both countries, TFR for a woman from the lowest quintile is 3.4 times higher than her counterpart in the highest quintile, which is one of the widest gaps in the Region.

Finally, Rodriguez-Vignoli (2008) points out two population segments in high need of contraception due to hard breaking socio-cultural obstacles: adolescents from low social stratum and indigenous population.

In fact, teenagers have not reduced fertility despite the increase in contraceptive. The causes of this paradox, as already pointed before, are of behavioral nature that

explain, for instance, the inadequate or mistimed contraceptive use (adolescents may be excluded from sexual and reproductive health services or accepted in family planning programs only after having their first pregnancy) (ECLAC, 2005). In addition, supply shortages tend to hit young women first. Mendoza (2009) explains that due to fiscal constraints in Mexico over the period 1997-2006, family planning did not consider new clients – basically young women. As for indigenous women, high fertility continues to be a hallmark, which is greatly related to the socio-economic disadvantages among these groups, such as extreme poverty and low levels of formal education, but also to cultural patterns that are reflected in reproductive behavior (ECLAC, 2004). There is no recent evidence at national levels; however, localized studies show that the need of indigenous women for modern contraception is very often unmet due to cultural clashes (Rodriguez, 2008).

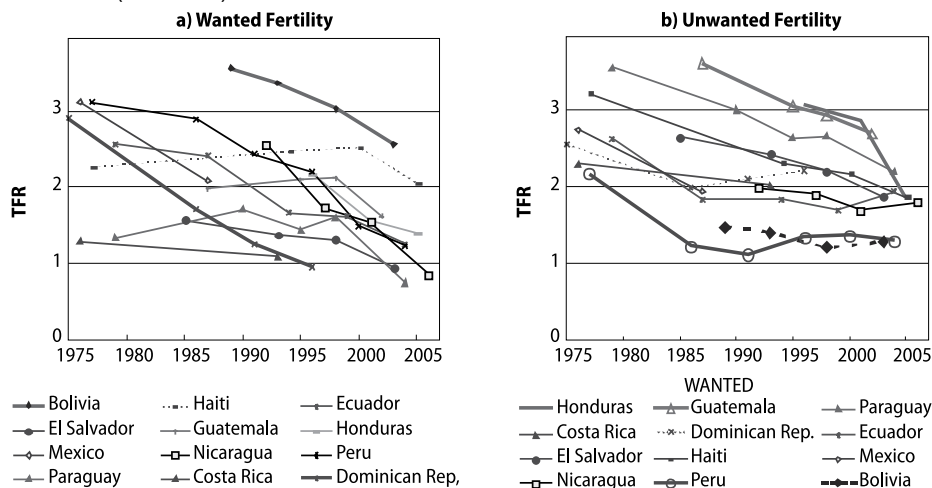
Reproductive Preferences - Unwanted Fertility

Estimates of wanted and unwanted fertility are of high interest because they indicate the extent to which fertility would be reduced/increased if women were completely successful in implementing their reproductive preferences. They are important inputs in the public health organization, particularly for the provision of family planning services. Above all, knowledge of these dimensions of fertility may help to close the gap between reproductive aspirations and outcomes which is a worthy policy goal in its own right (Bongaarts, 1990; Casterline and Mendoza, 2009).

The recent paper by Casterline and Mendoza (2009) gives a comprehensive review of magnitude of unwanted fertility in 12 Latin American countries using DHS and HRS data and covering as much as three decades¹⁷. Levels of unwanted fertility may vary independently of the total fertility level, although there has been a generalized fall in both wanted and unwanted fertility (Panels A and B in Figure 7). The overall figure suggests that at the end of the period women would have an unwanted fertility rate tending to stabilize around 1 child. In that way, one could say that TFR would tend to stabilize around 2 children per women with similar proportions of wanted and unwanted fertility.

¹⁷ In an innovative way, they estimate unwanted fertility using an “aggregate prospective preference” approach. The method “does not classify individual births as wanted or unwanted, rather generates a birth-order-specific estimate of the proportion unwanted, with an estimate of the overall incidence of unwanted births calculated as a weighted average of the order-specific estimates.

Figure 7. Wanted and Unwanted Total Fertility Rates, Selected Latin American Countries (1975-2005)



Source: Data from Casterline, and Mendoza (2009: 26).

In fact, actual estimates for the last period available show virtually no country with a wanted fertility above the replacement level, Guatemala being the isolated exception (Figure 8). Although share of unwanted fertility in the past may have been as high as 60%, recent figures are still important. The lowest share corresponds to Paraguay where 25% of the total fertility is unwanted. Very often, however, unwanted fertility is more than 40% with Haiti's unwanted fertility higher than the wanted, the latter representing only 48% of the total fertility.

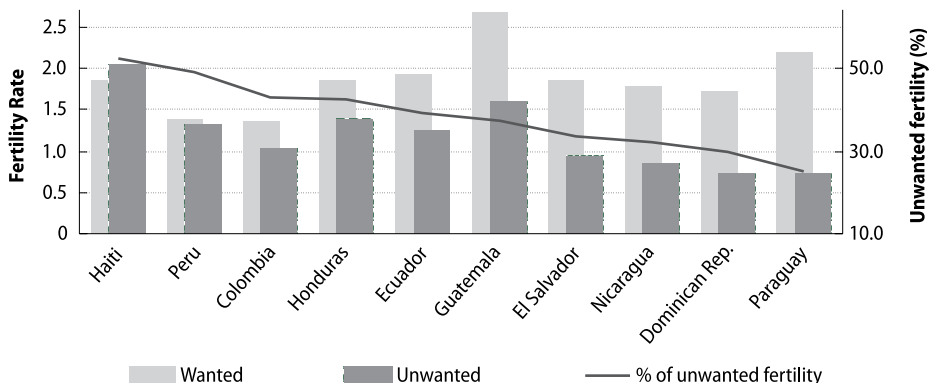
The burden of unwanted fertility will not be discussed here, despite important issues behind, mainly the lack of means to implement reproductive preferences and discrimination according socio-economic stratum once it is known that most vulnerable women very often will have a larger proportion of unwanted pregnancies over passing their desired family size. Haiti is the typical example of how expressive is the unmet need of sound family planning.

Another aspect related to implementation of reproductive preferences to be considered in a context of such fast fertility decline is the no-correlation between the ideal family size and the actual number of children ever born. Women at ages 40-49 are considered because they are closing her reproductive period.

Figure 9 allows us to compare those indexes for women classified according their socioeconomic condition defined by Household Wealth Index (HWI). Ideal number of children as it is known, is a complex concept that may include social religious and/or community values in the interviewees' responses and according to Hagewen and

Morgan (2005) it may be interpreted as the preferred number of children for some hypothetical family. Also, variations in this indicator, very often are smaller across social classes than actual fertility, whether because of the globalization of socio-economic relationships or due to the uniformity of cultural messages (ECLA, 1998).

Figure 8. Wanted and Unwanted fertility rates, Selected Latin American Countries (circa 2005)



Source: Data from Casterline, and Mendoza (2009:29).

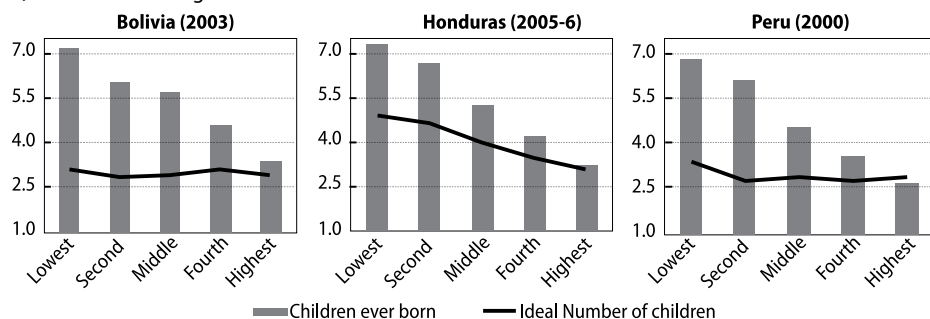
Panel A considers three countries of relatively high fertility and Panel B allow us to compare a temporal trend. In the first case, Honduras is the only country presenting a relationship between socio-economic stratum, parity (mean number of ceb) and ideal number of children. In Bolivia and Peru, parity varies according socio-economic situation but ideal number of children does not. It is almost constant, slightly over 2.5 regardless of the HWI. Furthermore, in the case of Peru, women at the highest position had lower parity than the number of children reported as ideal.

Panel B shows evolution in time of this relationship using countries with a different timing of their fertility transition. Colombia started fertility decline well before Dominican Republic and Haiti is among the countries with an incipient decline¹⁸. Changes in ideal number of children is clearly less obvious but it shows lower values for more recent periods. There are also several cases where ideal number of children is higher than reported parity. Most of them are related to women at the highest stratum; in the Dominican Republic in 2007, however, this is true for almost all strata, being the only exception, the lowest stratum.

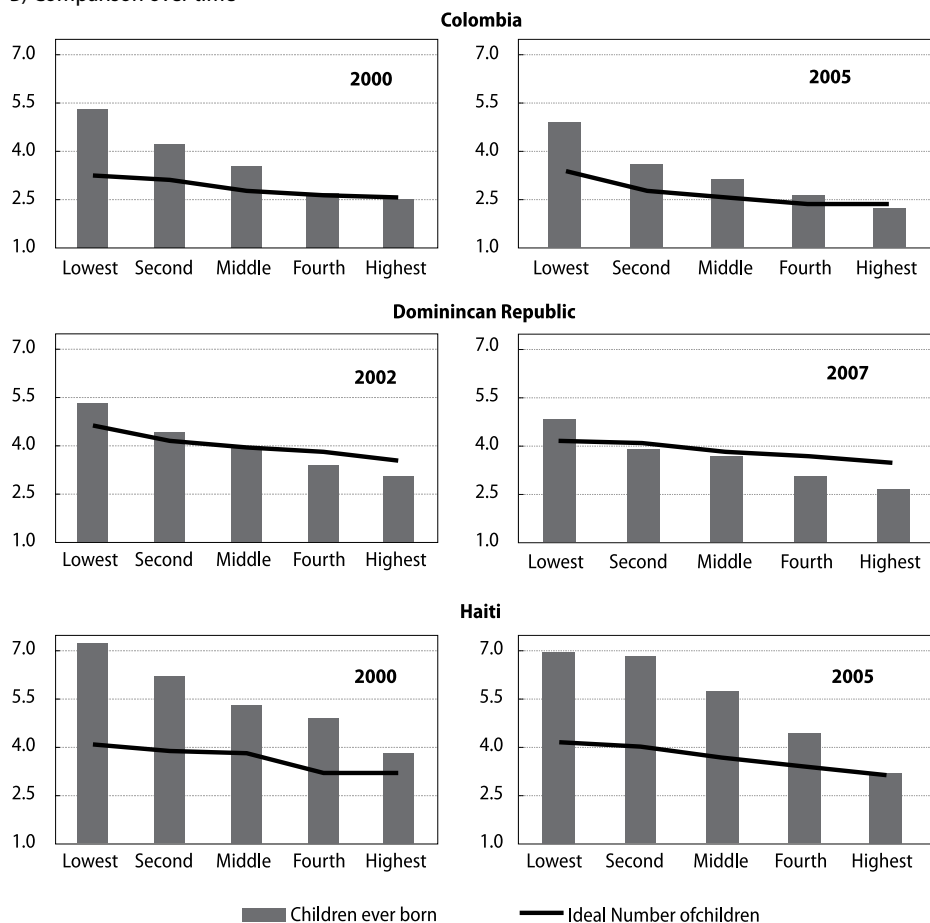
¹⁸ Evolution of fertility transition in Latin America can be seen in Chackiel and Schkolnik (1992; 2004)

Figure 9. Mean number of children (ever born and ideal) from women aged 40-49 in selected countries according to household wealth index

A) Countries with High TFR



B) Comparison over time



Source: Macro International Inc, 2009. MEASURE DHS STATcompiler. <http://www.measuredhs.com>, September 19 2009.

Outside the reproductive surveys sources, a desired number of children lower than the actual number of children, among high and middle class women, is found in Uruguay (Perí and Pardo, 2008).

While among poorer groups this discrepancy translates into a larger number of children than those desired, conversely, the actual fertility of wealthier groups are lower than the desired number of children. As ECLAC (1998) recognized, reproductive rights may be vulnerable in both poor and rich segments, although for different reasons and with different consequences.

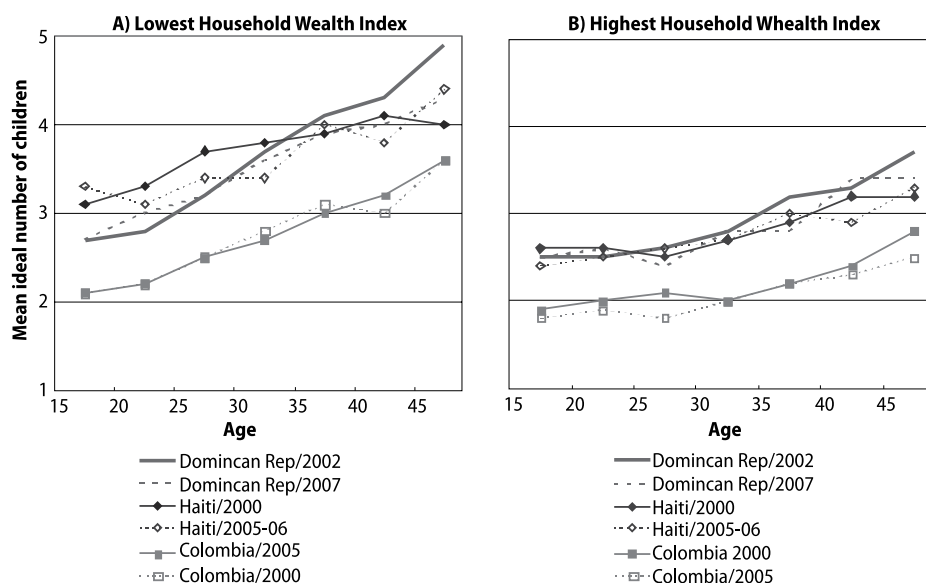
This type of discrepancy appears in the most recent Latin American estimates and it has been recognized in post-transitional societies using data collected since, at least, early nineties (Boongarts, 2001). In that context –including USA (Hagewen and Morgan, 2005) – desired family size is typically two children while fertility is well below replacement. The three cases used to illustrate differences between desired and actual fertility neither are developed countries nor are highly positioned in the HDI Latin American ranking.

Data on ideal number of children in this case are for women at the end of their reproductive period, thus whatever the concept of wanted fertility behind the answer on desired number of children, the process is over. Such discrepancy, though, suggests either those women in Latin America have started to have less children than the number considered ideal or the indicator we are using is misleading.

On the other side, it can give insights for what to expect from fertility behavior in the short or medium run when consider younger women. This indicator plotted in Figure 10 shows the recognized age-related-pattern, much of this, explained by the rationalization factor.

Besides, in times of changing fertility, older women tend to have more children either because they have been exposed to the risk of having a child more often or because attitudes towards low fertility are more intense among younger women. Specifically in these cases, we noticed, firstly, that desired number of children is different according to social stratum. Women with the lowest HWI (Panel A) report systematically higher number of desired children than those at the highest position (Panel B). Secondly, the set of parallel curves indicates that increase in the number of desired children by age is similar whatever the stage of the fertility transition in these countries and the social stratum. Thirdly, there is no obvious change over the five-year period that separates surveys in each country. In addition, despite differences in timing of fertility transition and TFR, ideal number of children is quite similar inside the socio-economic classes in Dominican Republic and Haiti. The notion of cultural values behind this index is reinforced because these are neighboring countries.

Figure 10. Desired number of children in the lowest and the highest household index by age, Dominican Republic, Haiti and Colombia (circa 2005)



Source: Macro International Inc, 2009. MEASURE DHS STATcompiler. <http://www.measuredhs.com>, September 19 2009.

Table 2. Desired number of children for cohorts with indicated age at the time of earliest survey according to lowest and highest Household wealth index, selected countries, in two periods

Household Wealth Index	Cohort's age at earliest survey	Colombia		Dominican Rep.		Haiti	
		Year of the survey		Year of the survey		Year of the survey	
		2000	2005	2002	2007	2000	2005.5
Total Average		2.3	2.2	3.1	3.1	3.1	3.1
Lowest	15-19	2.1	2.1	2.7	3.0	3.1	3.1
	20-24	2.2	2.2	2.8	3.2	3.3	3.4
	25-29	2.5	2.4	3.2	3.6	3.7	3.4
	30-34	2.8	2.6	3.7	3.9	3.8	4.0
	35-39	3.1	3.0	4.1	4.0	3.9	3.8
	40-44	3.0	3.6	4.3	4.3	4.1	4.4
Highest	15-19	1.9	1.9	2.5	2.6	2.6	2.5
	20-24	2.0	1.8	2.5	2.4	2.6	2.6
	25-29	2.1	2.0	2.6	2.8	2.5	2.7
	30-34	2.0	2.2	2.8	2.8	2.7	3.0
	35-39	2.2	2.3	3.2	3.4	2.9	2.9
	40-44	2.4	2.5	3.3	3.4	3.2	3.3

Source: Macro International Inc, 2009. MEASURE DHS STATcompiler. <http://www.measuredhs.com> (19/09/2009).

Note: estimates in bold indicates cohorts with no increment or diminution in the desired number of children five years later.

Finally, despite variation by age, when numbers are considered in detail, we find that, although it is true that this index tends to increase as women age, when looking at the cohort, behavior by age is somehow different (Table 2). In a number of ages, the cohorts report the same (or less) desired number of children reported when they were five years younger. This is the case in Colombia, notably in almost all cohorts with lowest HWI and youngest cohorts in the wealthiest stratum. This behavior is also present in the other two countries. Another important fact is that, despite changes (or not) of mind about the report of desired fertility, a number of young cohorts reports less desired number of children than their counterparts at same ages but five years earlier. Take the case of the lowest stratum in Dominican Republic. Cohort at ages 25-29 in 2002, for instance, reports 3.2 desired children. Five years later, being at ages 30-34, this cohort reports a higher number (3.6). This number, however, is smaller than the reported by women also aged 30-34, but five years earlier (3.7).

In short, the information presented in this section suggests that trends in wanted/desired fertility are consistent with recent evidences of steeped fertility decline. Policy makers in development societies may have no consensus yet on whether desired/wanted fertility should be considered as important input in policies oriented to increase fertility levels¹⁹. The trend of this variables in Latin America though, might be warnings that current fertility could reach even lower levels, then deep research on this issue is indispensable.

Evidences presented here indicate that wanted and unwanted fertility showed a decreased trend. Behavior comparing cohorts appears to be a strong support for the hypothesis that number of children desired is also falling. Again, as in the case of total fertility figures consistently suggest that after 2000, decrement was perhaps sharper than immediately before 2000. In addition, it is suggestive that women from different social classes, not just at the highest levels, report having fewer children than those desired.

Unsafe Abortion

Levels of induced abortion in Latin America is and will be a real challenge while legal, cultural and moral aspects interfere on the decision / action of interrupting

¹⁹ For instance, related to recent evidence of increase in intended parity among young women Hagewen and Morgan (2005:524) say: "Only additional data can determine whether recent data are an aberration or the beginning of a trend that portends appreciably lower fertility in the United States (USA). Constancy in this social indicator for a substantial period of time suggests that while yearly monitoring may not be crucial, periodic (say on a two- or three-year cycle) monitoring of fertility intentions should be given high priority".

pregnancy²⁰. Considering what is understood by unsafe abortions, by year 2000, their absolute number was estimated to be around 3.7 millions in the Region²¹. Those abortions caused 3.7 thousand maternal deaths. Recent reviews reveal that the corresponding figures for 2003 are 3.9 millions unsafe abortions and 2.0 thousand maternal deaths (WHO, 2004; 2007).

Despite methodological accuracy implicit in WHO researches, it is hard to tell the real trend due to improvements in the quality of data. Thus, the figures may not indicate decrease or even stagnation on unsafe abortion incidence. The increment of nearly 1.8 % per year is, in fact, very similar to the annual increment of the female population at reproductive ages from which abortions were traced²². On the other hand, when compared to the annual number of births, levels of incidence of unsafe abortion might have increased if we consider that number of live births is shrinking²³.

Unsafe abortion in Latin America, related to women at reproductive age or number of live births, has relatively high incidence. WHO statistics reveals a ratio of above 30 unsafe abortions to 100 live births. It corresponds to South America the highest level, where nearly 40% of pregnancies seems to be at risk of interruption. As for women of reproductive age, rate of unsafe abortion is 30 for every 1.000 women aged 15-44. Again, South America has the highest rate. The study by Sedgh et al. (2007) endorses figures for South America and there are national evidences also backing WHO estimates. Brazilian data for the years 2005 to 2006 indicate around one million induced abortions (Adesse and Monteiro; 2005; Vieira and Monteiro, 2008), equivalent to nearly 35-40% the number of live births. In Mexico, correspondent figures oscillate between 37 and 52 or one induced abortion for every 2.3 live births. (Juárez et al., 2009). In Argentina an estimated 37% of pregnancies may probably result in induced abortion, while other studies go as far as one abortion to every live birth (Steele and Chiarotti; 2004).

It is worth noticing that those three countries (Brazil, Mexico and Argentina) represent nearly 60% of the total Latin American population and estimates are

²⁰ A comprehensive overview on ethical and socio cultural dimensions on induced abortion in Latin America can be seen in Vigoya M. (1997).

²¹ Unsafe abortion is defined as "a procedure for terminating an unintended pregnancy either by individuals without the necessary skills or in an environment that does not conform to minimum medical standards, or both. The legality or illegality of the services, however, may not be the defining factor of their safety" (WHO, 1992:3). In general, according to WHO reports on unsafe abortion, all induced abortions outside national legal frameworks are considered unsafe. Induced abortion relates to abortion brought on intentionally by drugs or mechanical means; usually the reference period of up to 20 weeks is included.

²² According to 2008 UN estimates, annual increment between 2000 and 2005 was 1.90 % for women aged 15-44 or 1.75% for the age interval 15-39, the age group where nearly 85% of the unsafe abortion happens.

²³ UN population estimates are given for 5-year periods. For 1995-2000, 2000-2005 and 2005-2010 number published about live births show a decreasing trend: 10.6 and 10.9 million, respectively.

subsequent in time to those by WHO that refers to approximately 2003. Thus, national evidence indicates increment on the ratio of unsafe abortion.

Latin American levels are the highest in the world even when compared to regions with relatively lower reproductive health care standards (Annex 4). Unsafe abortion ratio in South America for instance is nearly three times²⁴ the average registered in Middle African Countries²⁵. Similarly, rates for women in reproductive ages are higher in Latin America.

Despite the indispensable efforts by WHO on data comparability, one can always argue that levels are higher in South America due to a relatively better coverage. However, there are two reasons for disadvantage favoring the African continent: the small number of live births per women in Latin America and the demographic momentum. As mentioned, current fast age structural transition in this continent resulted in less absolute number of new generations. As fertility decline started several decades ago, current cohorts of women at reproductive age have now lower growth rates than their African counterpart. This explains the low increment in the number of unsafe abortions even when its ratio is higher than the average in the African continent.

On the other hand, regarding maternal mortality, the huge decrease in the number of deaths due to unsafe abortion over the period (more than 40% between 2000 and 2003, approximately), signals improvements in health care services. Post abortion care (PAC), specifically, might have improved as findings by Billings and Benson (2005) and Billings and Vernon (2007) suggest. PAC, however, could do more to save more lives. Although it has indeed saved women's life, its expansion could also help to prevent interruption of future unwanted pregnancies by offering sound contraceptive counseling and, more importantly, actual access to contraception. Most of interventions for improving PAC followed by Billings and Vernon (2007) failed to link women with services of reproductive health. According to them, the strategies to link the community with reproductive health services were notably absent.

Towards very low fertility levels in Latin America -Summing up evidences

It is well document that fertility levels in Latin America have sustained a decline trend that started by early seventies in most of the countries in the Region. Recent evidences suggest that the decline trend did not decelerate and stabilized at the

²⁴ Ratio of unsafe abortion in South America is 38 to 100 live births. Corresponding average ratio for countries of Middle Africa is 12. (WHO, 2007: 13).

²⁵ Countries from Middle Africa are: Angola, Cameroon, Central African Republic, Chad, Congo, Democratic Republic of the Congo, Equatorial Guinea, Gabon and Sao Tome and Principe

replacement level. On the opposite, before finishing the first decade of current century, a number of countries have TFR already below replacement level.

Adolescents' fertility, whose rates were constant and relatively high until, say 2000, signals some decline. The question is whether this recent decline is homogeneous or is coming to broaden the gap between highest and lowest social classes. Also given the multi-causal approach, another hypothesis to work out is how strong is the relationship between contraception misuse (lack of access, side effects, prejudice, etc.) and abortion, considering that incidence of the latter at these young ages is higher than other ages.

Given the young pattern of the fertility distribution and the awareness that, in general adolescent fertility is a social burden, one can expect meaningful changes in the teenagers' reproductive behavior. Vulnerable adolescents may continue to present high risk of unwanted pregnancies, since unfortunately this is how it has been up to now, even in the most developed settings. However, if the average adolescent delays her age at maternity, the TFR will significantly fall in the short/medium run. Thus, fertility levels in Latin America will probably coincide with those predicted in the low variant UN hypothesis. When women will make up for the postponed maternity is a matter of deep research and guesses.

Desired number of children and unwanted fertility indicators also point out to a further decrease of the TFR. Unwanted fertility is important in the Region, regardless of how low the country TFR is. Unmet need for family planning, unintended pregnancy, and unsafely performed abortion –all of them relevant in the Region– are recognized to be linked to each other (Zuehlke, 2009).

The simultaneous increase in both modern contraception and abortion apparently does not make sense once there is wide evidence that this is an inverse relationship. In Europe, for instance, according to Marston and Cleland (2003) the abortion rate is related to the level of modern contraceptive method use. This is also the case in places like the Republic of Korea, where fertility has now stabilized, contraception has continued to increase and abortion has fallen. The authors also find that in the context of fertility decline, as it is the case of Latin America, when both phenomena increase there is another aspect to consider: variation in the wanted/desired fertility. According to these authors the counterintuitive parallel rise in both abortion and contraception is that desired family sizes were changing rapidly so *“the increase in modern contraceptive use alone was probably not sufficient to reach this low level of fertility; therefore, women likely still resorted to induced abortion”* (Marston, and Cleland, 2003: 10). Thus, what is probably happening in Latin America is that demand for implementation of fertility preferences defined by smaller families is increasing and it is met through abortion.

The aspiration to a small family has strengthened, the unwanted fertility have an important share in the total fertility, ratio of unsafe abortion is between 30-40 abortions to 100 live births. The message they deliver is just a cry for more and better sexual and reproductive health services.

Finally, although incapability to implement reproductive preferences, most of the times is related to a higher number of actual children than the desired it is also related to have fewer children than the desired. Society is failing to provide the former with the means to match actual fertility to desired fertility. Demands that this same society imposes on the latter, in terms of what they have to do to maintain a standard of living that is compatible with their qualifications, tend to make it difficult for them to have children. In this case, the decision to have a smaller number of offspring than desired is a result of pressure exerted by the economic and sociocultural context in which this decision is made (ECLAC, 1998). In both cases, the reproductive right to have the number of children a couple wants is missing.

Conclusion - Variations in the Age Structure as Consequence of lower Fertility Levels

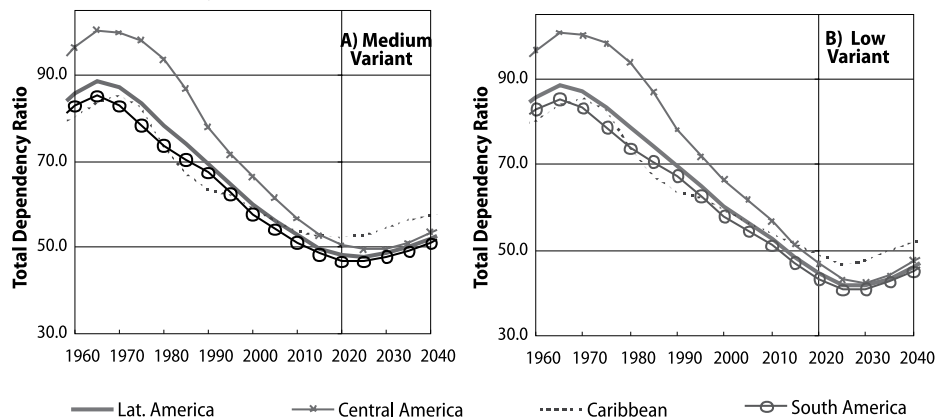
Variations in the size of generations to be born according to different fertility levels are shown on item 1. It was said that regardless any hypothesis on the future of fertility, next generations will be of smaller size. If it is assumed that fertility may fall as predicted in the low variant hypothesis as previous evidences suggest, then what is important to know is how much the age structure will change.

The magnitude of change can be seen through the changes in the relationships between the age groups that define the dependency ratios (Figure 11). As a natural consequence of steeper fertility decline, the Total Dependency Ratio (TDR) decline that is expected to stop by 2020 according to the Medium Variant hypothesis will probably continue the decline because one of the components of this ratio, the volume of population up to 15 years old will shrink even more. In addition, recovery of the TDR would slow down. If fertility falls as implied in the low variant, this ratio would be less than 40 per cent thus lessening the burden on the economically active population.

As intense fertility decline has opened what is called a *demographic window of opportunities* it is also worth to consider how long a further decline in fertility –this time, with countries having a TFR well below replacement level– will let this window to remain open. This window, broadly defined, opens when increase of the TDR stops and initiates a downwards trend, thus burden of the population at working ages also decrease, creating what it is also known as a *demographic bonus*. Additionally, both

onset timing and intensity of fertility decline determine this trend. As it is known, they had largely varied in Latin America. The window would close when the TDR starts recovery due to the increment in the volume of the elderly population.

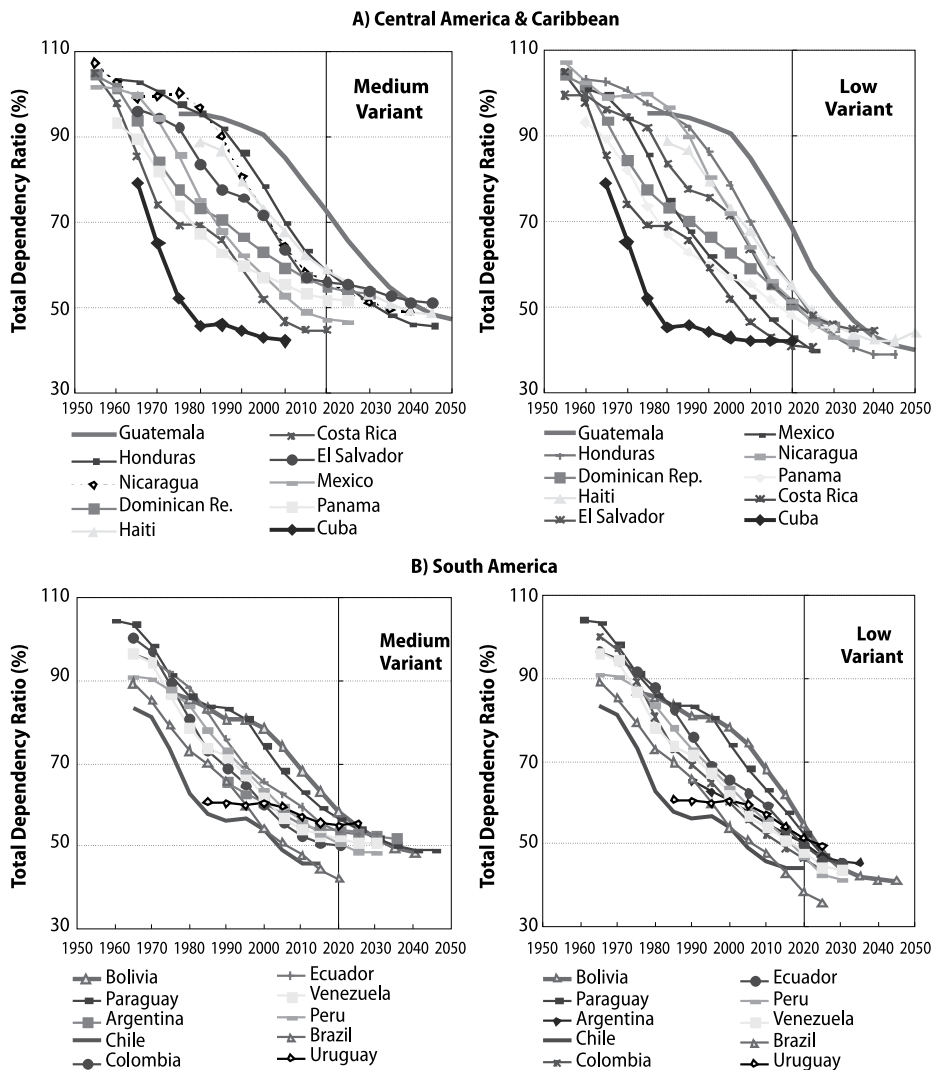
Figure 11. Total Dependency Ratio estimated from the UN estimates considering Medium and Low variant hypothesis, Latin America and the Caribbean (1960-2040)



Source: 2009 - UN Population Division <http://esa.un.org/unpp/index.asp>.

Demographic bonuses and burden of this Age Structural Transition in Latin America are widely discussed elsewhere, being an important reference, the research developed, for instance, by Celade (2008). Thus, it is illustrative just to compare *duration* of changes. Figure 12, shows for a set of countries in the Region, the initial moment of that window, which is the first year at which TDR starts lessening. It shows the final year of this trend and, it also shows the variety of intensity in the TDR. Considering, for instance, the process corresponding to the Medium Variant, for Central America and the Caribbean (Panel A), one can notice that Guatemala was among the last countries to enter this window. Figure 12 also shows that Cuba is the first country where the window will close once the TDR will start to increase before 2010. When considering the low variant, the TDR will remain longer with the window open: up to around 2020. The same process is shown for South American countries. Considering the low variant, aside from the TDR to remain longer with a decreasing trend, their levels would be also lower before start the way upwards than in the case of the medium variant. Is it not the objective of this article to discuss whether a further decline in fertility brings positive or negative socio economic consequences for the entire population. It is enough, however, to say that having more time experiencing low TDR due to the lessening in the volume of live births is an opportunity to optimize use of resources, whatever they may be.

Figure 12. Total Dependency Ratio estimated from the UN estimates considering Medium and Low variant hypothesis, Latin American and Caribbean Countries (1960-2040)(*)



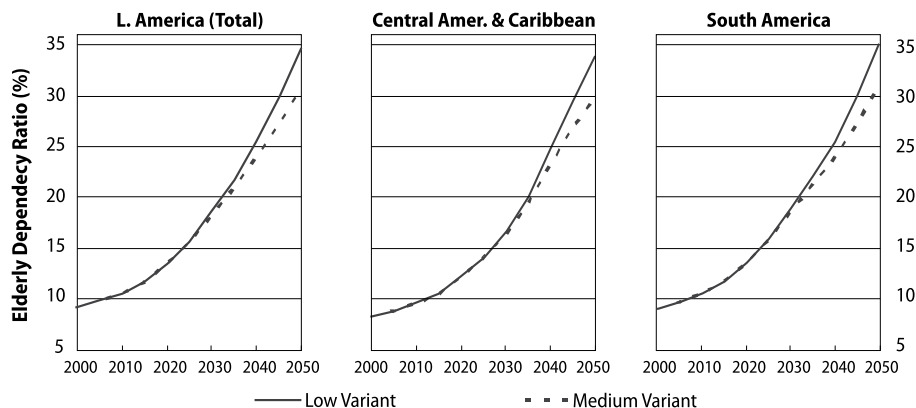
Source: 2009 - UN Population Division <http://esa.un.org/unpp/index.asp>.

(*) Last value corresponds to the point when the TDR starts to increase.

Finally, possible effects of a steeper fertility decline can be also evaluated in the dependency ratio that considers only the elderly population (EDR) (Figure 13). A natural consequence of acute reduction in the size of new generations will be heavily felt when these generations enter the labor force to support the economy and the older dependent population. EDR will then grow more proportionally in 20

years time from now, assuming that fertility has fallen more than what was predicted in the medium variant. Steeper fertility decline after 2000 will result in a bonus that lasts longer, but the burden may be heavier.

Figure 13. Elderly Dependency Ratio estimated from the UN estimates considering Medium and Low variant hypothesis, Latin American and Caribbean Countries (1960-2040)



Source: 2009 - UN Population Division <http://esa.un.org/unpp/index.asp>.

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Annexes

Annex 1. Latin America and The Caribbean, 1985 -2005 - Human Development Index (HDI) , Total Fertility Rate and Gini Index

Country	Human Development Index			Total Fertility Rate			Gini Index (2005) (*)
	1985	1995	2000	1985-1990	1995-2000	2000-2005	
Argentina	0.811	0.836	0.862	3.05	2.90	2.35	51.3
Chile	0.761	0.819	0.845	2.65	2.55	2.00	54.9
Uruguay	0.787	0.821	0.842	2.53	2.49	2.20	44.9
Cuba	--	--	0.838	1.85	1.85	1.60	--
Costa Rica	0.774	0.814	0.830	3.37	2.95	2.28	49.8
Mexico	0.758	0.786	0.814	3.63	3.19	2.40	46.1
Trinidad & Tobago		0.785	0.814	3.22	2.10	1.61	38.9
Panama	0.751	0.775	0.797	3.20	2.87	2.70	57.0
Brazil	0.700	0.753	0.789	3.10	2.60	2.25	56.1
Venezuela	0.743	0.770	0.776	3.65	3.25	2.72	48.2
Suriname	--	--	0.774	3.00	2.60	2.60	58.6
Colombia	0.709	0.753	0.772	3.24	3.00	2.40	51.6
Ecuador	0.699	0.734	0.772	4.00	3.40	2.82	..
Peru	0.699	0.737	0.763	4.10	3.57	2.80	52.0
Dominican Rep.	0.684	0.723	0.757	3.65	3.31	2.70	53.6
Guyana	--	0.699	0.750	2.70	2.55	2.43	58.4
Paraguay	0.707	0.737	0.749	4.77	4.31	2.80	..
Jamaica	0.690	0.728	0.744	3.10	2.84	2.53	45.5
El Salvador	0.611	0.692	0.716	4.20	3.73	2.60	52.4
Bolivia	0.580	0.639	0.677	5.00	4.80	3.96	43.1
Nicaragua	0.601	0.637	0.671	5.00	4.50	2.80	53.8
Honduras	0.611	0.653	0.668	5.37	4.92	3.50	60.1
Guatemala	0.566	0.626	0.667	5.70	5.45	4.40	55.1
Haiti	0.462	0.487	0.529	5.70	5.15	4.00	59.2

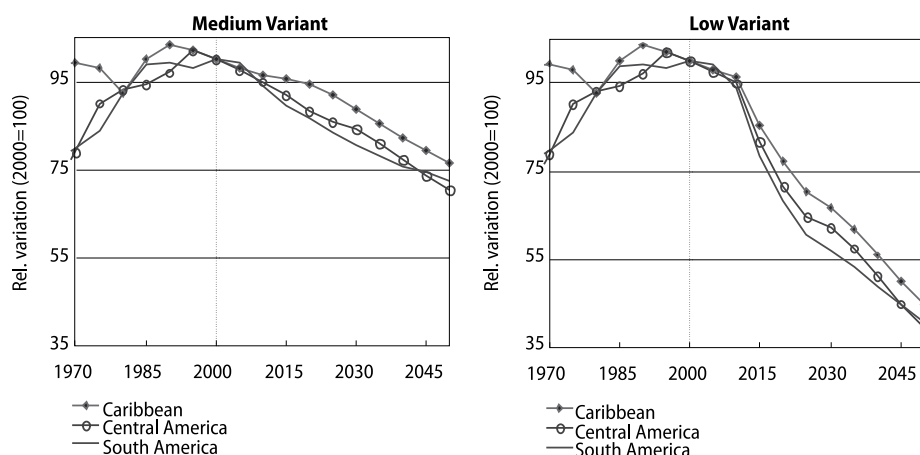
Source: PNUD - Human Development Index - http://hdrstats.undp.org/buildtables/rc_report.cfm

UN- Population Division (2008 Revision)

DHS and HRS Surveys

(*) Colored cell indicates the highest values for Gini Index

Annex 2. Relative variation of the size of population aged 0-4 according two hypothesis (1970=100%), The Caribbean, Central America and South America (1970-2050)



Source: 2009 - UN Population Division <http://esa.un.org/unpp/index.asp>

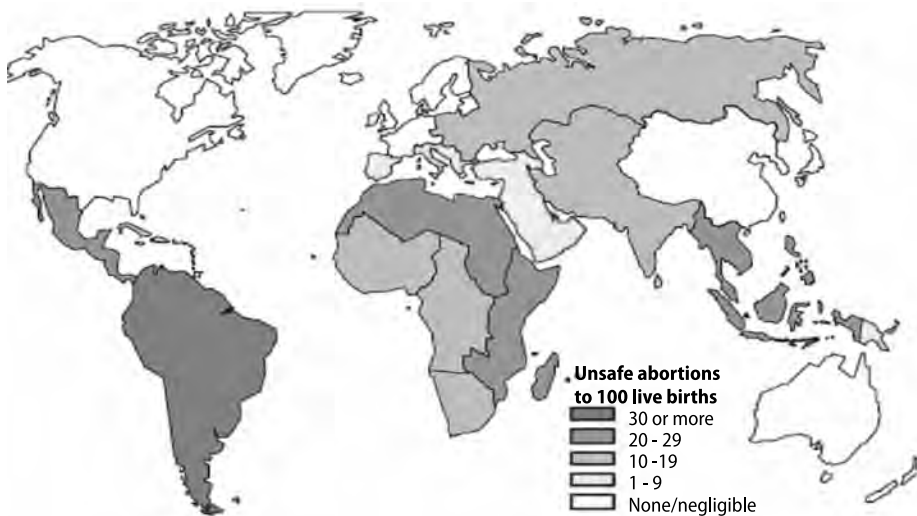
Annex 3. Selected Latin American Countries: Proportion of childless women at ages 25-29 and 30-34 (Circa 2000-2005)

Country	Survey year	Age Group	
		25-29	30-34
Nicaragua	2001	14.1	7.1
	2007	15.1	8.4
Dominican Republic	2002	16.8	8.4
	2007	16.8	7.5
Colombia	2000	23.1	14.7
	2005	26.1	12.8
Brazil	1996	26.2	12.2
	2006	32.3	16.9

Source: <http://www.measuredhs.com>; <http://www.cdc.gov/reproductivehealth/surveys>
Berquó et al. (2008)

Annex 4. WHO estimates of annual incidence of unsafe abortion (circa 2003)

a) Unsafe abortions to 100 live births



b) Unsafe abortions per 1,000 women aged 15 - 44



Source: Reproduced with permission from: WHO (2003) Unsafe abortion: global and regional estimates of incidence of unsafe abortion and associated mortality in 2003. -- 5th ed. p. 10-11. (http://whqlibdoc.who.int/publications/2007/9789241596121_eng.pdf), accessed on 05/Set/2009.

The pace of convergence of population aging in Latin America: opportunities and challenges¹

Gilbert Brenes-Camacho²

Abstract Some of the fastest demographic transitions in the world have been observed in Latin American countries. Fertility and mortality declining have occurred in less than half the time observed in industrialized countries. Population aging is also occurring rapidly in the region. However, its socioeconomic consequences take longer to happen. Socioeconomic disadvantages experienced by current cohorts of Latin American elderly are more resistant to change over time because of the persistence of cohort effects. The slower pace of population aging with respect to other demographic dynamics translates into both opportunities and challenges. This paper intends to describe the differences in the population aging process across Latin American countries, and how these differences can show the path for institutional changes that can improve the welfare of Latin American nations. The paper will first explore how advanced different Latin American countries are in their population aging process. The paper will link this information with data about Social Security coverage among the labor force, labor force formalization and availability of caretakers. Countries that are demographic transition leaders have had higher proportions of educated people, as well as proactive governments that created welfare institutions that still benefit the population in most need. On the contrary, most of the countries that are still going through the transition have been characterized by income and wealth inequality and an absence of political disposition to advance human development policies. The countries that are still far away in their aging process will be able to avail from their demographic situation consensus to develop policies and institutions that improve the human development of their populations can be reached. The article concludes highlighting the need for reforms in terms of Social Security coverage, not only pension reform, for securing the well-being of Latin American elderly in the near future.

¹ Paper presented at the XXVI IUSSP International Population Conference, Session 143 (Demographic transformations, convergences and inequalities in Latin America: what the future holds? - Latin American Population Association), September 27 to October 2, 2009, Marrakech, Morocco.

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Introduction

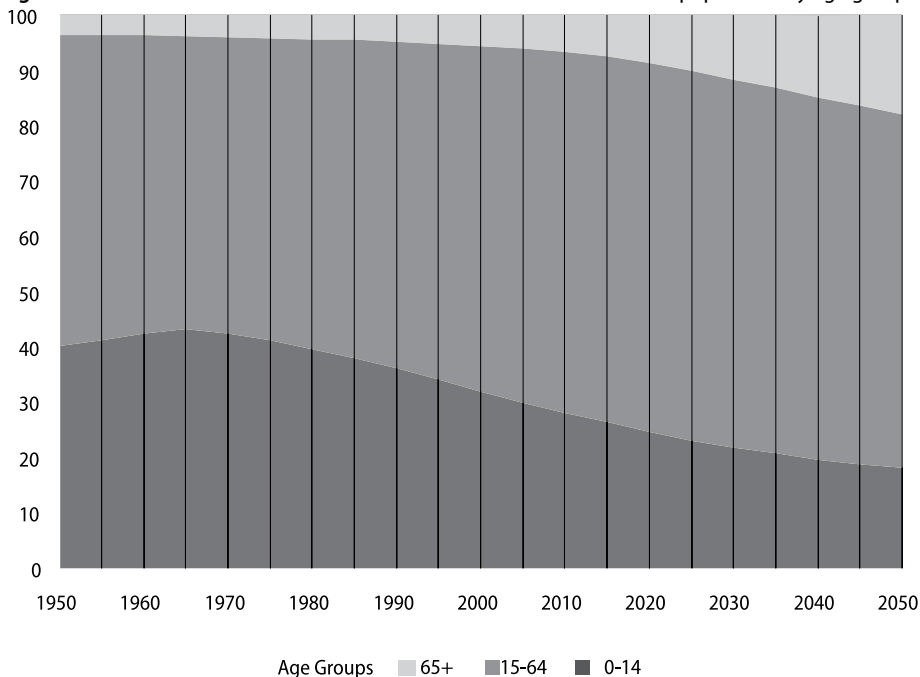
Demographic Transition Theory was posed based on population dynamics in industrialized countries, and it has been used to explain and understand the paths followed by developing countries (Notestein, 1945). A large part of the developing world reached advanced stages of the demographic transition during the 20th century and early 21st century, at a much faster pace than European or North American countries. Some Latin American countries have transited from high levels of fertility and mortality to levels similar to those reported in industrialized countries: life expectancies at birth above 75, Total Fertility Rates (TFR) below replacement, and infant mortality under 15 per thousand births (CELADE, 2007). Demographic Transition Theory –as well as related frameworks, such as the Epidemiologic Transition Theory– assumes that demographic figures will converge to a similar scenario of low fertility and low mortality. This article will start with the argument that population aging indicators across Latin American countries will tend to converge too, because the process of population aging is a necessary outcome of Demographic Transition; however, its pace in the region will be slower than the rhythm of fertility and mortality change. The presentation will follow with a discussion on what population aging implies in terms of the needs of the elderly population and the availability of resources a nation has to fulfill such needs. I will conclude commenting about the opportunities and challenges that the slow pace of convergence in population aging has on policy decisions for different countries. The analysis relies on data produced by other Latin American researchers in the region, given that exhaustive documents of very good quality have been produced lately. I highlight Huenchuan's (2009) comparative analysis of aging in Latin America from a human rights perspective, the 2008 Social Panorama produced by CEPAL (2008), and data analysis by Carmelo Mesa-Lago (2008) and Rofman and Lucchetti (2006), renowned experts in Social Security in the region.

Population Aging in Latin America

The process of population aging is defined as the increase in the relative importance of people aged 65 and over with respect to the total population. According to Figure 1, during the 1950-2050 period, the proportion of people aged 65 and over grew from 3.5% in 1950 to 6.7% in 2010, and will likely become 17.9% in 2050 (CELADE, 2007). In the following 40 years, the size of this population is expected to be 3.5 times its size in 2010: from 39 million to 136 million. It is expected that all Latin American countries will have an aging index of 40% by 2050. This figure means

that there will be at least 40 people aged 65 and over for every 100 people under age 15 (CELADE, 2007).

Figure 1. Latin America and the Caribbean. Relative distribution of total population by age groups

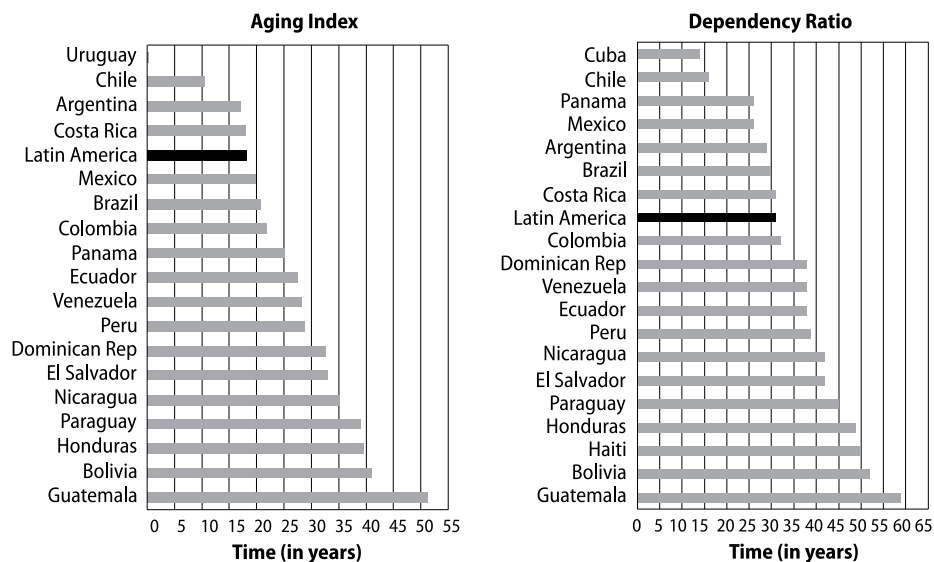


Source: CELADE (2007).

However, there is a large variation in aging indexes across Latin American countries. Uruguay reached this level in 1985 and Cuba in the early 1990's. Currently, the aging index in Uruguay is 60%. Figure 2 (left panel) shows the estimated time that several Latin American countries will need to reach Uruguay's level. Chile will have such a figure in around 10 years, and there is a group of countries that will reach the 60% mark in less than 25 years (Costa Rica, Mexico, Brazil, Colombia, and Panama). Others will need between 25 and 35 years (Ecuador, Venezuela, Peru, Dominican Republic, El Salvador and Nicaragua), and there are others who will need 4 decades or more to reach the mark (Paraguay, Honduras, Bolivia, and Guatemala). A very similar ordering is observed if we graph the estimated time to reach a dependency ratio of 66% (Figure 2, second panel). Most of the countries at the top of the graph are usually classified under the labels "advanced" or "moderately advanced" in the process of population aging, whereas most of the countries at the other extreme are usually classified as countries with an "incipient aging process" (Huenchuan, 2009). The countries classified in the moderate category have a wide range of expected

times to reach the mentioned marks. This shows that even in this group, there is ample variation in the pace of aging. Even though classifications of Latin American countries according to their demographic stage might imply a linear progression in the Demographic Transition that does not necessarily agrees with reality, this typology is useful to understand general patterns.

Figure 2. Years from 2010 to reach an aging index of 60% and a dependency ratio of 66% for selected Latin American countries



Source: CELADE (2007) for aging index and on CEPAL (2009). Population Projections.

Note: (Aging index= Population aged 65 and over divided by Population aged 0-14;

Dependency ratio=[Population aged 65 and over + Population aged 0-14] divided by Population aged 15-64).

The consequences of biological aging and population aging

The biological process of aging translates into the onset of several conditions and chronic diseases that may produce functional limitations. According to the Epidemiologic Transition Theory (Omran, 1971), societies in early stages of the transition are characterized by high prevalence of infectious diseases, whereas at advanced stages –which coincide in time with advanced stages in the Demographic Transition–, chronic and degenerative morbidity is the most prevalent. The process of population aging implies that there is a larger proportion of the population at a higher risk of developing such chronic and degenerative diseases and, therefore, of being in greater need of aid due to functional limitations. Physical frailty among the

elderly also diminishes their ability to work. In absence of strong saving habits or structured welfare state institutions, economic dependence on others may also be a social and economic consequence of biological aging.

Table 1. People aged 65 and over with limitations in Activities of Daily Living (ADL) or Instrumental Activities of Daily Living (IADL), by helpers' relation to respondent, according to urban residence, in Costa Rica (2004-2006) and Mexico (2001)

Country and relation of respondent to helper	Area of residence		
	Total	Urban ^{2/}	Rural
Costa Rica ^{1/}			
Total	100	100	100
-Spouse	21	19	25
-Co-resident child	31	33	28
-Non co-resident child	17	14	20
-Other household member	14	14	14
-Other non-household member	17	20	12
Mexico ^{1/}			
Total	100	100	100
-Spouse	27	25	29
-Co-resident child	41	44	40
-Non co-resident child	16	20	14
-Other household member	24	21	26
-Other non-household member	15	15	15

Source: CRELES (Costa Rica) and MHAS (Mexico), project.

Note: 1/ For Costa Rica, categories are mutually exclusive because they refer to main helper. For Mexico, categories are not mutually exclusive because they refer to all helpers, thus the sum of the percentages adds up to more than 100%.

2/ In Costa Rica, area of residence is categorized in urban or rural. In Mexico, area of residence is categorized as more urban (localities with more than 100,000 inhabitants) or less urban.

In Latin America, co-residence and support from kin –rather than hiring private nursing aid– has been the most common way of dealing with dependence due to functional limitations. According to Saad (2003), Perez-Amador and Brenes (2006), and United Nations (2005), being disabled increases the probability of receiving informal transfers and the probability of residing in or moving into a multi-generational living arrangement rather than alone or only with spouse in 7 cities of the SABE project. Similar results have been observed in two recent studies based on nationally representative samples: CRELES (Costa Rica) and MHAS (Mexico) (See Table 1). In Costa Rica, two-thirds of elderly with functional limitations have a household member (especially children and spouse) as their main helper. In Mexico, 92% of helpers live in the same household as the senior with functional limitations. Figures are very similar between more urban and less urban areas, which suggest that SABE

figures (Saad, 2003) might reflect not only the patterns of help at major cities in the region, but also the patterns in rural zones. Additionally, it is worth mentioning that in Mexico, 13% of helpers are waged aids who are not relatives to the respondent; this figure is slightly higher in more urban settings (16%) than elsewhere (11%). The Costa Rican study did not collect this kind of information.

Although Bongaarts and Zimmer (2002) suggest that this pattern of living arrangements and family support is uniform across the region, the data show differences across countries. Part of these differences might be explained by the degree of advancement of each country into the Demographic Transition. Complex living arrangements might be understood as a reflection of strength of social networks (Puga et al., 2007). Other authors underscore the importance of independent living for seniors. Regardless of the interpretation, availability of kin is a direct determinant of family support: declining fertility implies having on average fewer children on whom to rely at old age. The fast fertility decline in Latin America means that current generations of middle-age adults will have fewer available kin when becoming older. According to information based on representative samples of Latin American censuses at the IPUMS project web-site (Minnesota Population Center, 2009)³, women who are currently aged 45-49 have on average 1 or 2 fewer surviving children compared to women who are currently 65-69 years old. Given the patterns observed in developed countries, we can expect that, 20 years from now when these women become 65, they will have a smaller pool of children on whom to rely for formal support than comparable women who were 65 during the 2000 census cycle. The decrease in the number of children between cohorts is smaller in Chile, which is one of the most advanced countries in the population aging process. In Argentina and in Bolivia, the mean number of children has remained similar across these 5 cohorts. Argentina has one of the smallest averages even though the data refers to children ever born rather than to surviving children, which shows that fertility decline onset was earlier in Argentina. Within the list of countries represented in Table 2, the former is very advanced and the latter the least advanced in the population aging process. The rest of the countries show a similar decrement in number of surviving children.

³ The census datasets are available at the IPUMS website through collaboration with the data producers: Argentina's National Institute of Statistics and Censuses, Bolivia's National Institute of Statistics, Brazil's Institute of Geography and Statistics, Chile's National Institute of Statistics, Colombia's National Administrative Department of Statistics, Costa Rica's National Institute of Statistics and Censuses, Ecuador's National Institute of Statistics and Censuses, Mexico's National Institute of Statistics, Geography, and Informatics, Panama's Census and Statistics Directorate, and Bolivarian Republic of Venezuela's National Institute of Statistics.

Table 2. Mean number of surviving children of women aged 45 to 69, by age groups, in selected Latin American countries, circa 2000

Country	Year				
	45-49	50-54	55-59	60-64	65-69
Chile	2.8	3.0	3.2	3.7	4.0
Argentina	3.1	2.9	2.9	2.9	2.8
Colombia	3.6	3.9	4.4	5.0	5.5
Brazil	3.6	4.0	4.6	5.0	5.1
Costa Rica	3.7	3.9	4.5	5.3	5.9
Panama	3.7	4.1	4.6	5.0	5.3
Mexico	3.7	4.2	4.8	5.3	5.8
Venezuela	3.8	4.2	4.7	5.3	5.6
Ecuador	4.1	4.5	5.0	5.3	5.5
Bolivia	4.6	4.7	4.6	4.5	4.6

Source: IPUMS datasets (Minnesota Population Center, 2009).

Notes: The corresponding country samples are: for Argentina (2001), 1%; for Bolivia (2001), 1%; for Brazil (2000), 0.1%; for Chile (2002), 1%; for Colombia (2005), 1%; for Costa Rica (2000), 10%; for Ecuador (2001), 1%; for Mexico (2005), 0.1%; for Panama (2000), 10%; for Bolivarian Republic of Venezuela (2001), 1%.

Types of households where Latin American elderly live

What is the alternative to less direct family support, given this diminishing availability of kin? The future Latin American elderly population will need to rely on non-family support. Non-family support has become more common in developed countries. In the United States (U.S.A.), in 1850, only 0.7% of elderly lived in institutions, while 70% of the elderly lived with children or children-in-law. By 1990, these figures were 15% and 7% (Ruggles, 2000). Residing in long-term care institutions, assisted-living facilities or functional elderly homes is an alternative to living with children or relatives. Fertility decline began in the U.S.A. earlier than in Latin America; therefore, the American society needed to start taking such institutions as plausible alternatives for elderly care. Latin American demography has not studied old-age institutionalization from a cross-country comparative perspective, especially because data sources are scarce.

A way to approach the topic of residence in specialized institutions is accounting for the prevalence of living in collective households according to the census, even though the census questions available to define a collective household are not strictly comparable across countries and the quality of the information is not good. I rely again on data from representative samples from the IPUMS project. Table 3 shows the distribution of the population aged 65 and over, by a special classification of households. In almost all the countries, the prevalence of living in collective households is smaller than 2%. Within the group of countries with available

Table 3. Population aged 65 and over: Relative distribution by household type in selected Latin American countries, circa 2000

Disability and Country	Household type					Total
	(n)	One person	Nuclear	Multi-generational	Collective	
Total sample						
Brazil	9,557	11.6	42.5	44.8	1.1	100.0
Chile	12,516	12.4	34.6	50.3	2.7	100.0
Costa Rica	21,433	10.9	40.4	47.1	1.7	100.0
Ecuador	8,315	8.8	26.5	63.8	1.0	100.0
Panama	16,956	12.3	27.4	58.1	2.2	100.0
Venezuela	11,119	8.3	26.2	64.3	1.1	100.0
With disability						
Brazil	2,070	11.6	35.7	50.3	2.5	100.0
Chile	1,270	10.2	26.4	56.4	7.0	100.0
Costa Rica	5,170	11.2	35.4	50.1	3.3	100.0
Ecuador	1,754	9.9	27.1	60.8	2.2	100.0
Panama	1,462	10.9	19.6	62.2	7.3	100.0
Venezuela	2,807	8.0	21.8	68.0	2.2	100.0

Source: IPUMS datasets (Minnesota Population Center, 2009).

Notes: The corresponding country samples are: for Argentina (2001), 1%; for Bolivia (2001), 1%; for Brazil (2000), 0.1%; for Chile (2002), 1%; for Colombia (2005), 1%; for Costa Rica (2000), 10%; for Ecuador (2001), 1%; for Mexico (2005), 0.1%; for Panama (2000), 10%; for Bolivarian Republic of Venezuela (2001), 1%.

information, it is higher in Chile, Panama, and Costa Rica and lowest in Brazil, Ecuador and Venezuela. None of these percentages is as high as the figure reported by Ruggles for the U.S.A in the 1990s, even though the definition used by Ruggles based on the U.S.A. census is more restrictive than the Latin American definitions⁴. Among disabled elderly, prevalence of residing in collective households is higher than the figure for the elderly population as a whole in every country, which suggests that the service of long-term care institutions is already in use in the region. Multi-generational living arrangements are also associated with elderly care. In the total samples, these households are more common in Ecuador, Panama and Venezuela, than in Brazil, Chile, and Costa Rica. The likelihood of residing in such households increases among the disabled elderly (except in Ecuador). The high prevalence of nuclear families among disabled elderly agrees with survey results that show that a large proportion of elderly with functional limitations are being taken care of by spouses or co-resident children (Table 1). I expected to find smaller prevalence of living in one-person households (someone residing alone) among disabled elderly

⁴ In the Latin American datasets available at the IPUMS project, it is not always possible to differentiate between long-term care institutions for the elderly (elderly homes) and other collective households, such as monasteries, prisons, etc.

than in the total population. However, the data show that the proportions are remarkably similar. It is not possible to elucidate whether these disabled elderly living alone reveal a problem of unmet needs of care. Given that the information generated with these census questions are not very reliable, I suggest that census planners should improve questionnaires and interviewer training to produce more and better information about this kind of facilities.

The economic status of Latin American elderly

Living arrangements at old age are linked to the degree of need of formal and informal transfers from the family and the State, as well as to the socio-economic status (SES) of the person through the life course. At younger ages, work is the typical main source of income. Physical frailty associated with biological aging reduces the likelihood of working among the elderly. Retirement pension systems and specialized health insurance systems were developed during the 19th century as a way of protecting older persons from catastrophic expenses due to illness or job loss (Gratton, 1996; Smeeding and Smith, 1998). Despite the first social security systems were founded in Latin America during the early 20th century, there are still large differences across countries in terms of coverage. Regarding retirement benefits⁵, it is possible to study coverage from two perspectives: the proportion of the workforce entitled to a future pension and the proportion of the elderly receiving a retirement pension. From both perspectives, the highest coverage is found in the countries that Mesa-Lago (2008) calls the social security precursors: Uruguay, Argentina, Brazil, Chile, and Costa Rica –as well as Cuba, which is not in the graph (Figure 3). Their pension systems have several characteristics that allow them to be relatively effective in terms of providing protection to the elderly: high formalization of their work force, mandatory or special contribution systems for informal workers, integration of pension and health insurance providers, good regulation of private providers, and non-contribution pension and health insurance for the destitute (Mesa-Lago, 2004). Other Latin American countries have recently established initiatives to improve social security coverage with varying degrees of success: Colombia, Mexico, Bolivia, Panama, Ecuador, Dominican Republic and Venezuela (Mesa-Lago, 2004).

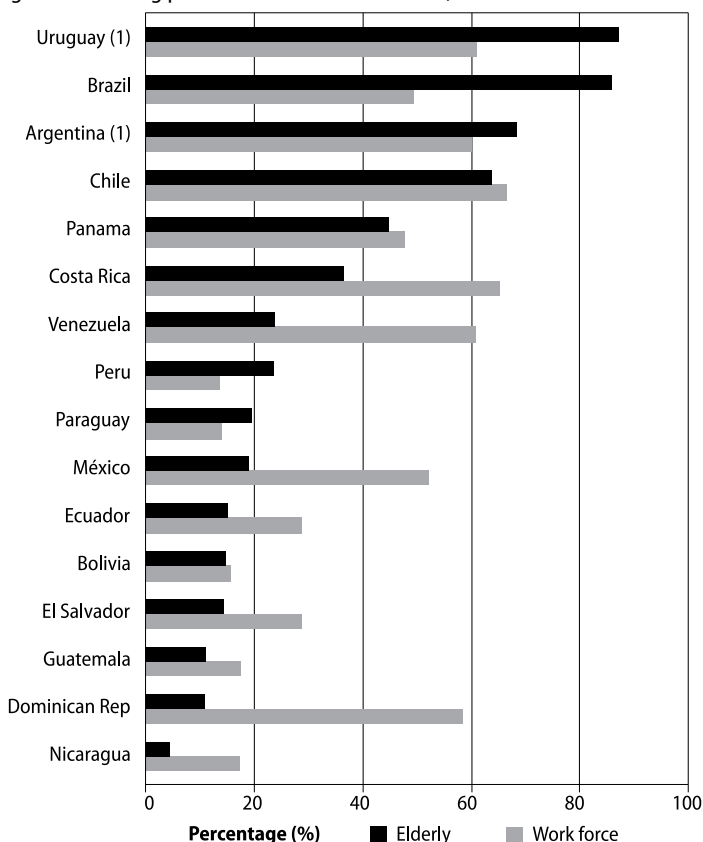
Based on Figure 3, it is worth noticing that there are also differences between work force coverage and coverage to the elderly population. A first group of countries –Uruguay, Brazil, and Argentina– has higher elderly coverage than work force coverage. Given that these countries founded Social Security systems early in

⁵ Figures are similar for health insurance coverage.

the 20th century, lower work force coverage suggests that recent factors –such as pension reform, economic crises, or an increase in the number of informal workers– might have induced a reduction in it (Mesa-Lago, 2008). The systems in Chile and Panama –a second group of countries– have similarly high figures in both indicators and this might indicate that these systems have been less affected by such factors. A third group of countries has higher work force coverage than elderly coverage: Costa Rica, Venezuela, Mexico, Ecuador, El Salvador, and Dominican Republic. In these countries, there seems to be recent factors that have increased work force coverage, such as more work force formalization or specific public policies aimed at achieving coverage among informal workers, but these recent factors have not benefitted current elderly cohorts thoroughly (Mesa-Lago, 2008). Finally, there is a fourth group of countries with very low coverage in both areas. These latter countries commonly have very weak work force formalization and a Social Security system founded relatively late in the 20th century –at least compared to the precursors.

According to Figure 3, some countries in the third group have similar elderly coverage than the fourth group. As explained before, the difference between these two sets of nations is that the third group has higher work force coverage. The difference between work force coverage and elderly coverage can be explained by age and cohort effects. Figure 4 shows the proportion of coverage among occupied workers in 5 countries, based on results computed and analyzed by Rofman and Lucchetti (2006). According to these authors, these curves have an inverse-U shape because the youngest and the oldest cohorts are less likely to be working in jobs that entitle them to Social Security benefits. This pattern is most evident in the curves for Uruguay (at the top) and for Peru (at the bottom) that peak around age 40 or 50. These patterns might be due to age effects: younger and older workers are less likely to find jobs in the formal sector. However, the decline from middle ages to older ages might be due to cohort effects. These patterns are clearest in the countries from the third group: Mexico and El Salvador. Their current elderly population was typically employed before some of the Social Security institutions were founded or they were working in informal, traditional, or rural jobs –agriculture, self-employed retail or artisanship, etc– during their young adulthood. Therefore, they were less likely to be entitled to benefits. On the contrary, younger cohorts in these countries are more likely to be in the formal sector and have been contributing to the System since their early years, or their Governments have offered options to incorporate self-employed or traditional workers into the System (CEPAL, 2008; Mesa-Lago, 2008). Such cohort effects are not well defined in the countries in the fourth group (Peru and Paraguay), where work force coverage is as low among younger cohorts as among older ones.

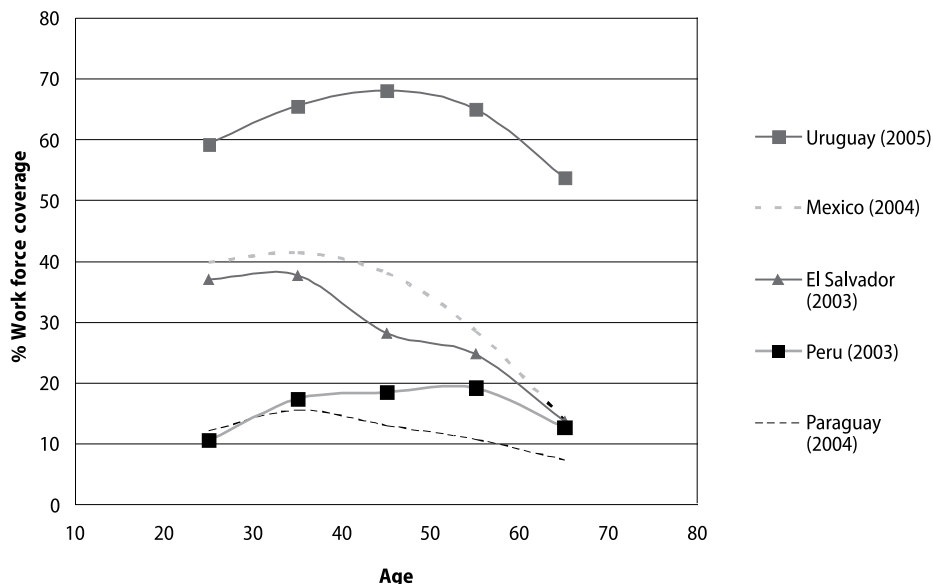
Figure 3. Percentage of work force entitled to a retirement pension and percentage of people aged 65 receiving pension or retirement benefits, in selected Latin American countries



Source: CEPAL (2008) for Work Force coverage, Rofman (2005) for elderly coverage.

When the distribution in Figure 3 is compared to the distribution in Figure 2, it is evident that the countries that are most advanced in population aging are the ones with the highest coverage, while the ones that are least advanced have also the lowest coverage (Huenchuan, 2008). The historical and sociological reasons of this association are difficult to explain in a short article, but they come from a combination of visionary public policies, cultural openness to extra-regional influences (esp. from Europe and North America), and integration to the foreign trade market, among others. However, it is possible to pose the hypothesis that demographic change is also a factor of this process. In fact, pension reforms during the late 20th century and early 21st century were drawn by worries on whether existing pension systems would become non-sustainable due to growing elderly population, especially in aged societies, like Argentina, Chile, and Uruguay.

Figure 4. Percentage of occupied population with pension entitlement coverage, by age, in selected Latin American countries.



Source: Rofman & Lucchetti (2006).

If the advanced stage of population aging has been driving countries like Argentina, Chile, and Uruguay to perform even better than what they have done historically in extending coverage, the countries in incipient stages (like Paraguay, Peru, or most of the Central American countries) should understand their demographic situation as a time frame during which their Governments (or the market) can establish policies to improve coverage directly (special programs for the informal sector) or indirectly (augmenting work force formalization). If such policies are carried on now, the 30 to 50 years during which these countries will reach Cuba's and Uruguay's aged population situation can be used to develop a relatively sustainable pension system based on capitalization.

This idea is not new. It is the main message behind the analyses of the demographic dividend in Latin America. The 2008 Social Panorama (CEPAL, 2008) has made the same argument about how the countries that are least advanced in the demographic transition have a "Demographic Window" during which they need to invest in order to have enough resources to sustain the future costs of population aging. The Social Panorama emphasizes the need of expanding education among young generations. The report shows the advantages of such investment in countries that still have above replacement fertility given that these cohorts would represent

the majority of the work force while the proportion of the population at dependent ages would be at its lowest.

Improving education coverage would definitely benefit nations still going through the Demographic Transition because a better educated work force is more likely to get formal jobs, to diminish sources of socio-economic inequality, and to contribute to the Social Security System, and is less likely to earn income below the poverty line. However, the net future benefits of this kind of investments will not solve the problem of the vulnerability of the elderly population during the “window period”. Throughout this phase, these countries will show patterns similar to the ones that the third group has: elderly coverage that is lower than work force coverage and a declining curve similar to Mexico’s and El Salvador’s graphs in Figure 4, which suggests cohort effects. What should be done to improve elderly coverage meanwhile? I will resort to Mesa-Lago’s (2008:80) excellent advices: establish special programs for the destitute like the non-contribution pension regimes in the precursor countries, improve coverage of informal and rural workers who will become old without entitlement to a retirement pension, and a guaranteed universal package of minimum comprehensive health care for the whole population, regardless of income, age, risk or gender, among others. This kind of measures has proven to be beneficial not only in countries that are well-advanced in the population aging process, but also in countries with incipient aging. Bolivia and Ecuador, for example, have relatively high above replacement Total Fertility Rates, but the BONOSOL (in Bolivia) and the Human Development Bonus (in Ecuador) have been successful subsidy programs that have improved their elderly well being (Rofman, 2005). Rofman (2005) highlights these measures but warns that a serious comprehensive actuarial analysis is needed to secure their sustainability.

Summary and concluding remarks

Even though fertility and mortality decline (and emigration in some countries) are the main forces driving population aging, the fast convergence in these demographic dynamics components will not immediately translate into a fast convergence in population aging indicators across Latin American countries. This result is obviously related to the time needed for a population to change its age structure from a pyramidal shape into a roughly rectangular shape (population momentum). As explained before this slow pace of convergence has its opportunities and threats.

Countries that are well-advanced in their population aging process are currently facing its costs: chronic morbidity and higher prevalence of disability, fewer children

–on average– to take care of the elderly and thus greater need of non-family care providers, and more pressure on the sustainability of their Social Security systems. They have less chances of making the most from the Demographic Dividend because their window period is shorter. However, these countries are also the ones with the most comprehensive system of social benefits, which have high coverage rates; regarding education, these are also the countries with the lowest drop-out rates from the education system. The challenges for these countries are related to keeping their Social Security systems, as well as other social benefits for the elderly, sustainable and as universal as possible. Mesa-Lago (2008) considers that the pension reforms carried out during the last quarter century have not increased work force coverage; therefore, these countries have the challenge to complement the reform with more measures that improve this coverage. Another challenge is to start considering the plausible expansion of non-family support networks for the elderly given that the availability of kin is decreasing very fast.

The least advanced countries in the population aging process have the challenge of improving Social Security coverage during the Demographic Window period, by formalizing the work force and making the affiliation to the system more flexible for current informal and rural workers. As CEPAL (2009) recommends, they also have the opportunity of expanding the coverage of the education system. They have the chance of studying the cases of the most aged Latin American societies; they can learn from their successes and from their missteps. The challenge is to overcome the historical conditions that hindered them in expanding Social Security benefits⁶. These historical conditions are different across Latin American countries. This means that the experience of successful neighboring countries should be studied, but there are no fixed recipes in achieving this kind of goals.

Finally, there is the group of countries that have been advancing rapidly into the Demographic Transition but are not as aged as Uruguay, Argentina, or Cuba. Some of these countries –such as Costa Rica, Panama, and Brazil– have a not so short demographic dividend period of which to take advantage and they have achieved relatively high Social Security coverage rates, too. These are the countries that are better situated for improving the human capital of their population by improving quantitatively and qualitatively their education system, without discarding more efforts to augment coverage rates in Social Security benefits.

These recommendations assume that Latin American countries will keep progressing linearly according to the theoretical pathway described by the

⁶ Sadly enough, the 2009 coup d'état in Honduras shows that there are still many political, cultural, and economical constraints that affect the socio-economic improvement of several nations in the region.

Demographic Transition. This assumption will not necessarily hold for every case. Countries may experience mortality reversals, halts in fertility decline, or cyclical patterns in the number of births. Therefore, there is no single recipe or policy that every Latin American country has to follow in order to make the most from the Demographic Dividend or prevent the consequences of population aging on pension funds. Panama and Costa Rica are considered as two of the precursors in Social Security systems in the region, even though the pace of their Demographic Transition has been different to the pace of the other precursors, such as Argentina or Uruguay.

Another issue to take into account is that the causal mechanisms that link socio-economic development and population dynamics are not as straightforward as they appear to be. The recommendations that were explained above assume that countries that are lagging behind in their Demographic Transition have better chances of developing policies and institutions to deal with the Demographic Dividend and population aging, while those countries that have practically finished their Demographic Transition have fewer chances because their aging process is quite advanced too. However, these opportunities and challenges can be beneficial if a country has a political, economical, institutional, and cultural context that allows for flexible changes in favor of the population. It is not a coincidence that the most advanced Latin American countries in the Demographic Transition are also the most advanced in terms of human development.

Historically, the Demographic Transition leaders have had higher proportions of educated people, as well as proactive Governments that created welfare institutions that still benefit the population in most need. On the contrary, most of the countries that are still going through the transition have been characterized by income and wealth inequality and an absence of political disposition to advance human development policies. The countries that are still far away in their aging process will be able to avail of their demographic situation if their people and Governments can reach to a national consensus to develop policies and institutions that improve the human development of their populations.

I would like to conclude this article commenting that Latin America as a whole is well suited for monitoring the development of these opportunities and challenges because there are recent efforts in constructing information systems and other sources of data about population aging. Some of these efforts are regional, like CELADE's SISE (Sistema Regional de Indicadores sobre Envejecimiento), and others are national, like the "Observatorio de Envejecimiento y Vejez" in Uruguay, "MONITOR-IDOSO Sistema de monitoramento da saúde e qualidade de vida dos idosos a nível federal e municipal" in Brazil, or "Informe de Situación de la Persona Adulta Mayor en

Costa Rica". Other valuable efforts aimed at the same goal are recent surveys about Latin American elderly, like CRELES in Costa Rica, MHAS in Mexico, PREHCO in Puerto Rico, or the SABE Project. It would be advisable that this kind of projects should be sponsored by Governments and the private sector because having this information is useful in proposing and monitoring the policies for improving the well-being of our elderly population.

Acknowledgments

I thank the ALAP Directive Council, especially Suzana Cavenaghi and Enrique Peláez, for inviting me to write this article. I was able to write this paper because of my participation in the CRELES project. "Costa Rica: Estudio de longevidad y envejecimiento saludable (CRELES)" is a research project of the University of Costa Rica, conducted by the Central American Center for Population (CCP) in collaboration with the Instituto de Investigaciones en Salud and the laboratories of the Hospital San Juan de Dios, and funding from the Wellcome Trust Foundation. Principal : Luis Rosero-Bixby. Co-investigators: Xinia Fernandez and William H. Dow. Collaborating researchers: E Mendez, G Pinto, H Campos, K Barrantes, A Cubero, G Brenes, F Morales, MA San Roman and G Valverde. Technical and support staff: D Antich, A Ramirez, J Hidalgo, J Araya and Y Hernandez. Fieldwork staff: J Solano, J Palma, J Méndez, M Arauz, M Gomez, M Rodriguez, G Salas, J Vindas and R Patiño.

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Comments by discussant on “Demographic transformations, convergences and inequalities in Latin America: what the future holds?”

Ian Pool ¹

Introduction

1. Thank you for the privilege of inviting a person from a different Region as discussant. I feel like a visitor to a friendly club where everyone knows everyone else.
2. Although I am Anglophone, actually, I feel very much at home. We share commonalities, especially with southern Latin America, as has recently been pointed out in a magnum opus by New Zealand's leading historian James Belich (*Replenishing the Earth*, Oxford, 2009), farming settler societies, which largely displaced indigenous people, and we are wrestling with modern demographic trends. Among similarities between New Zealand and Latin America:
 - We have lower fertility today, although historically levels were above that of our metropolis.
 - The ageing trends of New Zealand are now between those presently in the USA and those of Argentina;
 - Migration is a major issue for us (including a Diaspora).
 - We are both highly urban societies, and for us that has been so since the early 20th century, despite our dependence on farm exports.

Key issues brought out by the papers

A. An overview

1. As an overview of the session, let me say that it has a rich array of very good papers covering key aspects of your region's demography. I particularly like the title – *Demographic Transformation* – because it has allowed you to synthesize diverse issues.

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2. All papers have stressed the uniqueness of Latin American demography – I accept that there are particularities, but wonder whether some of the trends are due more to being a settler society than to cultural homogeneity? My question is motivated from the mention of the adolescent fertility rise. Very frequently, historically, adolescent fertility levels have occurred as a marker of more general fertility decline.
3. Most importantly, taken together the papers provide an analysis of cardinal aspects of your *demographic transformation*.

B. The Latin American *demographic transformation*

1. I like your term *transformation* because the papers go far beyond the demographic transition. That is, they consider natural increase (the classical Demographic transition model, DT) but also go into age-structural change (AST), mobility (MOB), urbanization (URB), and, by implication, the epidemiologic transition. The implicit model in the set of papers can be seen as:

DT => Mediated by mobility => MOB, URB => DEMOGRAPHIC TRANSFORMATION
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2. Then several papers went well beyond this (Rodriguez-Wong, Brenes, P. da Cunha and Rodriguez) into the social and economic consequences of transformation, e.g. retirement, pensions, wanted childbearing, unsafe abortion. I will, however, discuss only the narrower demographic aspects.

C. Demographic Change and Development

1. All the papers use a broader and more realistic measure of development – the Human Development Index. This reminds us that development is about people, not about financial growth.
2. The papers also stress recent demographic convergence, an issue that brings me to a question: were the antecedents of convergence evident, already far back in the 1960's? I took out some sample data to look at this point, using the social development (HDI) in 2000 as a classification of selected countries: high (Argentina, Uruguay, and Costa Rica); medium (Mexico, Brazil, and Peru); low (El Salvador, and Guatemala). Although the results are not perfect they do point to similar starting points 40+ years ago.

Some factors of demographic change showing “convergence” in the 1960s

1. If we look at the TFR in 1960 – 65, for Argentina and Uruguay it was 2.9-3.1. But all the other countries had rates around 6.2 – 7.2. Thus the fertility trends except for the Southern cone of the Latin American Continent were similar, and then seem to have followed a relatively similar downward trajectory, with the low HDI countries still in the medium range.
2. Then if one takes the numeric growth of the elderly population (65+), 1965 – 2005, it has been fast for Costa Rica and the medium HDI countries; very fast for the low HDI countries, but slower in Argentina and very slow in Uruguay. What is my Conclusion:

that there was a convergence trend in place already, except in the Southern cone where the demographic transition had been initiated well before the 1950's

3. If I look at the numeric growth of the elderly for 2005-45: it is low at 68%-124% for Argentina/Uruguay, but the other selected countries are very similar to each other with levels running between 274%-355%. My conclusion, about numeric growth must be very tentative: that there was similarity in the past and that convergence will continue except for the Southern cone.
4. Let us take one further important indicator. The proportion of those aged 65 or more in 1965-2005, was higher than 4% in Argentina and Uruguay (which was still a low figure by European-Asian standards). But other countries had proportions below 3%. That profile, however, will change in the period 2005-2045. It will be "low" in the Southern cone (7 %-point change), but, conversely to the situation today, high in the other countries (9-14%-points). An exception will be Guatemala (4%-point), but is this a dramatic example of an emigration effect?

D. Flow-on Effects: Mobility and Urbanisation

1. As in some other regions of the world, urbanization has been marked, but is not necessarily a negative factor – the recent World Bank report stresses this, although I found their analysis too dependent on "market forces" and much less on social-demographic factors. The Latin American papers presented in this session do emphasize, very competently, the complexity of urbanization patterns of the Region.
2. That said, it seems to me that two other demographic factors *cross-cut* the trends of urbanization and metropolitan dominance in Latin America:
 - a. Ageing (thus fewer younger migrants in some countries)
 - b. High levels of international migration, which includes in some cases, a change from being countries of immigration to origins of Diasporas. I was particularly struck by this when looking at the data for Mexico and Guatemala, as one might expect, but also for other countries in South America, with the recent shifts to Spain.

Quo Vadis, Latin America?

- Fertility levels are low and a number of countries – Brazil, among them – have rates below replacement level. Exceptions are those with low HDIs (and, to a lesser extent, those with medium levels also). The region will thus "age" structurally.
- A question remains: given the disparities within countries and residential segregation (particularly considering urban areas), what is the magnitude of internal differences?
- Ageing has been emphasized in this session. But when considering demographic transformation, it is useful to distinguish between numerical and structural ageing as both have different effects. This is also true for any country that has different change patterns.

- Generally, numerical ageing will be rapid across the region, and has been over last 40 years – thereby requiring high levels of current expenditure to be diverted towards meeting this challenge. This will have reduced capacity to invest in infrastructure and savings.
- Structural ageing transition has a different trend. In future it will be relatively low in the South Cone, but rapid over much of the rest of the Region. This implies increases in dependency ratios, intergenerational transfers etc.
- The paper on aging stressed intra-family transfers, and also that the demographic bonus is not a certainty. Thus, when looking at aging we should not just focus on the formal sector, but the role of the informal sector needs to be considered.
- Urbanization trends may stabilize in general (at least viewed superficially) with a high level of metropolitanisation, but beneath the surface there is a complex “churning” with inflows/ outflows that will make meso-level planning difficult.
- In sum, Latin America faces major challenges that were brought out in this session.

Parte II

Fertility, Contraception and Reproductive Health in Latin America

Fertility and contraception in Latin America: historical trends, recent patterns¹

Suzana Cavenaghi²

José Eustáquio Diniz Alves³

Abstract Several Latin American countries are close to or have reached below replacement fertility levels, 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 allowed for 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 contraceptive use in the last 20 years in selected countries in Latin America and the Caribbean. 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 large, and the unwanted and mistimed fertility is very high, pointing to very inconsistent use of contraception and high prevalence of induced abortions. Additionally, we point out to changes noticed in some recent surveys, showing an increase of contraceptive prevalence among younger people and a timid increase in the male participation on contraception in some countries. Finally, we make the case that despite of different policies and implementation of family planning programs there is large similarity on reproductive behavior in Latin American and Caribbean countries regarding to the timing of childbearing.

¹ Paper presented at the Population Association of America (PAA), 2009 Annual Meeting, Detroit, MI, from April 30 to May 2, 2009.

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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. In addition, 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. In addition, many different actions from the government or the private sector were put into practice to give couples access to family planning. Whatever diverse paths government and non-governmental organizations have followed, when faced with the issues of reproduction, currently all countries have moved over

to fertility transition⁴. 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 countries⁵ 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 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 the ones that have been conducted since the 1980's (Table 1). Most of them were conducted with the assistance of Macro International Inc. and more recently from the Measure DHS Project⁶. Several other surveys were carried out by national

⁴ See Potter (1999) for a good comparison of the Mexican and Brazilian cases.

⁵ For purposes of brevity, we will henceforth denominate Latin American and the Caribbean as LA.

⁶ Available at www.measuredhs.com.

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

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

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

institutions or organizations with the collaboration of the CDC Project⁷ (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 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 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)

⁷ Available at http://www.cdc.gov/reproductivehealth/Data_Stats/index.htm.

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 20th 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 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, and 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. Figure 1 presents the TFR for three periods for this group of countries.⁸ 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 large⁸. This occurred because countries with low fertility seem not to conform to the hypothesis of stalling at around two 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.

The information in figure 1 taken together with information regarding fertility rates according to place of residence and wanted fertility estimates (WTFR)⁹ shows that there is still a great deal of room for fertility decrease in LA countries (Figure 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)¹⁰. In other words, it seems that LA has a demand for contraception

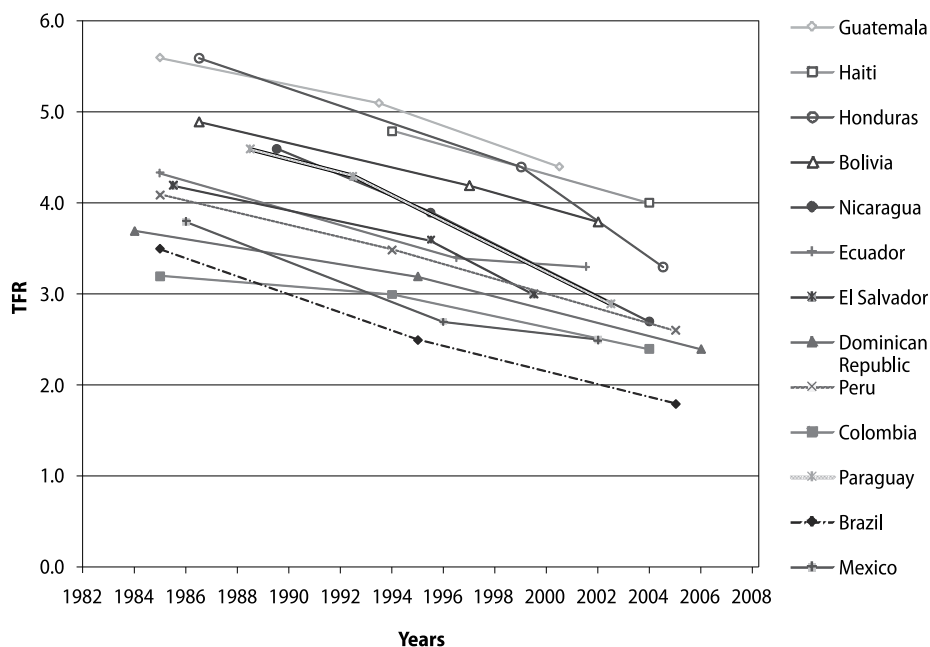
⁸ The data collected in these surveys, which are based on very small sample sizes, may present problems, so they have to be analyzed with caution, but even given a margin of error, the trends cannot be mistaken (maybe with the exception of Ecuador).

⁹ 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.

¹⁰ 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.

that is not within everyone's reach, and that is a right that must be achieved in the region, in accordance with International agreements.

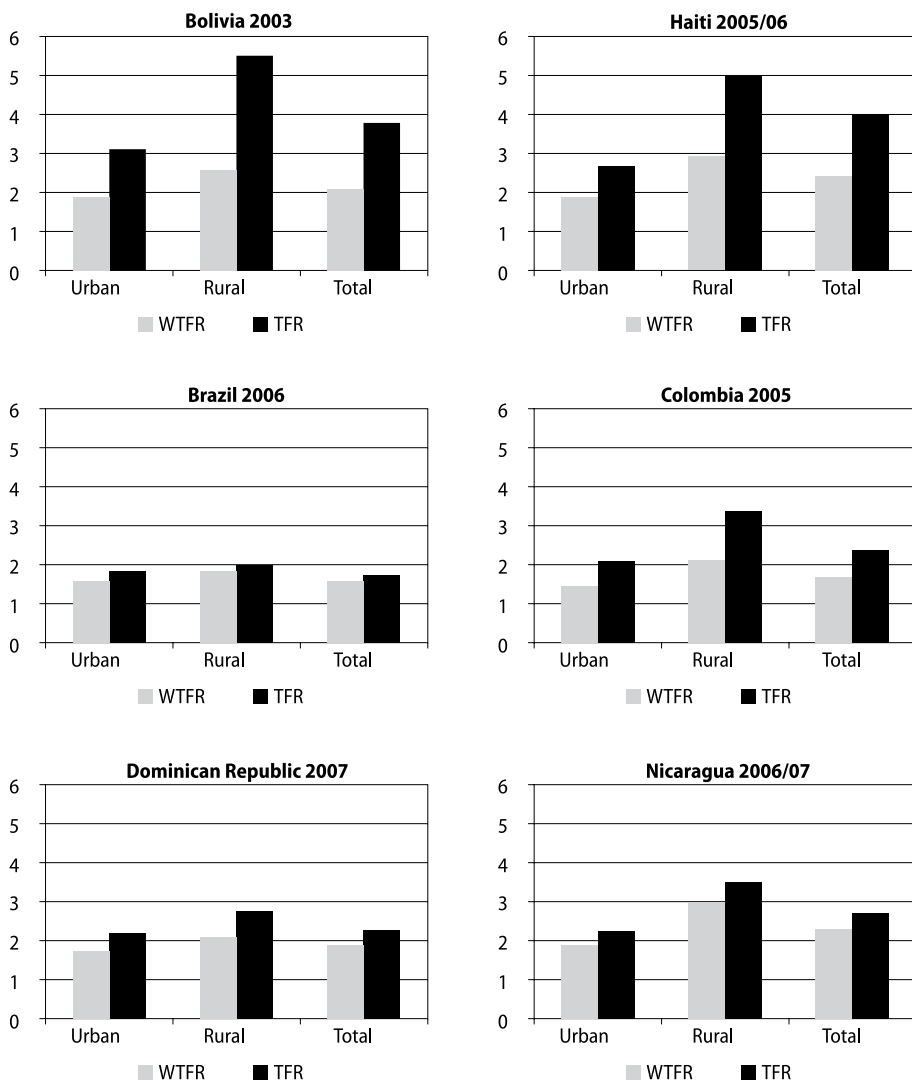
Figure 1. Trends in total fertility rates (TFR) in selected countries in Latin America (rates are averages for 3 or 5 years around the point in the graph), 1984-2007



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

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

Figure 2. Total fertility rates observed and wanted for selected countries, according to place of residence and in total, in several recent periods, 2003-2007



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. Figure 3 shows the fertility schedule for the countries previously analyzed, for the most recent data available, from the reproductive surveys. Besides 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).

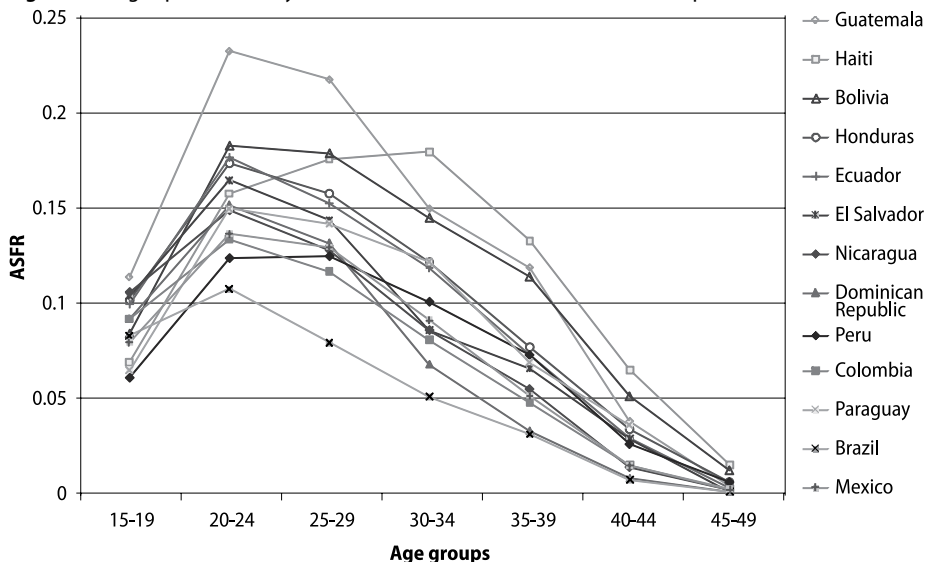
Another way to view the young pattern of fertility in the LA countries is by looking at the weighting of each age specific rate, that is, the relative distribution of the ASFR, which is presented in figure 4. The first fact to note is that the sequences in which the countries appear in the figure are 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 the 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.

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 child¹¹. 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

¹¹ 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.

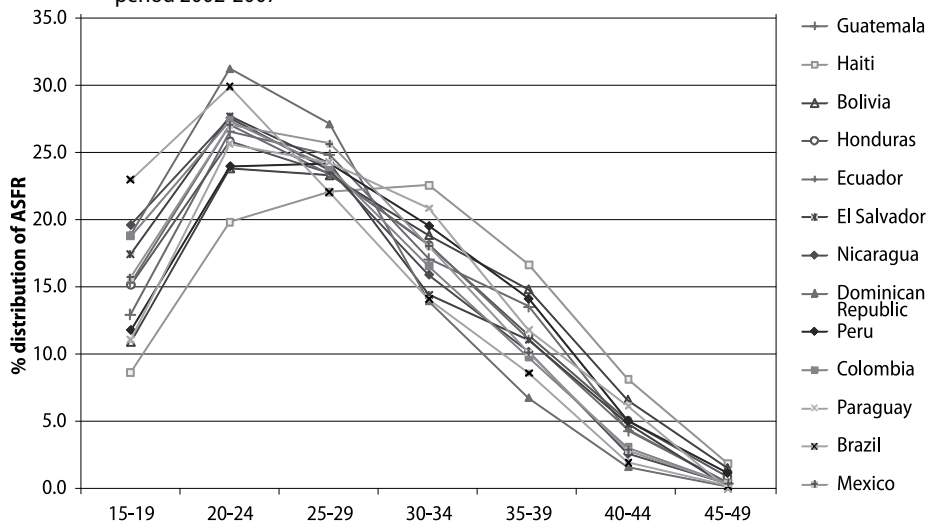
in Europe and those in the lowest-low levels in the Mediterranean, see delays in childbearing that sometimes extend to the 30-34 age range. In Latin America, no country presents this situation, even in a country with the lowest-low TFR such as Cuba, below 1.5, or Brazil with 1.8 children per woman.

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



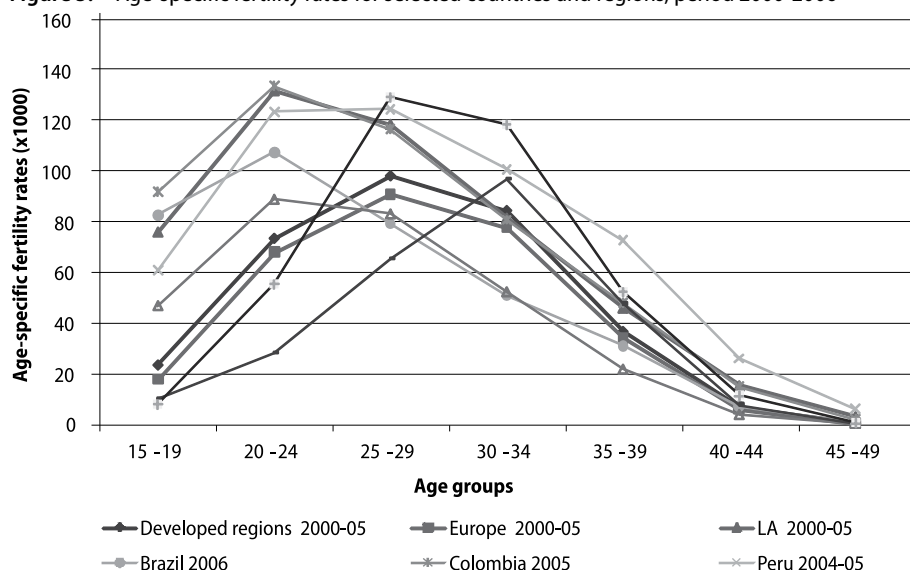
Source: Several National Reproductive Health Surveys (see Table 1 in Methods and Data section).

Figure 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).

Figure 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.

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 life¹², together with full access to reproductive health and particularly fully effective contraception, it is unlikely that the fertility schedule in

¹² 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.

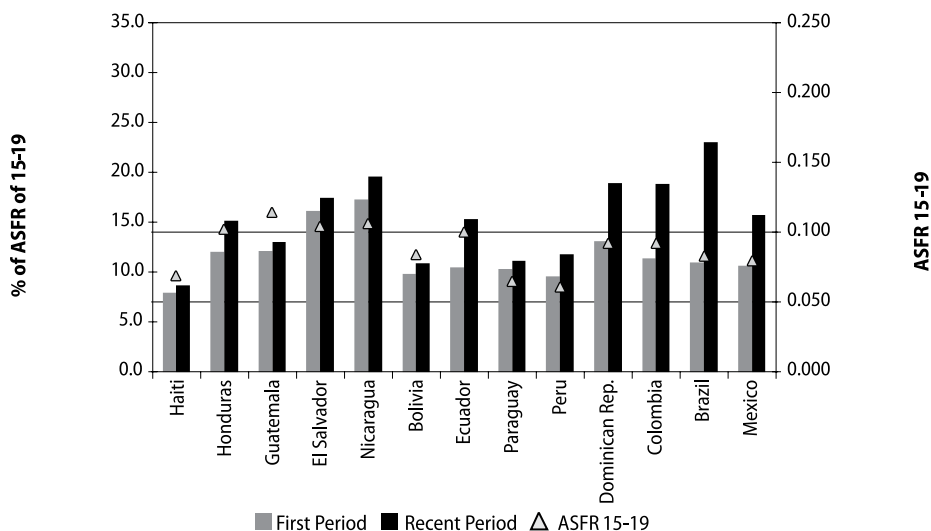
LA countries will approximate that of the developed countries, where women aged 20-24 still have low fertility compared to the 25 – 29 age group.

To corroborate this premise, we are presenting in figures 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 (Figure 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 (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 conditions¹³ (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 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: 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”.

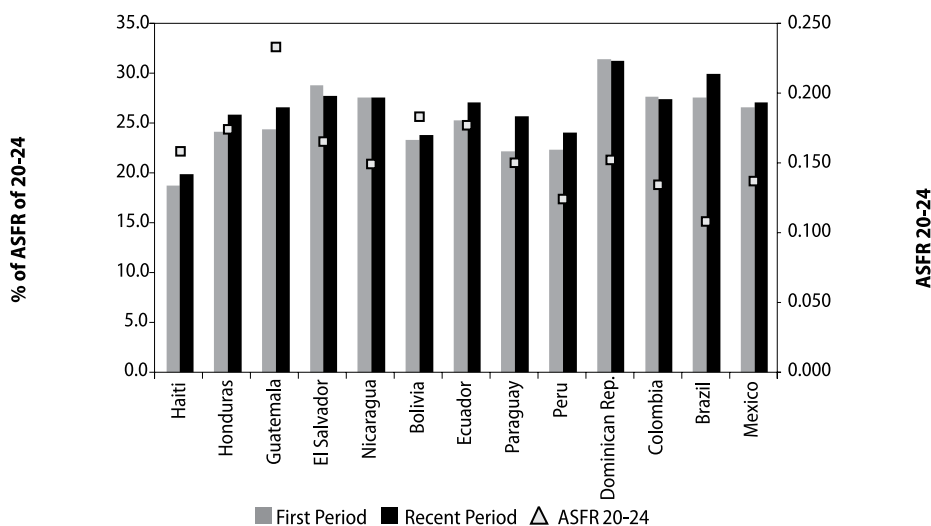
¹³ Put simply, it is likely that a couple would not wait longer to start a family if the kind of education and perspectives in the labor market do not bring more benefits or the hope of a better standard of living as a result of this postponement.

Figure 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).

Figure 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*¹⁴. 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 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 contraception¹⁵, and that levels of contraceptive use in most countries in the region are high compared to others in different continents that present low fertility rates¹⁶.

¹⁴ 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).

¹⁵ 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.

¹⁶ See Bay et al (2004) for the latest application of proximate determinants for several countries in LA.

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 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 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 Nicaragua¹⁷ (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

¹⁷ For Nicaragua and the Dominican Republic, we present data on contraceptive prevalence for the first period in 1990 and 1991, respectively.

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 methods¹⁸, 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 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 methods¹⁹.

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

¹⁸ 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.

¹⁹ 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).

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 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. Therefore, 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. It may take specific efforts and well designed policies to change this situation. 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.

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*²⁰, 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 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.

²⁰ 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".

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
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).

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. In addition, 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 central 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
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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
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
	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
(continue)										

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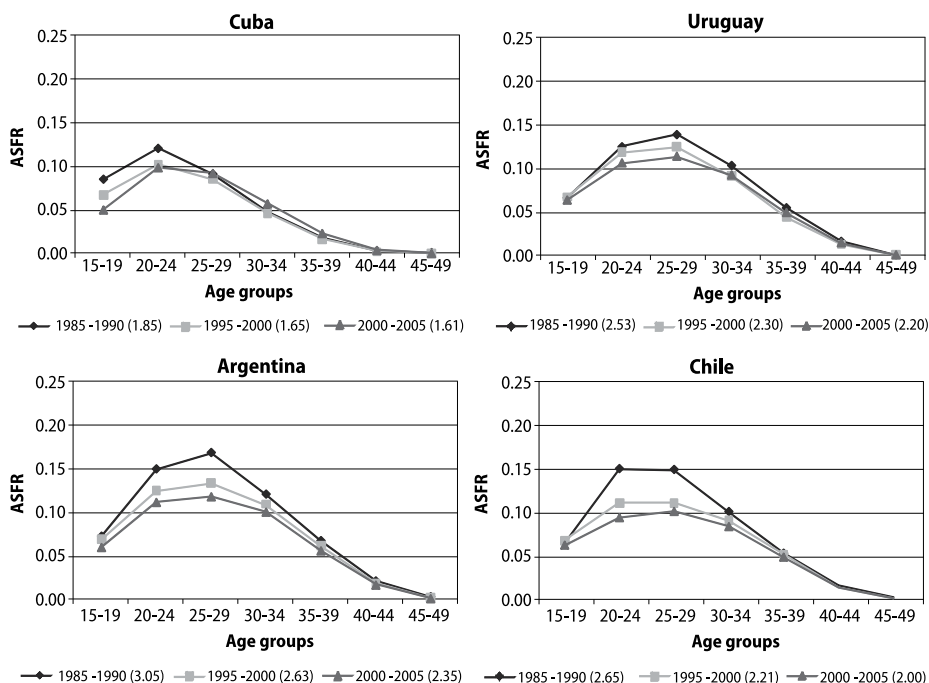
Country and survey year	Women's Education and place of residence	Any method	Any traditional or folk method	Any modern method	Any modern method					
					Female sterilization	Male sterilization	Pill + Injections	IUD	Condom	Other
Guatemala 2002	0-1 years of education	30.4	9.0	21.3	0.0	0.6	15.5	1.4	2.8	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
	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
Mexico 2006	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
	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 larger similarities they have in the fertility transition and, mainly, the difficulties to obtain data on trends and differentials of contraceptive use. Figure 8 shows the age specific fertility rates distributions for three periods in Cuba, Uruguay, Argentina, and Chile, and the correspondent TFR in each period. From the first period (1985-1990) analyzed, we can see that TFR were 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 have declines of fertility as expressive as the other countries analyzed in the previous sections. On the other hand, regarding to the patterns of fertility, with no exception, they present a rejuvenated age distribution, with high ASFR at 15-19 years old, although Cuba presented an important decline in the period, from 86 to 50 birth for one thousand women aged 15-19 years old and Uruguay and Chile some indications of small increase in the 1990's.

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



Source: 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 started fertility transition in other countries are pointed 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 explanations for the low levels of fertility even before the 1960's, besides the social and economical comparative advantages this 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 them we can cite 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 and contraceptive prevalence and *method-mix*. In Cuba, on the other hand, the political process, after the installment of the revolutionary government took Cuba to another path regarding 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 observe, the percentage of contraceptive use of any method is high, but even for Cuba, is not the highest in the region, and Chile and Argentina have lower prevalence than countries like Peru, Colombia, Nicaragua or Dominican Republic, in addition, more than 13% of contraceptive use in Argentina are traditional or folk methods. Interestingly, besides that, fertility rates are kept at lower level compared to those countries²¹. 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 needs medical intermediation and follow-up, the IUD (43%) and the second mostly used is female sterilization (19%). In Uruguay and Argentina what calls attention is the high prevalence of condom, reaching 31% of contraceptive use in Uruguay, and secondly the high use of pill and injections, all methods that are readily available from pharmacy counters. The IUD in these two countries also presents an important frequency, which is counterbalance from the very low levels of sterilization. In Chile, sterilization is also seldom used, and the hormonal methods and IUD are the most frequently used. Again, we can observe that like in other countries analyzed, the *method-mix* in each country tells a different story in the availability of methods and the means women and couples had to regulate their fertility, but at the same time,

²¹ Facts that might explain the lower levels of fertility can be 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.

all of them probably tell the same story of sexual and reproductive rights not readily available to population throughout history.

Regarding to the provision of methods in these countries, again, except in Cuba where according to Alfonso (2004) the historical organization of the public health system and an organized family planning program provided access to contraception to the entire population. In Argentina's case, the story is much different, because until recently, the state did not have an organized program, and moreover, it had laws forbidding the practice of sterilization (López, 2005). Just recently, a law giving consent to voluntary sterilization was approved, but still there is not a national program to provide the entire range of methods to the population (Cecchetto et al., 2007). In Uruguay, the story in the beginning was similar to Argentina, but since 1996, the state provides free contraceptive methods (not permanent but includes emergency contraception). However, a report on monitoring the health system in Uruguay shows that there is a lot of inequalities in the access to health and to the methods as well, and a shortage of methods offered by the services due to logistic problems in the distribution (MYSU, 2007). In the case of Chile, although there was a family planning program, access to contraceptive methods are restricted, voluntary sterilization is not a free option, and although laws on abortion are the most restricted in the world, it is widely documented that the country has the highest rates in the region.

Table 4. Percent distribution of currently married women (in union) by contraceptive method currently used, selected countries and survey year, 2000-2004

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 ^a	-- ^b	-- ^b	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

^a: The prevalence includes combination of methods, hence it does not sum up to total prevalence.

^b: Sterilization are practiced, but since is no 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).

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%)" (Rosero, 2004:84). 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 histories and the current situation on reproductive health and rights and access to contraceptive methods should serve as examples to policy makers, organized political institutions, academics, non-government organization, religious groups, and each individual in other continents, that a good reproductive

health program is what will bring fertility down, within the human rights principals, when the population has a minimal level of education and gender equality to take informed decisions by themselves.

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Unwanted fertility in Latin America: historical trends, recent patterns¹

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Abstract This paper offers an overview of levels and trends in unwanted fertility in Latin America (including the Caribbean) based on national demographic surveys conducted from the mid-1970s to the present. We present estimates on a per child basis (percentage of births unwanted) and a per woman basis (unwanted births per woman, i.e. unwanted fertility rate). We apply to 59 WFS, DHS, and RHS surveys the estimation method recently proposed by Casterline and el-Zeini (2007); this method typically yields higher estimates of unwanted fertility than other available estimators. The contribution of this paper is to offer a portrait of unwanted fertility in the region that is revised, updated, and relatively comprehensive. There is considerable inter-country variability, but a summary of the general pattern is as follows. In the period since 2000, roughly one-third of births are unwanted, ranging from a low of 21% (Paraguay) to a high of 60% (Bolivia), and women experience on average about one unwanted birth during their reproductive career (synthetic cohort estimates), ranging from a low of 0.60 to a high of 2.5 unwanted births per woman. If these estimates are combined with Guttmacher estimates of induced abortion, the implication is that 1.5 – 2.0 unwanted pregnancies per woman is a common experience in the region (or, from a pregnancy perspective, about one-half of pregnancies are unwanted). The fertility decline experienced throughout the region in recent decades has consisted of different mixes of declines in wanted and unwanted fertility, no pattern predominates. Strikingly, wanted fertility in the recent period falls below replacement level (two births per woman) in almost all countries, and below 1.5 births per woman in a substantial minority of countries. However, the ideal number of children among young cohorts of women generally falls between 2.0 and 2.5, suggesting a contradiction between fertility ideals and fertility preferences (which take into account economic and social realities).

¹ An earlier draft of this paper was presented at the annual meeting of the Population Association of America, Detroit, 30 April – 2 May 2008. The authors thank Suzana Cavenaghi for assistance with access to data, and Jose Miguel Guzman for comments on the earlier draft. Partial support for this research was provided by an award to the Initiative in Population Research at Ohio State from the National Institute of Child Health and Development (R21-HD47943).

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Introduction

There are multiple motivations for demographers' continuing efforts to generate accurate estimates of the incidence of unwanted births (defined here as births not wanted at the time of conception). Prevention of unwanted births has long been a fundamental justification for investment of public and private resources in family planning services. Where reduction in population growth rates is a policy goal, the prevention of unwanted births can be a cost-effective step towards attainment of this goal, since unwanted births are assumed to be less costly to avert. The prevention of unwanted births also closes the gap between reproductive aspirations and outcomes, a worthy public policy goal in its own right. Finally, unwanted births are thought to carry distinctive and substantial costs (Gipson et al., 2008). These costs can consist of disadvantage suffered by the unwanted child – in health, in early childhood development, and in later social and economic opportunity – and of damage to the welfare of siblings, parents, and communities. The detrimental repercussions of unwanted childbearing are presumed to be multifaceted and potentially long-term.

This paper examines the current (and past) level of unwanted fertility in Latin America, as well as the contribution of changes in unwanted fertility to the substantial declines in fertility in the region that have occurred in the period from the 1970s to the present. The estimates of the incidence of unwanted births presented here have been calculated using a recently-developed method (Casterline, and el-Zeini, 2007) that we believe offers more valid estimates than the methods employed in past research on unwanted fertility in Latin America. We have also striven to maximize historical and cross-national coverage, analyzing surveys conducted as part of three major multi-national survey programs: World Fertility Survey (WFS), Demographic and Health Surveys (DHS), and Reproductive Health Surveys (RHS).

Demographers and public health researchers have long been aware of the relatively high levels of unintended pregnancy and unwanted birth in the Latin America and Caribbean region. An early multi-country study is Westoff's (1981) six-country WFS analysis, in which Colombia and especially Peru stand out as having high unwanted fertility as compared to three Asian countries. In many subsequent multi-country studies, Peru, and to a lesser extent Colombia, have been identified as having distinctively high unwanted fertility (Blanc, 1982; Bongaarts, and Lightbourne, 1996; Westoff, and Moreno, 1996; Bongaarts, 1997; Adetunji, 1998). Analyses of DHS data have also pointed to high unwanted fertility in Bolivia (Westoff, and Moreno, 1996). Research that has taken a more global perspective has consistently concluded that the Latin American region experiences the highest rate of unwanted fertility (e.g.

Bongaarts, 1997; Adetunji, 1998). Research in the 1980s and 1990s also concluded that unwanted fertility was on the rise in Latin America, and might well continue to rise, as a consequence of declines in the number of children desired (Westoff, 1981; Blanc, 1982; Bongaarts, 1997).

During the past decade, unwanted fertility has received less attention in comparative research on the region. Several overviews of fertility do not consider the distinction between wanted and unwanted fertility (Chakiel 2004, Guzman et al. 2006). A noteworthy exception is the comparative research of Ralph Hakkert (2001, 2003). Hakkert reviews the past research on unwanted fertility in the region and presents a thorough and revealing analysis of eight DHS surveys conducted in the mid- and late-1990s. Hakkert considers levels and trends in unwanted fertility and the correlates of unwanted fertility, while also being attentive to methodological issues. As such his piece is far more ambitious than our paper, although Hakkert's research is now a bit dated.

Unwanted birth – the focus of this paper – is one of three possible outcomes of an unintended pregnancy, the other two being induced abortion and mistimed birth. Each of these outcomes is of concern in its own right, for reasons that are common to all three and specific to each one. All three can impact maternal and child health, with the impact possibly long-term (for the woman and, except for induced abortions, for the child). The social and economic consequences of unwanted births are in all likelihood substantially larger than the analogous consequences of the other two types of pregnancies. And unwanted births are distinctive in their effect on levels of fertility (and thereby population growth rates): unwanted births raise fertility, whereas mistimed births have minimal effect on fertility rates and induced abortions lower fertility. Therefore, while a comprehensive analysis of unintended pregnancy would encompass all three components, there are compelling reasons for examining each component separately. (While the empirical analysis in this paper is confined to unwanted births, our discussion in the final section incorporates regional estimates of induced abortion rates).

Our goal in this paper is to provide a portrait of unwanted fertility in the region that is revised, updated, and relatively comprehensive. We do not carry out empirical analysis of the determinants of unwanted fertility, but there is some value in listing the general categories of direct determinants as background to the descriptive portrait in this paper. A first point is that the risk of unwanted fertility is a function of desired fertility: everything else being equal, the fraction of women at risk of an unwanted birth is inversely related to the average number of children desired. Second, conditional on the fraction of women at risk, unwanted fertility is inversely related to the prevalence of contraceptive use among women who want

no more births (i.e. positively related to unmet need for stopping). This prevalence, in turn, is a function of the strength of the various obstacles to using contraception, including access to family planning services and a broad array of psychological, social, and cultural factors. Third, conditional on the prevalence of contraceptive use, unwanted fertility is inversely related to the effectiveness of contraception; that is, contraceptive failures can lead to an unwanted births. Fourth, conditional on the rate of occurrence of unwanted pregnancies, unwanted fertility is inversely related to the induced abortion rate. There are, then, four distinct direct determinants of population-level variation in the incidence of unwanted fertility, and any effort to explain cross-time or cross-country variation in unwanted fertility should account for all four determinants.

Method and Data

Method

Estimating the incidence of unwanted fertility is intrinsically a challenging task. At issue is the couples' desires at the time of conception, but it is not practical to design data collection for national populations that ensures that interviews are conducted proximate in time to all (or even most) conceptions. Hence classification of births as wanted or unwanted will unavoidably depend on fertility desires measured prospectively or retrospectively, with the risk that the desires are not stable or, in the case of retrospective recall, incorrectly remembered. Adding to the challenge is the emotional sensitivity of the topic: respondents may feel that declaring a child "unwanted" is a violation of social or religious norms.

There are two widely-used methodologies for estimating the level of unwanted fertility, another method that has received little use, and the recently developed methodology that is applied in this research. The first method is retrospective direct inquiry, in which respondents are asked birth-by-birth about their preferences at the time of conception. The usual questionnaire item, asked of births during the previous three to five years, reads,

"At the time you became pregnant with <name>, did you want to become pregnant then, did you want to wait until later, or did not want (more) children at all?"

The chief virtue of this approach is that, in contrast to the other three methods, the variable of interest is directly measured, i.e. desires at the time of conception. However, it is now well-established that respondents are averse to reporting recent births (most of which will be living children) as "unwanted" (Bankole, and Westoff, 1998; Williams, and Abma, 2000). Hence estimates produced by this method are

known to be downwardly biased, and to a substantial extent in most settings. For this reason, while the DHS collects this information, DHS reports do not use it for estimates of wanted and unwanted fertility rates.

Instead the DHS uses the second method, popularized by Lightbourne (1985), which relies on a comparison of the respondent's ideal number of children and the number of living children at the time of conception. The DHS wording of the key item is,

"If you could go back to the time you did not have any children and could choose exactly the number of children to have in your whole life, how many would that be?"

If this ideal is equal to or less than the number of living children at the time of conception of the birth in question, the birth is classified as unwanted. This method produces higher estimates than the retrospective direct method (Bongaarts, 1990; Casterline, and El-Zeini, 2007), suggestive of its greater validity. But the method has serious shortcomings. For one thing, it relies on a survey item that is known to have low test-retest reliability (see studies cited in Casterline, and el-Zeini, 2007). Secondly, two response patterns undermine the method: the tendency to report an ideal that is no lower than the number of living children (so-called "rationalization"), and the tendency in some societies to give a non-numeric answer ("up to God"). These two response patterns both lead to downwardly-biased estimates of unwanted fertility. Finally, there are valid reasons why the preference to have (or not have) more children can be inconsistent with the ideal number of children (Bongaarts, 1990), for example if the household is economically stressed or if sex preferences have not been satisfied after the first few children.

Bongaarts (1990) proposes an aggregate estimator that relies on the prospective preference item,

"Would you like to have (a/another) child, or would you prefer not to have any (more) children?"

This item has been shown to have higher test-retest reliability and higher validity (by several criteria) than other standard fertility attitudinal items (see studies cited in Casterline, and el-Zeini, 2007). Bongaarts' method has, curiously, hardly been used in the nearly twenty years since it was proposed. While it would appear to be superior to the two methods described above, it also has significant disadvantages. Perhaps the most important stem from the fact that this is a synthetic cohort approach: full reproductive careers are inferred from cross-sectional patterns. That is, the method assumes no inter-cohort differences in fertility desires (Hakkert, 2001). While Bongaarts proposes a correction for this assumption, it is data-demanding and, moreover, it is not clear that the correction is sufficient.

The final method is the “aggregate prospective” estimator recently introduced by Casterline and El-Zeini (2007). Like Bongaarts’ approach, this method relies on the prospective preference item which, as noted above, is known to have relatively high reliability and validity. Casterline and el-Zeini’s method is an aggregate method: it does not classify individual births as unwanted or unwanted, rather generates a birth-order-specific estimate of the proportion unwanted, with an estimate of the overall incidence of unwanted births calculated as a weighted average of the order-specific estimates. Unlike Bongaarts’ method, this is a strictly period estimator – order-specific prospective preferences at the time of the survey are used to estimate the fraction of births unwanted (by order) in a brief reference period preceding the survey. The data requirements are minimal, little more than prospective preferences at the survey and an accounting of births during the reference period. The basic formula is presented in equation (1):

$$u^{p+1} = ({}_1N^p - {}_2V^p) / B^p \quad (1)$$

where

u^{p+1} proportion of unwanted births in the reference period preceding the survey

${}_1N^p$ proportion of women at the beginning of period who do not want another child

${}_2V^p$ proportion of women at the survey who do not want another child and did not have a child between the beginning of the reference period and survey

B^p proportion of women who had a birth in the reference period

And the overall proportion of births unwanted (u) is a weighted sum, as in equation (2):

$$u = \sum g^{p+1} u^{p+1} \quad (2)$$

where

g^{p+1} is the proportion of births in the reference period at order ($p+1$)

Age-specific estimates can be calculated on the basis of the order-specific estimates u^{p+1} (i.e. age-by-age, weighted sums of the order-specific proportion unwanted are calculated), and, using these age-specific estimates, the unwanted total fertility rate (unwanted TFR) can be calculated. (See Casterline and el-Zeini (2007) for more details).¹

¹ A program in Stata for applying the Casterline – el-Zeini estimator to DHS and WFS data is available from the first author. Note that there are sample restrictions on each of the three elements of the formula given above, and these sample restrictions differ slightly among the three.

The “aggregate prospective” estimator assumes stability in fertility preferences during the reference period (in this application, 36 months). Preferences may be unstable in two directions, i.e. from “want more” to “want no more”, and *vice versa*. Of concern is instability among women who have a birth. If women state a preference to have no further births but change their mind before having a next birth, this will lead to upward bias in the estimate of unwanted fertility. If, in contrast, some women who state a preference to have another birth change their mind yet nevertheless have a birth, this will lead to downward bias. We have no empirical evidence on the relative weight of these two countervailing sources of bias, and indeed their relative weight probably varies by time and place. One might speculate that the first is more common, resulting in upwardly-biased estimates of unwanted fertility from the Casterline – el-Zeini aggregate prospective estimator. But in periods of rapid fertility decline, the second source of bias might well dominate, resulting in downwardly-biased estimates.

As expected, the aggregate prospective estimator produces higher estimates of unwanted fertility than the “Lightbourne method” (comparison of ideal and living children) that has been the primary method employed by demographers in recent years. (This is the method on which published DHS estimates are based.) Among the 59 surveys analyzed in this paper, on average the aggregate prospective estimate of the percentage of recent births unwanted is 16 percentage points higher (difference in medians) than the Lightbourne estimate, a substantial average difference.²

A final point concerns the interpretation of the wanted and unwanted TFRs that are presented later in this paper. As Hakkert (2001) observes, these TFRs are hybrid measures, a combination of preferences and fertility outcomes. They certainly are not pure representations of fertility desires. This is most clearly the case with the wanted TFR – some women do not have children they wish to have, for whatever reasons, and therefore fall short of their desired number. (We return to this point at the end of the analysis, when considering data on the ideal number of children.) Thus ordinarily desired fertility (usually unobserved) will exceed the wanted TFR. In contrast, the unwanted TFR actually represents the quantity of interest, provided there is confidence in the validity of the estimate. The reader is directed to Hakkert (2001) for a thorough and very insightful evaluation of the strengths and weaknesses of alternative estimators of wanted and unwanted fertility based on the standard battery of demographic survey items.

² This comparison is complicated by the non-comparability across surveys in the measurement of the ideal number of children. Not all survey questionnaires included a fully appropriate item.

Data

Our ambition is to provide a comprehensive picture of levels and trends in unwanted fertility in the Latin American region, including the Caribbean, for the period from the onset of fertility decline to the present. To our knowledge we offer the most expansive coverage across time and country of any research to date. Even so, we analyze no surveys prior to the WFS surveys carried out in the late 1970s. In future work we hope to enlarge our analysis by adding surveys from the 1960s. But because the survey record from the 1960s is spotty, and because some Latin American fertility declines started before the 1960s (i.e. the southern cone countries), unfortunately the picture will remain incomplete.

We analyze survey data collected under three survey programs: the World Fertility Survey (WFS), the Demographic and Health Surveys [DHS], and the Reproductive Health Surveys (RHS). Two surveys were outside these three international programs: the 2003 ENSAR in Mexico, and the 2006 PNDS in Brazil. We consider countries that have at least one survey since 1990 – fourteen countries and fifty-nine surveys in total. Table 1 shows the surveys analyzed in this paper, by country, year, and survey program.

Table 1. Survey Data Analyzed in the Paper, by Country, Survey Program and Time Period

Country	Decade					
	1970s	1980s	1990s		2000s	
South America						
Bolivia		1989 [D]	1993-94 [D]	1998 [D]		2003 [D]
Brazil		1986 [D]	1996 [D]			2006 [P]
Colombia	1976 [W]	1986 [D]	1990 [D]	1995 [D]		2000 [D] 2005 [D]
Ecuador	1979 [W]	1987 [D]	1994 [R]	1999 [R]		2004 [R]
Paraguay	1979 [W]		1990 [D]	1995-96 [R]	1998 [R]	2004 [R]
Peru	1977 [W]	1986 [D]	1991-92 [D]	1996 [D]		2000 [D] 2004 [D]
Central America						
Costa Rica	1976 [W]		1993 [R]			
El Salvador		1985 [W]	1993 [R]	1998 [R]		2002-03 [R]
Guatemala		1987 [D]	1995 [D]	1998-99 [D]		2002 [R]
Honduras			1996 [R]			2001 [R] 2005 [D]
Mexico	1976 [W]	1987 [D]				2003 [E]
Nicaragua			1992-93 [R]	1997-98 [D]		2001 [D] 2006-07 [R]
Caribbean						
Dominican Republic	1975 [W]	1986 [D]	1991 [D]	1996 [D]		2002 [D] 2007 [D]
Haiti	1977 [W]		1994-95 [D]			2000 [D] 2005-06 [D]

W = WFS

D = DHS

R = RHS

P = PNDS

E = ENSAR

A few comments on the country coverage:

- The countries of the southern cone (Argentina, Chile, Uruguay) are entirely missing from this analysis. The omission of Argentina is of particular concern, given its demographic weight.
- We include Costa Rica (surveys in 1976 and 1993) in some of the analysis, despite the absence of a recent survey.
- Several countries with WFS surveys (including Venezuela and Panama) are excluded because there has been no subsequent DHS or RHS survey since 1990.
- We are rather arbitrary in our inclusion of Caribbean countries, presenting estimates in this paper only for the Dominican Republic and Haiti. The justification for their inclusion is that both countries offer a time-series of surveys from the 1970s to the present.

As just noted, two Caribbean countries are included in this analysis. Rather than continually referring to “Latin America and the Caribbean” in the text, we use “Latin America” as a short-hand label.

The WFS and DHS surveys are relatively standardized across countries, although there are differences in the core questionnaires for the two survey programs that are relevant to research on unwanted fertility. Specifically: (1) The ideal number of children item in the WFS did not contain the prefatory clause “If you could go back to the time you did not have any children . . .”, a difference that is thought to result in higher ideal numbers in the WFS. (2) The WFS and DHS-I usually did not ask the retrospective child wantedness questions that became standard in later DHS phases.

In contrast to the WFS and DHS surveys, the questionnaires for the fifteen RHS surveys (conducted with technical assistance from the U.S. Centers for Disease Control) differ considerably from country to country, particularly in their fertility attitudinal items. For this analysis we have constructed extract files in which we attempted, within the constraints of the RHS questionnaires, to mimic the crucial DHS variables. In every survey we were able to construct a prospective preference variable that, in our judgment, is comparable to the WFS and DHS variables. This has not been feasible for ideal number of children nor for retrospective child wantedness. Fortunately our preferred estimator of unwanted fertility – the aggregate prospective estimator – requires the prospective preference item. The greater variation in questionnaire design among RHS surveys threatens the validity of our comparative analysis. Offsetting this threat is the expanded coverage offered by the RHS, in particular Ecuador and Paraguay in South America and El Salvador, Guatemala, Honduras, and Nicaragua in Central America.

We generate estimates, using the aggregate prospective method, for births occurring in the thirty-six months preceding the survey (excluding births in the

month of interview). The estimates include births to never-in-union women but exclude births before age 15 (a very small fraction of total births in all countries).

Findings

All the estimates discussed in this section are listed in the Appendix.

Recent levels of unwanted fertility

We begin by examining the evidence on recent levels of unwanted fertility, as estimated from data in the most recent survey conducted since 2000 (thirteen countries – Costa Rica is excluded).

In reviewing past literature in Section I, we noted that historically Latin America has experienced high unwanted fertility as compared to other regions. This remains the case. The median percentages of births unwanted for the most recent survey since 2000, by region, are in table 2.

Table 2

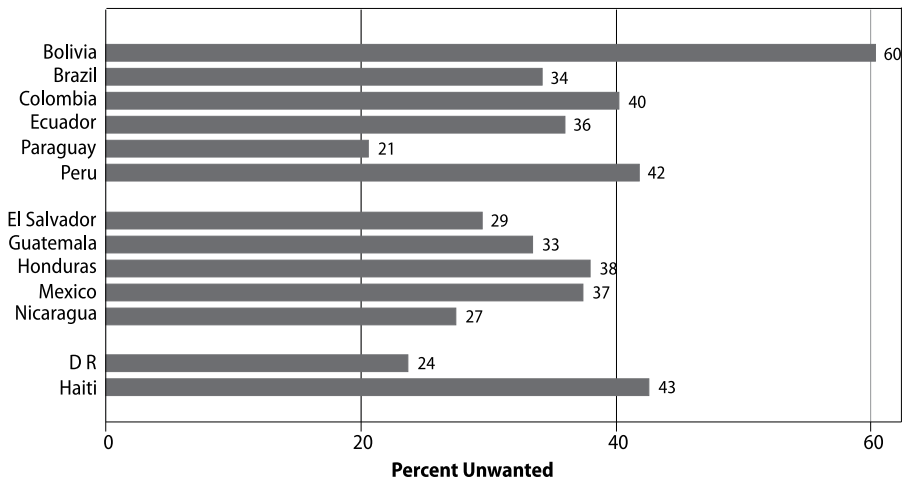
Region	Median Percentage Unwanted	Number Countries
Latin America & Caribbean	37 %	13
Sub-Saharan Africa	16 %	27
North Africa & West Asia	30 %	4
South & Southeast Asia	30 %	8

The country-specific fraction of births unwanted is shown in figure 1. This fraction varies widely within the region, from a high of 60 percent in Bolivia (2003 DHS) to a low of 21 percent in Paraguay (2004 RHS). A rather high incidence of unwanted births is the common pattern: in only two of the thirteen countries are less than one-quarter of births unwanted (Dominican Republic (24%) and Paraguay (20%)), whereas forty percent or more of births are unwanted in four countries (Bolivia (61%), Colombia (40%), Haiti (43%), and Peru (42%)). The estimates suggest that the incidence is especially high in the Andean countries (Bolivia, Peru), but also in the markedly different social and demographic setting of Haiti.

The exceptionally high percentage of births estimated for Bolivia stands out in figure 1. We have investigated this further. A first point is that a high incidence of unwanted fertility especially characterizes the indigenous sub-groups, who contribute about two-thirds of the Bolivian births: the incidence for all indigenous groups combined is 66 percent, as compared to 51 percent for the non-indigenous portion of the Bolivian sample. To be sure, the latter is a high rate as compared

to national figures for other countries, but clearly it is the incidence among the indigenous groups in Bolivia that is exceptional.³ It is outside the bounds of this research to ascertain the reasons for this very high level of unwanted fertility, but we can comment briefly on what the existing research literature suggests. Indigenous women are less likely to use any method of contraception (Mendoza, and Heaton, 2008). This differential undoubtedly is due in part to lower socioeconomic status, but it may also reflect barriers to accessing services that are specific to these groups, such as greater geographic distance, language barriers, and distrust of non-indigenous medicine (Schuler et al., 1994; Terborgh et al., 1995). And among those women who do practice contraception, indigenous women are more likely to use less effective methods (Mendoza, and Heaton, 2008), increasing the likelihood of contraceptive failure. A final factor that could account for the much higher incidence of unwanted fertility among indigenous women in Bolivia would be a lower likelihood of resorting to induced abortion once an unwanted pregnancy occurs. We are not aware of any empirical literature that examines this.

Figure 1. Percentage of Births Unwanted
Most Recent Survey Since 2000

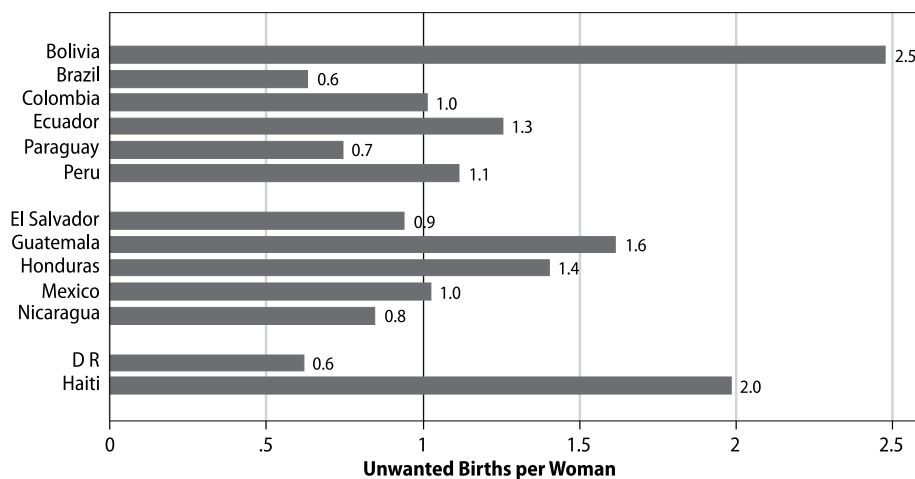


Note: Aggregate Prospective estimates, births during 36 months before survey.

³ The estimate for the indigenous portion of the Peruvian sample is identical – 66%. This provides some reassurance about the validity of the Bolivian estimates. Note that the indigenous sub-groups carry far less demographic weight in Peru, contributing only 15% of births.

Estimates of the unwanted Total Fertility Rate are shown in figure 2. These can be interpreted as the average number of unwanted births women would have over the course of their reproductive careers if the age-specific rates of unwanted fertility observed in the thirty-six month reference period prevailed throughout their reproductive years. Most striking are the very high rates in Bolivia and Haiti, at least two births per woman (note also the rate in Guatemala of more than 1.5 births per woman). Although these are exceptional cases, the rate equals or exceeds one birth per woman in eight of the thirteen countries; those under one birth per woman are Brazil (0.6), Dominican Republic (0.6), El Salvador (0.9), Nicaragua (0.8), and Paraguay (0.7). Levels of contraceptive sterilization are relatively high in these countries, except for Paraguay, and undoubtedly this is an important proximate cause of their relatively low unwanted fertility rates. The unwanted TFR for nine of the thirteen countries falls between 0.7 and 1.4; thus one could say, speaking in most general terms, that the common regional experience in this recent period has been roughly one unwanted birth per woman.

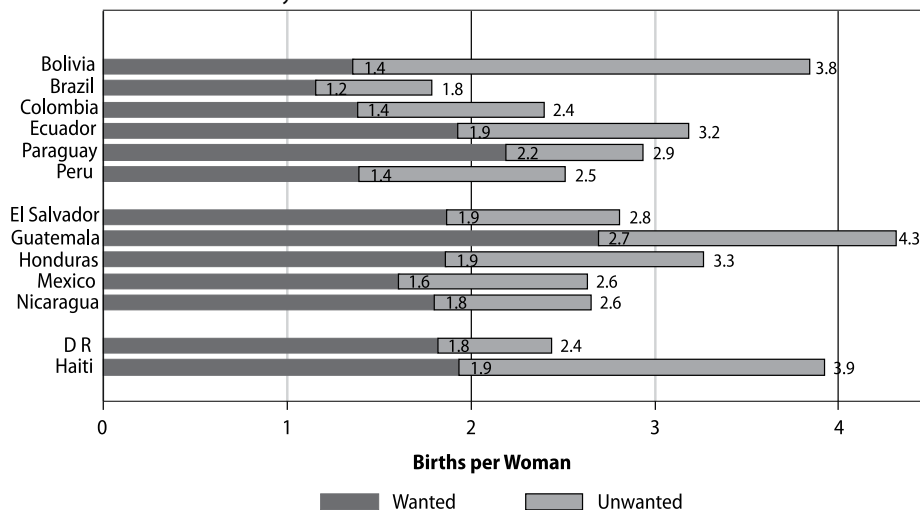
Figure 2. Unwanted Total Fertility Rate
Most Recent Survey Since 2000



Note: Aggregate Prospective estimates, births during 36 months before survey.

It follows that unwanted fertility contributes substantially to the overall level of fertility in the region. This is confirmed in figure 3, which shows the TFR as the sum of its two components (wanted and unwanted TFR). On average (median) the unwanted TFR constitutes 43 percent of the TFR in these thirteen countries. Only in the Dominican Republic and Paraguay does the unwanted TFR make up less than 30 percent of the TFR, and in Bolivia and Haiti one-half or more of the TFR consists of unwanted fertility.

Figure 3. Total Fertility Rate and Components
Most Recent Survey Since 2000



Note: Aggregate Prospective estimates, 36 months before survey.

Trends in unwanted fertility and the Latin American fertility decline

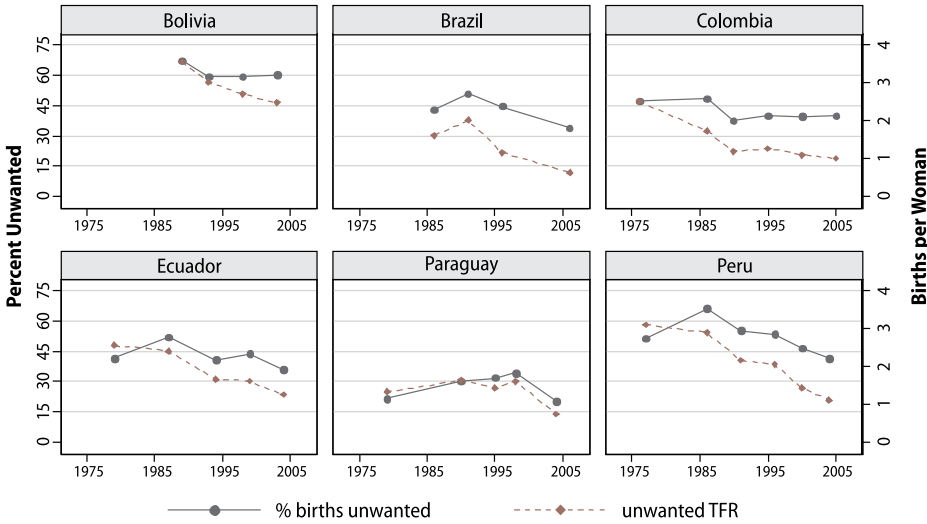
Trends in both the percentage of births unwanted and the unwanted TFR are shown in figures 4a–4c. These figures are a bit confusing because of the different scales for the percentage of births unwanted (solid line and left-hand scale) and the unwanted TFR (dashed line and right-hand scale). But this layout has the advantage of facilitating comparison of the pair of trends in each country. Note that there is no necessary association between the two trends; for example, when fertility declines the unwanted TFR may also decline despite stability or even increase in the percentage of births unwanted.

A variety of patterns of reproductive change are evident in figures 4a–4c. The most common pattern is decline in both the percentage of births unwanted and the unwanted TFR. This is the pattern in the six South America countries. It is also the pattern in three of the six Central American countries – El Salvador, Mexico, and Nicaragua, although in El Salvador the decline is slight (Figure 4b). And this pattern occurs to a dramatic extent in the Dominican Republic, and there is some indication that this is the emerging pattern in Haiti (Figure 4c).

But the preceding summary gives an exaggerated impression of the extent to which the two variables march down together. Another salient feature of figures 4a–4c is the slower pace of decline in the percent of births unwanted. This observation applies to Bolivia, Colombia, El Salvador, Mexico, Dominican Republic, and Haiti.

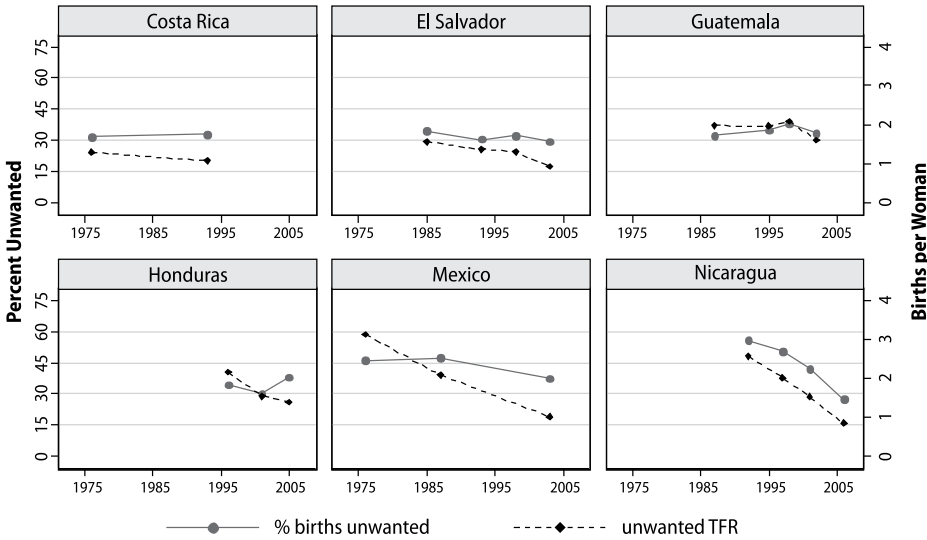
In these two South American countries (Bolivia and Colombia), the percentage of births unwanted has remained relatively stable while the unwanted fertility rate has fallen substantially (by at least one birth per woman).

Figure 4a. Trends in Unwanted Fertility: South America



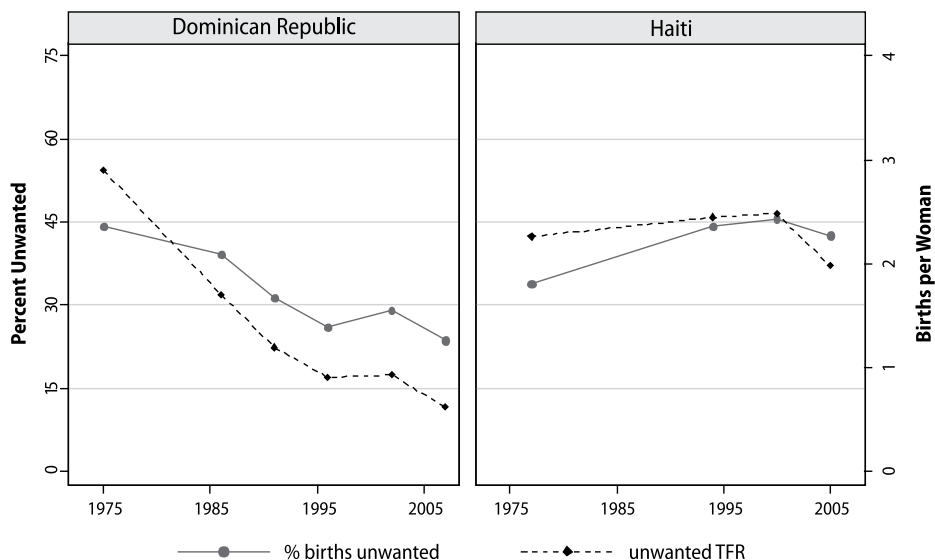
Note: Aggregate Prospective estimates, 36 months before survey.

Figure 4b. Trends in Unwanted Fertility: Central America



Note: Aggregate Prospective estimates, 36 months before survey.

Figure 4c. Trends in Unwanted Fertility: Caribbean



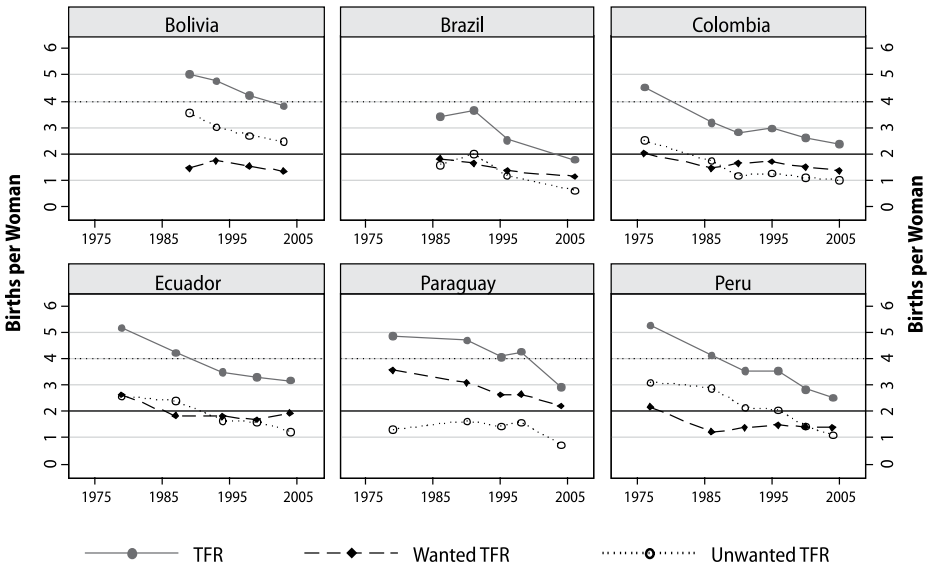
Note: Aggregate Prospective estimates, 36 months before survey.

From the standpoint of women and households, it is probably of more importance that the rate of unwanted childbearing (i.e. births per woman) declines: everything else being equal, as the volume of unwanted births declines, the social and economic costs should ease. And these individual- and household-level gains probably aggregate up to societal gains, not to mention further macro returns from lower fertility and slower population growth. But from the standpoint of children, the fact that the fraction of births unwanted hardly declines is of some concern. That is, from a birth cohort perspective, the prevalence of unwantedness (at conception) has been relatively fixed in these countries over the past few decades (with, to be sure, some notable exceptions, namely Dominican Republic, Nicaragua, and Peru). Furthermore, the societal context has been far from stable, rather has been quite dynamic, including economic changes that have placed a higher premium on educational credentials and on women working away from the home. These changes may have increased the costs of unwanted childbearing. Hence it is altogether possible that, despite the lower rates per woman of unwanted fertility in the recent period, the individual- and societal-level impact of unwanted fertility matches or even exceeds the impact of the higher rates in the past.

A final question about trends concerns the relative contribution of declines in wanted and unwanted fertility to the overall fertility decline. This question is addressed in figures 5a-5c and table 3. Evidently these Latin American declines

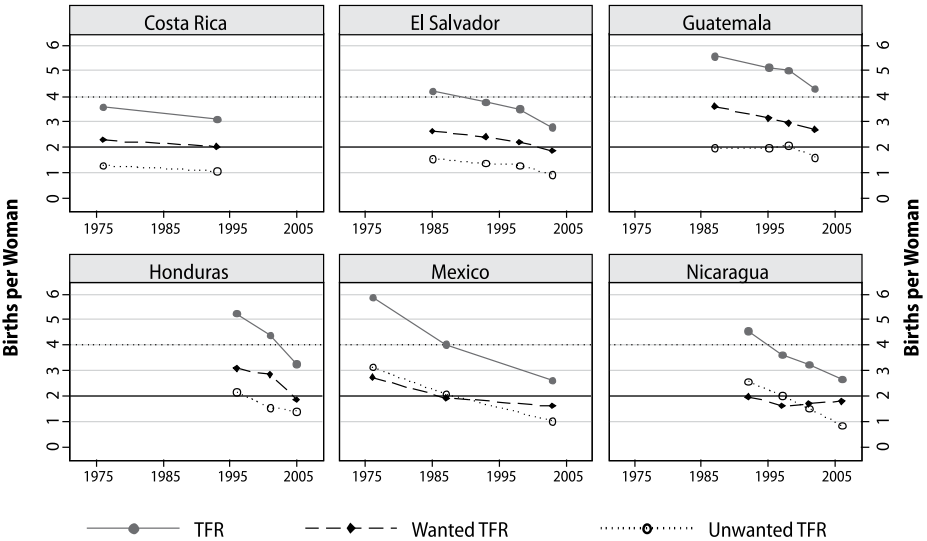
have been produced by different mixes of declines in the two components. The decomposition in table 3 makes this point most clearly: The fraction of the overall fertility decline due to declines in unwanted fertility has ranged from a high of 90 percent in Nicaragua (where wanted fertility has remained rather stable at two births per woman from the early 1990s to the present) to a low of 18 percent in Haiti (where unwanted fertility remained over two births per woman from the late-1970s until the most recent survey). The relative contributions of declines in wanted and unwanted fertility vary so much as to resist any generalization. In attempting to perceive common patterns across countries in figures 5a-5c and table 3, it should be kept in mind that the time-period encompassed differs considerably from country-to-country: in some countries the period is no more than two decades, whereas in other countries only the most recent 15 years or so is examined. Were the equivalent analysis to be performed in all countries on the entire period of fertility decline, it is possible that a discrete number of common patterns might emerge.

Figure 5a. Trends in Fertility: South America



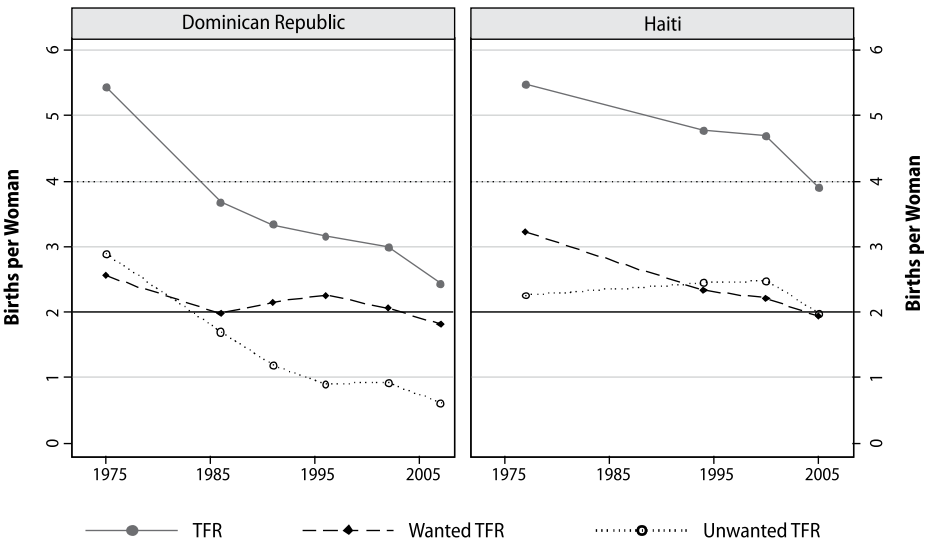
Note: Aggregate Prospective estimates, 36 months before survey.

Figure 5b. Trends in Fertility: Central America



Note: Aggregate Prospective estimates, 36 months before survey.

Figure 5c. Trends in Fertility: Caribbean



Note: Aggregate Prospective estimates, 36 months before survey.

Table 3. Fertility Decline: Contributions of Declines in Wanted and Unwanted Fertility

Country	Survey Years	Amount Decline in TFR	Percentage Contribution		
			Wanted	Unwanted	Total
South America					
Bolivia	1989, 2003	-1.20	9.3	90.7	100
Brazil	1986, 2006	-1.64	40.7	59.3	100
Colombia	1976, 2005	-2.14	29.8	70.2	100
Ecuador	1979, 2004	-2.00	34.7	65.3	100
Paraguay	1979, 2004	-1.94	69.9	30.1	100
Peru	1977, 2004	-2.77	28.1	71.9	100
Central America					
Costa Rica	1976, 1993	-0.48	55.8	44.2	100
El Salvador	1985, 2003	-1.41	55.1	44.9	100
Guatemala	1987, 2002	-1.29	71.5	28.5	100
Honduras	1996, 2005	-1.97	61.4	38.6	100
Mexico	1976, 2003	-3.23	35.1	64.9	100
Nicaragua	1992, 2006	-1.90	9.7	90.3	100
Caribbean					
Dominican Republic	1975, 2007	-3.01	24.3	75.7	100
Haiti	1977, 2005	-1.57	82.2	17.8	100

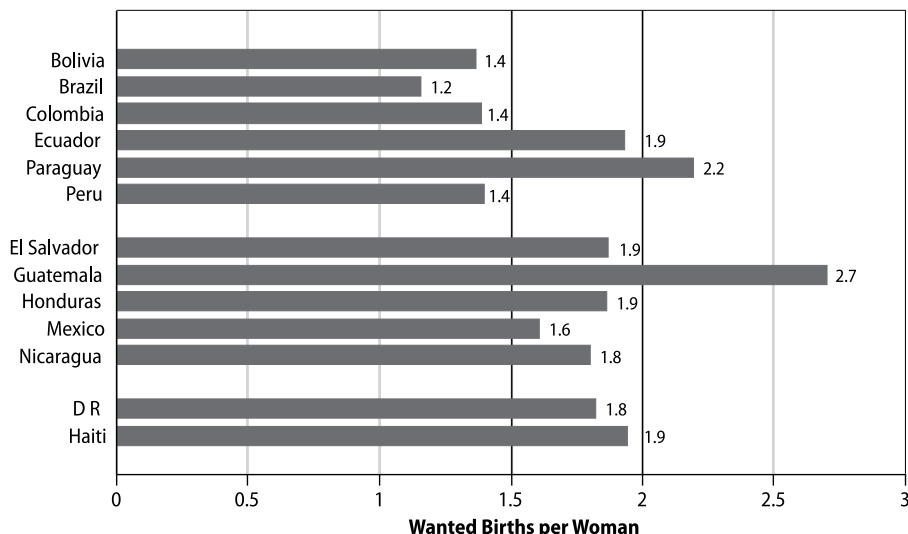
Current levels of wanted fertility and the future course of Latin American fertility

While the focus of this research is unwanted fertility, estimates of wanted fertility are a by-product, and these are of interest in their own right. The wanted TFRs for the most recent survey since 2000 are shown in figure 6. These are the total number of births women would have, on average, if unwanted fertility were entirely eliminated. To reiterate, this is a synthetic cohort estimate based on fertility rates in the three years preceding the survey. It should not be viewed as a measure of desired fertility, because some women may have failed to have births that were desired.

In eleven of the thirteen countries – Guatemala and Paraguay are the exceptions – the wanted TFR is less than replacement-level, i.e. less than two births per woman. Indeed, in four countries the wanted TFR is less than 1.5 births per woman: Brazil, Bolivia, Colombia, and Peru. Moreover, it is evident from figure 5a that, according to our estimates, rather low levels of wanted fertility have characterized these South American countries for several decades, in the cases of Colombia and Peru as far back as the mid-1970s. Perhaps most surprising are the low levels of wanted fertility in Bolivia and Peru in the past when their overall TFRs exceeded four births per woman and when social and economic conditions were relatively undeveloped. There appears to be an anti-natalism in these Andean societies that is rather deeply rooted.⁴

⁴ A separate analysis of the Peruvian surveys limited to the Sierra region -- which resembles Bolivia in its social, cultural, and economic features -- also reveals consistently low wanted TFRs since the 1980s.

Figure 6. Wanted Total Fertility Rate
Most Recent Survey Since 2000

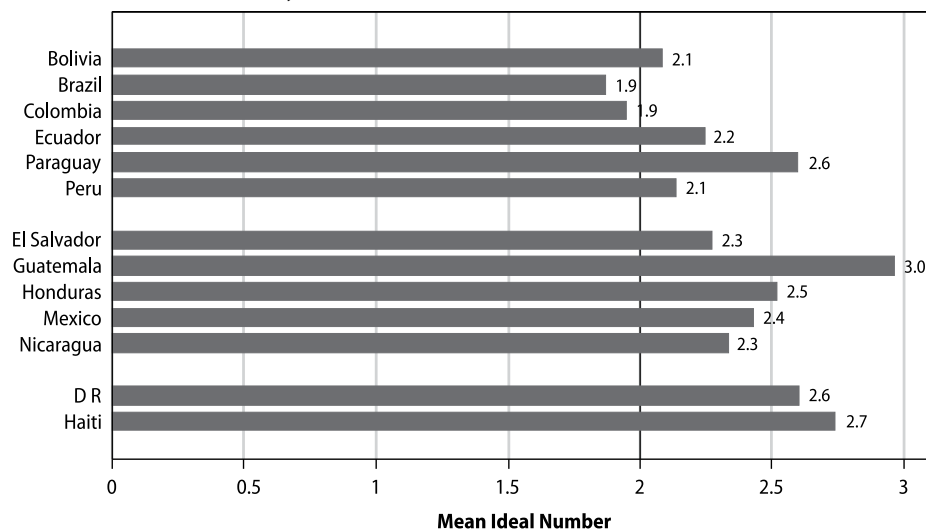


Note: Aggregate Prospective estimates, 36 months before survey.

What are the implications for the future of the estimates in figure 6? As evident in figure 3, at present the overall TFR – the sum of wanted and unwanted fertility – exceeds two births per woman in all countries included in this analysis. A future with no unwanted fertility is implausible – in no society has unwanted fertility been entirely absent. And, indeed, from the record of the past three decades one could infer that Latin American societies are especially susceptible to unwanted fertility, for whatever mix of reasons. Having said this, if one anticipates more perfect birth control in the future and consequent reductions in unwanted fertility – certainly a desirable outcome on social and public health grounds – then from the estimates in figure 6 one could reasonably posit that post-transition rates of fertility in the region will generally lie below replacement level (i.e. less than two births per woman).

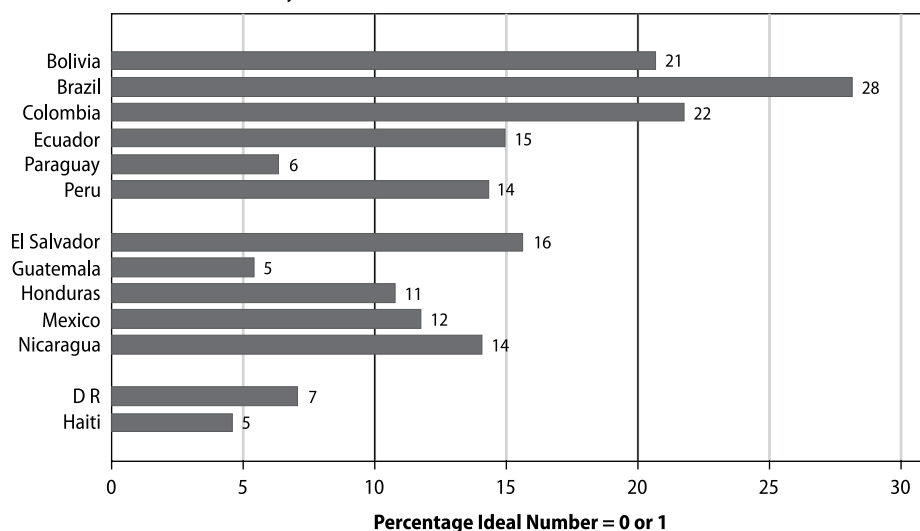
A different perspective on likely future levels of fertility is provided by survey data on women's ideal number of children. The mean ideal for young cohorts (women age 15-24) is presented in figure 7a, and the percentage expressing an ideal of 0 or 1 child is presented in figure 7b. These data indicate little attitudinal support for sub-replacement fertility. The mean ideal exceeds 2.0 children in all countries except Brazil and Colombia, where the mean is 1.9 children. In five countries (Dominican Republic, Guatemala, Haiti, Honduras, Paraguay) the mean ideal equals or exceeds 2.5 children. And it is evident in figure 7b that relatively small fractions of women express an ideal of 0 or 1 child – only in Brazil, Bolivia and Colombia does this amount to one-fifth or more of these younger women.

Figure 7a. Ideal Number of Children, Women Aged 15-24
Most Recent Survey Since 2000



Note: Among women who provide a numeric ideal.

Figure 7b. Ideal Number of Children Equals 0 or 1, Women Aged 15-24
Most Recent Survey Since 2000



Note: Among women who provide a numeric ideal.

As guides to future levels of fertility, the recent unwanted TFR and the ideals of younger women are in contradiction, with the latter suggesting substantially higher fertility (one-half child or more) than the former. This is a common predicament in

contemporary low fertility societies, i.e. achieved period fertility falling well short of stated ideals, especially the ideals expressed by younger cohorts (Morgan, and Taylor, 2006). The conventional interpretation of this apparent contradiction is that achieved fertility falls short of ideals because couples defer to various economic and social constraints. The estimates in figures 6 and 7 indicate that the same predicament is coming to characterize Latin American societies. Indeed, because the wanted TFR must be no greater than the TFR and typically will be lower than the TFR (because of the existence of unwanted fertility), it follows that the wanted TFR will fall short of the mean ideal number of children so long as the ideal at least equals the TFR, which is often the case in low and moderate fertility societies. We note again that the wanted TFR is not a pure measure of fertility desires, rather mixes desires and actual outcomes (with the latter possibly affected by voluntary and involuntary factors that depress fertility).

Summary and Concluding Comments

This is a study of reproductive change that takes advantage of the large number of national demographic surveys conducted during the past four decades in Latin America and the Caribbean. We give special attention to the most recent decade, but also examine trends since the mid-1970s. The historical analysis provides the context for consideration of recent estimates, and also yields some insights about the nature of fertility decline in the region.

Our focus in this paper has been unwanted fertility, viewed both from a child perspective (percentage of births unwanted) and from a woman perspective (rate per woman). Those familiar with the demography of the region will not be surprised that we estimate high rates of unwanted fertility in the region even in the recent period – high according to absolute standards (roughly one unwanted birth per woman on average, and well in excess of this rate in some countries) and high as compared to the incidence of unwanted births in other major regions. This is a familiar outcome – survey data as far back as the 1970s indicated that rates of unwanted fertility were relatively high in Latin America, and evidently the region has maintained this standing up to the present.

This is not to deny that downward trends in unwanted fertility are not also apparent. While the fraction of births unwanted remains rather stable in most of the countries examined (typically around 30%-40% of births), the unwanted fertility rate – the number of unwanted births per woman – has fallen substantially in most countries. Whether the individual and societal costs of unwanted childbearing have declined by an equivalent amount cannot be assumed. One could reasonably surmise that per child costs of unwanted fertility are higher now than in the past.

As noted at the outset, unwanted birth is one of three components of unintended pregnancy, the other two being induced abortion and mistimed birth. Induced abortion rates are notoriously difficult to estimate accurately. Perhaps the most trustworthy and cross-nationally comparable estimates have been generated by researchers at the Guttmacher Institute (Sedgh *et al.* 2007). Their most recent estimates are centered on 2003, and are shown in table 4.

Table 4

	Abortion Rate (per 1000 women)	Abortion Ratio (per 100 births)
South America	33	38
Central America	25	26
Caribbean	35	42

Multiplying the abortion rates by twenty-five (an approximation of the number of years in an average reproductive career) yields a lifetime average number of abortions ranging from 0.6 per woman (Central America) to 0.9 per woman (Caribbean). If these are added to the unwanted TFRs shown in figure 2, most of which approach or exceed 1.0 per woman, and if one assumes lifetime exposure to recent rates, the conclusion is that the average regional experience is 1.5 – 2.0 unwanted pregnancies per woman, a remarkably high rate. Alternatively, considering this on a per child basis, if one were to take the regional median of 37 unwanted births per 100 births (see Appendix and table 2 earlier in this paper) and use Guttmacher’s South American abortion ratio of 38 abortions per 100 births, the two combined imply 54 unwanted pregnancies per 100 pregnancies.⁵ That is, the common experience in the region would appear to be one-half or more of pregnancies unwanted (and subsequently leading either to an induced abortion or an unwanted birth). This is stark evidence of a large discrepancy between reproductive aspirations and achievements.

Our aim in this paper has been to present a revised and up-to-date set of estimates of unwanted fertility for the maximum number of countries in the Latin American region. As such this is a piece of descriptive analysis, for which we do not apologize: good description of demographic realities, especially demographic realities that have major public policy implications, is among the chief responsibilities of the demographic research community. But certainly this research should be followed by investigation of the determinants of unwanted fertility, as well as assessments of policy options for reducing it. If success in reducing unwanted fertility were to generate a new set of concerns that fertility is too low, then this can become the focus of a different set of research endeavors and public policy evaluations. There are

⁵ Calculated as $(37 + 38) / (100 + 38)$.

costs attached to unwanted fertility (for the child, for the parents). If sub-replacement fertility is viewed as a societal problem, unwanted fertility is a sub-optimal solution.

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Appendix. Unwanted Fertility Estimates

Country	Year	Survey Program	Total Fertility Rates						
			Percent of Births Unwanted		Overall TFR	Unwanted			Wanted
			Ideal vs. Living	Aggregate Prospective		Ideal	Bongaarts	Aggregate Prospective	Aggregate Prospective
Bolivia	1989	DHS	41.4	67.4	5.04	2.28	3.26	3.56	1.47
Bolivia	1993	DHS	38.3	59.2	4.77	2.02	2.89	3.02	1.74
Bolivia	1998	DHS	37.6	59.5	4.23	1.75	2.49	2.70	1.53
Bolivia	2003	DHS	41	60.2	3.84	1.74	2.26	2.48	1.36
Brazil	1986	DHS	29.2	43.1	3.42	1.15	1.37	1.60	1.82
Brazil	1996	DHS	28.7	44.4	2.54	0.75	1.04	1.16	1.37
Brazil	2006	PNDS	21.6	34.1	1.79	0.39	0.43	0.63	1.16
Colombia	1976	WFS	21.2	47.3	4.54	1.21	1.83	2.51	2.02
Colombia	1986	DHS	27.9	48.4	3.20	1.06	1.27	1.73	1.47
Colombia	1990	DHS	23.2	37.4	2.82	0.75	0.77	1.18	1.64
Colombia	1995	DHS	25	39.9	2.97	0.81	1.20	1.27	1.71
Colombia	2000	DHS	29	39.7	2.61	0.81	1.04	1.10	1.51
Colombia	2005	DHS	28.7	40.2	2.39	0.73	0.91	1.01	1.38
Costa Rica	1976	WFS	15.6	31.8	3.58	0.63	0.72	1.29	2.29
Costa Rica	1993	RHS	15.2	33.1	3.10	0.52	0.77	1.08	2.02
Dominican Republic	1975	WFS	21.3	44.2	5.45	1.53	2.37	2.90	2.55
Dominican Republic	1986	DHS	23	39.1	3.68	1.09	1.19	1.71	1.98
Dominican Republic	1991	DHS	19.6	31.2	3.34	0.76	0.87	1.19	2.15
Dominican Republic	1996	DHS	19.6	25.9	3.17	0.70	0.94	0.90	2.26
Dominican Republic	2002	DHS	19.8	29	2.99	0.63	0.88	0.93	2.06
Dominican Republic	2007	DHS	19.6	23.6	2.43	0.51	0.45	0.62	1.82
Ecuador	1979	WFS	17.5	41.7	5.18	1.18	1.99	2.56	2.62
Ecuador	1987	DHS	29.3	52.1	4.24	1.42	2.05	2.41	1.83
Ecuador	1994	RHS	24.8	40.8	3.49	1.02	1.46	1.66	1.83
Ecuador	1999	RHS	28.9	44	3.30	1.07	1.41	1.61	1.69
Ecuador	2004	RHS	26.5	35.9	3.18	0.92	1.09	1.25	1.93
El Salvador	1985	DHS	12.8	34.6	4.21	0.70	1.31	1.57	2.64
El Salvador	1993	RHS	1.2	30.4	3.79	0.06	1.14	1.37	2.42
El Salvador	1998	RHS	1.2	32.5	3.51	0.05	1.14	1.31	2.20
El Salvador	2003	RHS	0.7	29.4	2.81	0.02	0.77	0.94	1.87
Guatemala	1987	DHS	16.6	32.4	5.59	1.09	1.87	1.98	3.61
Guatemala	1995	DHS	18.4	35.1	5.13	1.10	1.84	1.97	3.16
Guatemala	1998	DHS	15.9	37.7	5.04	0.94	2.11	2.09	2.95
Guatemala	2002	RHS	16	33.4	4.31	0.80	1.37	1.61	2.69

(continued)

(continued)

Country	Year	Survey Program	Percent of Births Unwanted		Total Fertility Rates				
			Ideal vs. Living	Aggregate Prospective	Overall TFR	Unwanted			Wanted
						Ideal	Bongaarts	Aggregate Prospective	Aggregate Prospective
Haiti	1977	WFS	20.1	33.9	5.48	1.44	1.83	2.26	3.22
Haiti	1994	DHS	30.5	44.2	4.78	1.75	2.18	2.45	2.33
Haiti	2000	DHS	33.7	45.6	4.69	1.90	2.38	2.48	2.21
Haiti	2005	DHS	31.8	42.5	3.92	1.53	1.66	1.98	1.93
Honduras	1996	RHS	26.9	34.5	5.23	1.74	2.25	2.16	3.07
Honduras	2001	RHS	24.2	30	4.39	1.26	1.61	1.55	2.85
Honduras	2005	DHS	24.7	37.9	3.26	0.93	1.13	1.40	1.86
Mexico	1976	WFS	22.3	46.2	5.86	1.61	2.80	3.12	2.74
Mexico	1987	DHS	25.6	47.2	4.02	1.17	1.64	2.08	1.94
Mexico	2003	ENSAR	15	37.3	2.63	0.42	0.64	1.02	1.60
Nicaragua	1992	RHS	74.3	55.6	4.55	3.49	2.39	2.56	1.98
Nicaragua	1997	DHS	27.6	50.6	3.63	1.17	1.75	2.01	1.62
Nicaragua	2001	DHS	25.2	42.1	3.23	0.96	1.33	1.52	1.70
Nicaragua	2006	RHS	15.4	27.4	2.65	0.48	0.54	0.85	1.80
Paraguay	1979	WFS	7.5	21.7	4.87	0.49	1.04	1.33	3.55
Paraguay	1990	DHS	13.4	30.4	4.71	0.73	1.29	1.63	3.08
Paraguay	1995	RHS	17.5	31.8	4.07	0.79	1.14	1.44	2.63
Paraguay	1998	RHS	9.4	34.4	4.26	0.45	1.26	1.60	2.66
Paraguay	2004	RHS	14.6	20.5	2.93	0.52	0.60	0.74	2.19
Peru	1977	WFS	28.1	51.3	5.28	1.79		3.11	2.17
Peru	1986	DHS	38.1	66.2	4.12	1.79	2.30	2.89	1.22
Peru	1991	DHS	38.4	55.5	3.54	1.54	1.77	2.16	1.38
Peru	1996	DHS	34.2	53.6	3.54	1.35	1.87	2.05	1.48
Peru	2000	DHS	32.9	46.8	2.85	1.03	1.19	1.44	1.41
Peru	2004	DHS	31.8	41.7	2.51	0.85	0.86	1.11	1.39

Is Latin America starting to retreat from early and universal childbearing?¹

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Abstract Latin America is quickly approaching fertility replacement levels. Although the pace of fertility decline has been uneven across countries, recent data show that more than half of the 20 Latin American countries had total fertility rates close to or below replacement levels by 2005. Until now, a distinctive feature of the process of fertility decline in Latin America was that it took place without major changes in the onset of family formation, as indicated by fairly stable rates and ages at first union and first birth. It seems, however, that Latin America has entered into a new stage of the fertility decline process in recent years. After decomposing childbearing into the contributions of (1) entry into motherhood and (2) children that mothers have, we detect a new fertility pattern in the region: the age-30 proportion of mothers, which had changed little in the past, has dropped substantially in Latin America in the 1990s, suggesting that the social imperative of early motherhood, which has long prevailed in the region, is weakening. The analysis is based on cohort estimates from the four waves of Latin American censuses between 1970 and 2000. In addition, surveys conducted in 14 Latin American countries in 2006 show a strong link between childlessness and higher education across several cohorts. We discuss whether the recent increase in childlessness reflects a shift towards later childbearing or whether it may signal an emerging retreat from universal childbearing in the region. In turn, the data show that the decline of fertility of mothers continues, although slowly.

¹ This article is a slightly revised version of an article by the same name which appeared in the journal *Demographic Research*, Vol 20, Article 9, pages 169-194, 2009, URL: <http://www.demographic-research.org/Volumes/Vol20/9/> as open access material. Also, presented at the Population Association of America (PAA), 2009 Annual Meeting, Detroit, MI, from April 30 to May 2, 2009.

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Introduction

Latin America is quickly approaching fertility replacement levels. Although the pace of fertility decline has been uneven across countries⁵ (Guzmán et al., 1996), recent data show that more than half of the 20 Latin American countries had total fertility rates (TFR) close to or below replacement levels by 2005 (Population Reference Bureau 2007). This group includes the four largest countries in the region: Brazil, Mexico, Colombia, and Argentina; as well as five countries with populations that have already crossed the replacement threshold (with TFR lower than 2.1): Uruguay, Chile, Costa Rica, Puerto Rico, and Cuba. Fertility patterns and trends at these low levels may be strongly determined by women's behavior in entering maternity; that is, by rates of first births and age schedules. If motherhood continues to be almost universal and early, it seems unlikely that the region will eventually reach the very low fertility levels observed in several European and East Asian countries (Kohler, Billari, and Ortega, 2002). Conversely, if larger proportions of Latin Americans opt to have their first child at older ages, or to remain childless, the region could reach very low fertility levels sooner rather than later.

Until now, a distinctive feature of the process of fertility decline in Latin America was that it took place without major changes in the onset of family formation, as indicated by fairly stable rates and ages at first union and first birth (Rosero-Bixby, 1996, 2004; Mensch, Singh, and Casterline, 2005). It seems, however, that Latin America has entered into a new stage of the fertility decline process in recent years. The proportion of women under 30 who have made the transition to motherhood has dropped significantly in most Latin American countries in the past decade. In Costa Rica, for example, the estimated proportion of women who would be mothers by age 30, according to the rates of the study year, fell from above 80% to about 65% from 1995 to 2005. Drawing on the European experience, this article discusses whether this reduction in rates of motherhood among young adults reflects a novel shift in the starting age of childbearing, an emerging retreat from universal childbearing, or a combination of both.

The study of childlessness among younger groups adds a complementary perspective to earlier research. Previous studies on childlessness in developing countries have been traditionally confined to the end of the reproductive span; i.e., among women in the oldest reproductive age groups, usually over age 40. Based

⁵ For example, Mexico and Brazil have experienced a rapid and sharp fertility transition over the last thirty years; Chile, Uruguay and Argentina already displayed a relatively low level of fertility in the 1970s and the reduction in fertility rates has been moderate thereafter. In Guatemala, Bolivia, Honduras, Paraguay and Nicaragua, fertility rates remain relatively high at present (United Nations, 2007).

on the assumption that the desire for children is practically universal in developing countries, childlessness has been typically attributed to involuntary infecundity. The comparison of data from the World Fertility Surveys and the Demographic and Health Surveys reveals that permanent childlessness has diminished in Latin America since the 1970s (United Nations, 2004). However, the proportion of childless women aged 25 to 49 has recently increased in several countries of the region (Rutstein, and Shah, 2004), suggesting that childbearing is intentionally postponed (or foregone) by an increasing proportion of young adults.

This article documents the levels and trends of childlessness among young adult women in 16 Latin American countries between 1970 and 2000 with data from four waves of population censuses. It also identifies factors that are associated with childlessness using individual-level data from a 2006 series of surveys conducted in 14 Latin American countries. The article focuses primarily on *cohort* fertility, given that it has been shown that *period* indicators of fertility may be distorted by what Ryder called “demographic translation” effects (Ryder, 1964), also known as *tempo* effects in more recent literature (Bongaarts, and Feeney, 1998). For example, while *period* total fertility rates are as low as 1.2 and 1.3 in several European countries, the lowest estimates of complete *cohort* fertility in those countries are in the order of 1.5 to 1.7 births among cohorts born circa 1970 (Sardon, 2006). The persistent postponement of births biases downwards the estimates of period fertility rates because there can be a recuperation of fertility at older ages. However, it is well documented that, in general, “later means fewer” children (Rindfuss, and Bumpass, 1976), or even no children.

The Latin American demographic context

Considering the far-reaching economic, social, and political transformations that Latin America experienced in the second half of the 20th century, it remains somewhat of a puzzle that demographic indicators of family formation, such as age at first union and age at first birth, have shown, until very recently, so little change (Heaton, Forste, and Otterstrom, 2002). During these past decades, major structural transformations affected the organization of society, particularly the expansion of mass education, rapid urbanization, and internal rural to urban migration, as well as the transition to democratic governments in the political domain. Women’s education and employment levels, which are known to influence family formation, also increased rapidly during this period. For example, the participation of women in the labor force increased from around 20% in the 1950s to over 50% in the 1990s, albeit with large differences according to country, area of residence, age and educational

level (ECLAC, 2007). The increase was particularly sharp after the debt crisis that affected the region in the 1980s, and the subsequent economic restructuring of the 1990s. The deterioration of the economy, increasing unemployment, and precarious attachment to the labour force rendered the traditional male breadwinner family model unsustainable (Jelin, and Díaz-Muñoz, 2003). Despite these trends, early life course transitions, such as the transition to first union and motherhood, changed remarkably little (Fussell, 2005).

Fertility in the Latin American region as a whole declined from 5.9 births per woman in 1950-1955 to 2.5 in 2000-2005 (United Nations, 2007). However, as mentioned above, this rapid and sustained process of fertility decline was not accompanied by a gradual delay in the onset of childbearing, as has been the norm in European countries (Sobotka, 2004). In the early 1990s, relatively low fertility coexisted with traditional patterns of family formation –i.e., early nuptiality and young motherhood– in many Latin American countries. Fussell and Palloni (2004) argue that the explanation for this distinct Latin American pattern⁶ lies in the strong cultural emphasis on family ties. According to these authors, the value placed on family networks, which represent the primary safety net guarding against economic and social instability, would explain the persistence of nearly universal and early family formation, despite major changes in the economic, political, and social spheres.

Traditional patterns are, however, not immutable, and it is reasonable to expect that behavior regarding motherhood will eventually change in the face of modernizing forces, such as women's education and salaried work, particularly when the average desired family size has declined to about two children in most Latin American countries (Westoff, and Bankole, 2002). Younger cohorts, particularly if they have had access to higher education, are likely to reach adulthood with different aspirations regarding marriage and family, work life, economic self-sufficiency, and lifestyle than their mothers and grandmothers, as has occurred in Western societies (Crimmins, Easterlin and, Saito 1991). Delaying childbearing could be a suitable strategy that allows them to pursue higher education, establish themselves in the labour market, build their couple relationship before child-rearing, and also to deal with unstable life conditions or uncertainty in the economic context (Adsera, and Menéndez, 2006).

⁶ Fertility patterns in Eastern Europe also reflect the atypical coexistence of very low fertility and early transition to childbearing, but an upward trend towards later motherhood has recently started (Council of Europe, 2005).

Data and methods

Drawing on the classic study of the decline of fertility in Europe that decomposed childbearing into marriage and marital fertility indexes (Coale, and Watkins, 1986), the starting point in this article is the following identity that decomposes total fertility F into two different processes:

1. the proportion of women who became mothers, or motherhood rate M , and
2. the fertility of mothers, or G rate, which is simply the additional number of children that mothers have:

$$F = M(G+1)$$

Our trend analysis is based on *cohort* estimates of F and M from the four waves of censuses conducted in 16 Latin American countries since 1970. The G rate is derived from the above identity. We focus on M at ages 25-29, which the data shows represents 87% (5% SD) of complete M in Latin America (cohorts in these data reach complete M by age 40). And we focus on G in the age bracket 30-34, which includes 80% (5% SD) of complete G in each cohort. In some analyses, we estimate complete M and G for cohorts born in the 1970s from the quasi-complete figures at ages 25-29 and 30-34, respectively, using relations derived from the data. The census data were taken from several sources, including the UN Demographic Yearbook, as well as online census data on the web from the IPUMS project (Minnesota Population Center, 2008), the University of Costa Rica (CCP, 2008), and the census offices in Colombia, Brazil, Chile, Mexico, Nicaragua, and Honduras.

This decomposition of fertility in M and G was used in an earlier study of the prospects of below-replacement fertility in 15 metropolitan areas of Latin America (Rosero-Bixby, 2004). For comparison purposes, we also use the most recent estimates of cohorts M and G for 22 European countries, which correspond to the cohorts born circa 1970. The lowest estimates of cohort total fertility in this group of European countries are in the order of 1.5 to 1.7 births. The estimates come from the European Demographic Observatory (Sardon, 2006), and the countries are: Austria, Bulgaria, Croatia, Czech Republic, Denmark, England and Wales, Finland, Greece, Hungary, Ireland, Latvia, Netherlands, Norway, Poland, Portugal, Romania, Russia, Serbia, Slovakia, Slovenia, Spain, and Sweden (countries with no available estimates for 1970s cohorts were not considered). In addition, we use published cohort estimates of completed- M and M at age 27 for five cohorts in 23 developed countries (Frejka, and Sardon, 2007) to identify an intra-cohort relationship between these two figures, which we then use to estimate a scenario of completed- M in the 1970s birth cohorts in Latin America.

In order to examine in more detail recent trends in motherhood rates, we use vital statistics data on first births in Chile and Costa Rica in the period 1980-2006. These are the only countries in the region with accessible and reliable series of numbers of births by birth order. We estimate the time series of *period-M* at age 30 (sum of age specific first birth rates), as well as the *period* median age at motherhood (i.e., when 50% of women reach motherhood) in these two countries.

In complementary analyses of factors associated with childlessness, we use micro-data from surveys conducted in 14 Latin American countries in 2006 as part of the Latin American Public Opinion Project (LAPOP, 2008) of the “Americas Barometer” of the Vanderbilt University⁷. These are nationally representative surveys of adult women and men aged 18 and over, with a sample size of around 1,500 in each country. The questions mainly focus on political themes, such as voting participation, tolerance, and support of democracy, and citizens’ rights. However, by including questions on the number of children and socioeconomic status, these surveys offer a rare opportunity for comparing the co-factors of the prevalence of childlessness in several cohorts and across 14 Latin American countries. Using logistic regression, this article estimates cross-sectional effects on the probability of being childless, contrasting results across three age or cohort groups (women aged 20-29, 30-39, and 40-49 in 2006). The covariates included in the model are: urban residence, educational level, occupation, household wealth (a zero to one scale built by counting up to 11 household assets), religion and religiosity, trust in neighbors (an indicator of social capital measured with a zero to one scale), satisfaction with life (an indicator of self- perceived wellbeing measured with a zero to one scale), and sources of news, since some authors postulate an important role of television (*telenovelas*, in particular) for the diffusion of modern lifestyles and family values in Latin America (Potter, Schmertmann, and Cavenaghi, 2002). Age and marital status are included as controls, and interactions between age and several covariates are also explored.

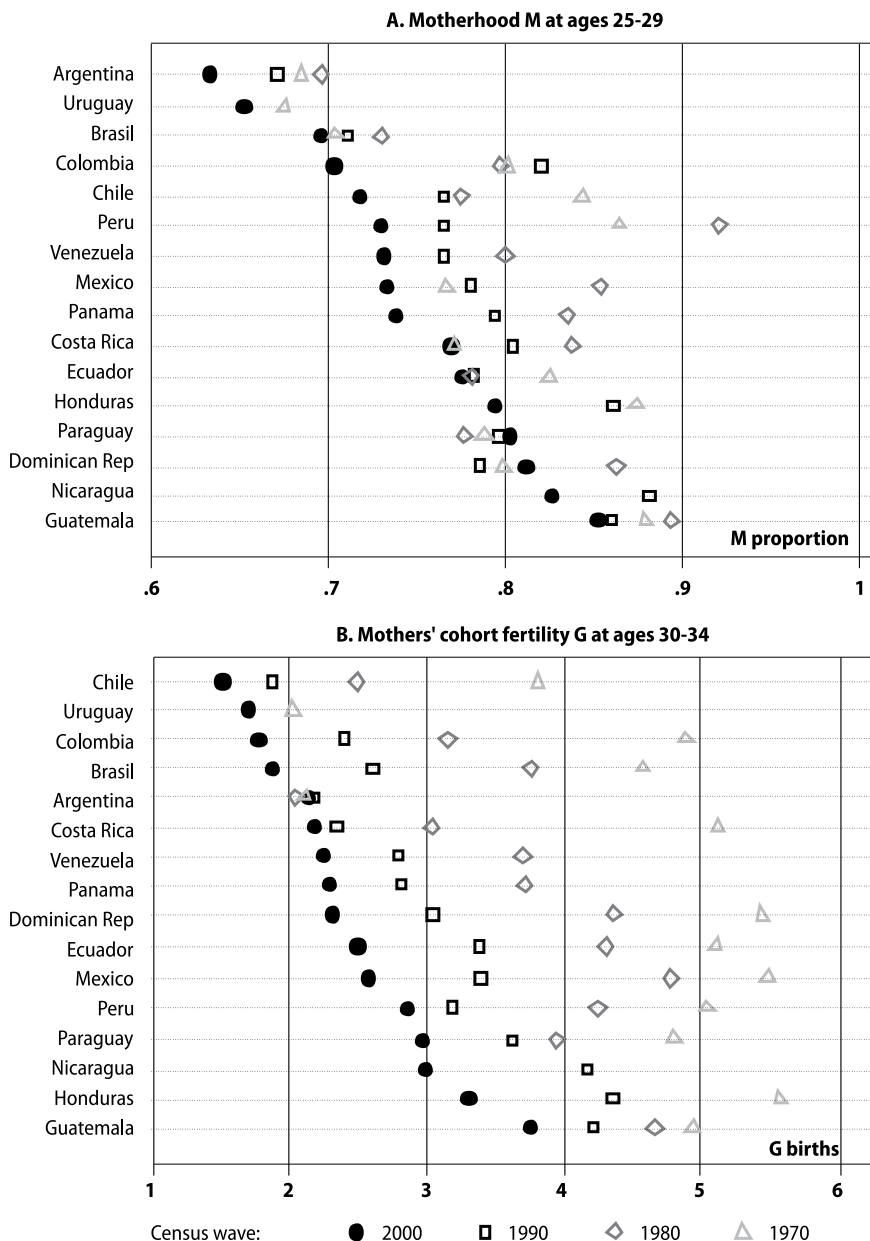
Results

Figure 1 (Part B) shows the remarkable drop in the *G* rate or fertility of mothers from cohorts aged 30 to 34 in the 1970 wave of censuses (born around 1940), to analogous

⁷ The countries are Mexico, Guatemala, El Salvador, Honduras, Nicaragua, Costa Rica, Panama, Colombia, Ecuador, Bolivia, Peru, Paraguay, Chile, and the Dominican Republic.

cohorts in the 2000 censuses born around 1970. At these ages, about 80% of the final G fertility of the cohort is usually completed in Latin America. The oldest cohorts were at

Figure 1. M proportion and G rate in Latin American countries over four census waves, 1970-2000



their peak reproductive ages in the 1960s, and the youngest cohorts reached these ages in the 1990s. Most countries went from a G rate of four or five children to a rate of around two children in these 30 years. The exceptions are, on the one hand, Argentina and Uruguay, which already had G rates of about two births from 1970 onwards; and, on the other hand, Honduras and Guatemala, the only countries with G rates higher than three births in 2000.

Trends are different in the proportion M of motherhood in the 25-29 age bracket (Figure 1, Part A), when close to 90% of the final cohort- M is usually completed in Latin America. First, there is no clear pattern of change from 1970 to 1990. In some countries, such as Chile and Peru, there are declines of about 10 percentage points in M , whereas in most countries, including the four regional giants, Brazil, Mexico, Argentina and Colombia, the M change from 1970 to 1990 is only about two percentage points in any direction. In contrast, between the last two waves of censuses, from 1990 to 2000, there is a clear drop in M in almost all countries. With the exceptions of the Dominican Republic and Paraguay, the M proportion reached its historic low in the 2000 wave of censuses.

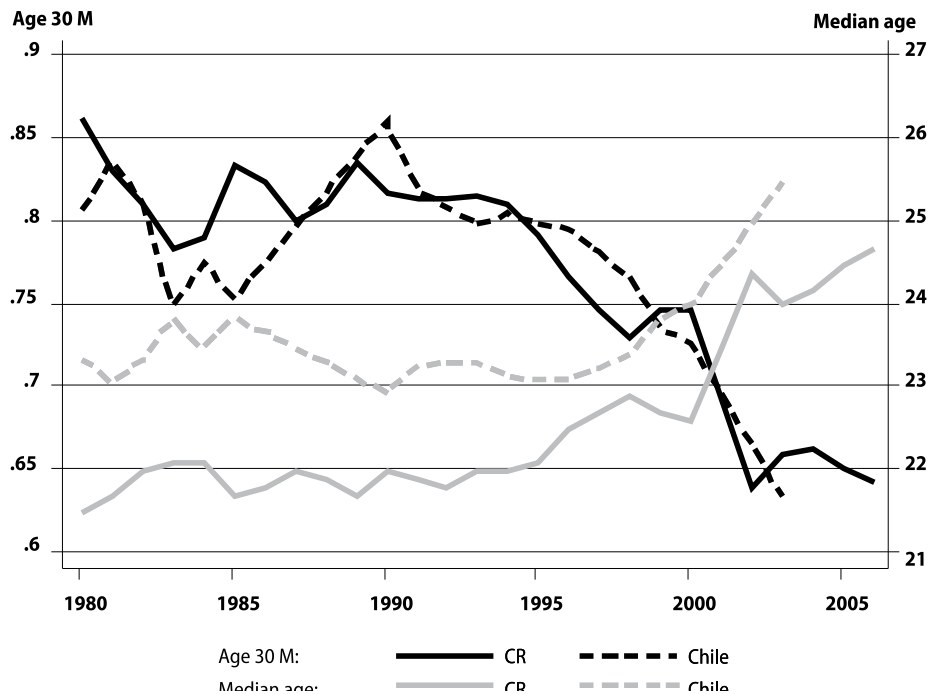
Period indicators of M illustrate these trends more sharply. Figure 2 shows the evolution over time in the *period-M* at age 30 and the *period* median age of entry into motherhood in Chile and Costa Rica, the only Latin American countries with readily available series that are sufficiently long. Three points emerge from Figure 2:

1. there are no clear trends before 1990;
2. starting in about 1990, there is a clear increase of almost three years in the median age at first birth over a period of about 10 years; and
3. there is a sharp drop of almost 20 percentage points in M in the decade of 1990.

The M proportion of mothers is below 65% at the end of the series. Considering that, in the past, no more than 10% of women entered motherhood after age 30, this might imply that as many as one in four women could end her reproductive life childless. This is, however, a naïve interpretation of a *period-M* that may be down-biased by the shift in *tempo* of first birth. It is plausible that women will enter motherhood after age 30 in significantly higher proportions than in the past if recent changes are driven mostly by a temporal postponement of the first birth.

Returning to the census-based cohort estimates of G and M , in order to include younger cohorts (born in the 1970s) in trend analyses, we completed the final 10 years of the G rate for cohorts born around 1970 (observed until about age 32), as well as the

Figure 2. Trend in motherhood proportion at age 30 and median age at motherhood. Period rates in Costa Rica and Chile, 1980-2005



final 10 years of the M proportion for women born around 1975 (observed until about age 27 in the 2000 wave of censuses). To complete the cohort G rate, we estimated a simple regression model with G in the same cohort 10 years earlier as the predictor variable, using fixed effects estimates in the panel of 16 Latin American countries. The resulting equation for a cohort c was (standard errors in parentheses):

$$G_{40-44}^c = 0.335 + 1.145 \times G_{30-34}^c$$

(0.20) (0.07) $R^2 = 0.92$

To complete M , we followed the same procedure as Frejka and Sardon (2007), and assumed that the rate in the coming 10 years would be the same as in the previous 10-year period in the same country and ages. However, this assumption corresponds to a traditional scenario in which very low proportions of women commence childbearing in their thirties, which had been the pattern until recently. It is quite plausible that women in younger cohorts who did not start childbearing in their twenties will do so in their thirties, resulting in substantially higher rates of late transition to motherhood similar to those seen in Europe. We thus assumed, as an alternative scenario, that young Latin American cohorts will display the same behavior as their European counterparts. Based on this assumption, we completed

the M proportion with a relationship derived from the panel data for 23 countries and five cohorts in the Frejka and Sardon (2007) article, Tables 1 and 3. The resulting European equation, estimated with a fixed effect regression model in the logits, for a cohort c was⁸:

$$\text{logit}(M_{final}^c) = -0.426 + 3.953 \times M_{27}^c$$

(0.69) (0.97) $R^2 = 0.55$

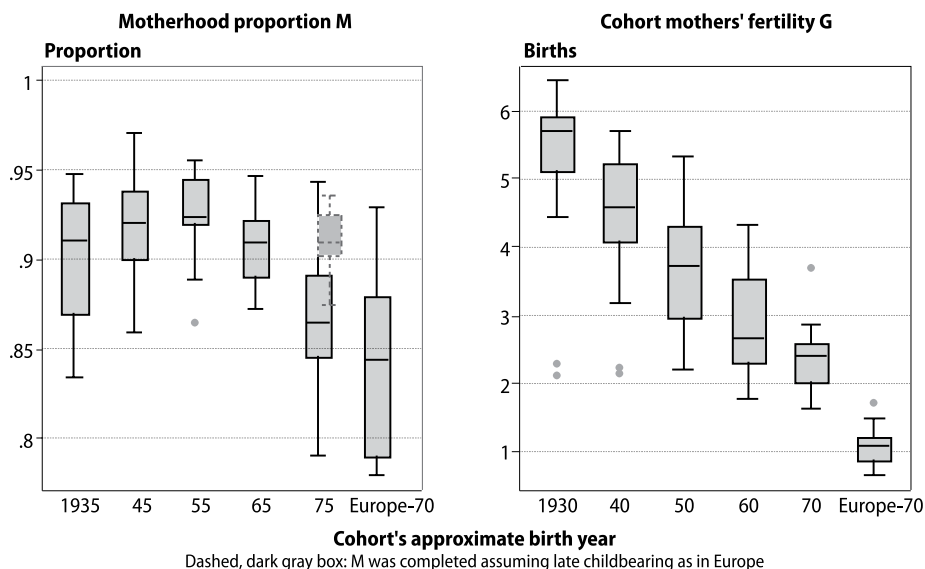
Figure 3 shows the box plots⁹ for complete G and M in the 16 Latin American countries and in each of the four census waves, plus our prediction for the wave of 2010 (two scenarios for M). These are cohort estimates of quasi-complete G and M , which will be observed in the census wave of 2010 for the 1970 cohorts. The figure also includes boxes of G and M for 22 European countries, with available estimates for cohorts born around 1970. It also shows the M box in the hypothetical scenario that the 1975 cohort would complete M with high rates of late motherhood, like in Europe. Overall, this figure confirms the precipitous decline in G from cohorts born around 1930 (median of 5.7 births) to those born around 1960 (median of 2.6 births). This decline has somehow stalled for the cohorts born about 1970 (median 2.3 births) at a level well above the European median of about one birth per mother in the 1970 cohorts.

For the complete M proportion –the main focus in this article–no clear trend can be seen when we move from the 1935 cohorts to the 1965 cohorts. The median M hovers above 90% motherhood, although in the 1965 cohorts there are signs that a decline has started. In contrast, the cohorts born by 1975 seem to be heading towards lower M (median of 86%), close to the M level in the European cohorts of 1970 (median of 83%). However, as indicated by the dashed box in the figure, if the 1975 cohorts have been simply delaying the onset of childbearing, and can be expected to have their first birth in their thirties, as in Europe, complete- M (median of 91%) will change little, and will stay above 90% median value. In this scenario, the only change will therefore be in the age at first birth. Reality may follow a path between these two scenarios, with a median M between 86% and 91%. Colombia is an extreme case, showing large differences between the two scenarios. Only 70% of women aged 25-29 were mothers in the 2005 census (our 1975 birth cohort), compared to 82% of the 1965 cohort in the

⁸ Since the R-squared of 0.55 in the prediction equation is less than optimal for forecasting purposes, we consider this as just an alternative scenario.

⁹ The line in the middle of the box indicates the median value of the distribution; the extremes of the box indicate the 25 and 75 percentiles.

Figure 3. Trend in the approximately final *G* and *M* in five cohorts of 16 Latin American countries and in the 1970 cohort of 22 European countries



1993 census. Our estimates of the completed *M* for the 1975 cohort range from 77%, if we assume the continuation of the 1965 cohort first birth rates, to 90%, if we assume the adoption of first birth patterns similar to those of Europe.

To what extent are *M* and *G* related to each other? Is fertility of second and higher order births influenced by the rate of entrance into motherhood? Lower *M* usually means later age at first birth and a reduced exposure time for having second and higher order births. This exposure effect would be strong in a natural fertility setting. But even under perfectly controlled fertility conditions, later may mean fewer births, particularly for the tail of the age distribution of women who start childbearing by age 40. However, if a lower *M* comes from a retreat from reproduction by large numbers of couples, further fertility of those who choose to have children may or may not be lower than in the previous situation, in which women with low fertility desires were part of the pool of mothers. If there is a general reduction in fertility preferences, a reduced *M* will go hand-in-hand with a reduced *G*. If, however, in some societies there is a divide between couples who opt out of parenthood and couples more oriented towards family and children, we will not observe an association between *G* and *M*, or the association may even be inverse.

Figure 4 shows the cross-sectional associations between the national levels of *M* and *G* in five successive Latin American cohorts and a recent European cohort. It is clear from the figure that the association between these two fertility components

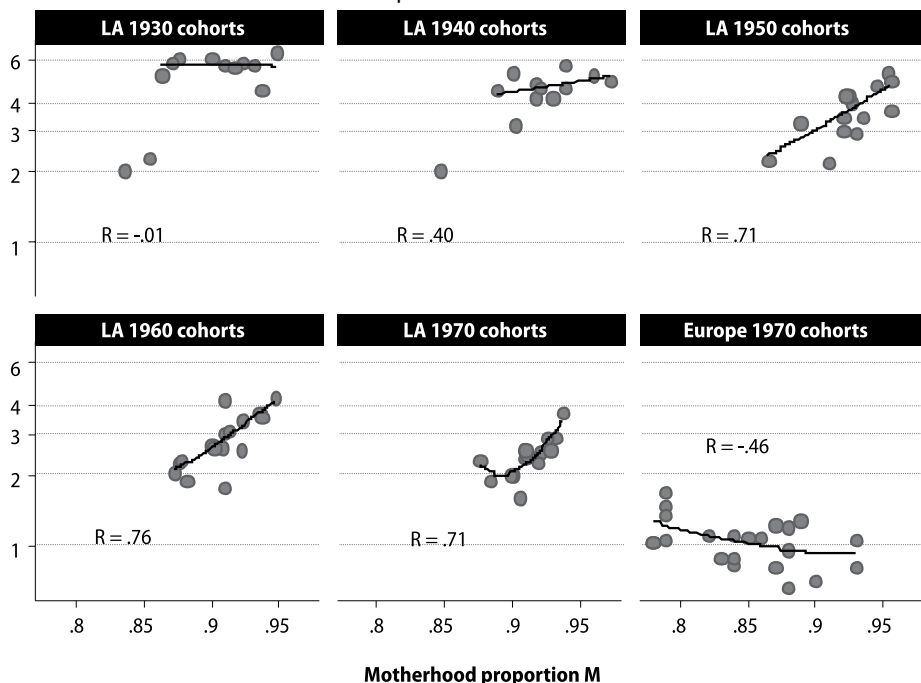
has changed over time. If we exclude the outliers Argentina and Uruguay from cohorts born in the 1930s and 1940s, there is almost no association between G and M in these cohorts. A positive and clear association takes shape in more recent generations of women, particularly in the 1950s and 1960s cohorts. However, the association weakens in the 1970s cohorts¹⁰. Moreover, an inverse relationship can be observed in the 1970s European cohorts: in societies with a lower proportion of women who are mothers, the fertility of mothers tends to be higher. This inverse association seems peculiar at first. However, it may simply mean that when M falls below a certain threshold, those women with lower fertility preferences are removed from the pool of mothers; that is, women who would have one child at most may be the ones who opt out of motherhood, leaving a self-selected group of women with higher fertility preferences in the pool of mothers, which, consequently, results in a higher G -rate.

What factors increase the likelihood of being childless (even if only temporarily) among young adults? Do these factors act differently than in earlier cohorts? Table 1 shows the results of a multivariate analysis on the probability of being childless among the 9,000 respondents of the LAPOP surveys of the Americas Barometer 2006. We present separate models for all women aged 20–49, and for each of the 10-year age brackets; i.e., for 10-year cohorts with central birth years at 1980, 1970, and 1960. All models include controls for age and country.

As expected, there is a clear and positive effect of education on childlessness (Castro-Martín, and Juárez, 1995). College-educated women are about four times more likely to be childless than women with no education or incomplete elementary school. This effect does not differ much in young and old cohorts. Working women, in turn, are twice as likely as housewives to be childless, but this effect is present and significant only in younger cohorts. However, the direction of causality in this relationship cannot be determined from the available data; i.e., we cannot tell whether women are childless because they are in the labor force, or whether they are more likely to be in the labor force because they are childless. Women who get the news mostly from newspapers are more likely to be childless, whereas the opposite occurs among women who get the news mostly from TV. The model does not show clear effects on childlessness based on residence in urban or metropolitan areas once we control for education, or from the indicators of social capital in the community (measured by the trust scale). Contrary to

¹⁰ The scatter graph for the 1970 cohort M that was predicted with the European relationship differs little from the one shown in Figure 4. The correlation coefficient is 0.70, compared to 0.71 in Figure 4.

Figure 4. Cross-sectional relationships between G and M. Latin American (LA) countries cohorts 1930-1970 and Europe cohort 1970



Note: The two outliers in 1930 are Argentina and Uruguay; the outlier in 1940 is Argentina. R is the correlation coefficient (excluding the outliers).

the popular view that religious affiliation and church attendance have a strong influence on women's fertility behavior in Latin America, our data show no effect of these factors on childlessness.

The effects on childlessness of the scales of wealth and satisfaction with life deserve a closer look. The odds ratios show that the direction of these effects reversed in younger cohorts. This change of direction is statistically significant, as shown by the interaction effects included in the all ages model. The findings indicate that women who are wealthier or more satisfied with life are less likely to be childless in older cohorts, and are more likely to be childless in younger cohorts. Among younger women, going from zero to one on the wealth scale increases the odds of being childless almost threefold, whereas among older cohorts, it reduces the odds to about one-third. Regarding satisfaction with life, going from zero to one on the scale more than doubles the odds of being childless among younger women, and reduces the odds by 30% among older women. If these were truly *cohort* effects, as opposed to *age* effects, they would stand for a dramatic generational change: childlessness now seems linked to happiness and wealth, in contrast to the trends

Table 1. Logistic regressions on the probability of being childless.
LAPOP-2006 surveys, in 14 Latin American countries

Explanatory variables	Total		Age 20-29		Age 30-39		Age 40-49	
	Odds Ratio	P> z	Odds Ratio	P> z	Odds Ratio	P> z	Odds Ratio	P> z
(N)	(8,925)		(3,717)		(2,802)		(2,406)	
Marital status								
With no couple	1	Ref.	1.00	Ref.	1	Ref.	1	Ref.
Common law union	0.09	0.00	0.08	0.00	0.10	0.00	0.16	0.00
Married	0.07	0.00	0.09	0.00	0.05	0.00	0.11	0.00
Place of residence								
Metropolitan	0.89	0.29	0.77	0.07	1.15	0.58	1.22	0.50
Other Urban	0.80	0.07	0.77	0.09	1.13	0.66	0.59	0.16
Rural	1	Ref.	1.00	Ref.	1	Ref.	1	Ref.
Education								
Incomplete elementary	1	Ref.	1.00	Ref.	1	Ref.	1	Ref.
Completed elementary	1.44	0.04	1.24	0.36	1.66	0.17	1.82	0.12
High school	1.70	0.00	1.70	0.01	1.58	0.15	1.78	0.10
College	3.72	0.00	4.06	0.00	3.61	0.00	5.19	0.00
Occupation								
Housewife	1	Ref.	1.00	Ref.	1	Ref.	1	Ref.
White-collar / student	2.03	0.00	2.69	0.00	1.26	0.32	0.94	0.83
Blue-collar	1.48	0.00	1.71	0.00	1.11	0.63	1.37	0.21
Religion								
Catholic	1	Ref.	1.00	Ref.	1	Ref.	1	Ref.
No Catholic	1.08	0.45	1.21	0.13	0.74	0.20	1.17	0.55
No religion	1.03	0.83	1.26	0.25	0.79	0.51	0.55	0.34
Church attendance								
Weekly vs. less than weekly	1.09	0.30	1.11	0.33	0.82	0.28	1.28	0.27
Trust scale (0 - 1)	1.08	0.55	1.07	0.70	0.84	0.53	1.25	0.54
TV informed scale (0 - 1)	0.62	0.00	0.54	0.00	0.66	0.18	0.77	0.48
Paper informed scale (0 - 1)	1.42	0.01	1.37	0.06	1.47	0.16	1.43	0.29
Satisfied with life scale (0 - 1)	2.26	0.00	2.23	0.00	1.63	0.17	0.71	0.44
Wealth scale (0 - 1)	2.85	0.00	2.97	0.00	4.33	0.00	0.31	0.05
Age groups and interactions								
20-29	1	Ref.						
30-39	1.22	0.62						
40-49	9.43	0.00						
Life satisfaction and								
Age 30-39	0.58	0.17						
Age 40-49	0.35	0.02						
Wealth and								
Age 30-39	1.23	0.61						
Age 40-49	0.24	0.00						

Note: All regressions included controls for age (continuous) and country (13 dummy variables).

Source: LAPOP surveys project data online at <http://encuestas.ccp.ucr.ac.cr/Lapop.html>.

seen only a generation ago, in which childless women reported being less happy and less wealthy. Nevertheless, we should interpret these cross-sectional relationships with caution because of possible reverse causality and the confounding effects of age and cohort.

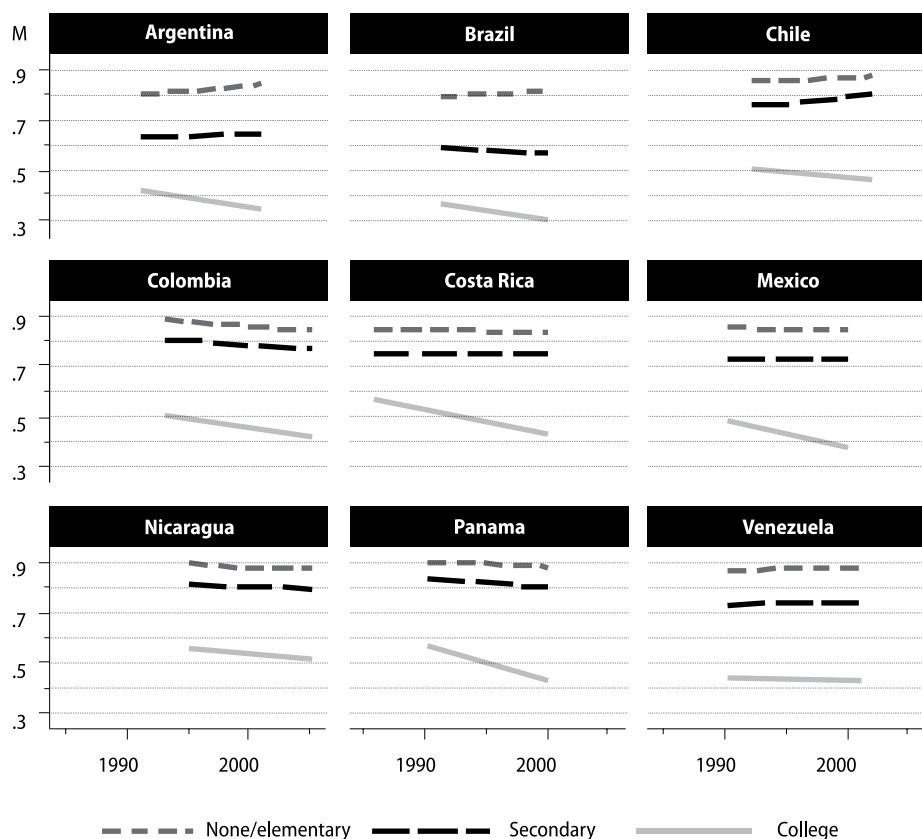
Figure 5 re-examines the robust effect of education on the motherhood proportion M among women aged 25-29 using data from the two most recent censuses in nine Latin American countries. The educational gap in M is large and persistent over time. Having a college education seems particularly important for two reasons: (1) the M gap for college is larger than for lower educational levels, and (2) college-educated women are the only group with a clear reduction in M over time in the nine countries. In Costa Rica, for example, only 43% of women aged 25-29 who attended college are mothers in the 2000 census, compared to 76% and 84% of women with high school and primary education, respectively. Moreover, in this country, the proportion of mothers among college-educated women fell 15 percentage points from the 1984 to the 2000 census, whereas the M proportion remained fairly stable in the other two educational groups. Among college-educated women, M dropped 14 percentage points in Panama, 11 points in Mexico, nine points in Colombia, seven points in Argentina and Brazil, five points in Nicaragua, and one point in Venezuela.

Therefore, the fall in the M proportion among women with college education seems to be a key factor in understanding the emerging retreat from childbearing in Latin America observed in recent years. Another key factor in understanding this trend is the growing numbers of women receiving a college education. In the age bracket 25-29, the percentage of women who attended college increased in the last two censuses by 18 points in Chile; 15 points in Colombia; 10 points in Venezuela; eight points in Argentina, Costa Rica, and Nicaragua; but only one to three points in Panama, Brazil, and Mexico (Table 2). In the 2000 wave of censuses, college-educated women in this age bracket range from low levels of 11% in Brazil and 14% in Mexico and Nicaragua, to highs of 32% in Argentina and Chile, and 27% in Colombia and Venezuela.

In a quick exercise to estimate the impact of the changing educational composition on M , we computed for the nine countries in Figure 5 a hypothetical M for the 2000 census wave, assuming that the educational composition was that of the 1990 census wave. The result of this exercise is presented in Table 2, and suggests that educational improvement might be responsible for all of the observed national change in M in Argentina, Brazil, Chile, and Venezuela; and for about half of the M change in Colombia, Costa Rica, Mexico, and Nicaragua. In other words, about half the decline in M in these four countries (and 80% in Panama)

comes from M reductions within educational groups, mostly among women with a college education, meaning that factors other than the improvement in women's education may also need to be considered if we are to fully understand the recent decline in M .

Figure 5. Motherhood proportion M at age 25-29 by education in the two most recent censuses, selected countries



If the recent enhancement in women's education explains a significant portion of the recent drop in the percentage of women who become mothers, why then did past educational improvements not produce a similar result? The answer might be that educational improvements in the past occurred mostly at the primary and secondary levels and, as Figure 5 suggests, in most countries there are only small differences in M at these lower educational levels. It is college education that seems to make a difference in the timing and level of transition to motherhood.

Table 2. Educational composition and M proportion in women aged 25-29 in the two most recent censuses

Country year	Educational composition of women				M proportion			
	None/ elementary	High school	College	Total	None / elementary	High school	College	Total
Argentina								
1991	50	25	25	100	0.81	0.65	0.43	0.67
2001	38	30	32	100	0.85	0.65	0.36	0.63
Percent M-change explained by education								100
Brazil								
1991	67	23	10	100	0.80	0.59	0.38	0.71
2000	60	29	11	100	0.82	0.58	0.31	0.69
Percent M-change explained by education								100
Chile								
1992	37	48	15	100	0.86	0.77	0.51	0.76
2002	23	45	32	100	0.88	0.81	0.47	0.72
Percent M-change explained by education								100
Colombia								
1993	56	32	12	100	0.89	0.81	0.51	0.82
2005	26	47	27	100	0.85	0.78	0.43	0.70
Percent M-change explained by education								63
Costa Rica								
1984	52	34	14	100	0.85	0.76	0.58	0.78
2000	48	31	21	100	0.84	0.76	0.43	0.73
Percent M-change explained by education								51
Mexico								
1990	56	32	12	100	0.87	0.74	0.50	0.78
2000	39	47	14	100	0.85	0.74	0.39	0.73
Percent M-change explained by education								51
Nicaragua								
1995	58	35	7	100	0.90	0.82	0.57	0.85
2005	52	34	14	100	0.88	0.81	0.52	0.80
Percent M-change explained by education								50
Panama								
1990	32	46	21	100	0.91	0.84	0.58	0.81
2000	31	45	24	100	0.89	0.81	0.44	0.75
Percent M-change explained by education								19
Venezuela								
1990	54	29	17	100	0.88	0.74	0.45	0.76
2001	46	27	27	100	0.88	0.76	0.44	0.73
Percent M-change explained by education								100

Discussion

This article documents the growing proportion of Latin American women in their twenties and early thirties who have not made the transition to motherhood. This emerging trend certainly means a shift in the region toward a later onset of childbearing, but it could also mean that some women are choosing to

forgo having children. Until recently, one of the singular demographic features of the region was that rapid and sustained fertility decline occurred without a concomitant change in the timing of union formation, or in the onset of childbearing. Early and almost universal childbearing persisted in spite of radical changes in the demographic, economic, social, and political spheres. There is, however, recent evidence that young cohorts are departing from this traditional pattern, and that Latin American women are waiting longer to become mothers. Although age at first birth had remained fairly stable since the 1970s, the data presented from the 2000 wave of censuses reveals that the proportion of women aged 25 to 29 who are still childless increased in almost all the countries analyzed. Data from vital statistics for Chile and Costa Rica also corroborate this new trend towards later motherhood.

The emerging trend in postponement of childbearing raises the question of whether this development will lead to an increase in the region in permanent childlessness –voluntarily chosen or because of age-related infecundity– as has been the case in European countries (González, and Jurado-Guerrero, 2006; Tanturri, and Mencarini, 2008). Our estimates of the proportion of women born in 1975 who will eventually become mothers are not conclusive: an important drop could take place if these women follow the traditional pattern of low rates of transition to motherhood beyond age 30, but no significant drop would take place if there is a recovery with high rates of transition to motherhood among women in their thirties, as in many European countries. Nevertheless, the increase in childlessness in the customarily prime ages of reproduction (25 to 29), even if transitory, deserves attention. It signals an important change in societies where the social imperative of motherhood has been traditionally strong, and where women who wished to postpone their first birth or remain childless were commonly stigmatized as selfish. Latin American cultural constructions of femininity have been strongly influenced by women's symbolic and social roles as mothers (Jelin, 1990). Nowadays, motherhood continues to play a central role in women's lives, but there has been an expansion of women's non-familial identities and roles, possibly rendering the deferment of childbearing an acceptable option.

Beyond the normative context, economic constraints and competing opportunities are also likely to play a major role in shaping decisions and behaviors regarding childbearing. In the face of enhanced female labor market prospects, increased economic insecurity, or rising conjugal instability, delayed childbearing might become an increasingly common strategy for dealing with uncertainty, as has occurred in Europe (Billari, Liefbroer, and Philipov, 2006). The impact of economic instability on family formation, as well as variations in the perception, tolerance,

and reactions to economic insecurity across educational strata and social contexts, deserve further attention (Bernardi, Klärner, and Lippe, 2008).

It is not evident whether these changes should be interpreted under the lens of the second demographic transition (van de Kaa, 1987). The validity of that framework to explain recent family changes in Latin America is at the center of contemporary debates (Quilodrán, 1999; García, and Rojas, 2001). Divergent views persist on whether to interpret recent family dynamics as an outcome of diffusion processes of new cultural patterns, or as a reflection of the lack of social cohesion within excluded sectors (Arriagada, 2002). Some demographic features of Latin American societies, such as the high prevalence of consensual unions or frequent union disruption, can be linked to either modernity or tradition, depending on the social group we focus on (Castro-Martín, 2002). The delayed onset of childbearing can, however, be unequivocally labelled as innovative behavior. Furthermore, our education-specific trend analysis has shown that it is precisely the highly educated strata who have taken the lead in this behavioral change. In fact, a great deal of the overall increase in childlessness among young adults is due to the upgraded educational composition of the population. We argue that major educational improvements in the past did not have a comparable impact on the timing of motherhood because they were focused on the universalization of primary education. In contrast, the more recent expansion of secondary education, and of college education in particular, is becoming a powerful force in restructuring the transition to adulthood and, consequently, the process of family formation (Grant, and Furstenberg, 2007). Yet in some countries, there is more to delayed fertility than a shift in the educational distribution of the population. In Nicaragua, Mexico, Costa Rica, Colombia, and Panama, for example, we have documented significant changes in the proportion of mothers within educational strata or, more precisely, within the college-educated group.

The multivariate analysis of a recent survey across 14 Latin American countries also reveals that high educational attainment is the most influential factor predicting childlessness among women of all ages. Hence, although our data do not allow us to link the recent increase in childlessness at young adulthood to “post-materialist” values (Lesthaeghe, and Moors, 1995; van de Kaa, 2001), such as the search for individual autonomy or gender equality, the fact that highly educated women are the main protagonists of the observed trend points towards a change in values and competing life priorities that discourage early childbearing.

It is not certain whether a delayed childbearing pattern will spread across the entire population. Latin America continues to display some of the highest levels of inequality in the world (Portes, and Hoffman, 2003), and the social processes that bring about family change in different social strata remain quite

heterogeneous. Furthermore, the large socioeconomic divide that characterizes many Latin American societies may act as an insurmountable barrier against the diffusion of social values regarding family, parenthood, and the optimal calendar for adulthood transitions. Yet it seems clear that the social imperative of early motherhood that prevailed during most of the 20th century has started to weaken, and that we are witnessing an increasing de-standardization of the life course.

There are multiple areas in which this research could be expanded in the future. One logical extension is to test cohort differentials regarding the timing and the determinants of the transition to motherhood within a life course framework, using retrospective birth histories from survey data. The problem is that, since childbearing postponement is an emerging trend, it might be visible only in recent data, and not many Latin American countries have conducted demographic surveys in recent years. An additional direction for analysis would be to examine the prevalence and correlates of childlessness among men, since socio-cultural expectations and competing opportunities shaping attitudes, decisions, and fertility behavior are fundamentally gendered.

Acknowledgements

The Wellcome Trust Foundation (grant WT072406), the Spanish Ministry of Education and Science (grant SEJ2006-03485) and an UCR-CSIC scientific cooperation agreement supported in part this research.

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Evaluating the millennium development goal target on universal access to reproductive health: a view from Latin America and the Caribbean¹

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Abstract The recent inclusion of the universal access to reproductive health as a target of the Millennium Development Goals (MDG) reaffirms the importance of this topic in promoting sustainable development and poverty eradication worldwide. However, several characteristics of fertility, contraceptive use and access to reproductive health services in Latin America and the Caribbean (LAC) challenge the effectiveness of this MDG target in the region. Improvements in reproductive health have not been sufficient to erase the historical disparities between social and economic groups in terms of access to and use of contraceptives and reproductive health services, particularly according to socio-economic status, ethnicity, and area of residence. Furthermore, while the TFR has been decreasing in all countries of LAC, tendencies in adolescent fertility rates are mixed. Finally, men have largely been ignored in studies of fertility in the LAC region. These stylized facts necessitate a careful evaluation of the new MDG target and indicators and their relevance to reproductive health in the region. As such, we present an overview of the MDG target on universal access to reproductive health and its four indicators—the contraceptive prevalence rate, the adolescent birth rate, the prevalence of prenatal care use, and the unmet need for family planning—and explore the challenges and limitations these indicators present to the monitoring of reproductive health. We analyze data from Demographic and Health Surveys, International Reproductive Health Surveys and other national fertility surveys in order to calculate a wider range of disaggregated indicators on reproductive health in as many countries, including men's data from these surveys. We conclude that any further gains in the access to reproductive health in LAC will not be achieved without addressing social and economic disparities, improving adolescents' access to reproductive health education and services, and acknowledging the role men play in reproductive choices.

¹ Paper presented at the Population Association of America (PAA), 2009 Annual Meeting, Detroit, MI, from April 30 to May 2, 2009. Contributions to this paper were made by the Project "Taking Stock - Development Account on Interregional cooperation to strengthen social inclusion, gender equality and health promotion in the Millennium Development Goals," and the "Regional Program in Population and Development in Latin America and the Caribbean, 2008-2011," funded by the UN Population Fund (UNFPA).

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Introduction: Reproductive health on the agenda of international conventions

The exclusion of a specific goal to address sexual and reproductive health (SRH) at the outset of the Millennium Development Goals in 2000 served as a call to action by experts and professionals to emphasize the gravity of this omission, given that without improvements in SRH the majority of MDG targets would not be met. In 2005 the Outcome Document of the World Summit partially addressed this exclusion when including additional targets for inclusion to those originally established by the Millennium Declaration, most notably the target of ensuring universal access to reproductive health worldwide by 2015 (as part of the goal of reducing maternal mortality). Both this target and the indicators included to measure it—the adolescent fertility rate, the rate of contraception use, the unmet need for contraception and the use of prenatal care—were identified by the Inter-agency and Expert Group (IAEG) on MDG Indicators as the most relevant to this target (WHO/UNFPA, 2008).

The recent inclusion of the universal access to reproductive health as a target of the Millennium Development Goals (MDG) reaffirms the importance of this topic in promoting sustainable development and poverty eradication within a human rights framework. This idea was not new, but instead based on the central theme of the International Conference on Population and Development (ICPD) held in Cairo in 1994, which posited access to reproductive health and family planning services as a basic human right. Indeed, among the actions included in the ICPD Program of Action (PoA) was that, “All countries are called upon to strive to make reproductive health accessible through the primary health-care system to all individuals of appropriate age as soon as possible and no later than 2015,” (United Nations, 1994). The incorporation of the central theme of the ICPD Programme of Action into the MDG agenda is particularly important, given that many countries and donors have shifted their primary attention to those goals included in the MDGs, often to the detriment of programmatic goals stemming from other international agreements regarding population and development.

Thus, the inclusion of universal access to reproductive health no doubt presents an advance in promoting SRH as part of development strategies. The goal and its indicators as they were incorporated into the MDGs, however, suffer from several shortcomings. In particular, several characteristics of fertility, contraceptive use and access to reproductive health services in Latin America and the Caribbean (LAC) challenge the effectiveness of this MDG target in the region. Overall improvements in reproductive health have not been sufficient to erase the historical disparities between social and economic groups in terms of access to and use of contraceptives and reproductive health services in the region, particularly according to socio-

economic status, ethnicity, and geographical location. Furthermore, while the TFR has been decreasing in all countries of LAC, tendencies in adolescent fertility rates are mixed; this suggests that the factors that influence adolescent fertility differ from those that affect fertility at later ages, and thus requires different interventions than in the past. Finally, although under the ICPD PoA universal access to reproductive health is not only a right afforded to women, but also men and couples, men have largely been ignored in studies of fertility in the LAC region, both as clients and as partners. In sum, as they stand the four MDG indicators on universal access to reproductive health fall short of covering the main challenges to SRH that remain in the LAC region.

Thus, these characteristics of fertility and fertility control necessitate a careful evaluation of the new MDG target and indicators and their specific relevance to reproductive health in the LAC region. This is particularly valid given that the inclusion of an MDG specifically dealing with SRH has opened the door to further conversations regarding what actions are necessary in order to ensure universal access to reproductive health by 2015, including additional indicators that can measure progress in achieving this target.

As such, we present an overview of the MDG target on universal access to reproductive health and its four indicators— the adolescent birth rate, the contraceptive prevalence rate, the unmet need for family planning, and the prevalence of prenatal care use—and explore the challenges and limitations these indicators present to the monitoring of reproductive health. Next, we analyze data from Demographic and Health Surveys, International Reproductive Health Surveys and other national fertility surveys in order to calculate a wider range of disaggregated indicators on reproductive health in as many countries of the region as possible, including men's data from these surveys. We conclude that any further gains in the access to reproductive health in Latin America and the Caribbean will not be achieved without addressing social and economic disparities, improving adolescents' access to reproductive health education and services, and ensuring the inclusion of men in reproductive health strategies.

Universal access to reproductive health: a complex concept with a complicated operationalization

In order to effectively evaluate the goal of universal access to reproductive health services we first must arrive at a working definition of the concept. Although the move from an emphasis on family planning to the right to reproductive health in the

1994 ICPD PoA represented a major gain for the SRH stakeholders (United Nations, 2006), unfortunately, the definition of universal access given in this document and in the 2005 World Summit Outcome Document is general and vague. This conceptual complexity has impaired sustained efforts to improve SRH, despite its importance to poverty reduction and development goals.

A recent WHO/UNFPA (2008) document presents a detailed discussion about the concept of universal access to reproductive health, including the recognition of the difficulty in defining and measuring this concept. This document states that, “for a number of reasons, measuring universal access to sexual and reproductive health and monitoring the extent to which it has been achieved poses challenges to operation and interpretation” (WHO/UNFPA, 2008:4).

The same document later indicates that,

In a broad sense, universal access implies the ability of those who need health care to obtain it. This definition suggests, for example, the ability of all individuals with a diagnosed sexually transmitted infection (STI) to receive an effective treatment, or of those who want to delay pregnancy to obtain effective contraception. In practical terms, therefore, “universal access” means “equitable access” – that is, equal access for people with equal need” (WHO/UNFPA, 2008:41).

This document goes on to define universal access to sexual and reproductive health as,

The equal ability of all persons according to their need to receive appropriate information, screening, treatment and care in a timely manner, across the reproductive life course, that will ensure their capacity, regardless of age, sex, social class, place of living or ethnicity to: decide freely how many and when to have children and to delay or to prevent pregnancy; conceive, deliver safely, and raise healthy children, and manage problems of infertility; prevent, treat and manage reproductive tract infections and sexually transmitted infections including HIV/AIDS, and other reproductive tract morbidities, such as cancer; and enjoy a healthy, safe and satisfying sexual relationship which contributes to the enhancement of life and personal relations (bold not in original). (WHO/UNFPA, 2008:41).

Thus, under this definition the core concept of universal access to reproductive health is based largely on access to health care services. This document identifies the following dimensions as the main targets for health care services: i) family planning; ii) prenatal care, safe delivery and postnatal care; iii) infant and women’s health care; iv) infertility; v) unsafe abortion; vi) sexually transmitted diseases, and other reproductive health conditions; vii) human sexuality; and viii) harmful practices. The specific services for each issue are different, but in general are composed of medical care, education and counselling to prevent risks and diseases and punish against harmful practices (such as female genital mutilation).

The conclusion of this document underlines that,

Although “access to reproductive health” is not confined to health care, the PA of the ICPD suggests the achievement of this goal through primary health care. Therefore, health-care indicators constitute a major component determining the extent of the achievement of the ICPD goal. However, important societal factors should also be monitored, as it recognizes the influence of the wider context affecting health behaviour and service uptake. In sum, the range of indicators should include social determinants, process indicators, measures of access, utilization, and quality, as well as outcome measures.

The concept of “universal access” should reflect equity (equal access for equal need, usually difficult to measure) through proxies like relative differences and geographic disparities in access and use per need, and in financial and human resources for health. The inclusion of sexual and reproductive health services as an essential health package is another indicator to be considered.

Some of the sexual and reproductive health outcomes are more amenable to health-care interventions (e.g. maternal mortality and morbidity), but others (e.g. FGM and sexual violence) are less so. The latter group is largely influenced by social and cultural determinants, and how we measure and monitor them is critical to the development of robust indicators.

While universal access requires increasing the services offered, efforts must also be devoted to ensuring increased uptake and sustained use. Universal access therefore must be seen in the context of availability, affordability, appropriateness, quality, acceptability, and continuity/sustainability of services.

In evaluating sexual and reproductive health services, inputs such as policy, financing, and human resources; outputs such as health information, service availability, and quality; and outcomes such as utilization (demographic and geographic) should be available to correlate with outcome measures such as well-being, morbidity, disability, and mortality.

Process indicators measuring performance further along the ‘causal chain’ (i.e. intermediate output indicators of service utilization and practice) are stronger proxy indicators than those earlier in the intervention pathway (i.e. input and direct output indicators of availability, physical accessibility, and quality of care) whose influence on eventual outcome will be mediated by intervening factors (WHO/UNFPA, 2008:9).

While this definition of universal access covers a wide range of outcomes, contexts, and inputs, two aspects that are relevant to universal access in Latin America and the Caribbean are not included. The first is that of confidentiality of reproductive health services, which is particularly important to meeting the reproductive health needs of adolescents. The second is that of cultural sensitivity, which comes into play when considering the reproductive health needs of indigenous and Afro-descendent peoples, whose sexual and reproductive behaviours must be contextualized.

Nonetheless, this definition of universal access to reproductive health suggests the need for a wide variety of indicators, yet the question still remains as to which indicators best serve the purpose of measuring and promoting universal access to reproductive health. Accordingly, at least three approaches exist to operationalize this definition of universal access to reproductive health, which are as follows:

1. First, we refer to the list presented in the WHO/UNFPA (2008) document as the “exhaustive approach.” This list includes dozens of indicators, which are presented in several matrices that fall into the following four categories:
 - a. determinants: policy and social factors;
 - b. access: availability, information, demand, quality;
 - c. use; and
 - d. output/impact,

and that cover the following four broad dimensions:

- i. family planning;
- ii. maternal, perinatal, and newborn health, including eliminating unsafe abortion;
- iii. sexually transmitted infections (including HIV) and reproductive tract infections (STI/RTI) and other reproductive morbidities, including cancer; and
- iv. sexual health, including adolescent sexuality and harmful practices.

While the range of indicators included in this approach represents the operationalization of all aspects of sexual and reproductive health, its main detriment is most obviously its exhaustivity. On one hand, it is difficult to assemble the entire list of indicators listed. Some of these indicators require special sources (expert groups, policy review, specialized surveys, etc.), and others can be calculated on the basis of good administrative records, which unfortunately are rare in the developing world. The gaps left from the lack of data available to construct indicators hinder the monitoring and evaluation of the state and progress of universal access to reproductive health, both within and between countries.

On the other hand, this approach, although the most conceptually appropriate in terms of capturing the various facets involved in ensuring universal access to reproductive health, is of less value in identifying priority areas for public policy intervention in scenarios where challenges to reproductive health exist on multiple fronts in resource poor settings (even though the document does make the distinction between “core,” “additional,” or “extended” indicators).

2. The “priority approach” would be the “short list” of 17 indicators elaborated by the WHO/UNFPA (2004), which are as follows:
 1. Total fertility rate
 2. Contraceptive prevalence
 3. Maternal mortality ratio
 4. Antenatal care coverage
 5. Births attended by skilled health personnel
 6. Availability of basic essential obstetric care
 7. Availability of comprehensive essential obstetric care
 8. Perinatal mortality rate
 9. Prevalence of low birth weight
 10. Prevalence of positive syphilis serology in pregnant women
 11. Prevalence of anaemia in women
 12. Percentage of obstetric and gynaecological admissions owing to abortion
 13. Reported prevalence of women with genital mutilation
 14. Prevalence of infertility in women
 15. Reported incidence of urethritis in men
 16. Prevalence of HIV infection in pregnant women
 17. Knowledge of HIV-related preventive practices

As these agencies themselves acknowledge, a number of these indicators are difficult to calculate, thus leaving gaps in the monitoring of sexual and reproductive health. This evaluation points to the need to review this list of indicators to determine their relevance and utility in national contexts (WHO/UNFPA, 2004).

3. The “synthetic approach” further whittles down the number of indicators suggested to measure universal access to reproductive health to only a handful. For instance, Dixon-Muller and Germain (2007) argue that there is no one indicator that adequately captures access to reproductive health in a rights-based framework, and thus propose the following three indicators: i) total fertility rate and contraceptive prevalence; ii) unmet need for contraception and unplanned births; and iii) unsafe abortion and abortion mortality. Additionally, Bernstein and Eduard (2007), argue in favour of the importance of including the unmet need for contraception as an indicator of family planning needs.

The four official indicators defined to measure progress in the achievement of the new MDG target on universal access to reproductive health falls within this approach. Originally, the United Nations Millennium Project Child Health and Maternal Health Task Force suggested the target, “Universal access to reproductive health services by

2015 through the primary healthcare system, ensuring faster progress among the poor and other marginalized groups.” Four indicators were proposed to monitor this target—the contraceptive prevalence rate, proportion of desire for family planning satisfied, the adolescent birth rate, and the HIV prevalence among 15- to 24-year-old pregnant women (United Nations, 2005). Indeed, adolescent fertility, contraceptive use, and some variant of unmet need for family planning have been included in most proposals of indicators of universal access to reproductive health.

The final target and indicators incorporated into the revised MDG monitoring framework stand as follows:

Target 5.B: Achieve, by 2015, universal access to reproductive health

5.3 Contraceptive prevalence rate

5.4 Adolescent birth rate

5.5 Antenatal care coverage (at least one visit and at least four visits)

5.6 Unmet need for family planning

According to WHO/UNFPA (2008), these indicators serve as measures of use of family planning, outcome of family planning services use of maternal and perinatal health services, and the demand for family planning services, respectively. However, these indicators only partially cover two dimensions of universal access to sexual and reproductive health—family planning and maternal and infant health—thus excluding unsafe abortion, STI/RTI and other reproductive morbidities, and sexual health. It must be noted, however, that the MDG target makes reference *only* to reproductive health, and that separate MDG goals and indicators on reducing child mortality, reducing maternal mortality, and combating HIV/AIDS already exist.

In this paper we evaluate these indicators to determine their effectiveness in measuring progress in achieving the target of universal access to reproductive health in Latin America and the Caribbean. Clearly the primary advantage of this approach is the ease with which these indicators can be calculated for the majority of Latin American and Caribbean countries, as will be demonstrated in the following section. However, we shall argue that these set of indicators are insufficient for depicting a detailed description of the progress in the achievement of this new MGD target in the LAC region. Accordingly we will use in select cases indicators taken from other approaches to complement the four official MDG indicators on universal access to reproductive health. Finally, we not only propose complementary indicators to those officially included in Target 5.B, but also highlight the inequality in these indicators—by age, socio-economic status, geographical location, and gender—to elucidate the equity and equality aspect of the universal access to reproductive health.

The new MDG indicators on universal access to reproductive health in Latin America and the Caribbean

Adolescent fertility rate

The inclusion of the adolescent fertility rate (AFR) as an indicator of universal access to reproductive health is paradoxical, given that it is not consistent from a human rights standpoint. Indeed, one of the main gains of the ICPD was the move away from aiming to reducing the TFR to ensuring the full and free exercise of reproductive rights. Notwithstanding, the ICPD Programme of Action exhibits some degree of ambiguity regarding adolescent fertility. The document does not contain a final conclusion regarding an indicator to measure adolescent health because the objective is solely, "to substantially reduce all the adolescent pregnancies." This validates the indicator in a political sense, although it distances the indicator from a focus on human rights and social determinants. Instead, it comes closer to a risk prevention strategy and speaks to public health measures. The adolescent birth rate, or the annual number of births to women 15 to 19 years of age per 1,000 women in that age group, is the indicator that was incorporated in the MDG Target on universal access to reproductive health. This indicator represents the risk of childbearing among adolescent women in these ages.

Table 1. Age-specific fertility rates for women 15 to 19 years old, by sub-regions and socio-economic groupings of countries: 1990-2005

Region	1990	2005	% change
World	61	48.6	20.3
Developed Regions	34.7	23.6	32.0
Developing Regions	66.5	53.1	20.2
North Africa	42.9	31.5	26.6
Sub-Saharan Africa	130.6	118.9	9.0
Latin America and the Caribbean	77.4	73.1	5.6
East Asia	21.3	5.0	76.5
South Asia	90.1	53.7	40.4
Southeast Asia	50.4	40.4	19.8
West Asia	63.6	50.2	21.1
Oceania	82.3	63.5	22.8
Community of Independent States	52.1	28.4	45.5
Community of Independent States (Europe)	44.8	28.9	35.5
Community of Independent States (Asia)	55.2	28.1	49.1

Source: The Millennium Development Goals Report, 2008 (www.mdgs.un.org).

Undeniably, adolescent fertility is a crucial dimension of SRH in Latin America. Addressing it is one of the major challenges to achieving the new MDG target on universal access, given that on the global scale the region is characterized by levels of adolescent fertility much higher than would be expected given its levels of total fertility, its levels of socio-economic development and its advancement in the rest

of the MDGs. Furthermore, the region has achieved very little reduction in this indicator from 1990 to the present. As a result, current levels of adolescent fertility in Latin America and the Caribbean are second only to sub-Saharan Africa (Table 1).

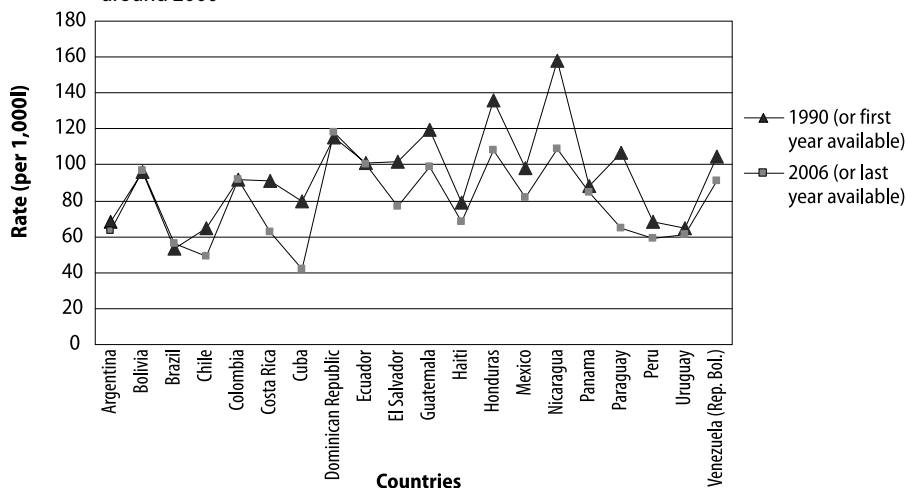
It should be noted that the official estimates of the adolescent birth rates for the MDG database are based on a range of sources, and accordingly, are calculated utilizing different procedures, which reduces comparability across figures—occasionally, even for the same country across time⁴. Regardless, the results from the MDG database illustrate a range of situations in Latin America (Table 1). Decreases generally predominate between 1990 and 2005, but in half the countries for which there are data AFRs have remained constant or slightly increased. This is in significant contrast to the tendencies in TFRs, which have fallen drastically in all countries in the region during this period (for TFR estimates and projections calculated by CELADE for the LAC region, see www.eclac.cl/celade/proyecciones/xls/LATtgftO.xls).

Indeed, trends in adolescent fertility are a contentious subject in the LAC region. Although the total fertility rate has undeniably been on decline in all countries of Latin America and the Caribbean, the tendencies in adolescent fertility rates in Latin America are mixed—depending on the time frame and data source used to construct trends, countries can demonstrate decreases, increases or stagnation in adolescent fertility rates over time.

In addition to the limited compatibility between adolescent birth rates, this indicator suffers from various weaknesses that reduce its relevance for monitoring trends and informing programmatic efforts to address adolescent reproductive health. What follows is a review of what we esteem to be the limitations in the use of adolescent fertility rate as an indicator of universal access to reproductive health. The first is of a political nature and the second 2 are of a technical nature (although not completely unrelated to the political limitations).

⁴ "Estimates based on civil registration are only provided when the country reports at least 90 per cent coverage and when there is reasonable agreement between civil registration estimates and survey estimates. Small discrepancies might arise due to different denominators or the inclusion of births to women under 15 years of age. Survey estimates are only provided when there is no reliable civil registration. There might be discrepancies on the dating and the actual figure if a different reference period is being used. In particular, many surveys report rates both for a three-year and a five-year reference period. In such a case, the five-year reference period closest to the survey is used for global monitoring. For countries where data is scarce, reference periods located more than five years before the survey might be used. Note that, given the restrictions of the Millennium Development Goals database, only one source is provided by year and country. In such cases precedence is given to the survey programme conducted most frequently at the country level, other survey programmes using retrospective birth histories, census and other surveys in that order. The adolescent birth rates reported for global MDG monitoring differ also from those calculated by the United Nations Population Division in the *World Population Prospects* publication. The latter are based on population reconstruction at the country level and provide a best estimate based on all the available demographic information. The estimates for MDG global monitoring are direct estimates from country data on adolescent births" (UN Millennium Development Goals Indicators Database).

Figure 1. Tendencies in the adolescent birth rate, 20 countries in LAC region: around 1990 to around 2000



Source: The Millennium Development Goals Indicators Database, last accessed 03/01/2009 (<http://millenniumindicators.un.org>).

The first shortcoming is that the adolescent fertility rate is *not* the most intuitive indicator for the people who are meant to use it. For decision makers and the general public, the notion of the “risk of adolescent childbearing” can be cryptic. Additionally, it refers to a risk that adolescents may face more than once. The risk of adolescent childbearing, furthermore, is not the topic most relevant to public policy. The ultimate objective of policymakers is to reduce the experience of adolescent motherhood, which materializes once an adolescent has her first child before the age of 20—if she has more than one child her situation most likely will be more complicated, but her status as a teen mother will go unchanged.

In this sense, two more intuitive and relevant indicators are the following:

1. The proportion of adolescent women who are already mothers at the time of data collection (which shall be referred to as the “proportion of mothers” from here on forward); and
2. The proportion of young women (20-24 or 20-29 years old) that were mothers before their 20th birthday.

The first indicator can easily be calculated with census⁵ and survey⁶ data, but not on the basis of vital statistics registries. However, this is not particularly problematic

⁵ The availability of census microdata provides the means—by way of imputations based on efficient predictors—to more effectively address the main challenge of this data source, namely high levels of non-response to the question of live births among teenagers.

⁶ An indicator which surveys, in particular the DHS, broadens to “the percentage of women 15 to 19 who are mothers or are pregnant with their first child”.

to the LAC region; vital statistics data is not widely used due the fact that the majority of the countries of the region suffer from problems of data coverage and quality (CELADE, 2007). The second indicator can be calculated on the basis of birth history data typically collected in Demographic and Health Surveys (DHS) or the International Reproductive Health Surveys (IRHS).

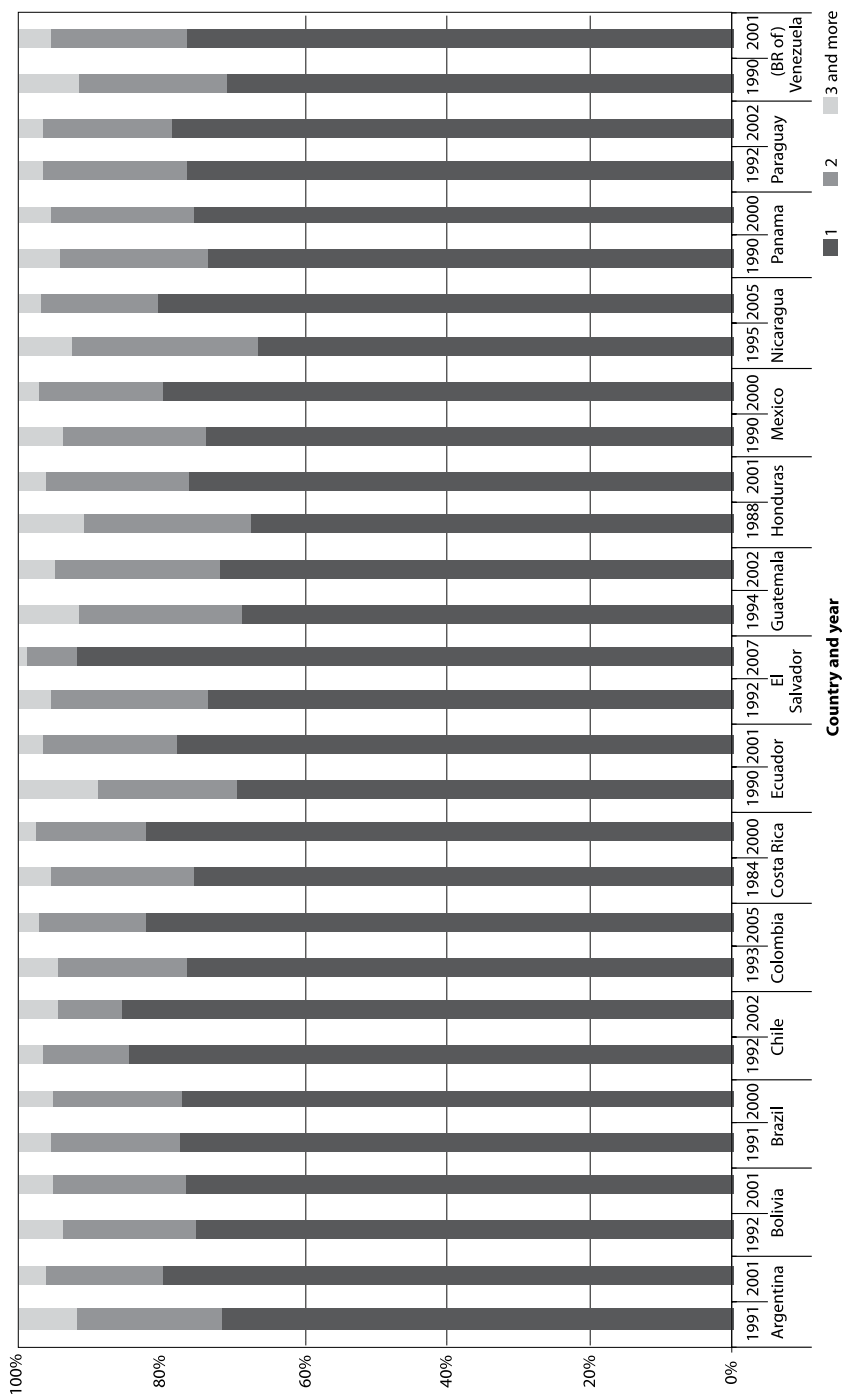
Public intervention should first focus on adolescents with the objective of prevention, then on teenage parents with palliative purposes, particularly the mother, who usually assumes the responsibility of parenting many times with the support of her parents. The proportion of adolescent mothers provides straightforward policy information, since not only is it a measure of the effective reach of the main problem, but it also serves for the identification and characterization of the affected population that immediately requires mitigation measures.

The second weakness is that the adolescent fertility rate is strongly affected by the age structure of adolescents, given that the risk of being mother increases markedly at the higher ages of this age group. Thus, differences in the age-specific fertility rate for 15 to 19 year olds (over time, or between groups) can be due to the age structure of this group and not to real discrepancies in the levels of fertility. For example, an increase in the representation of 19 year olds between two years could generate a spurious increase in the adolescent fertility rate, given that fertility tends to be highest at the extreme of this age group. This problem also affects the proportion of mothers indicator; however since it is a much simpler calculation, results can be disaggregated by single-age group and can be presented according to this disaggregation or as a standardized indicator.⁷

Finally, the last shortcoming, not only technical in nature but also related to the first political weakness mentioned, is that the age-specific fertility rate considers all births regardless of the birth order. Thus, a reduction in higher-order births during adolescence can result in a decrease in the adolescent birth rate, without a corresponding decrease in the proportion of teenage mothers. As figure 2 illustrates, the proportion of second order and higher births among the total births to adolescent mothers has decreased in recent years. This could possibly indicate that whatever decreases in the adolescent fertility rate experienced in the region from 1990 to the present is due to a reduction of parity among adolescent mothers, and not a decrease in teenage childbearing. The effect of parity among 15 to 19 year olds is not necessarily reflected in the other indicator of early childbearing we recommend—the percentage of mothers among the female adolescent population.

⁷ The calculation of age-specific fertility rates by single year age groups is not easy, both because indirect methods of estimation of fertility rates have been designed for 5 year age groups, as well as because direct estimation of rates based on survey samples lose their robustness when utilizing small samples. Only calculations based on vital statistics permit for reliable estimates of age-specific fertility rates by single year age groups, but as previously mentioned, this source of data is infrequently used due to problems with coverage and quality in the majority of the countries in the region.

Figure 2. Relative distribution of adolescent mothers (15 – 19 year olds) by number of children ever born, select countries of Latin America: 1990 and 2000 rounds of censuses



Source: CELADE, 1990 and 2000 round census data.

Table 2 presents the percentage of adolescents that are mothers obtained from the 1990 and 2000 rounds of censuses available at CELADE (17 Latin American and Caribbean countries). When utilizing this indicator, trends indicate that during this period adolescent motherhood increased in a majority of the countries. In South America, all countries save Paraguay register an increase in the percent of teenage

Table 2. Trends in the proportion of women 15 – 19 years old that have at least one child, by single year age groups, Latin America: circa 1990 and 2000 (in percentages)

Country	Census year	Years of age					Total
		15	16	17	18	19	
Argentina	1991	3.3	6.6	11.2	17.3	23.1	11.9
	2001	3.7	6.5	11.2	17.2	23.6	12.4
Bolivia	1992	1.6	4.4	9.9	17.9	28.0	11.7
	2001	2.0	5.7	11.7	20.8	29.2	13.5
Brazil	1991	2.2	5.2	10.4	17.2	24.3	11.5
	2000	3.3	7.6	13.8	20.8	28.1	14.8
Chile	1992	2.1	4.8	9.8	16.1	24.8	11.8
	2002	6.3	5.1	10.2	16.7	24.1	12.3
Colombia	1993	2.6	6.4	12.8	20.9	29.3	14.0
	2004/05	2.9	7.1	13.7	21.0	28.6	14.3
Costa Rica	1984	2.0	5.6	10.9	18.6	27.5	12.8
	2000	2.5	6.2	11.8	19.8	27.5	13.2
Dominican Republic	1993	ND					ND
	2002	4.4	9.1	15.4	23.6	32.1	16.7
Ecuador	1990	6.2	5.4	11.0	19.4	27.9	13.5
	2001	3.2	8.1	14.9	23.9	32.5	16.3
El Salvador	1992	2.8	6.8	13.5	22.0	30.6	14.4
	2007	4.1	8.2	14.3	22.2	30.1	15.4
Guatemala	1994	2.9	7.3	14.5	25.1	35.5	16.1
	2002	2.6	6.9	14.2	23.1	33.0	15.5
Honduras	1988	3.6	8.1	15.6	25.2	34.6	16.6
	2001	3.0	8.4	17.1	27.6	38.0	18.3
Mexico	1990	1.4	3.8	8.6	16.1	24.2	10.4
	2000	1.8	4.8	10.7	18.2	26.2	12.1
Nicaragua	1995	5.0	12.6	23.7	34.8	46.0	23.9
	2005	4.3	10.7	19.8	28.9	38.4	20.0
Panama	1990	3.6	8.2	15.2	22.4	30.8	16.1
	2001	4.1	9.3	16.2	25.4	33.3	17.4
Paraguay	1992	2.0	6.2	13.0	23.4	32.9	15.0
	2002	1.9	5.1	10.1	17.8	26.7	12.1
Peru	1993	2.2	4.9	9.7	16.7	24.0	11.2
	2007 (first results)	ND					11.5
(B.R. of)	1990	3.3	6.9	13.0	19.9	27.5	13.8
Venezuela	2001	3.2	7.5	13.7	21.7	29.8	15.0
Uruguay	1985	1.2	3.4	7.2	12.4	19.3	8.4
	1995	5.0	7.7	12.8	18.4	24.6	13.9

Source: CELADE, 1990 and 2000 round census data. Results from the 2007 Peruvian census were processed online at <http://www.inei.gob.pe/censos2007/>.

ND: No data.

Note: All calculations with regards to adolescent maternity obtained from census data and presented in this paper impute null parity to adolescents that did not respond to the question on number of live births. For arguments in favour of this method, see Rodríguez (2005).

mothers. Nevertheless, table 2 also paints a diverse picture in Central America—while levels of adolescent motherhood drop in Nicaragua and Guatemala, they rise in El Salvador, Honduras, Costa Rica and Panama.

These results are key to resolving the regional debate regarding the tendencies of early childbearing in the region (Rodríguez, 2008). It is easy to guess why an apparently simply and “objective” topic could generate such different readings: conclusions regarding trends depend on the source, the indicator, and the period under consideration. In sum, table 2 is both convincing and disquieting, for it reveals an increasing tendency of teenage motherhood in the majority of the countries, a trend unparalleled on a global scale.

This resistance to decline that early motherhood demonstrates contrasts with continuous declines in global fertility documented by all studies of Latin America and the Caribbean. This contradiction implies that the theories and determinants of fertility do not apply to the current state of adolescent fertility. Accordingly, this indicates that the interventions successful for reducing total fertility have not been successful in the case of adolescent fertility (which requires specific programmes and practices) every time that the achievements brought about by lower fertility for families and women could be eroded if fertility becomes concentrated at earlier ages.

Contraceptive prevalence rate

The contraceptive prevalence rate is considered a measure of the use of family planning services and is widely used to evaluate the success of reproductive health programs. As an indicator of the MDG target on universal access to reproductive health, it is calculated as the percentage of married or in-union women 15-49 years old currently using any method of contraceptives. The main advantages of contraceptive use as an indicator of universal access to reproductive health comprise of its traditional inclusion in reproductive studies and its demonstrated relationship with the TFR (Dixon-Mueller, and Germain, 2007). In general, high contraceptive use goes hand in hand with low fertility rates, as currently demonstrated in countries such as Brazil, Costa Rica, and Cuba.

The importance of this indicator to reproductive health in Latin America and the Caribbean has been extensively documented, first with the *Programa de Encuestas Comparativas de Fertilidad en America Latina* (PECFAL) surveys in 1964-1966 (10 metropolitan areas) and 1968 (rural areas in 4 countries) (ECLAC/CELADE, 1963; Simmons, Conning, and Villa 1979), and later with the World Fertility Surveys (WFS) (United Nations, 1987) and DHS (ECLAC/CELADE 1993). As can be seen in table 3, the PECFAL Urban study conducted between 1964 and 1966 documented only about a total of 42 percent of married women residing in 10 metropolitan areas were using

methods of contraception at the time of the survey (CELADE, and CFSC, 1972). Additionally, at that time great disparities in contraceptive use existed between these cities, such that while in Buenos Aires over 60 percent of married women were practicing contraceptive use, less than a third of their counterparts in Bogota and Mexico City were doing the same.

Table 3. Percent of married female respondents currently using methods of contraception, 10 metropolises in Latin America: 1964/1966

City	Average number of children per woman	Reliable method	Less reliable method	Sterilized	Not using method, fertile	No information
Buenos Aires	2.2	31.6	30.2	0.3	36.5	1.4
Rio de Janeiro	3.6	12.2	19.8	6.1	56.6	5.2
Bogota	5.7	9.1	18.0	1.1	71.2	0.6
San Jose	5.1	21.2	22.2	6.0	49.2	1.1
Mexico City	5.8	9.9	15.0	2.0	72.6	0.6
Panama City	4.7	11.1	12.0	(19.9)	56.0	0.9
Caracas	5.2	21.2	20.8	5.6	50.2	2.1
Quito	5.7	9.1	16.4	6.6	65.3	2.4
Guayaquil	6.1	9.0	17.1	6.5	66.6	0.8
Total sample	--	14.9	19.1	6.0	58.2	1.7

Source: CELADE and CFSF, 1972.

Note: It is suspected that the figure for percent sterilized in Panama City is due to a coding error.

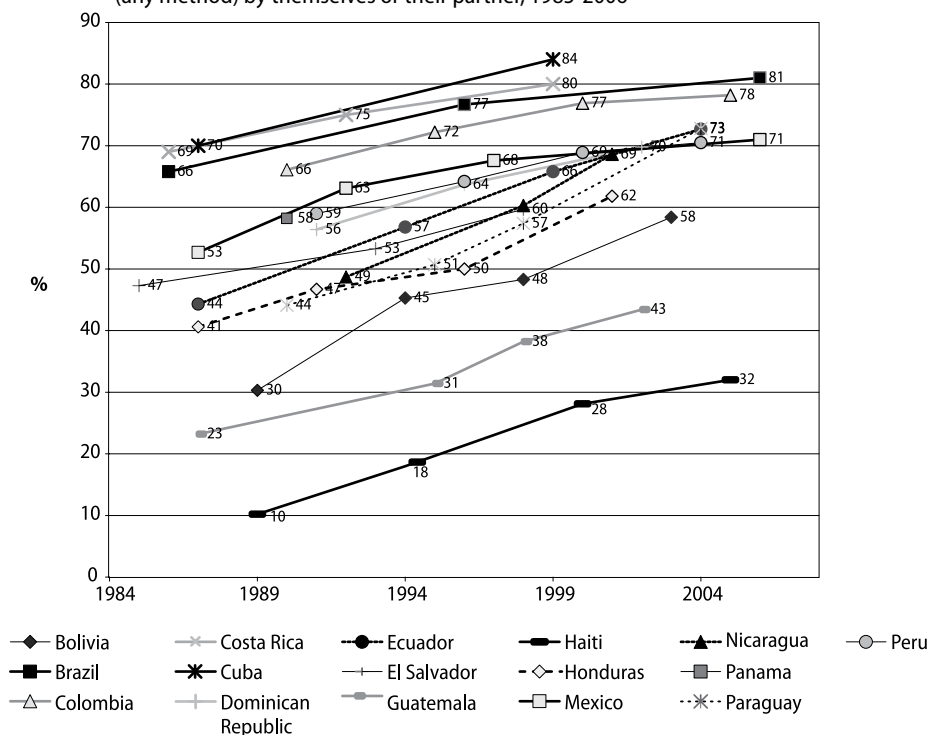
Nevertheless, contraceptive use has risen significantly and fertility rates fallen precipitously since then, such that current data indicate some national averages high enough to be comparable with countries of the developed world (Figure 3). Discrepancies in contraceptive use between countries persist, however. Notably, contraceptive use in Bolivia, Guatemala and Haiti are well below other countries in the region. Yet overall, increases in contraceptive use among married women have driven the sharp declines witnessed in fertility rates during the second half of the last century in the LAC region.

The effectiveness of contraceptives in avoiding pregnancy depends in large part in the method used, the regularity of use and the efficiency of use. Modern methods of contraception are considered to be more effective than traditional methods. For that reason, the MDG indicator of contraceptive prevalence is further disaggregated into the percentage of women married or in-union aged 15 to 49 who are currently using, or whose sexual partner is using, at least one modern method⁸ of contraception, regardless of the method used; and the percentage of

⁸ Modern methods of contraception include female and male sterilization, oral hormonal pills, the intra-uterine device (IUD), the male condom, injectables, the implant (including Norplant), vaginal barrier methods, the female condom and emergency contraception. Traditional methods of contraception include the rhythm (periodic abstinence), withdrawal, lactational amenorrhea method (LAM) and folk methods."

women married or in-union aged 15 to 49 whose sexual partner is currently using a male condom for contraceptive purposes.⁹

Figure 3. Percentage of married or in-union women 15-49 that report current contraceptive usage (any method) by themselves or their partner, 1985-2006



Source: CELADE/UNFPA. *Indicadores para el Seguimiento del Programa de Acción de la CIPD*. <http://www.eclac.cl/celede/indicadores/default.htm>.

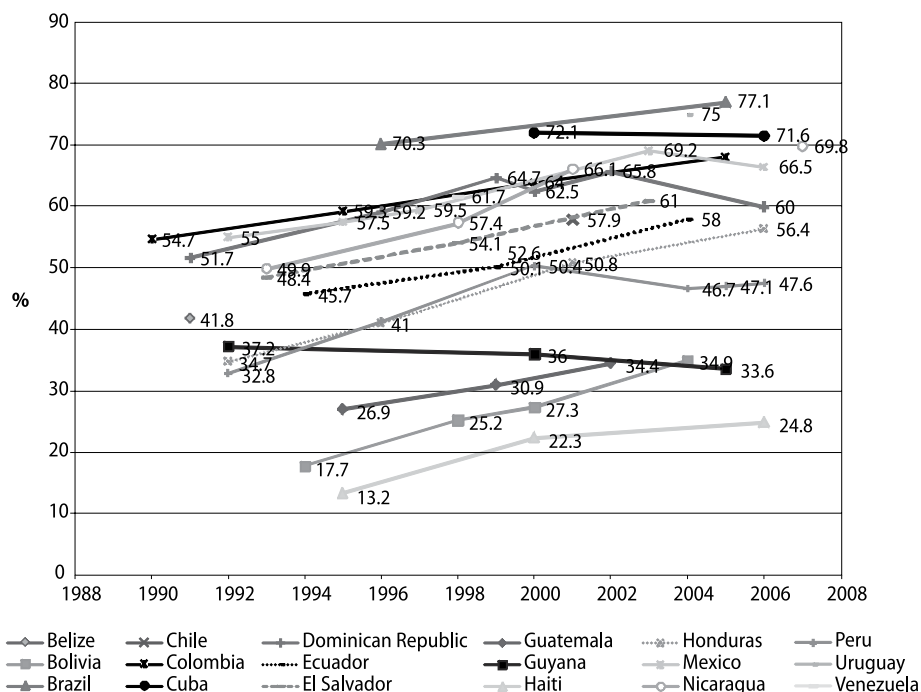
Note: Figures for Brazil 2006 and Mexico 2006 were taken from the final reports of their health surveys (PNDS and ENADID, respectively).

There are a wide variety of method-mixes between countries in the region and within the same country in the LAC region. At the national level, there is usually only one type of contraception that predominates, although the dominate method varies from one country to the next. Amongst these is female sterilization; indeed, recent survey data indicate a significant reliance on female sterilization for contraception particularly in Brazil, Colombia and the Dominican Republic, although there are indications that male sterilization is increasing in at

⁹The use of condoms is important not only for pregnancy prevention but also for STI and HIV/AIDS transmission. Accordingly, MDG target 6A—Have halted by 2015 and begun to reverse the spread of HIV/AIDS—includes an additional indicator of condom usage, condom use at last high-risk sex.

least Brazil and Colombia (Amorim, Alves, and Cavenaghi, 2008). Furthermore, the predominance of traditional methods, particularly in rural areas and among indigenous peoples, is notable in many countries in the region. When considering only modern methods of contraceptives, the contraceptive prevalence rate is notably lower in some countries; particularly Bolivia and Peru, where traditional methods hold significant weight among contraceptive users (Figure 4).

Figure 4. Percentage of married or in-union women 15-49 that report current modern contraceptive usage by themselves or their partner, 1990-2007.

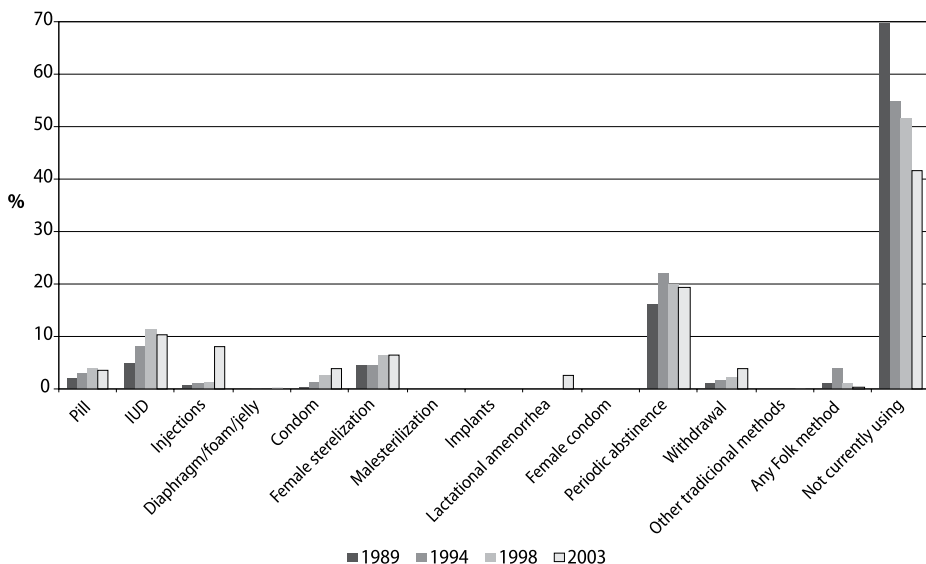


Source: The Millennium Development Goals Indicators Database, last accessed 03/01/2009 (<http://millenniumindicators.un.org>).

Figures 5, 6, and 7 demonstrate trends in contraceptive use and methods in Bolivia, Colombia and Peru from approximately the mid-1980's to the mid-2000's. The three graphs demonstrate the diversity characteristic of national level differences in the LAC region. For instance, the percentage of married women not using contraception at the time of the survey continues to be relatively high (40 percent) in Bolivia, while lower in Peru (about 30 percent) and even lower in Colombia (a little more than 20 percent). Additionally, the method-mix in these

countries presents diverging pictures; in Bolivia the main method of contraception continues to be the rhythm method (traditional), whereas as indicated previously female sterilization dominates contraceptive practices in Colombia and continues to do so over time. Periodic abstinence is also the predominate method of contraception in Peru; the recent increase in the use of injectables is notable both in this country as well as Bolivia.

Figure 5. Current contraceptive use by method among married Bolivian women, 1989-2003

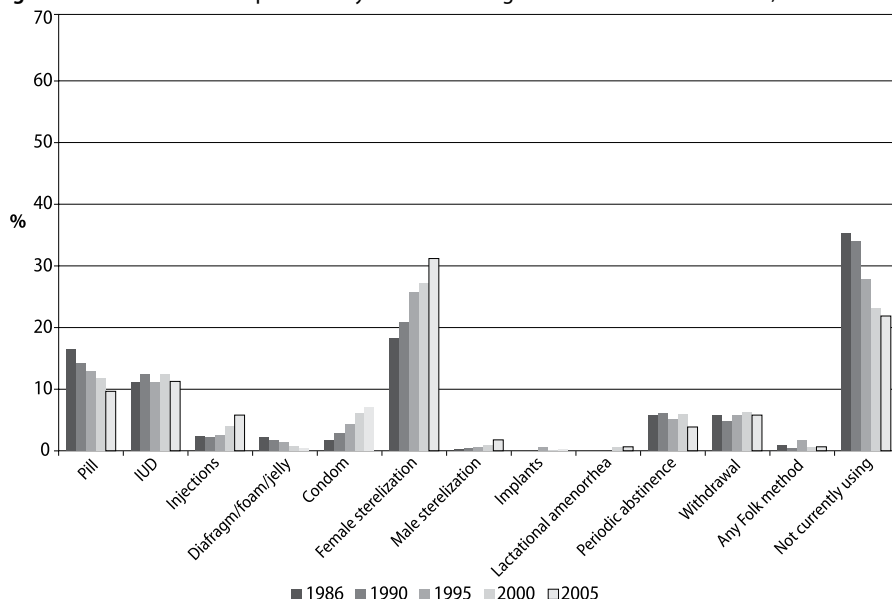


Source: Macro International Inc, 2009. MEASURE DHS STATcompiler. <http://www.measuredhs.com>.

Note: Preference was given to national reports when those figures differed from those in STATcompiler.

The diversity in the mix of contraceptive methods used in Latin America and the Caribbean beg the question of what causes these differences. Method choice is influenced by several factors, including sources of contraceptive supply, demand for certain types of methods, and technological advances (Bongaarts, and Johansson 2002). It has been argued that peer and community views on contraceptive practices, concerns about the effects on health, and the role of medical professionals in promoting the use of some methods over others, can create situations where the predominant method of contraceptive is not necessarily the “best” or most adequate under a human rights framework (Potter, 1999). Accordingly, contraceptive use alone does not necessarily indicate that a woman is utilizing the method most appropriate to her needs, even if it is a modern method.

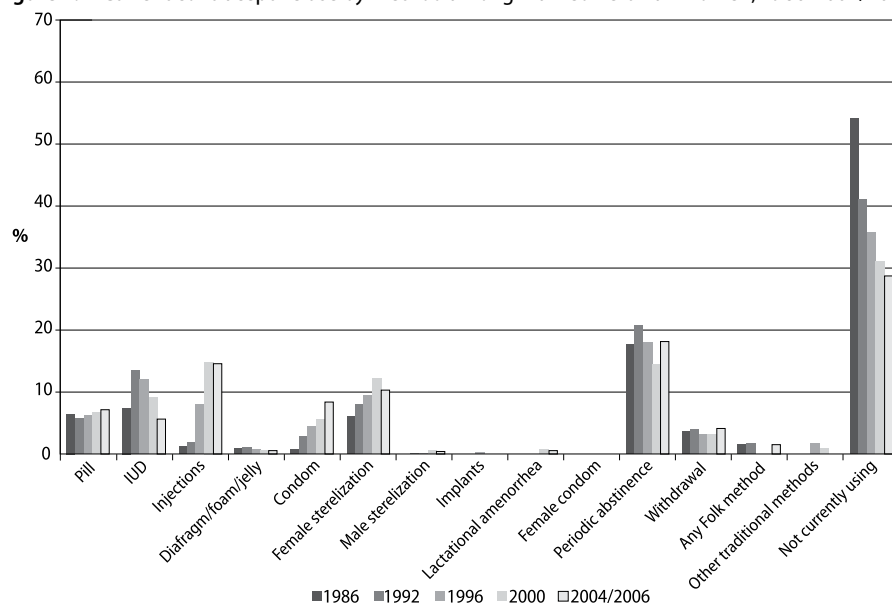
Figure 6. Current contraceptive use by method among married Colombian women, 1986-2005



Source: Macro International Inc, 2009. MEASURE DHS STATcompiler. <http://www.measuredhs.com>.

Note: Preference was given to national reports when those figures differed from those in STATcompiler.

Figure 7. Current contraceptive use by method among married Peruvian women, 1986-2004/2006



Source: Macro International Inc, 2009. MEASURE DHS STATcompiler. <http://www.measuredhs.com>.

Note: Preference was given to national reports when those figures differed from those in STATcompiler.

Table 4. Percent distribution of current users of modern methods, by most recent source of supply, Latin America: 2003-2007

	Pill	IUD	Injections	Condom	Female sterilization	Male sterilization	Implants
Bolivia 2003							
Public	31.2	69	74.4	7.5	70.3	31.1	-
Private medical	66.9	31	24.5	83.8	27.6	68.9	-
Other private	1	0	0.9	1.6	0	0	-
Other	0.2	0.3	0	1.5	0.3	0	-
DK	0	0.3	0	4.4	0	0	-
Missing	0.7	0.3	0.1	1.1	1.8	0	-
Brazil 2006							
Public	21.3	59.4	22.6	25.1	63.6	36.4	-
<i>Convênio/plano de saúde</i>	10.7	14.2	0.8	2.0	10.7	15.7	-
Private medical	0.7	17.9	0.4	0.1	25.3	44.7	-
Other private	0.8	3.6	74.9	66.0	-	-	-
Other	1.2	2.1	0.1	4.7	0.1	0.3	-
DK/Missing	1.7	2.8	1.3	2.0	0.3	2.9	-
Colombia 2005							
Public	15.2	48	11.2	1.2	63.2	33.4	12
Private medical	81.1	51	85.7	77.4	36.7	59.1	87.9
Other private	2.8	0	1.3	15.7	0	0	0
Other	0.9	0.4	1.7	0.9	0.1	0	0.1
DK	0	0	0.1	4.8	0.1	7.5	0
Dominican Republic 2007							
Public	30.6	55	79.6	9.2	57.6	15.1	67.3
Private medical	63.1	44	17.5	58.7	39.9	43.1	27.4
Other private	0	0	0	18	0	0	0
Other	0.7	0	0.3	12.6	0.4	0	0
DK	0	0	0	0	0	0	0
Missing	5.6	0.7	2.6	1.5	2.1	41.8	5.3
Haiti 2005/06							
Public	21.1	-	31.5	5.3	46.8	13.8	29.1
Private medical	41.2	-	37.2	22.4	32.9	86.2	34.7
Other private	10.7	-	13.1	2.1	18.5	0	34.9
Other	27	-	17.8	69.9	0.3	0	1.3
Missing	0	-	0.5	0.3	1.5	0	0
Honduras 2005							
Public	28.3	58	72.1	24.2	46.6	24.8	-
Private medical	62.2	42	26.2	63.6	52.9	66.7	-
Other private	6.7	0	0.5	6.7	0	0	-
Other	2.6	0.1	1	5.5	0.4	5.2	-
DK	0	0	0	0	0.1	3.4	-
Missing	0.2	0.2	0.2	0	0	0	-
Peru 2004/2006^a							
Public	80.4	80.5	91.9	29.4	87.7	-	-
Private medical	18.8	17.4	7.4	69.9	10.0	-	-
Other private	0.5	0.7	0.0	0.5	0.0	-	-
Other	0.2	1.4	0.6	0.2	2.3	-	-
DK/Missing	0.0	0.0	0.0	0.1	0.0	-	-

Source: Macro International Inc, 2009. MEASURE DHS STATcompiler. <http://www.measuredhs.com>.

Note: Peruvian data is from the DHS final report. Brazilian data is from the PNDS final report (Brasil. Ministerio da Saúde, 2008).

^a Data on the 15 weighted cases of male sterilization and 8 weighted cases of Norplant use are omitted.

This point indicates the importance of the source of provision of contraceptive methods in influencing the type of contraceptive used. As table 4 illustrates, not only does the method of contraception used differ between countries, but the source of the contraception method does as well. These figures demonstrate the importance of the public provision of contraception, although the weight of public provision differs according to method used. This holds true save for the case of Peru, where contraceptive provision is overwhelming public for all methods save the condom.

Finally, contraceptive use among adolescents merits separate reflection. Many times adolescents are limited in their access to reproductive health information and services, thus restricting their contraceptive use. Although contraceptive use among sexually active adolescent females in Latin America and the Caribbean is below that of their counterparts in developed countries, in recent years contraceptive use among 15 to 19 year olds has been increasing and levels of use are above that of other developing regions (among those in unions). This indicates that although adolescents in the region can access to contraceptive use, this use is insufficient, inefficient and/or inconsistent among this group.

In modelling predictors of contraceptive use among adolescents it is difficult to establish causality, due to the fact that many times contraceptive methods are distributed to adolescents after the birth of their first child, such that motherhood actually predicts contraceptive use in many cases. While this practice reduces parity among adolescents, it does not reduce teenage motherhood in and of itself (Rodríguez, 2008).

The difficulties of contraceptive use among adolescents extend to the need to measure contraceptive use among sexually active unmarried women as well. In many countries, increases in age at first marriage and contraceptive use over time have not been sufficient to compensate for decreases in the age of sexual initiation among young women 15 to 24 years old (Ali, and Cleland, 2005). As such, contraceptive use among unmarried sexually active women also impacts the total fertility rate and thus is of policy concern.

Table 5. Percentage of women using any modern method or any traditional or folk method of contraception, by age group and marital status, Latin America: 2003-2007

	Currently married	Unmarried sexually active	Currently married	Unmarried sexually active
	Any modern method		Any traditional or folk method	
Bolivia 2003				
15-19	26.3	18.7	19.3	31.0
20-24	36.1	44.8	19.1	23.6
25-29	38.8	45.0	24.8	26.2
30-34	39.7	-	25.0	-
35-39	37.1	-	27.2	-
40-44	34.7	-	23.8	-
45-49	18.8	-	19.8	-

(continue)

(continued)

	Currently married	Unmarried sexually active	Currently married	Unmarried sexually active
	Any modern method		Any traditional or folk method	
Brazil 2006				
15-19	63.3	65.2	3	1.7
20-24	75.4	78.1	1.7	1.5
25-29	75.8	76.3	2.9	3
30-34	80.6	78.7	3.9	2.6
35-39	82.2	80.6	3.7	0.8
40-44	81.8	76.3	4.6	2.5
45-49	70.2	57.5	4.3	0.2
Colombia 2005				
15-19	47.1	66.1	10.0	13.3
20-24	61.3	66.5	10.5	14.0
25-29	67.5	70.5	11.4	10.5
30-34	72.1	-	9.4	-
35-39	74.2	-	10.1	-
40-44	73.6	-	9.8	-
45-49	64.2	-	10.1	-
Dominican Republic 2007				
15-19	43.8	44.3	2.0	5.1
20-24	56.2	54.0	4.1	5.1
25-29	63.9	63.4	3.6	4.2
30-34	73.8	-	2.5	-
35-39	80.4	-	2.9	-
40-44	79.8	-	2.4	-
45-49	77.5	-	1.0	-
Haiti 2005/06				
15-19	20.2	29.4	8.3	4.2
20-24	26.2	27.8	6.8	12.1
25-29	29.2	38.8	5.7	10.7
30-34	29.9	-	6.3	-
35-39	23.2	-	9.1	-
40-44	22.1	-	8.4	-
45-49	15.8	-	7.3	-
Honduras 2005				
15-19	58.7	39.9	9.7	6.0
20-24	58.8	51.3	10.2	7.8
25-29	65.3	56.6	8.2	8.8
30-34	63.4	-	9.4	-
35-39	62.3	-	9.6	-
40-44	61.8	-	11.2	-
45-49	49.5	-	9.4	-
Peru 2004/2006				
15-19	43.6	51.9	15.1	37.7
20-24	50.4	57.6	19.0	30.2
25-29	51.4	63.1	23.2	27.1
30-34	47.9	57.7	26.2	23.8
35-39	52.9	60.1	27.3	26.6
40-44	47.0	52.1	26.2	24.1
45-49	35.3	-	18.8	-

Source: Macro International Inc, 2009. MEASURE DHS STATcompiler. <http://www.measuredhs.com>.

Peruvian data is from the DHS final report. Brazilian data is from the PNDS final report (Brasil. Ministerio da Saúde, 2008).

Indeed, table 5 illustrates that the contraceptive prevalence rate and contraceptive method vary significantly by age and marital status. In point of fact, although levels of contraceptive usage among unmarried women vary across countries, they do not always correspond to prevalence rates among their married national counterparts. The same holds true for the method-mix among unmarried women. Most notable among the methods used by unmarried women is the prevalence of the male condom (results not shown), of which married or partnered women report low levels of usage.

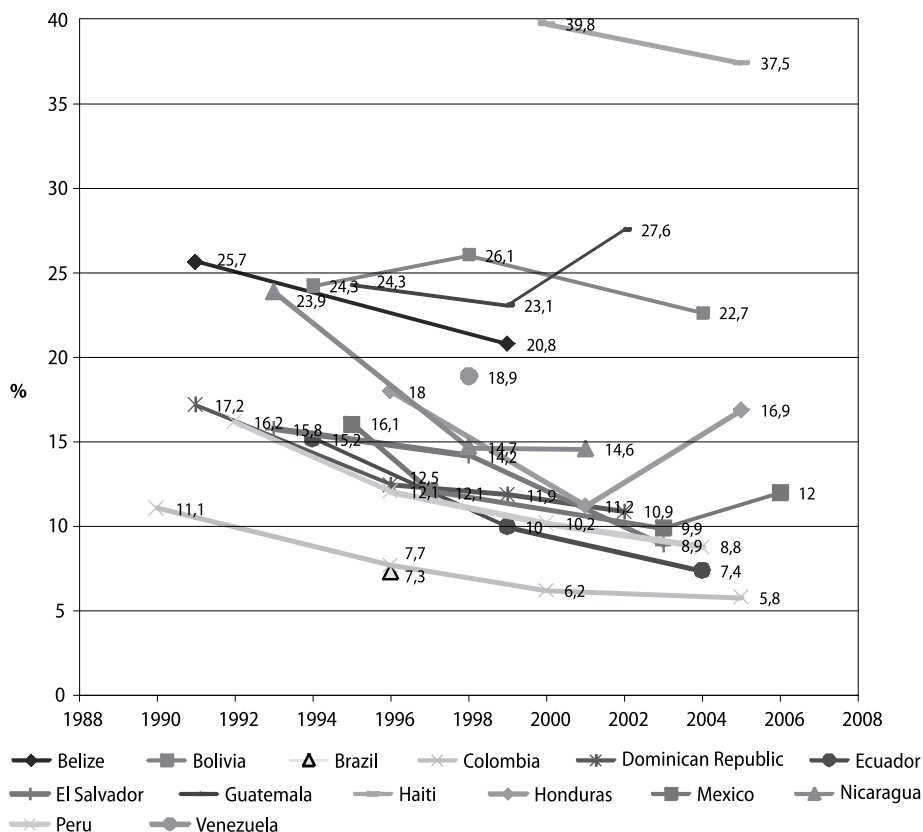
In sum, the three indicators of contraceptive prevalence—total use, use of modern methods, and use of condoms among married women or those in union, would benefit significantly if they were calculated separately for unmarried sexually active women, as well as for sexually active adolescents.

Unmet need for family planning

The official calculation of the indicator defines women (who are married or in a consensual union) as having an unmet need when they are pregnant or amenorrheic and whose pregnancies were unwanted or mistimed; and fecund women who desire to either stop childbearing or postpone their next birth for at least two years, or who are undecided about whether or when to have another child, and who are not using a contraceptive method, as a percentage of all women married or unioned. The unmet need for family planning indicator is divided into three components: the total unmet need, unmet need for spacing births, and unmet need for limiting births.

Eloquent arguments have been made in favour of included in the unmet need for family planning in indicators of access to reproductive health. The unmet need for family planning is a complementary indicator to the use of contraceptives—the contraceptive prevalence rate provides the context in which unmet need is situated. Higher contraceptive prevalence rates may or may not reflect that individuals and couples are freely deciding the number and spacing of their children, because it does not include a dimension of fertility preferences. As such, as with the adolescent fertility rate, within a human rights framework it is unreasonable to set a target for contraceptive use, given that the emphasis should be on whether or not individuals and couples are meeting their fertility goals. On the other hand, the unmet need for family planning does exactly this: it takes into account fertility intentions and desires and thus provides a measure of whether or not women are meeting their fertility preferences (Bernstein, and Eduard, 2007). Thus, the sole provision of contraception and family planning services without taking into consideration clients' fertility preferences is neither desirable nor accurate within a human rights framework.

Figure 8. Unmet need for contraceptives among married or in-union women, Latin America: 1990-2006



Source: The Millennium Development Goals Indicators Database, last accessed 03/01/2009 (<http://millenniumindicators.un.org>).

As Haiti registered the lowest contraceptive usage rate in the region, it exhibits the highest percentage of unmet need for family planning, much more so than Guatemala and Bolivia. And as opposed to contraceptive prevalence rates in the region, which present a singular increasing trend, the trends in unmet need for family planning are mixed, such that in some countries there are recent upswings in unmet need, among them Guatemala, Honduras and Mexico. The disparity between the trends in contraceptive use (in general, monotonically increasing) and unmet need for contraception (decreasing, but with some increases) highlights the importance of evaluating these indicators together.

General trends indicate that at younger ages there is greater unmet need for family planning services to space births, but as women age the need for family

planning switches to that for limiting additional births (Table 6). However, taken together, greatest unmet need for family planning is expressed by the youngest age groups.

Table 6. Contraceptive prevalence rate, unmet need for contraceptives among married or in-union women—total, for spacing births, and for limiting births—Latin America: circa 2005

Country and year	Contraceptive prevalence rate	Unmet need - space	Unmet need - limit	Unmet need - total
Bolivia 2003				
15-19	45.6	22.0	11.1	33.0
20-24	55.2	15.3	14.9	30.1
25-29	63.6	8.1	16.1	24.2
30-34	64.7	4.4	19.0	23.4
35-39	64.2	1.7	19.4	21.1
40-44	58.4	1.1	18.6	19.7
45-49	38.6	0.4	10.8	11.2
Colombia 2005				
15-19	57.2	12.6	3.7	16.2
20-24	71.7	7.5	3.0	10.5
25-29	78.0	3.0	3.4	6.4
30-34	81.5	1.2	3.6	4.8
35-39	84.3	0.7	2.7	3.4
40-44	83.5	0.2	3.8	3.9
45-49	74.3	0.1	2.8	2.9
Dominican Republic 2007				
15-19	45.8	25.9	2.1	28
20-24	60.4	16.2	2.6	18.8
25-29	67.7	10.7	4.9	15.6
30-34	76.3	4.1	5.2	9.3
35-39	83.3	1.7	4.5	6.2
40-44	82.2	0.2	5.8	6.0
45-49	78.5	0.6	3.8	4.5
Haiti 2005/06				
15-19	9.8	49.6	2.8	52.4
20-24	25.0	34.8	6.0	40.8
25-29	30.9	20.5	16.4	36.8
30-34	31.1	12.3	25.5	37.7
35-39	29.0	6.5	32.8	39.4
40-44	26.0	2.2	35.6	37.8
45-49	19.5	0.6	20.8	21.4
Honduras 2005				
15-19	45.9	21.6	4.2	25.8
20-24	59.1	16.5	6.0	22.5
25-29	64.9	10.7	7.9	18.6
30-34	72.8	6.2	8.8	15
35-39	71.9	3.0	12.3	15.3
40-44	73.0	0.8	9.9	10.7
45-49	58.8	0.1	9.1	9.2

(continue)

(continued)

Country and year	Contraceptive prevalence rate	Unmet need - space	Unmet need - limit	Unmet need - total
Peru 2004/2006				
15-19	58.7	13.9	1.6	15.4
20-24	69.4	7.5	3.2	10.7
25-29	74.6	4.6	4.7	9.3
30-34	74.1	3.3	5.9	9.2
35-39	80.3	1.0	6.9	7.9
40-44	73.3	0.3	5.5	5.8
45-49	54.1	0.0	4.2	4.2

Source: Demographic and Health Surveys, Macro International Inc, online: www.measuredhs.com.

Note: Peruvian data is from the DHS final report. Brazilian data is from the PNDS final report (Brasil. Ministerio da Saúde, 2008).

As with contraceptive prevalence, the unmet need for family planning is traditionally calculated only for women in marriages or unions. The inclusion of only women in marriages or union in the official indicator of unmet need again excludes women who do need and use contraceptive and is an important area for monitoring and programme intervention, especially for countries such as Chile where early childbearing is increasingly non-marital.

Again, unmet need for family planning among adolescents requires a separate reflection, given the importance of this aspect of reproductive health in Latin America and the Caribbean. As mentioned previously, the calculation of the unmet need for family planning includes retrospective information—whether the last pregnancy was intended, mistimed, or unwanted—which can be problematic. This holds particularly true in the case of adolescents in Latin America, where a first births are highly valued and are usually met by joy (Guzmán et al., 2001), thus decreasing reports of mistimed or unwanted births.

Antenatal care coverage (at least one visit and at least four visits)

The indicator of prenatal care included in the new MDG goal on universal access to reproductive health measures the proportion of births with at least one antenatal visit and at least four antenatal visits (the latter is considered adequate). This indicator is also in line with the ICPD PoA, which not only refers to universal access to reproductive health as access to family planning, but also, “the right of access to appropriate health-care services that will enable women to go safely through pregnancy and childbirth and provide couples with the best chance of having a healthy infant,” (United Nations, 1994). Clearly the use of prenatal care is an outcome indicator of this latter right; it has been promoted as an essential mechanism for ensuring the health of both mother and child.

This point has held true in many countries which have met this target and have low rates of maternal and infant mortality to prove it. In general, rates of prenatal care coverage are high in countries of Latin America and the Caribbean (Table 7). However, paradoxically there are cases where high rates of medical check-ups during pregnancy co-exist with high levels of maternal and infant mortality and morbidity. Often cited as an example of this is the case of the Dominican Republic, where nearly universal coverage of antenatal care coexist with relatively high levels of infant mortality. As such, it is indispensable to interpret this indicator within the context of reproductive health in the country and not to evaluate it on its own.

Table 7. Number of antenatal care visits and estimated infant mortality rates, based on births during the 5 years preceding the survey, countries with a DHS survey in the last 10 years: 1998-2007

Country and Year	Infant mortality (1q0)	Number of antenatal care visits			
		0	1	2-3	4
Bolivia 2003	53.6	21.4	4.9	15.8	57.9
Colombia 2005	18.7	7.8	1.4	7.7	83.1
Dominican Republic 2007	32.1	2.5	0.5	2.5	94.5
Guatemala 1998/99	45.1	14.7	3.0	14.7	67.6
Haiti 2005/06	57.3	14.5	4.9	26.8	53.8
Honduras 2005	23.4	8.2	2.0	9.0	80.8
Nicaragua 2001	31.3	14.8	2.7	10.9	71.6
Peru 2000	33.3	15.9	3.1	12.5	68.5

Source: Demographic and Health Surveys, Macro International Inc, online: www.measuredhs.com.

Inequality as a barrier to universal access to reproductive health in Latin America and the Caribbean

In Latin America and the Caribbean national averages hide very different realities, the product of the sharp socio-economic inequality that characterizes the region. Sexual and reproductive health in the region is no exception to this inequality. In fact, the four official MDG indicators of universal access to reproductive health demonstrate marked disparities not only by age groups as seen in the access to reproductive health by adolescents, but also socio-economic groups, geographic location, ethnic groups, and gender. Indeed, this reality has not gone unnoticed among SRH researchers, who have made inequality one of the central objectives of study and advocacy. In fact, the Latin American and Caribbean Regional Plan of Action on Population and Development (ECLAC, 1996) acknowledged among its specific objectives and recommendations for actions the need for countries in the

region to address the difficulties that some groups have to accessing reproductive health services due to their geographical location or social condition. In this section we review some aspects of inequality that are most relevant to the four indicators of the MDG target on universal access to reproductive health. Much of the information that follows is taken from the population chapter of the 2005 *Social Panorama of Latin America*, the annual flagship publication of ECLAC.

Although many researchers argue that the concern regarding adolescent fertility on the part of national governments and international bodies in the region is unwarranted given data constraints that preclude the generation of conclusive evidence on the causal relationship between adolescent motherhood and negative life outcomes, several researchers have pointed to the fact that the fertility rate among 15-19 year olds is undoubtedly highly correlated with an adolescent's educational level and social standing, and has serious deleterious effects not only on the well-being of the adolescent but also on other members of the adolescent's household, thus making it a cause for concern. Early reproduction has historically been associated with poverty and low levels of education, and as such has been considered as one mechanism of the intergenerational transfer of poverty (Rodríguez, and Hopenhayn, 2007). The most recent results from the DHS in the region suggest that this relationship persists, given that girls with low education continue to exhibit much higher probabilities of becoming mothers during adolescence. This relationship exhibits a certain grade of endogeneity—educational trajectories can be cut short by adolescent maternity and thus be the cause of low levels of educational achievement—as such complicating the establishment of causal relationships between education levels and adolescent childbearing. Although the magnitude of the relationship between education and early fertility can change over time, the direction of the correlation is always the same, in that more education implies a lower likelihood of teenage pregnancy.

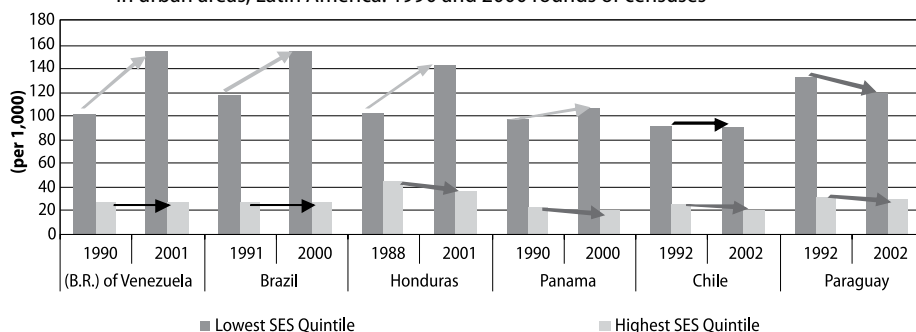
However, improvement in schooling levels across the LAC region has modified the relationship between education and adolescent fertility. No longer are teen mothers those girls that have no formal education as was true in the past. Instead, adolescent mothers tend to complete some years of schooling before dropping out. This has serious implications for the historical role of schools as protective factors against early childbearing; schools' protective effects against early sexual initiation and childbearing begin to erode because of the devaluation of education at later ages. Both factors are key to public policies and indicate a specific area for adolescent pregnancy prevention that involves not only health but also educational institutions.

It is clear that improving educational levels have tended to reduce schooling disparities within countries; that currently almost every girl and boy in the LAC

region finishes primary school is eloquent evidence in this respect. This has not put an end to all educational disparities, however; now these disparities are expressed at advanced levels of schooling—such as university or graduate school enrolment—as well as in the quality of education available at all levels of schooling. Thus, increases in education at the population level clearly have not done away with social inequalities but instead changed the way in which they are expressed. Accordingly, the traditional disaggregation employed in surveys in the region (no formal education, primary education, secondary and higher education) is increasingly of less utility.

Given the evolution of the characteristics of educational attainment in the region, the use of this variable to measure the changing relationship between social inequality and adolescent maternity is inappropriate. This problem has been described in a recent publication (ECLAC, 2005), which concluded that the only way to conduct a rigorous evaluation of the evolution of social inequality in early childbearing is to disaggregate indicators according to quartiles of some quantitative socio-economic variable. In this line, Rodríguez and Hopenhayn (2007) present an exercise conducted by CELADE with select countries in the region. The results, as seen in figure 9, indicate that increases in adolescent fertility have been primarily driven by an increase in fertility of the poorest groups.

Figure 9. Adolescent fertility rate (per 1,000) for minimum and maximum socio-economic groups in urban areas, Latin America: 1990 and 2000 rounds of censuses



Source: Rodríguez and Hopenhayn (2007).

Additionally, table 8 reveals that these inequalities in reproduction persist in data from the most recent surveys in the region. In comparing inequalities in the total fertility rate and the adolescent fertility rate, recent DHS surveys confirm the findings of the study by ECLAC (2005), done with indirect census estimates: social inequalities are more pronounced in the case of early childbearing than in total fertility, which confirms the importance of adolescent fertility as a topic of SRH in the region (Figure 10).

Table 8. Indicators of reproductive behaviour among adolescents according to socio-economic quintile, select countries of Latin America: circa 2000

	Quintile	AFR	TFR	Percent of adolescents who are mothers
Bolivia, 2003	1	161	6.7	29.3
	2	128	5.0	21.6
	3	81	4.0	14.9
	4	73	2.9	13.7
	5	38	2.0	7.2
	Total	84	3.8	15.7
Colombia, 2005	1	155	4.1	31.5
	2	118	2.8	25.6
	3	97	2.4	22.1
	4	61	1.8	14.4
	5	37	1.4	10.7
	Total	90	2.4	20.5
Honduras, 2005	1	156	5.6	31.3
	2	129	3.8	23.7
	3	120	3.3	27.2
	4	84	2.6	19.6
	5	50	2.1	9.6
	Total	102	3.3	21.5
Peru, 2004-05	1	132	4.8	29.1
	2	87	3.4	18.4
	3	67	2.2	12.5
	4	41	2.1	8.3
	5	16	1.5	4.2
	Total	59	2.5	12.7
Dominican Republic, 2002	1	214	4.5	41.5
	2	162	3.5	32.6
	3	117	2.9	25.1
	4	87	2.4	15.6
	5	36	2.1	7.9
	Total	116	3.0	23.3

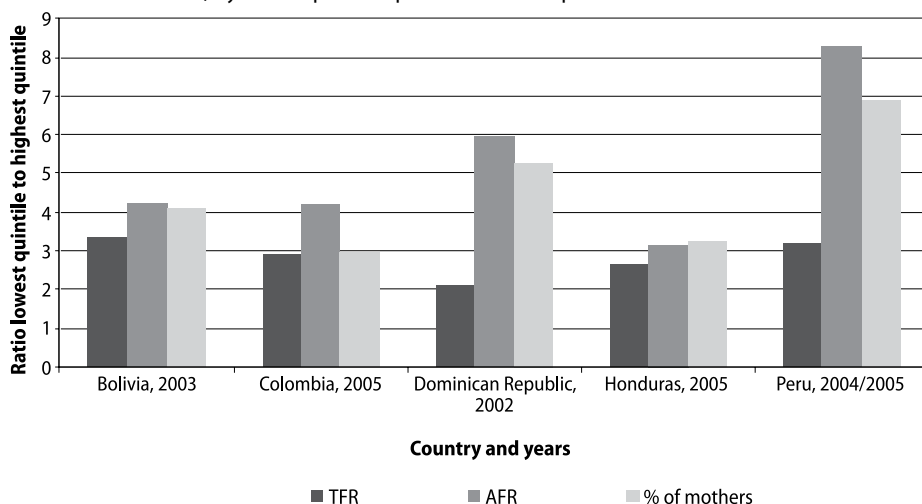
Source: Demographic and Health Surveys, Macro International Inc, online: www.measuredhs.com.

Note: Data from Peru 2004/2005 also includes some cases from 2003.

One aspect of inequality that has acquired increasing visibility in Latin America is that according to ethnicity, due to the disadvantaged situation of indigenous peoples and Afro-descendent populations. Recent studies have revealed that these inequalities are manifested in fertility trends as well (ECLAC, 2007). In particular, levels of adolescent and total fertility among these groups are typically higher compared to the rest of the population. A recent study which for the first time processed census data available at CELADE according to ethnic group identification confirms this disparity (Table 9). In effect, almost without exception indigenous and Afro-descendent girls present a higher percentage of those who are mothers than in the rest of the adolescent population. Some cases are notable for their high levels of early motherhood, in particular adolescent girls belonging to indigenous peoples

in Panama and Paraguay, where at least one out of every four girls ages 15 to 17 has already given birth to at least one child.

Figure 10. Inequality in reproductive behaviour (TFR, AFR and percentage of adolescents who are mothers) by ratio of poorest quintile to richest quintiles: circa 2005



Source: Demographic and Health Surveys, Macro International Inc, online: www.measuredhs.com.

Note: Data from Peru 2004/2005 also includes some cases from 2003.

The latter finding reveals a dimension of adolescent maternity that is by definition excluded from the MDG goals. It deals with fertility at ages earlier than 15 years old, particularly worrying given the biomedical and social risks that it entails. The official MDG indicator excludes this group, every time that the AFR is calculated for only the group between 15 and 19 years of age. And even if births to mothers younger than 15 are included in the numerator this group is on the margin of any monitoring or analysis. Although it is a relatively rare event, the rates for indigenous peoples reveal that for some groups within Latin American countries very early maternity is more frequent than expected.

Regarding ethnic differences in adolescent fertility a couple of final points can be made. The first is in regards to the diversity among the indigenous peoples of the region, which stems from at least two sources. On one hand part of it is due to the socio-economic heterogeneity among this group, a clear example of this being an increasing proportion of indigenous peoples that reside in urban areas, which exhibit different fertility behaviours compared to their rural counterparts. On the other hand are the cultural specificities of each indigenous tribe. Although it is true that on average indigenous peoples tend towards early marriage, there are some tribes that do not, which leads to them to have levels of adolescent fertility that

are lower than national averages (although their completed fertility ends up being higher), as happens with the Aymara, the dominant ethnic group in Bolivia (Table 8). Another specific case is in Panama, where the two dominant ethnic groups—Ngöbes and Kunas—exhibit very different reproductive behaviours, also due to different marital customs that influence the age at first marriage. To be sure, recognizing this diversity among indigenous groups does not deny the disadvantaged condition that indigenous groups face in general; however, these specificities are relevant to the design of public policy and programmes in the realm of the sexual and reproductive health of indigenous and Afro-descendent persons.

The second point refers to the cultural context of these behaviours that can be different from the urban or *mestizo* world. In this sense, the same parameters to evaluate fertility behaviours of indigenous peoples cannot be applied. Cultural context is important, and for many indigenous peoples, early motherhood is part of a normal transition to adulthood. In sum, this recognition should not relegate ancestral practices to an ad hoc explanation of early childbearing among indigenous women; instead these behaviours can be challenged by adolescents themselves depends on their decision to follow traditional custom. Whatever the case may be, in this area it is clear that conflicts of interest and collisions of human rights can arise. In particular, “collective rights” which increasingly figure into advances in international jurisprudence and are clearly related to indigenous peoples, can butt heads with an individual’s right to freely decide the number, spacing and timing of their children, in which case the appropriate response according to international agreements and the spirit of existing laws is to privilege the right of the individual.

Although the adolescent fertility rate (AFR) is one of four indicators of progress and achievement for the MDG target on universal access to reproductive health, for policy purposes the key inputs that affect birth rates are the proximate determinants of adolescent fertility, which are accordingly influenced by socio-economic and cultural characteristics.

Two proximate determinants emerge as principal in effecting the AFR, and both exhibit marked differences according to socio-economic status. One is the exposure to the risk of pregnancy through sexual practices, in particular the age of sexual initiation, which has become of increasing importance given the declining age of first menarche. On the other hand is the use of contraceptives. The examination of both factors reveals that adolescents with fewer resources face an “accumulation of risk,” in that they register both earlier sexual initiation and lower levels of contraceptive use (although the latter is only apparent when using appropriate indicators). Table 10, which disaggregates recent DHS data by wealth quintiles, serves as empirical proof that lower socio-economic status is related to earlier sexual initiation and marriage.

Table 9. Percentage of adolescent girls 15-17 and 18-19 who are mothers, by ethnic identification: circa 2000

Country	Ethnic group	Age	
		15-17	18-19
Argentina	Indigenous	10.4	27.3
	Afro-descendent	-	-
	Other	6.7	19.9
Bolivia	Indigenous	6.0	25.2
	Afro-descendent	-	-
	Other	6.5	24.2
Brazil	Indigenous	17.9	41.2
	Afro-descendent	9.7	28.2
	Other	6.9	20.9
Chile	Indigenous	7.7	21.9
	Afro-descendent	-	-
	Other	7.1	20.4
Costa Rica	Indigenous	19.0	49.1
	Afro-descendent	9.6	27.7
	Other	6.4	23.1
Ecuador	Indigenous	7.6	31.0
	Afro-descendent	13.0	37.0
	Other	8.6	27.3
Guatemala	Indigenous	8.2	29.8
	Afro-descendent	-	-
	Other	7.6	26.2
Honduras	Indigenous	8.7	34.4
	Afro-descendent	7.2	26.6
	Other	9.3	32.2
Mexico	Indigenous	8.5	30.3
	Afro-descendent	-	-
	Other	5.5	21.3
Nicaragua	Indigenous	13.6	38.7
	Afro-descendent	8.9	30.9
	Costal mestizos	18.7	47.2
	Other	11.0	33.3
Panama	Indigenous	24.8	57.3
	Afro-descendent	-	-
	Other	7.8	25.8
Paraguay	Indigenous	31.3	66.5
	Afro-descendent	-	-
	Other	5.0	21.0
B.R. Venezuela	Indigenous	13.9	37.6
	Afro-descendent	-	-
	Other	7.9	25.4

Source: 1990 and 2000 round of census data.

Notwithstanding, the use of contraceptives requires a more careful examination given that at first glance, results may appear to be counterintuitive. In fact, if the MDG indicator of contraceptive use is used (the prevalence of use among women in unions¹⁰), at least two countries do not exhibit expected relationship (higher socio-economic status equals higher usage). This apparently is due to the elevated rates of usage among poor adolescents that are already mothers, as mentioned earlier in this paper. In this sense, an indicator that would be of very little use in the case of the rest of age groups is better at capturing inequalities in the case of adolescents. This would be the indicator of “use of contraceptive at any time,” which indicates the proportion of “never-users” among adolescents who have already begun to participate in sexual activity, that is to say, exposed to the risk of pregnancy. These tend to be lower in the two bottom quintiles of wealth.

In conclusion, while sharp inequality in two key dimensions of adolescent reproduction (sexual initiation and use of contraceptives) persists, it is highly likely that the reproductive trajectory, and in general, life trajectory of the adolescents leads to the persistence of real socio-economic differences, through the mechanisms of the intergeneration reproduction of poverty associated with teenage motherhood. This contributes to the reproduction of socio-economic inequality, as well as the intensification of the unequal exertion of rights by future generations.

In conclusion, the indicator regarding adolescents in the new goal on universal access to reproductive health in 2015 (the adolescent fertility rate) should be complemented in order to achieve a more complete picture of early childbearing and the factors related to it (and thus most relevant to the design of public policy). In particular, we suggest the following supplementary indicators:

1. The percent of adolescent females (15-19) who are mothers—by single age groups or age-standardized to control for the effect of age composition within the group
2. Also consider this indicator for the group of girls 10 to 14 years old, by single age group
3. The proportion of young women (20-24 or 20-29 years old) that were mothers before their 20th birthday.
4. Utilize the percent of adolescents who already had their first child at the time of contraception initiation, as an indicator of the lack of access to contraceptives
5. Include the percentage of contraceptive use at first intercourse as the closest indicator to the efficient use of contraceptives in adolescents.

¹⁰ In the column, “sexually initiated 15-19 year olds” in Table 10.

Table 10. Indicators of reproductive behaviour among adolescents according to wealth quintiles, Latin America: circa 2000

Quintil	TFR	ASFR	% Mothers	% of 15-19 that had intercourse before their 15th birthday	% of 18-19 that had intercourse before their 18th birthday	% of 15-19 that entered into a union before their 15th birthday	% of 18-19 that entered into a union before their 18th birthday	Sexually initiated 15 – 19 year olds	
								% that used modern contraception at any time	% that currently use modern contraceptive
Bolivia, 2003									
1	6.7	161	29.3	11.0	46.2	5.4	28.1	22.5	13.1
2	5.0	128	21.6	9.1	56.7	5.2	33.0	29.7	14.0
3	4.0	81	14.9	4.9	33.1	2.4	16.4	33.6	17.3
4	2.9	73	13.7	4.1	36.7	1.1	14.1	44.2	16.9
5	2.0	38	7.2	2.3	26.3	0.3	4.6	48.6	19.0
Total	3.8	84	15.7	5.6	37.3	2.4	16.4	36.1	16.1
Colombia, 2005									
1	4.1	155	31.5	21.2	63.3	10.8	39.9	65.3	28.9
2	2.8	118	25.6	16.4	59.3	6.1	31.6	79.1	37.2
3	2.4	97	22.1	13.6	59.7	3.7	28.1	83.1	40.9
4	1.8	61	14.4	11.5	53.5	2.1	11.7	80.6	39.4
5	1.4	37	10.7	6.9	43.8	0.8	8.8	88.1	43.4
Total	2.4	90	20.5	13.7	55.3	4.5	22.9	79.1	37.8
Dominican Republic, 2002									
1	4.5	214	41.5	23.0	65.8	20.0	57.7	63.9	26.5
2	3.5	162	32.6	18.8	59.6	15.1	54.1	69.2	34.5
3	2.9	117	25.1	13.5	51.0	12.2	40.3	69.5	33.4
4	2.4	87	15.6	8.3	37.0	5.7	27.1	69.8	28.2
5	2.1	36	7.9	3.7	25.9	2.4	15.4	72.8	22.8
Total	3.0	116	23.3	12.7	46.2	10.4	37.1	68.6	29.8
Honduras, 2005									
1	5.6	156	31.3	15.8	49.1	12.8	40.1	44.0	25.1
2	3.8	129	23.7	10.4	46.6	8.3	38.1	54.5	26.4
3	3.3	120	27.2	13.0	48.1	8.8	43.1	71.3	35.4
4	2.6	84	19.6	7.9	39.8	5.4	30.3	72.1	39.2
5	2.1	50	9.6	4.1	23.5	2.2	15.8	65.1	28.9
Total	3.3	102	21.5	9.8	40.0	7.0	32.1	62.2	31.7
Peru, 2004/2005									
1	4.8	132	29.1	16.7	52.6	7.1	36.1	38.7	20.7
2	3.4	87	18.4	7.8	42.4	2.9	23.6	48.8	25.6
3	2.2	67	12.5	5.4	33.5	2.0	15.0	58.7	28.1
4	2.1	41	8.3	2.4	25.9	0.6	11.7	68.9	43.0
5	1.5	16	4.2	1.3	22.2	0.6	6.6	74.7	31.6
Total	2.5	59	12.7	5.6	32.7	2.1	16.1	56.5	29.4

Source: Demographic and Health Surveys, Macro International Inc, online: www.measuredhs.com.

Note: Data from Peru 2004/2005 also includes some cases from 2003.

Historical reproductive inequalities in Latin America—significantly high since the beginning of the collection of systematic data on fertility—have affected access to family planning and contraceptives in particular. And as it is with the rest of the indicators for the new Goal 5B, inequalities have always operated in the same direction; the prevalence of users increases with socio-economic status, such that poor, rural and indigenous women have reported much lower use, in whatever the modality (actual use or ever used).

According to Gakidou and Vayena (2007), among developing regions Latin America has the largest gap in modern contraceptive use according to socio-economic status (i.e., DHS wealth quintiles). Indeed, the latest information available from the DHS in the region presents indicators that contraceptive use has increased in all countries and among all socio-economic groups (Table 6). Furthermore, this increase has been more rapid among the most disadvantaged groups. However, the counterpart to this positive picture is the still significant difference in usage according to socio-economic status in almost all countries and in a handful of countries where poor women are still far behind their better-off counterparts (such as, Guatemala, Haiti and Bolivia).

The exercise offers other indicators in which inequality is expressed, although with national specificities. One of them is the difference between modern and traditional methods, which as noted previously implies a less efficient form of contraceptive protection. In countries such as Bolivia and Peru this difference is significant and broader (in relative terms) among the most disadvantaged women. On the other hand in other countries this difference is narrow (Nicaragua) and in some cases broader (again, in relative terms) among higher educated women (Dominican Republic). In sum, for some countries in the region the difference between any method used and modern methods continues as a relevant indicator of “quality of protection” and for the same reason it is reasonable to consider the distance between the two as an important indicator of universal access.

With regards to condom use, at first glance condom use rates appear low given that in no country it reaches 10 percent of the methods used; however, on a global scale national averages infrequently reach more than 15 percent. The inequalities in usage that manifest themselves in this indicator are noteworthy, above all because condom use is marginal among the most disadvantaged women. A grave case is that of Haiti, the country that has the highest prevalence of HIV/AIDS in Latin America. This has clearly generated a protective response among the most advantaged groups (women in unions with a university education is the group with the highest percentage of users in table 11) which is very distant from the vulnerability of poor women that practically do not use the condom. Additionally, it is evident that the

percentages of condom usage have increased in all countries and within all socio-economic groups.

However, these figures underline three weaknesses of this indicator. The first is that the condom has a male bias that could underestimate its use when the question is posed to women. In this sense, making men more visible in SRH indicators (ideally, by including them in surveys on sexual and reproductive health) is key for a closer approximation to contraceptive coverage, a topic which shall be covered in the following section. The second is that condom use is still closely associated with protection from the spread of sexually-transmitted diseases (STDs) and HIV/AIDS, and as such, it is still a method that is used infrequently in stable relationships (irrespective of the security it offers). Because of this, the low prevalence of condom usage can be a result of the perception of a low risk of contracting STDs or of strict monogamy. The third weakness is that the condom can be used only on occasion, thus an indicator on “current usage” would also underestimate its importance.

As noted previously, sterilization has been one of the preferred methods of contraception in several countries for Latin America and the Caribbean. However, the accelerated spread of sterilization in the region during the 1980's and 1990's generated great controversy because of the concern that this method was applied without safeguarding the basic rights of the recipients of the surgery, particularly in the case of the poor. In some countries it was charged that the practice of sterilization was coercive to the point of being criminal in nature. After ICPD, sterilization without consideration of all the rights of a person stood in complete contradiction to this international agreement. Thus, the debate over the use of sterilization as a means of contraceptive now centres on the question of whether it is in fact a method only for the poor. As one example, sterilization use is particularly high in Northeastern Brazil, the poorest region of the country, where Caetano and Potter (2004) argue that the lack of supply of contraceptive methods, together with the high prevalence for deliveries by caesarean section and high levels of political clientelism has reinforced sterilization as the main contraceptive method in this region. However, the conclusion that can be drawn from the figures in table 11 is that a systematic trend towards higher use among the poor does not exist; in fact, in some countries the trend is in the opposite direction (i.e., higher sterilization rates among more educated women).

Regardless, it is difficult that the actual practice of sterilization be the object of controversy, since it is known that it is an effective and simple method of contraception. Due to the irreversibility of sterilization, however, the method should be applied with complete transparency and a woman's consent. Additionally, it is not

Table 11. Current contraceptive use by select method, by women's educational level, Latin America: circa 1990 and circa 2005

	No Formal Education				Primary Education				Secondary Education or Higher			
	Any method	Any modern method	Con-dom	Female sterilization	Any method	Any modern method	Con-dom	Female sterilization	Any method	Any modern method	Con-dom	Female sterilization
Bolivia 2003	33.6	17.8	0.7	4	55.1	30.2	1.9	5.6	69.5	46.4	7.7	8.5
Bolivia 1989	11.6	2.4	0	1	26.3	9.1	0	4.4	49.4	23.8	1	6.7
Brazil 1996	64.1	56.6	2.2	45.7	71.9	66.1	2.8	42.8	81.8	75	5.8	37.4
Brazil 1986 (2)	47.3	39.5	0.7	23.8	67.1	57.7	1.5	27.4	72.9	61.2	3	26
Colombia 2005	67.1	57.4	3.6	39.3	78.5	67.5	5	36.5	78.7	69.1	8.4	27.8
Colombia 1990	52.6	44	0.6	27	63.3	51.8	2.2	23.8	70.7	58.9	3.9	17.2
Dominican Republic 2007	69.8	68	0.3	54.8	75.2	73.3	1.3	56.1	71.2	67.4	2.6	39.3
Dominican Republic 1991	41.5	37.8	0	35.2	55.2	52.3	0.2	43.7	61.4	53.7	3	30.9
Guatemala 1998/99	19.4	16	0.7	11.4	38.4	31.3	2	17.3	68	53.6	5.7	23.7
Guatemala 1987 (3)	9.8	8.6	0	5.6	29.5	24.3	1.6	13.3	60	46.2	4.9	20.3
Haiti 2005/06	24.5	18.5	0.8	2.7	31.9	25.1	3.5	1.9	40.4	31.4	12.5	1.8
Haiti 1994/95	11.3	8.4	0.6	3.7	19.7	15.2	2.5	3	34.2	23.2	9.3	1.7
Nicaragua 2001	52.1	50.4	1.1	21.4	71.7	69.8	2.8	27.6	73	69.4	4.9	24.6
Nicaragua 1997/98	46.3	44.6	2.2	26	59.3	57.4	1.9	28.4	68.8	63.9	3.6	23.3
Peru 2000	50.2	33	0.8	11.8	63.5	43.8	2.8	13.8	74.9	57.1	8.1	11.4
Peru 1986	19.1	7.6	0.2	4.3	39.3	17.1	0.4	6.8	63.3	35.7	1.3	6.1

Source: Macro International Inc, 2009; MEASURE DHS STATcompiler. www.measuredhs.com.

always easy to collect information on whether sterilization was conducted with total consent and respect for human rights. While objective indicators that could be used do exist, such as the number of sterilizations performed at young ages or at a low completed fertility, these are only approximations that do not permit for definitive conclusions to be made on the desire for and transparency of the procedure.

In summary, unequal access to appropriate and efficient contraceptive methods continue to exist as a problem in Latin America and the Caribbean, and as such continues to be a challenge for public policy. The important advances that some countries have made in terms of the expansion of this coverage are indicative of the possibility to successfully face this challenge if political will exists, correct programs are applied, and financial resources are dedicated to the provision of contraceptives.

As was expected in the inequalities found with respect to adolescent fertility and the use of contraception, levels of unwanted fertility also are highly differentiated by socio-economic status. In fact, the unmet need for contraception among women without any formal schooling is normally twice or more of that among women with secondary schooling or higher (Table 12). As is the case of contraceptive use, Latin America and the Caribbean is the region with the most socio-economic inequality in the unmet need for contraception (United Nations, 2008). This inequality is present in both types of unmet need (for spacing births and for limiting births). Nevertheless, as the former represents the bulk of total demand, the rates of unmet need for contraception are closer to the rates of the unmet need for contraception to space births. One exception in the inequalities in rates of unmet need is the Dominican Republic, which according to the 2007 DHS in this country, all socio-economic groups are characterized by around a 15 percent rate of total unmet need. Compared to other countries in the region, such as Brazil and Colombia, this percentage is high, although more homogenous than other countries.

As other studies have pointed out (for example, Dixon-Mueller, and Germain, 2007), this indicator, which in principle is the most adequate for a rights-based framework and the most relevant for public policy, has several difficulties in measurement and interpretation. As such, the indicator on the unmet need for contraception requires other indicators to facilitate analysis. Regardless, the objective of reducing inequalities of this indicator between and within countries appears feasible (much more if the figures from the Dominican Republic are considered) and pertinent from a human rights standpoint.

Finally, in Latin America inequality in both reproductive health as well as maternal health are also expressed in prenatal care indicators (which in turn affects another MDG, that of reducing child mortality).

Table 12. Unmet need for contraception to space, to limit, and total, according to educational level, Latin America: circa 1990 and circa 2005 (in percentages)

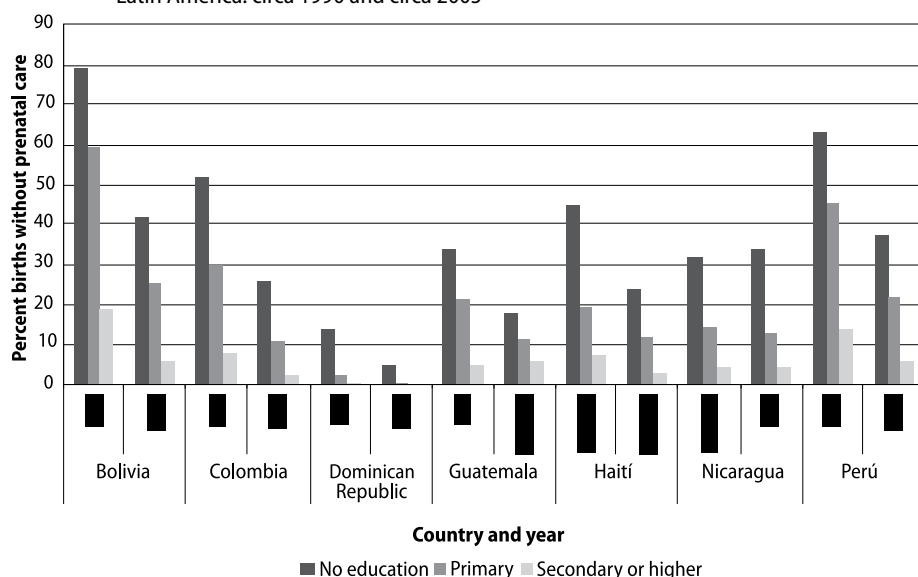
Country and survey year	Unmet need for spacing			Unmet need for limiting			Total unmet need		
	No formal education	Primary schooling	Secondary schooling or higher	No formal education	Primary schooling	Secondary schooling or higher	No formal education	Primary schooling	Secondary schooling or higher
Bolivia 2003	67.5	37.3	19.4	47.0	31.0	16.3	48.2	32.3	17.6
Bolivia 1994	66.7	41.7	19.0	56.6	36.9	16.5	57.5	37.9	17.4
Brazil 1996	35.8	24.6	9.5	17.6	8.4	4.2	19.1	11.0	5.5
Colombia 2005	27.8	15.8	10.5	13.4	5.8	3.8	15.0	7.4	5.8
Colombia 1990	27.7	21.4	13.5	23.4	15.3	7.8	23.9	16.8	10.1
Dominican Republic 2007	31.3	38.7	26.2	13.1	6.7	7.0	15.0	12.8	14.0
Dominican Republic 1991	82.8	60.7	25.2	35.8	16.2	9.2	41.5	25.0	15.8
Guatemala 1998/99	79.8	62.8	28.1	52.0	24.1	6.6	59.4	37.9	14.5
Guatemala 1995	85.7	65.2	20.9	57.8	30.5	8.1	67.0	43.7	12.8
Haiti 2005/06	71.7	63.3	45.3	58.4	50.1	44.8	61.1	55.9	45.1
Haiti 1994/95	87.0	77.8	55.9	76.6	65.1	51.4	79.6	70.3	54.2
Peru 2000	32.5	21.9	10.3	22.2	15.2	7.3	23.4	16.7	8.5
Peru 1992	45.5	32.6	14.6	39.2	22.7	11.8	39.7	24.5	12.8

Source: Macro International Inc, 2009, MEASURE DHS STATcompiler. www.measuredhs.com. Technical Consultation, 13-15 March 2007. Geneva.

As can be expected, socioeconomic differences in this indicator are highly visible (Figure 11), although they have decreased in the last years, in large part because mothers with secondary education or more already had high levels of antenatal care usage since the 1980's. Because of this, clearly in Latin America is appropriate to use a more stringent indicator, such as the percentage of births with four antenatal visits or more. However, even this indicator could even be a weak indicator in the region, where health care services are often of poor quality. An exceptional case in this sense is the Dominican Republic, where antenatal care (at least one visit) is nearly universal yet child health indicators are still far from satisfactory.

In sum, these affirmations do not imply that health system coverage of antenatal care is irrelevant; in point of fact the countries in Latin America and the Caribbean that have been most successful in the reduction of child and maternal mortality (Chile, Costa Rica y Cuba, none of which appear in table 8), are notable for their universal coverage of prenatal, birth and after birth care. However, in countries where coverage levels stand in contradiction to their levels of maternal and infant mortality, clearly other indicators are needed to evaluate that antenatal care visits are achieving their goal of ensuring the health of both mothers and their newborns.

Figure 11. Proportion of births with no prenatal care, according to educational level of the mother. Latin America: circa 1990 and circa 2005



Source: Macro International Inc, 2009. MEASURE DHS STATcompiler. <http://www.measuredhs.com>.

The Invisibility of Men in Reproductive Health Indicators

Historically in the field of demography, indicators of reproductive behaviours have been calculated solely for women. This invisibility of men in indicators of reproductive health have given the impression that men's reproductive health is not salient to academic or political inquiries in the field, or that they do not influence their female partner's reproductive health (or when they do, they act as a barrier to women's exercise of her reproductive rights). This view is neither substantiated nor correct within a human rights framework. According to the ICPD PoA (United Nations, 1994:45), implicit in the definition of reproductive health is, "the right of men *and* women to be informed and to have access to safe, effective, affordable and acceptable methods of family planning of their choice (*italics added*). Thus, the shift from family planning and reproductive outcomes to reproductive rights with ICPD and the new MDG target has brought men into the picture of universal access to reproductive health.

Most obviously studies and policies on reproductive health have concentrated on women because they produce the main outcome of interest—births. Rodríguez (2008) cites several additional reasons as to why men have traditionally not been included in the dialog on reproductive health. One is that measures of fertility are usually only calculated for women, mostly due to the fact that data sources, such as surveys or fertility modules in censuses, tend to only collect data on fertility patterns for women. Furthermore, modern contraceptive methods primarily have targeted women, and as a cause or result the responsibility for contraception use most often falls to the female partner. Lastly, the idea of "irresponsible fatherhood," leads to the conclusion that men are more apt or likely to evade their responsibility as fathers, thus playing little importance in the health of their children and the reproductive patterns of their female partners over their life course. Thus, this invisibility of men in reproductive health indicators reinforces the tradition that the burden of ensuring reproductive health lies with women, and that it should be taken as granted that men are absent from or detrimental to the reproductive health of their female partners.

Although men are increasingly included in studies of reproductive health, little is still known about men's sexual and reproductive health, particularly that of adolescent men, in Latin America and the Caribbean. Greene and Biddlecom (2000), however, argue that two demographic trends now more than ever necessitate the inclusion of men in studies of reproductive health. The first is the decreasing correspondence between marriage and childbearing, which has been referred to previously in this work. The second, to an extent a reflection of the first, is what the authors refer to as the "divergence of cumulative experience" between men and women's reproductive

histories. More complex marital and partnership trajectories are reflected in both men and women's reproductive patterns, in that families can be comprised of children from different parentage, such that a women's completed fertility history may or may not reflect that of her husband's or partner's. In addition to these two trends, part of the shift towards interest in men's reproductive health has been driven by the spread of HIV/AIDS and attempts to stem the spread of the disease. This has mainly centred around use of the condom and the number of sexual partners.

In addition to having their own reproductive health concerns and be clients of reproductive health services, men can influence women's reproductive health on a range of indicators. This has been more acknowledged than men's role as clients of reproductive health services, but usually under the assumption that men act as barriers to women's reproductive rights, particularly given that men on average report desires for larger families than do women. Without documenting the actual effect of men on women's contraceptive choices and reproductive health in general, these assumptions can be neither affirmed nor disputed, and much less incorporated into service provision.

Finally, given the interest in explaining and reducing adolescent fertility, data on the reproductive health of adolescent men would be particularly useful to explaining the recent rise in teenage motherhood and to informing programmatic efforts to address it. As such, an additional shortcoming of the four indicators on universal access to reproductive health previously unmentioned is the exclusion of men in the calculation of these indicators. The MDG target on ensuring universal access to reproductive health does not mention that this target is limited to women; however, this target does fall within the goal of improving maternal health, thus the gender bias is implicit. Notwithstanding, indicators of men's reproductive health not only meet the requirement of ensuring the universal access to reproductive health under the guidelines set out in the ICPD PoA, it also provides more information on the cultural context in which reproductive decisions are made. As the majority of this information presented above is based on census or reproductive health surveys (many of which include men in their samples), and in line with a human rights framework as well as the principles of the ICPD PoA, indicators of men's universal access to reproductive health—both as clients and as women's partners—should be included in monitoring and promotion.

Conclusion

Although Latin America and the Caribbean have made significant advances towards reaching the Millennium Development Goals (MDGs), many challenges

remain. The summary indicators established as measures of progress towards MDGs mask disparities between countries in the region. Additionally, within-country disparities pose further challenges with regards to the MDGs. Countries in Latin America and the Caribbean have maintained over time some of the highest rates of income inequality in the world (ECLAC, 2006a). In addition to high economic inequality, geographical disparities, the exclusion of indigenous and afro-descendent groups and gender inequality persist in Latin America and the Caribbean. Social exclusion and poor access to services precludes a large part of the population from participating in economic development, thus reinforcing the perpetuation of poverty across generations (ECLAC, 2006b).

Accordingly, there is a need to support systematic data collection for the formulation of results-based policies. This includes disaggregating existing indicators in order to better meet the need of specific populations—adolescents, men, migrants, and those with geographically bounded constraints to access reproductive health-care. The focus on age and subgroups in the measurement of reproductive health is consistent with a life course perspective that acknowledges that sexual and reproductive behaviours, needs, and intentions change according to where one is in the life course and the social context in which SRH is embedded. Our rationale in this paper has been not to include new indicators, but rather propose additional indicators that compliment the existing MDG indicators of access to reproductive health, in order to better approximate the goals.

The cultural context of fertility in Latin America and the Caribbean needs to be taken into account if universal access to reproductive health is to be achieved. Adolescent fertility, socio-economic differentials and the exclusion of men in reproductive health is not singular to the Latin American and Caribbean region. However, given the advances that have already been made in the region, these three areas must be addressed in order to achieve the MDG goal on universal access to reproductive health. Thus, focusing on these issues provide guidance for programmatic interventions in the coming years.

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Parte III

Brief Histories on Family Planning Programs and Legislations in Selected Latin American and Caribbean Countries

The context of family planning in Argentina¹

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Edith Alejandra Pantelides³

Argentina⁴ is a special case within Latin America when it comes to fertility levels and trends. Its fertility decline started early, at the beginning of the 20th century, and largely took place before the 1950s (Pantelides, 2006). By the early 1950s, the total fertility rate (TFR) had dropped to around 3.2 children per woman, less than half the value of 7 of the 1890s (Arretx, Mellafe and Somoza, 1977; Camisa, 1965). Since then, the decline has been gradual, with periods of stagnation and a small increase in the mid 1970s. For 2005-2010, the total fertility rate (TFR) is estimated at 2.4, practically identical to the mean for the Latin American region⁵. This average fertility, however, hides internal differences by geographical areas and by socio-economic status. As an example, the TFR of the city of Buenos Aires (1.4) is half that of the province of Formosa (2.8). Another characteristic of Argentine fertility is the relatively high adolescent fertility (64 children per 1,000 women, 15-19 years old) which is not in accordance with the general fertility level.

The Argentine fertility transition took place before hormonal contraceptives became available, and thus it is safe to assume that periodic abstinence, withdrawal and abortion were the means through which fertility was controlled by the population. The present fertility levels are achieved through mechanical and hormonal methods and by induced abortion. According to a 2004-2005 survey of women 10-49 years old, residing in urban areas⁶, 78% of sexually active women were using a contraceptive method at the time of interview, with 41% using condoms,

¹ This text is partially based on previous publications: Gogna, (2004); Moreno and Pantelides (2009).

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⁴ Together with Uruguay.

⁵ Estimated by CELADE, hypothetical mean. www.cepal.cl/celade, accessed September 11, 2009.

⁶ Urban areas of at least 5,000 inhabitants.

28% hormonal methods and 11% IUD (Pantelides, Binstock and Mario, 2007). A recent, indirect estimate places the annual number of induced abortions between 372,000 and 522,000 (Mario and Pantelides, 2009).

The slow population growth was the basis that justified pro-natalist policies through most of the history of Argentina (Llovet and Ramos, 1986). By 1974, a governmental decree prohibited all activities devoted to fertility control and established measures to restrict the sale of contraceptives. In 1977, the military dictatorship, by way of another decree, counted among the “national population objectives and policies” the elimination of all activities that could promote fertility control. These restrictions were lifted in 1986, three years after democracy was restored, but this did not lead to immediate action.

In 1985, Congress ratified the Convention on the Elimination of all Forms of Discrimination Against Women (CEDAW) which was later included in the new Constitution of 1994. Thus the country was making, for the first time in its history, a commitment to guarantee men and women counselling and access to contraceptives (article 10 of CEDAW). Following an unsuccessful attempt in the late 1990s, the Senate finally approved a bill in 2002 creating the National Program on Sexual Health and Responsible Procreation under the Ministry of Health (Law 25.673). The political timing of the approval of the law was unexpected since it took place under a transitional, non-elected government immersed in the deepest crisis in the country’s history and can be associated with the sudden coverage that the media gave to the increasing cases of malnutrition and infant mortality that brought the issue of maternal and child healthcare into the public arena as an issue that could no longer be ignored by government authorities. To some extent, the sanctioning of the national law constituted a turning point since it explicitly incorporates sexual and reproductive health into the State’s agenda and evidences of political will to implement actions in this field.

The National Program on Sexual Health and Responsible Procreation includes, amongst others, the provision for contraceptive information and services to the population without discrimination. Program goals include the reduction of maternal mortality and morbidity; the prevention of unwanted pregnancies; the promotion of adolescent sexual health; and the prevention and early detection and treatment of sexually transmitted diseases, HIV/aids and breast and cervical/uterine cancer. Regarding to contraception, it allows public and private hospitals and healthcare centers to provide “transitory, reversible and non-abortive contraceptive methods” on demand. However, articles 9 and 10 exempt religious institutions from this obligation if they object to the provision of contraceptive methods based on religious convictions.

The national law encouraged provinces that until then did not have reproductive health programs, like the Province of Buenos Aires⁷, to approve similar laws. Even though at present the majority of Argentine provinces have reproductive health laws and programs, contraception is not widely available to users of public health services due to budgetary, ideological and/or political factors (Gogna and Zamberlin, 2004).

The access of teenagers to the provision of contraceptive counseling and methods is still controversial, particularly in some poorer provinces in which the influence of the Catholic Church and other conservative forces is still powerful. In some provinces, for instance, Housewives Leagues and other right-wing NGOs have taken legal actions against reproductive health programs declaring them unconstitutional, arguing that providing contraceptives to minors violates parents' custody rights. So far, Provincial Law Courts have not accepted these claims based on the "superior interest of the child" (Rights of the Child Convention). In addition, research results indicate that healthcare managers and providers' are often not familiar with prevailing legislation (which guarantees adolescents sexual and reproductive rights) and/or the fact that public opinion supports sex education and the provision of contraception to adolescents. Social taboos, religious or ideological stances and the fear of healthcare providers of moral or legal sanctions are other factors that hinder primary prevention of unwanted teen pregnancies and HIV/aids among adolescents and young people (Capuccio and Schuffer, 2006, Gogna, 2008).

According to a recent survey of people living with HIV/aids, this population also has unmet contraceptive needs: 55% of women and 30% of men have had children after their HIV diagnosis and half of those pregnancies had been unintended (Pecheny and Manzelli, 2006).

Emergency contraception was banned by the Supreme Court in 2002, but since the specific product mentioned in the ban was no longer on sale, the norm had no practical effect. Moreover, due to media coverage, public opinion was widely informed of the existence of this method. Emergency contraception was banned again in 2008 by two Provincial Laws.

On the other hand, in 2006, the National Law of Surgical Contraception (Law 26130) widened the provision of contraceptive methods available to the population as tubal ligation and vasectomy, previously forbidden, were included for the very first time among legally authorized methods.

To sum up, equitable access to modern and safe contraception is, to some extent, a pending issue in Argentina. Removing material, institutional and ideological

⁷ Despite accounting for 40% of the country's population, the Province of Buenos Aires did not have an official reproductive health law or program until 2003.

obstacles not only requires political will and programmatic guidelines but also a favorable scenario, one in which recent political and programmatic achievements are consolidated, intensified and expanded.

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The context of family planning in Brazil

José Eustáquio Diniz Alves¹

For most of its history, Brazil has maintained a family and pro-natalist culture. For nearly 450 years, the promotion of high fertility was justified by virtue of the high mortality rates, the interests of the Portuguese colonizers, the expansion of territorial occupation and the growth of the domestic market.

The Civil Code of 1916 placed women, though recognized as citizens, on an unequal footing in society in comparison with men, and reinforced patriarchal family standards. During the period of the “New State” (1937-1945), under the government of Getúlio Vargas, certain legal provisions were adopted to sustain the larger family, by means of a variety of measures: Regulation and discouragement of female working; incremental income tax levied on single people or those that were married but childless; assistance with home ownership for those intending to marry, income supplements for married couples with children, income support for the heads of larger families whose income was below a certain level, and rules that granted privileges to married couples with children in terms of access to and promotion within public service (Fonseca, 2001).

Article 124 of the Brazilian Constitution of 1937 stated that: “The family, constituted by indissoluble marriage, comes under the special protection of the State. Larger families will be granted compensation in proportion to their responsibilities”. In this period, as well as the incentives to marry and have children, there was a piece of legislation that was clearly anti-birth control that forbade the use of contraceptive methods and abortion: a) Federal Decree 20291, of 1932 established that “Doctors are forbidden from indulging in any practice whose aim is to prevent conception or terminate gestation”; and b) in 1941, the Criminal Misdemeanor Law was approved

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in which article 20 prohibited: “the advertising of processes, substances or objects destined to cause abortion or prevent pregnancy” (Rocha, 1987).

The pro-natalist stance present in the national culture predominated up until the middle of the 1970s, although Brazil has never gone as far as formulating an explicit population policy (Fonseca-Sobrinho, 1993). The military dictatorship that came to power in 1964 adopted expansionist, demographic stances, as expounded in the Strategic Development program (1968-1970) and in the message delivered to Pope Paul VI in 1968, at the time of the encyclical *Humanae Vitae* (Canesqui 1985). In 1967, a Parliamentary Commission of Inquiry (CPI) was created to investigate accusations over the existence of “mass sterilizations” of women in the Amazon region. The CPI did not come to any concrete conclusion, but it helped to create a climate of hostility against family planning. Brazil also adopted contrary positions to the limitation of population growth at the Conference on the Human Environment in Stockholm in 1972 and in preparatory meetings for the World Population Conference in 1974, held in Geneva (Merrick and Graham, 1981).

Officially, the Brazilian government had no action plan to meet the demand for methods of fertility control and birth spacing. In the absence of a policy guaranteeing access to contraceptive methods, the market (drugstores, health system and private institutions) started to fill this “void”. In 1965, in order to fill the void created by the absence of public policies on reproductive health, the Family Well-Being Civil Society, known as BEMFAM, was created, which began offering family planning services. In 1967, BEMFAM joined the International Planned Parenthood Federation (IPPF). Other non-governmental, non-profit making organizations operating in the country included the Research Center for Integrated Mother and Child Health Care (CPAIMEC), set up in 1975 and the Brazilian Association of Family Planning Agencies (ABEPF), established in 1981. However, the combined efforts of these entities only covered a limited portion of domestic demand for fertility regulation.

It was only after the World Population Conference in Bucharest in 1974 that the Brazilian government started to consider family planning as a right of individuals and couples. The Mother & Child Health Program, launched by the Ministry of Health in 1977, was the first action by the State in terms of the provision of family planning and included the prevention of high risk pregnancies. However, this program was criticized for its limited focus and the narrow conception of thinking about women’s health only in its maternal scope.

With the advent of political openness and the process of democratization at the beginning of the 1980s, the family planning issue started to be argued within a context of comprehensive women’s health. The result was the launch of the Program for Women’s Comprehensive Health Care (PAISM), launched in 1983, which viewed

the issue of women's health in a comprehensive fashion, and did not limit itself exclusively to the issues of conception and contraception. The PAISM was proposed to care for women's health during the life cycle, and not just during pregnancy and breastfeeding, paying attention to all aspects of their health, including cancer prevention, gynecological care, family planning and infertility treatment, pre-natal care, as well as during and after childbirth, diagnosis and treatment of Sexually Transmitted Diseases (STDs), as well as occupational and mental illness. In the environment of the early 1980s, the notion of "comprehensive women's health" was the concept employed to articulate those aspects related to biological and social reproduction, within the boundaries of citizenship (Corrêa and Ávila, 2003).

In 1983, another CPI was created to investigate problems linked with population growth, in the context of the 1981-1983 economic crises. The general consensus was that there should be no mandatory fertility control in the country and that the availability of contraceptive methods should be considered a right for all citizens, it being the duty of the State to provide them through the public health system. Accordingly, it was based on the founding concepts of the PAISM that the Brazilian government drafted its official position at the International Population Conference in México in 1984.

This type of approach was important in steering the debates over the drafting of the Federal Constitution of the New Republic. At the end of the Constitutional Convention debates, the approved wording of § 7 of article 226 of the 1988 Brazilian Constitution read as follows:

"Founded on the principles of the dignity of the human being and responsible parenthood, family planning is a free decision of the couple, with the State being responsible for providing educational and scientific resources for the exercise of this right, it being forbidden for official or private institutions to practice any kind of coercion".

The issues of abortion and sterilization were not included in the text of the constitution. Tubal ligation and male sterilization were forbidden in Brazil by article 16 of decree 20931 of 1931 and by article 29, paragraph 2.III of the Brazilian Penal Code of 1940, which states that any serious bodily injury resulting in the permanent disability of a limb, sense or bodily function is deemed to be a crime. However, the prevalence of sterilization in Brazil prompted the installation of another Parliamentary Commission of Inquiry (CPI), in 1991, to investigate the causes of "mass sterilization" of Brazilian women and if there existed a greater probability of sterilization of black women. The work of the CPI showed that there was no racial discrimination – since white women were more likely to be sterilized – but it did indicate a need for the regulation of the practice of both male and female sterilization (Cavenaghi, 1997).

Based on this CPI, the Brazilian Parliament began to debate legislation on the topic, and in 1996, the National Congress approved Law 9263, which governs § 7 of article 226 of the Federal Constitution, which deals with family planning in Brazil. This law incorporates much of what had been previously discussed within the country about family planning in terms of the rights of women, men and couples, being part of a package of global and integral healthcare actions and it also prohibits any coercive measures. In the 1990s, the first benchmark services were created to provided care in cases of abortion as set out in the 1940 Penal Code (pregnancy resulting from rape or when there is a risk of death to the woman).

From the previous, it can be seen that in the 1980s and 1990s, Brazil succeeded in implementing legislation governing the practice of family planning. This is not to say that the country adopted a population policy based on birth control. The Brazilian State continued to reaffirm a position that was in conflict with the demographic goals, but there was recognition that the population was demanding a means of making its own reproductive decisions. In fact, the family planning law in Brazil relied upon the transfer of the Reproductive Rights concept approved at the International Conference on Population and Development (ICPD) in Cairo in 1994, and it was sanctioned at a time when fertility transition was already well underway.

In fact, the demand for contraceptive methods had been growing gradually larger since the 1960s when the average number of children per woman in Brazil began to fall. In around 40 years, the Total Fertility Rate (TFR) that had been over 6 children per woman, reached the replacement level (2.1 children) in 2005 and is now in the range of 1.8 to 1.9 children per woman, according to the National Demographic and Health Survey (PNDS-2006) and the National Household Survey (PNAD-2008), respectively. Nevertheless, the national average rides socio-economic differences in fertility rates that exist in the country. According to Berquó and Cavenaghi (2004), women with up to 3 years of schooling and with a per capita household income of up to $\frac{1}{4}$ of the minimum salary in 2000, demonstrated fertility rates above 5 children per woman, while those having 9 years or more education and a per capita household income greater than $\frac{1}{2}$ minimum salary were already presenting fertility below replacement levels. Amongst adolescents and youngsters between 15 and 19 years of age, the fertility differentials in 2007 varied more than tenfold, according to the socio-demographic indicators employed (Cavenaghi, and Alves, 2009).

Recognizing that the poorer segments of population had less access to methods of fertility regulation, the Ministry of Health launched on February 11, 1999, Ordinance No. 048 in order to establish operating standards and monitoring mechanisms for implementation of family planning activities at the Unified Health System for the provision of services and methods. Since then, the Federal Government had

committed to a growing supply of contraceptive methods and their availability to states and municipalities. The large municipalities received directly the methods and the small ones received them throughout states' distribution.

Following the same line of action, the next Federal Government, through the Ministry of Health and the Special Secretariat for Policies for Women (SPM) launched in 2005 the National Policy on Sexual and Reproductive Rights, whose objectives were: a) To broaden the provision of reversible birth-control methods by the public health system (SUS) – the Ministry of Health is responsible for buying 100% of contraceptive methods for SUS users (up until then, the Ministry was responsible for supplying between 30% and 40% of contraceptives – the remaining 60% to 70% falling under the responsibility of state and municipal health secretaries); b) To broaden access to surgical sterilization on the SUS, by increasing the number of health services with accreditation for performing tubal ligation and vasectomies, in every state of Brazil; c) To introduce human assisted reproduction on the SUS (Brazil, 2005 and 2006).

Faced mainly with distribution problems, in 2007, the Federal Government launched its “National Family Planning Policy”, whose goal is to provide free contraception to men and women of reproductive age and it also establishes that the purchase of contraceptives shall be made available in the Popular Pharmacy network at very low cost (UNFPA, 2008).

Although the “National Policy on Sexual and Reproductive Rights” (2005) and the “National Family Planning Policy” (2007) have a coherent rights-based concept, there are still difficulties involved in universal access to reproductive health in Brazil, as established in goal 5B of the Millennium Development Goals (MDG). These policies still present problems in meeting the demand for contraceptive methods, particularly in the poorer strata of society and communities that are situated far from the large conurbations. The resolution of logistical problems of making adequate quantities of means of fertility regulation available continues to be an essential task in reducing unwanted or unplanned pregnancies and in liberating the practice of sexuality from possible embarrassments of untimely reproduction.

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The context of family planning in Colombia

Rubby Marcela Martinez Bejarano¹

Official family planning policies in Colombia are relatively recent; however its use privately and individually dates from pre-Hispanic times. In historical accounts of autochthonous, Colombian cultures, birth control is referred to as being crucial as a mechanism for survival, which is why, in these ethnic societies, sex is considered to be taboo, a sinful act. It has been reported that when the Spaniards arrived, the density of the population on the high plains of Cundiboya, where today's capital city is located, was not very high (approximately 400,000), because the need to maintain a natural balance which would permit the subsistence of the community, gave rise to a variety of different practices for spacing births.

Subsequently, the history of medicine and health practices is limited to reporting advances in terms of care afforded to pregnant women, to the birth and to gynecological pathologies, but family planning and birth control have, like all sexuality-related topics, been taboo for many decades.

In 1960, the birth control pill called Enevid was the first to be sold in the country, but at that time there was no public family planning policy or private facilities openly offering these services. In the same decade, the Colombian Association of Medical Faculties (ASCOFAME), began to conduct the first population surveys and studies, including one study in which worrying figures were shown concerning hospital discharges on account of abortion.

The first initiative to introduce family planning programs came from Dr. Fernando Tamayo Ogliastri based at his private practice, who in 1965 founded the Colombian Family Welfare Association, PROFAMILIA. This institution, affiliated to the International Planned Parenthood Federation since 1967, ended up covering, for many years, up to 70% of the demand for family planning services in the country.

The first population policies were decreed four years later, around 1969-1970, when from the government of Carlos Lleras Restrepo, a set of proposals was

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prescribed for policies related to fertility levels and the growth of the population linked to the promotion of responsible parenthood and the health of mother and child, prompted by the high maternal and infant mortality recorded at the time.

Subsequently, presidential development plans from 1974 to 1990 have gradually promoted the broadening of family planning coverage and a reduction in maternal and infant mortality, but with no clearly defined State family planning policy. Only in 1984 were norms issued that would govern family planning actions, specifying the responsibility of the State to provide birth control services, including sterilization. At that time, 80% of health services were provided by the State, 10% by the Institute of Social Security that cared for affiliated workers, by means of employee and employer contributions and the remaining 10% that corresponded to supplementary healthcare plans and special rules for those having greater financial means. Nevertheless, at that point in time, it was PROFAMILIA that continued to be the institution leading the way with surveys, training, education and birth control services.

In December 1993, law 100 was proclaimed which intended to achieve universal healthcare coverage for the country under the principles of comprehensiveness, decentralization, compulsoriness, solidarity, efficiency and quality. It was intended that these services should achieve this coverage in a gradual fashion, until they reached 100% of the population, to be met through the contributory regime (self-financed by employee-employer contributions) or the subsidized regime (subsidized by contributions of fiscal origin and parafiscal contributions). This goal has still not been achieved some 16 years later.

A personal and individual healthcare benefits plan has been established which includes interventions, activities, procedures and inputs (including drugs), for promotion, prevention, treatment and rehabilitation, including sexual and reproductive health. These benefit plans differ according to whether the regime is contributory or subsidized. The subsidized regime for the poorer population includes far fewer services. For the contributory regime, the benefits plan has, since its inception, included family planning education and advice, oral contraceptives (primarily macrodose), injections, the IUD and sterilization. Subsequently, non-oral hormones and emergency birth control were included. As for the subsidized regime, the same services are included with the exception of male sterilization which was only brought in 2007.

The Sexual and Reproductive Health Policy introduced by the Ministry of Social Protection 2002 - 2006 defines the following as its priority topics: Sexually transmitted diseases including HIV/aids, family violence, cancer of the uterine cervix, maternity care, sexual and reproductive health in adolescents and family planning.

Since 2003, the country has signed up to the celebration of the world day for unplanned teen pregnancy and is promoting the creation of amicable health services for this age group, the former due to the rise in the number of pregnancies in the teen population over the last decade. In a separate field of activity, the UNFPA and the Ministry of National Education have implemented the National Education Program for sexuality and citizenship building, which includes the promotion of sexual and reproductive rights and the prevention of teen pregnancy.

During the last 40 years, Colombia has recorded a marked change in its fertility rates, moving from an average of 5.5 children per woman to 2 children per woman. However, these averages mask big differences. Despite the efforts made by PROFAMILIA to get out to the more remote urban areas and rural areas, and in spite of the government's efforts through national policies, law 100 and public health plans, illegal abortion practiced in insalubrious conditions continues to imperil women's health and inequality continues to be prominent. Demographic and health surveys conducted in 1986 and at intervals of five years since 1990, show that there continues to be a great inequality in the country's hinterland in terms of access to services and rates of unsatisfied demand.

Unsatisfied demand for Family Planning services is higher amongst the poorest women, women in rural areas and those who have a lower standard of education. This situation is reflected in the General Fertility Rates reported in both the surveys and the census figures. According to the reconciled census data for 2005, the average General Fertility Rate (per 1,000 women) for the country, dropped from 112.6 to 81.4 between 1996 and 2006, however this same indicator was 92/1,000 women in 1996 and 62.30/1,000 in Bogotá, below the national average. Very similar figures were seen for the departments with the highest health coverage and for the largest urban populations. In the poorest and least educated areas of the country, the numbers are very different, such as in the region of Amazonia and Chocó where in 2006, general fertility rates of 147.3 and 144.5 were recorded, respectively.

A brief account of the history of family planning in Costa Rica¹

María Carranza²

Costa Rica has been a focus of demographic attention for at least two reasons: its startling rate of natural population growth, which peaked at 3.8% during 1955 and 1960 and which was considered one of the highest in the world³; and the astounding decline in the total fertility rate, from 7.3 to 3.7 children, that took place between 1960 and 1975, and which has rarely been recorded elsewhere (Gómez, 1968: 3; Reynolds, 1973: 312; Rosero-Bixby, 1979: 4). This sharp reduction in the fertility rate, which occurred in all strata of the population, albeit with varying intensity and chronology⁴, has been attributed in large measure to the use of modern contraceptive methods (Rosero-Bixby, 1979:13; 1986: 70-71). Their provision by state health institutions played a fundamental role in accelerating the phenomenon and spreading it from urban and educated women (among whom it started) to rural and less educated women (Rosero-Bixby, 1986: 70-71).

Before the 1960s, provision of contraceptive advice and methods in the country appears to have been very much restricted to private physicians and their well-off clientele, mostly in the capital city (Gómez, Raabe & Bermúdez, 1971: 2). Dr. Arturo Cabezas, of protestant affiliation, seems to have been the first to introduce hormonal contraception amongst his private clientele. He recalled a visit, in 1957, by a manufacturer's representative from a Mexican company promoting pills made out of estrogen. At his request, the manufacturer's representative supplied him with a flask containing several thousand pills, which Dr. Cabezas put in little envelopes and offered to his clients (Carranza, 2003).

¹ I want to thank Rita Maxera and Luis Rosero-Bixby for their valuable comments.

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³ This high rate of population growth was the product of a relatively low death rate and a high birth rate.

⁴ Urban middle and upper class women were the ones who started the fertility decline and the ones who account for most of the decline in the fertility rate recorded up to the mid 1960s. From the mid 1960s onwards, rural and poor urban women became the main protagonists of the downward trend in the fertility rate (Rosero-Bixby, 1986:67).

Efforts designed to reach women outside private medical practices unfolded in almost parallel form in two different settings: the capital city and Turrialba, a small rural town 53 km from San José. Starting in 1962, the Evangelical Costa Rican Alliance (Alianza Evangélica Costarricense) organized the Good Will Caravans (Caravanas de Buena Voluntad) and started offering contraceptive advice and vasectomies, among other medical services, to distant rural areas (La Nación, 1964)⁵. A year later, in Turrialba, at the headquarters of the Inter-American Institute of Agricultural Sciences (Instituto Interamericano de Ciencias Agrícolas, hereafter referred to as the IICA), Henry Tschinkel, a forestry engineer and professor at the IICA, concerned about the negative effects of population growth on the environment, started a family planning movement which would have an impact, not just locally but also at a national level. Tschinkel introduced Turrialban doctors and women to the Zipper ring and also supplied the recently launched contraceptive pill (Anovlar). Doctors working for the Ministry of Health and social security health system at Turrialba became involved with the family planning movement and contraceptive advice and methods started to be provided at the local health dispensary and hospital (Carranza, forthcoming a). In 1966, the engineer Alberto González, an IICA student and one of the main activists in the family planning movement in Turrialba, together with medical doctors who had been offering contraception in the capital city, founded the Costa Rican Demographic Association (ADC). The ADC started to provide contraceptive services on a national scale. During the first year of operation, most contraceptives were provided through the private practices of doctors and nurses. However, some of the services were located in public health facilities, with the “acquiescence” of the government (Asociación Demográfica Costarricense, 1967:14). The ADC was responsible for transforming population growth and family planning into subjects that could be addressed publicly, creating the necessary conditions that would legitimize the legal provision of contraceptives in state institutions.

Although Costa Rica has never had a formal population policy, there was, from the late sixties onwards, a concerted effort on the part of government and private institutions aimed at providing the population with access to contraception and reducing population growth⁶. In 1967, the Office of Population was created at the Ministry of Health⁷ and in 1968, the same year in which Pope Paul VI released the encyclical *Humanae Vitae*, and under the presidential mandate of José Joaquín Trejos Fernández, a conservative and catholic president, contraceptives started to be formally offered at the institution’s health dispensaries. By 1970, practically all

⁵ Also interviews conducted with Dr. Francisco Chavarría and Dr. Arturo Cabezas, 2009.

⁶ Efforts to provide contraceptive advice and current methods to men have been sporadic.

⁷ This office was created by Executive Decree No. 3 on April 7, 1967.

such dispensaries had incorporated the provision of contraceptives among their services (Carvajal, 1977: 123). In 1968, the Center for Social and Population Studies – CESPO (Centro de Estudios Sociales y de Población) was created at the University of Costa Rica with the aim of training health personnel in the provision of family planning. The Caja Costarricense de Seguro Social (CCSS), a socialized system of medicine created in the late forties and rapidly expanding its coverage at the time, incorporated family planning in its consultations in 1970⁸. Also in 1970, the Ministry of Education incorporated family planning as a component of Sex Education in the student curricula. There were also private organizations working on the subject: The Center for Family Orientation (Centro de Orientación Familiar), belonging to the Episcopal Church, and the Center for Family Integration (Centro de Integración Familiar), part of the Family Christian Movement. All these institutions participated in what would become known as the National Family Planning and Sex Education Program and were also members of the National Committee on Population (Comité Nacional de Población-CONAPO), an ad hoc committee created in 1968 with the aim of coordinating all family planning efforts (Carvajal, 1977: 117; Odio et al, 1973: 3). Contraceptives offered by the Ministry of Health and the CCSS were initially provided by the ADC, and were mostly donated by the International Planned Parenthood Federation (Reynolds & Herrera, 1972: 17-18). The United States Agency for International Development and the United Nations Fund for Population Activities were also important sources of financial assistance to the family planning activities (Rosero-Bixby, 1981; Colin, 1976:33-35). Nonetheless, at present, the CCSS finances family planning activities, including contraceptives, from its own budget.

The provision of contraceptives by the state was a primary factor in the propagation of contraceptive use. The percentage of the population served by state health institutions increased significantly in Costa Rica during the seventies and so did contraceptive use (Miranda, 1994: 124, table 6; Carvajal, 1977: 123, table 2). The first reproductive survey conducted in the metropolitan area in 1964 indicated that 50.5% of women aged 20-50, in a relationship, were practicing contraception. The methods most widely used included condoms, withdrawal and rhythm (Gómez, 1968: 70, 76, tables 63, 68). The first reproductive survey in rural areas was conducted in 1969. Although it showed that overall contraceptive prevalence was lower than that of the capital city five years earlier (22.1%), the proportion of users of modern contraceptives (mostly the pill) was higher than it had been in urban San José in 1964 (Gómez, Raabe and Bermúdez, 1971). By 1978, “modern” contraceptive use was predominant and evenly spread among women living in rural and urban areas, as

⁸ CCSS, Directive Board, session 3999, August 8, 1969.

well as among those with diverse grades of formal schooling (Rosero-Bixby, 1979: 24, table 7).

In 1999, the year of the last reproductive survey, 92% of women between 15 and 49 years old (married or cohabiting) in Costa Rica reported having made use of modern contraceptive methods at some point in their lives, and 80% were, at the time of the survey, actively using them. The most widely used contraceptive methods were the contraceptive pill (26%), female sterilization (21%) and the condom (11%). Around 72% of modern contraceptive methods, especially among rural and less well-educated women, were provided by the state (Chen Mok et al, 2001: 45, 55, 60, tables 6, and 12). With regard to female sterilization, it is important to point out that 95% of these surgeries had been performed at state institutions, this in spite of the fact that until 1999, when Presidential Decree 27913-S finally authorized the practice of this surgery for contraceptive purposes, the use of sterilization was permitted only for "therapeutic" use. Only those women whose health could be put at risk by pregnancy or childbirth were supposed to have access to this surgery (Carranza, 2004).

As evidenced by the aforementioned indicators, access to contraceptives is widespread in Costa Rica. This has had an impact on the average size of the Costa Rican family, which nowadays comprises just two children; this is the second lowest fertility rate in Latin America (INEC & CCP, 2008; Population Reference Bureau, 2007)⁹. Nonetheless, there are serious concerns regarding the quality of contraceptive advice and the range of contraceptives offered. The last reproductive survey (1999) indicated that unplanned and mistimed pregnancies in the country stood at 41.4% (Chen Mok et al, 2001: 74, table 1). Although this is a complex issue attributable to diverse causes, the quality of contraceptive advice available to women has been frequently shown to be one of the contributing factors. Family planning consultations at the CCSS, nowadays the sole provider of public health services in the country, last only a few minutes and women are not assigned to a single doctor but get to consult with the doctor on duty. Doctors do not have time to properly advise their patients and there is no room for women to air their doubts; there is little familiarity between patient and doctor. In most cases, it is impossible for the woman to revisit the doctor if problems arise with the prescribed contraceptive (Carranza, 2003). There is also a significant difference between the variety of contraceptives available at drugstores and those offered by the state. By way of example, fourth generation pills are not available at the CCSS, nor is emergency contraception with levonorgestrel, whose provision is being debated at the Legislative Assembly (Carranza, forthcoming b).

⁹Data for 2008.

The female condom has only recently been made available, and only to workers in the sex industry.

There are also important concerns regarding access to contraception by specific groups of people, including adolescents. Although it is declining, pregnancy among adolescents is still considerably high in Costa Rica; the fertility rate among women 15-19 years old was 71 per thousand in 2008 (INEC & CCP, 2008). In spite of this, the CCSS does not have a clear policy for the provision of contraceptive services to them, the understanding being that contraceptive advice and methods should be restricted to adolescents aged 15 years and older. This is based on the provisions of the Family Law and the Penal Code according to which people older than 15 have full capacity to consent in sexual matters¹⁰. In practice, provision of contraceptives to adolescents is limited and varies significantly between health centers, often depending on the individual attitude of the professional in charge of providing the services.

Finally, it is interesting to point out the effects that a law, intended to grant children their right to a legal father, appears to have had on the fertility rate. The Responsible Paternity Law (Ley de Paternidad Responsable, # 8101), proclaimed in April 2001 and which ascribes legal paternity to the newborn on the basis of the information provided by its mother¹¹, has not just substantially diminished the number of children born without a declared father (from 31% in 2000 to just 8% in 2002), but also appears to have contributed to an unexpected reduction of about 10% in the number of births in 2002, in comparison with 2000 (INEC & CCP 2009). Ongoing studies appear to indicate that this huge fall in the number of births can only be explained by the aforementioned law. The certainty of acquiring legal responsibility and having to provide for engendered offspring has probably prompted many men to take contraceptive measures to avoid getting women pregnant¹².

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¹⁰ Information provided by Dr. Marco Díaz, Coordinator of the Adolescents Program at the CCSS. The Costa Rican Family Code declares 15 years the minimum age for marriage (article 14). The Costa Rican Penal Code considers sexual relations with a person younger than 15 a crime, if taking advantage of age (article 159).

¹¹ The burden of proof remains with the declared father. It is up to him to prove with a DNA test (offered for free by the government) that the child is not his, instead of the woman having to prove it is.

¹² Information obtained from personal communication provided by Luis Rosero-Bixby.

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Family planning and reproductive and sexual health in Cuba

Marisol Alfonso de Armas¹

The Cuban population began its demographic transition in the early twentieth century, earlier than most countries in Latin America. Within this process, the fall in fertility that began during the 30s, continued until the late fifties when the process of social change started to become established, which turned into the Cuban Revolution. Therefore, according to Hernandez (1986), the increase in the crude birth rate, occurred as a result of several factors associated with the new conditions. First, many Cuban doctors decided to leave the country, a situation that created a lack of healthcare personnel, causing increased maternal mortality associated with abortion, in risky conditions; as a consequence, the government implemented greater control over the practice of abortion, which began spreading illegally. Secondly, the start of the U.S. embargo prevented the purchase of contraceptives, resulting in an increase in unwanted pregnancies. Moreover, the increase in the number of births was also a consequence of the introduction of a popular revolution, as well as the immediate implementation of a set of measures that benefited people throughout the country.

This process went on for approximately five years and the situation immediately reverted to the downward trend that had been observed before the Revolution. From this point, the trend was characterized by a visible homogenization throughout the country, which accelerated the pace of decline in fertility rate levels. Since 1978, the total fertility rate has been below replacement level. The total fertility rate in 2008 was 1.59 children per woman. With regard to age structure, Cuban fertility began a process of rejuvenation in the 1960s that has lasted until recently and now there are signs of a slight increase in the average age at which women are giving birth, showing a possible fertility postponement. Nevertheless, Cuban fertility is still

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characterized by relatively high adolescent fertility (49.2 children per 1000 women, 15-19 years old in 2008).

Regarding family planning services, Cuba is a country which, over the last fifty years, has made great efforts to protect its population, especially women, providing family planning and reproductive health. With the objective of contextualizing the program implemented in this period, some elements of historical nature are presented in this brief account of Cuban family planning context.

The contextualization is started from issues related to abortion. In the mid-60s, Cuban government began to implement a policy liberation of abortions performed in health institutions under the appropriate medical conditions, establishing free access and imposing penalties for situations where abortions are performed outside of these conditions (UNICEF, CEDEM, ONE, MINSAP, UNFPA, 1995). In this way, abortion was institutionalized in order to reduce maternal mortality and to guarantee women the right to make decisions about their own reproduction (Gran, 2005). In 1979, a new Penal Code was drafted describing situations in which the practice of abortion constitutes a crime: 1) for profit; 2) when performed outside of the health institutions; 3) performed by non-specialized personnel; 4) when performed without the consent of the pregnant woman. Similarly, the Government established that all women, regardless of marital status and older than 18 years old, have the right to the abortion service up until the tenth week of the pregnancy, after prior evaluation by gynecological and obstetric experts. If the woman is younger than 18 years old, the parents' consent is mandatory. These procedures are still valid today, with the addition of the performance of more specific laboratory tests to show the women's state of health.

In 1968 a national healthcare program for women was implemented, which included a set of actions such as control over all pregnant women, the encouragement to birth delivery in the appropriate institutions and the creation of nursing homes in rural and remote areas. In addition, a better training of medical personnel was encouraged and the program guaranteed global medical care coverage (García, 1996). In 1968 also, the menstrual regulation service was established². This procedure can be performed up to four weeks of amenorrhea by non specific causes, and when the woman or couples have a suspicion of a pregnancy that could end in abortion. It is not necessary to have the pregnancy confirmed when the woman is over 18 years old (MINSAP, 2003). Nevertheless, this method is not free from risks. For this reason, since the practice began in Cuba, it has received the attention of health authorities,

² This procedure involves applying suction to the contents of the uterine cavity, the original aim of which was not the termination of pregnancy.

which have gradually increased control over its use. It is estimated that 2/3 of the menstrual regulations relate to a termination of the pregnancy.

The legalization of abortion occurred in 1979, when its practice could be recorded, and since the legalization, the incidence of this practice has remained at high levels. The practice is characterized by a social tolerance and the population puts its trust in the security offered by health system to perform it. The records for 2008 show that there were 60.7 abortions per 100 live births during the year. Another indicator, the abortion rate, showed that 23.0 abortions per 1,000 women aged 12 and 49 years old occurred in that year. Nonetheless, according to Rodríguez (2006), in the last few years, a decline has been noted in the abortion rate. However, at the same time, menstrual regulation has continued its tendency to rise, perhaps compensating for the decline in abortion as an alternative form of terminating unwanted pregnancies. It is important to emphasize, that this practice is not abortive in nature and that its use is not restricted to the termination of pregnancy. Nevertheless, in Cuba, there is a recognition that the majority of women that turn to this practice want to discontinue pregnancy (Gran, 2005).

Another important feature of Cuban family planning is related to modern contraception. In the 1960's, when the second contraceptive revolution took place with the spread of modern contraceptive methods, such as the pill, the IUD, and female sterilization that are more effective, Cuba was already a country with low fertility levels in contrast to other countries in the Latin-American region. Accordingly, the modern contraceptive methods enabled the homogenization of fertility levels across the whole country. Currently there is a family planning network based, essentially, on the primary healthcare with global coverage and free universal access. Although these services have been offered since the 1970s, the program, along with its proposal for implementation has been growing and it was approved at the beginnings of the 1990s.

Some years after the Revolution, the supply of the contraceptive methods that were most commonly used by the population was reestablished and extended at some point. In conjunction with this, other methods were gradually introduced (Álvarez, 1982). During the period from the 1960s to the mid-1980s, the use of a wide range of contraceptive methods was scarce and this practice was most limited to intrauterine devices such as the Zipper Ring, the LippesLoop and the Copper-T device. Since the 1980's, contraceptive practice in Cuba is considered to have been high (Gran, 2005). More importantly, over recent years, family planning services in the country have begun to offer a wider range of contraceptive methods. Nonetheless, the domestic production of contraceptives is limited and the internal market is the main source of supply of contraceptive methods or the raw material

for its manufacture. Moreover, this is a complex and expensive commercial activity concentrated in the North-American market. In this sense, the activity becomes more complicated due to the economic embargo to which Cuba has been submitted.

In 2008, data from the Public Health Ministry show that 77.6% of women between 12 and 49 years old were using some form of contraception. Contrasting this with other countries, we may observe that in Western Europe, the percentage of contraceptive use is between 70% and 80%, and Spain recorded the greatest coverage, with 81%.

The most widely used methods is the IUD, accounting for 52% of Cuban. In second place comes female sterilization, used by 19.8% of Cuban women, while the condom comes third in the list of methods used, at 12.6%. The pill (10.4%) is the fourth most used method for women in Cuba. There is occasionally some variance in the use of these methods, with the condom sometimes coming in third place. Emergency contraception is not very widely used or known by the Cuban population. In recent years, this method has been included in family planning consultations at the primary health level through international cooperation with UNFPA and other international NGOs. In these actions, the Cuban Society for Family Development (Sociedad Cubana para el Desarrollo de la Familia - SOCUDEF) has played an important role.

It is important to mention that the basic conception of family planning was transformed in the 1990s, with the incorporation of the reproductive health concept. Given this notion, a broader family planning and health services strategy has been introduced, associated with sexuality and reproduction. To sum up, although Cuba has never had a formal population policy, there has been from the middle of the twentieth century, a concerted effort on the part of the government, aimed at providing the population with access to contraception and safe health services. These measures caused a decline in fertility across the whole country and ensured global access to family planning services and favorable levels of population health. Since the nineties, these services have been extended using a more holistic approach, as part of the implementation of sexual health and reproductive services.

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Haiti: between rhetoric and reality

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In spite of the fact that the demographic explosion continues to be widely discussed in Haitian society, the current process of demographic transition is characterized by a decline in fertility subsequent to the decline in mortality. The total fertility rate has dropped by a third, falling from 6.3 children per woman to 4 between 1987 and 2005; a belated transition in the context of the countries of Latin America and the Caribbean, but a transition which is accelerating. Estimate of fertility rate for the five-year period between 2005 and 2010 is 3.5 children per woman.

As a product of this transition it has been observed an increased relative proportion of young people between 15 and 24 years of age, which has reached around 22% (2005) of the total population. Accordingly, a demographic dividend has been generated which provides a unique opportunity for the public authorities to contribute to economic growth, based on the social and economic investment directed towards the young. Rapid processes of urbanization as well as an improvement in access to education for the younger generation are modifying society's reproductive behavior.

The prevalence of modern contraceptive methods was a mere 13% in the middle of the 1990s and had climbed to 22% by the start of this century for all women in reproductive ages, and just one in four women in union (24.8%) by 2005-2006 was using contraception. The unmet needs of family planning have fallen slightly, moving from around 40% in 2000 to around 37% by 2005-06. In the latest DHS survey, 60% of women in union who were currently not using modern contraceptive method have indicated their inclination to use one. One half of these women wish to use hormonal injections.

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It is important to point out that the reasons for not using contraception are mainly due to the method itself with 55% due to fear of side effects and health problems. Other reasons are: 27% are fertility-related reasons, or not being fertile, 1% for being sterilized or not wanting more children or not having sexual relations, among other reasons, and 17% are against the use either due to religious convictions or some other type of cultural barrier.

According to the latest DHS (EMMUS IV, 2005-2006) female sterilization was 1.5% and 0.2% men were also sterilized. For people in union these figures were 2.1% and 0.2% respectively for women and for men. The hormonal methods were the most commonly used (14.3%) in 2005-06. The modern contraceptive methods are distributed by the Government in hospitals and health centers as well as on specialized NGOs. However, many centers do not have available the full range of modern methods to offer, and according to the latest DHS only 21% of the methods are provided by the public sector.

Abortion is prohibited in the country. In the DHS II (1994/1995) was included a question to try to identify the practice of abortion. Among women sexually active, 78.6% reported never having had an abortion, 2.9% have had an abortion at least once, 15% had a false pregnancy and 5.9% had a stillbirth. According to DHS III (EMMUS III, 2000) figures, abortion increase to 7%. In both surveys, these figures are assumed to be underestimated since the practice of abortion is illegal in the country. Unfortunately, no questions were included in the latest DHS (2005-06) regarding this subject. Efforts are being made to include again abortion in the next DHS, which will be carried out in 2010.

What really attracts attention is that, faced with a discussion on the “demographic explosion”, its corollary would be the development of massive, authoritarian family planning programs. The reality is somewhat different and evidences a discussion that is not pertinent since there is no demographic explosion. Currently, the rate of growth is 1.6%, with availability and access to modern methods, within the framework of a perspective of rights, being exceptionally slow.

The influence on the country of President George Bush’s 8 years in power, which is very important in all aspects of life in Haiti but particularly on modern methods and the promotion of abstinence, has meant that the use and availability of modern methods has been degraded. Changes in the international context have had their impact in the case of Haiti; the repositioning of family planning (2006) has been thrown into the discussion but has not been followed up in practice given that it continued with the traditional view of the hallmark of the Bush era. It is not by chance that, within this framework, one half of all women have not heard about the family planning message through the media, particularly the radio which is the main medium for the Haitian people.

It should be pointed out that, following on from the change of president in the USA, USAID and UNFPA have managed to reach an agreement and, starting in 2008, have started to work together in acquiring birth control products and making them generally available.

Everything pointed so far may lead one to believe that the *objective of universal access to reproductive health is going to be very difficult to achieve by 2015*. Data from the next DHS survey (2010) will tell us if availability, access and use of modern family planning methods have or have not significantly improved.

Discussion about establishing new norms caused the Ministry of Public Health and Population to draft for discussion a new document, in which civil society did not take any part, which had been discussed at the beginning of September 2009. Even if advances are being seen in respect of what was already known some years before, the document concerning family planning norms, which has been in discussion, still bears the stamp of the pre- Cairo vision. In other words, the program's philosophy makes no reference to the International Conference of Population and Development (1994) or to its Program of Action, instruments signed and ratified by Haitian Government. The rights perspective is missing from the document. The Program should claim back its relationship with and contribution to the welfare of the population and especially show it can contribute to Haitian families having the number of children that they wish for.

The Haitian experience shows the mismatch between the discussion of reality and availability, access and use of modern contraceptive methods of family planning. There is still much to accomplish for both Haitian women and men, and also by the domestic and international players who are working in this area.

Summarized account of family planning in Honduras

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Honduras is a country covering an area of 112,492 kilometers and, as of 2009, has an estimated population of 7.4 million inhabitants (51% female) who, for the most part, live in conditions of poverty and exclusion, and over half of its people consist of individuals who have at most the age of 25. The total fertility rate stands at 3.5 children per woman (Villanueva, 1997), most of which are conceived at an early age in the reproductive life span and this has led to Honduras having one of the highest rates of adolescent fertility in Latin America, which guide us to reflect about the role that family planning has played in the country in the last few decades in terms of the reproductive dynamic. The following paragraphs will address this issue.

The history of family planning (FP) in Honduras developed around the Honduran Family Planning Association (ASHOMPLAFA), which was founded in 1962, though it began to operate in 1963 (Figueroa, 2005a: 19). The initiatives articulated the concerns that existed in the country at this time on account of the high rates of fertility and infant and maternal mortality². From this point on, the demographic transition phenomena has gradually materialized by means of using contraceptive method, amongst other factors, which has provided a decrease in the births rates, infant mortality rates, and maternal mortality.

In 1966, the Ministry of Public Health, today the Secretary of Public Health, obtained funding from the International Development Agency to undertake a family planning program with primary emphasis on rural areas. The Maternal and

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² Honduras has displayed high rates of fertility and growth (3.1-2.3), which have had repercussions on the accelerated growth in the population which has multiplied sevenfold over 68 years. In the 1960s, Honduran women had an average of 7.5 children, and from the 1970s onwards, there has been a tendency toward a reduction in this number. In 2006, the number of deaths of children under 1 year old and under 5 years old, respectively, for every 1,000 children born, was 23 and 30. Maternal mortality stood at 108 for every 100,000 births (Villanueva, 1997:37; Secretaría de Salud, 2008:29).

Infant Health Program emerged in 1968, putting the emphasis on family planning education by way of healthcare provided by maternal and infant clinics located in various regions of the country. One of which was the Family Planning clinic where the use of the pill, IUD and vaginal methods were preferred. This program was canceled in 1975 due to lack of funding and FP care was thus limited to certain health centers and sub centers (Dirección General de Estadísticas y Censos DGECC 1972: 10; Ministerio de Salud Pública, Dirección General de Estadísticas y Censos, ASHONPLAFA, 1981).

Also in 1975, ASHOMPLAFA created the Community Distribution Program in Tegucigalpa and San Pedro Sula, and by 1987 there were already more than 1,200 urban and rural distribution points. The distributors work from home or small sales points, where pamphlets relating to the subject are to be found, as well as contraceptive pills, condoms, etc. In addition, the Social Marketing Program was founded with the aim of increasing awareness and the use of contraceptive methods through authorized commercial establishments. An important moment came when surgical sterilization emerged in Honduras, performed since 1977 on the initiative of ASHOMPLAFA in which public and private hospitals received donations for carrying out its operations, and subsequently, in 1983, the Ministry of Public Health began a Family Planning Program as a component of its Maternal and Infant Health division (Ministerio de Salud Pública, Dirección General de Estadísticas y Censos, ASHONPLAFA, 1981; ASHONPLAFA, 1987).

In Honduras, from the mid 1960s up until the end of the 1970s, knowledge and use of contraceptive methods manifests itself in an intrepid, but nonetheless effective fashion. In 1981, according to ENPUA³ women's knowledge of birth control methods was 91% for the pill, 81% for sterilization, 71% for injection, 68% for IUD, and condoms at 36%. Even with a high degree of knowledge on contraceptive methods, their prevalence of use was very low, with over 70% of women not using any form of contraception. The reasons for this were that they did not like them or they were afraid to use family planning methods or they thought that they had insufficient information. It is interesting to note that around the end of the 1970s, beginning of the 1980s, for older women coming from past generations where FP was not popular and for youngsters in the 15-24 age range, use and knowledge was less than those women of intermediate age, and it is in this age group where levels of fertility started to show a reducing trend, and later on spread to other groups.

At the present time, there is a broad knowledge of contraceptive methods, the most widely known and used being injections, oral contraceptives and sterilization,

³ National Survey on Contraceptive Planning and Use.

although there is also a significant upturn in the use of condoms, in part due to the promotions and campaigns transmitted by the media. In Honduras, the changes and growth in birth control practices are reflected in the desire of couples and also individuals to have smaller families and to be able to choose the moment at which to have their children. In our region, the above is often consistent with the intimate correlation between the generationality of poverty and high fertility rates (Secretaría de Salud , INE y Macro International, 2006: 71,88 ; Secretaría de Salud, 2006, diapositiva 23).

The prevalence in the use of birth control, primarily the modern methods, has been rising. For example, in 1981, at the country level, among women in union aged 15 and 44 years old, only 26.9% made use of a birth control method, 47% in urban areas and 16% in rural areas. Within periods of 6 and 15 years respectively, the prevalence of use of birth control methods was 40% and 50% for the country. Natural methods have not experienced a significant emergence in the 15 years-period. From the beginning of the 1980s, there was an increase in use of 6%, and at the present time, there is a decreasing trend in the use of these types of method (3% of women in a relationship), caused by modern birth control methods which have cornered the best part of users in the country (USAID,2004: 7).

The use of modern contraceptive methods amongst women of childbearing age, in union, rose from 47% in 1991 to 50% in 1996 and 65% by 2005. This increase was more significant in rural zones due to the direction of Family Planning strategies to this area, where there was an increase of 24% between 1991 and 2005, in other words from 36% to 60%, while in urban areas, the use rose from 61% to 70% over the same period of time (Ibid: 4).

Despite the fact that in recent years in Honduras the prevalence rate in the use of contraceptives has grown and has reached a relatively balanced mix of methods, work still has to be done to ensure that all Hondurans are able to obtain and use birth control methods according to their desire to limit or space out future births. There is still a high index of unmet need for family planning, particularly amongst women who are extremely poor (23%) and poor (11%). The lowest prevalence rate of contraception corresponds to what was previously known as health region number 5, currently comprising the departments of Lempira, Ocotepeque and Copán, an area of the country with high levels of poverty. The hurdles faced by women with limited resources relate to the lack of trained public sector providers and to the frequent shortages of contraceptive inputs (Ibid: 9).

In recent years, the method mix has changed somewhat in Honduras. In spite of the fact that sterilization is a widely-used method, the use of injections and IUDs during the last decade has grown to a large degree on all socio-economic levels.

The use of the IUD has grown from 11% in 1991 to 15.5% by 2001. A significant reduction in the use of traditional methods has also occurred, but these methods are still used by poor women. In terms of the other methods, we should mention that the condom use has grown, while vasectomies are few and barely representative. The least known forms of birth control are Norplant, Billings and the vaginal method (Ibídem; Siow, 2009).

Recently, conservative organizations have presented some stiff opposition, and have even lobbied the country's legislative body, opposing emergency contraception known as the "morning after pill", which is the reason why, from the beginning of this year, they stopped being sold in the marketplace. However, the controversy continues and important social groups have demonstrated their disgust that this product is being sold again in authorized locations (El Heraldo, 2009, Secretaría de Salud, 1999:55).

In Honduras, as in other countries, it is difficult to comment on and analyze in quantitative terms the issue of abortion, which is not regarded as a contraceptive method but which is often used to prevent the birth of a child. As it is illegal in the country, there are no figures showing how many abortions are clandestinely carried out and therefore they remain unknown. The ones that are recorded are of those women admitted to mainly public medical centers as a result of complications in pregnancy, there still being a doubt, in the majority of cases, as to whether the fertility process was intentionally brought to an end (Figueroa, 2005b:32).

In general, the use of contraceptives amongst women in union has increased in Honduras over recent decades, and the reduction in the gap in the use of contraceptives, between the richer and poorer segments of the population, should also be emphasized, confirming that between 1991 and 2001 an increase was seen of 16% in the use of contraceptives amongst Honduran women. In the lowest socio-economic quintile, the prevalence of contraceptives reached 43% in 2001 (from 23% in 1991). Although the inequity in the use of contraceptives between the poorest and richest Hondurans has diminished over time, the gap continues to be considerable, the difference in 2001 being 31% (Stupp, Daniels, and Ruiz, 2007).

In Honduras, the main Family Planning service providers are the Department of Health (40% of the total supply of contraceptives), ASHONPLAFA (29% of the total), drugstores (12%), and private/commercial providers (10%) amongst others. The NGO sector is also a significant FP service provider in Honduras. Over the last decade, the provision of healthcare services by the Honduran Institute of Social Security has diminished since family planning is not included in the benefits package. Up until 1990, more than 90% of contraceptives provided by these three institutions

came from international donations (USAID, UNFPA and IPPF⁴). USAID has been the main Family Planning donor in Honduras and from 1999 to 2003; it provided 83% of these donations. From 2001, the Department of Health and ASHONPLAFA began to purchase their own contraceptives (USAID,2004: 8,9).

In Honduras, the legal framework mainly caters for sexual and reproductive health which we may find in general terms in the Republic's Constitution, Law against Domestic Violence, the Family Code and the Childhood and Adolescence Code. At the end of the 20th century, the Department of Health drafted its National Policies on Sexual and Reproductive Health, focusing on the family, women and adolescents. In 1999, the same Department drafted the National Health Policy in which a significant element dealt with Family Planning (Figueroa, 2005b:33).

It should be emphasized that the pillar for the national process of drafting Family Planning norms in Honduras began with the creation of the National Family Planning Program in 1983, which combined all reproductive health actions through the implementation of the reproductive/obstetric risk, family planning and gender approach. This program in particular included strategies devoted to increasing couples' access to family planning services. In 1999, this was converted into the National Program for Comprehensive Women's Healthcare.

The legal structure in Honduras, in terms of access to family planning services, is weak. The existing law that cites rights of reproduction is the 2003 Law of Equal Opportunities for Women. Article 19 of this law mentions a woman's right to exercise her reproductive rights, decide on the number of children she wishes to have along with her partner and to space the pregnancies, but it makes no mention of the government's responsibility for provision of services. The government has focused on reducing maternal mortality and the transmission of HIV/AIDS as the two key health priorities. As any reduction in maternal mortality has a close relationship with the availability of FP services, the family planning program, although not explicitly quoted, falls within this area of the program (Secretaría de Salud , INE y Macro International. 2006: 3).

The National Strategy for the Reduction in Maternal and Infant Mortality, developed by the Department of Health, identifies Family Planning as the most important element in reducing maternal and infant deaths. As part of the fulfillment of this strategy, the Honduran government proposed to develop in 2005 the National Strategy for the Assured Availability of Contraceptives Inputs (DAIA) and within the remit of its Committee are included the areas of financial sustainability, acquisition, logistics (information, distribution, storage,

⁴ IPPF stands for International Planned Parenthood Federation.

delivery) and a political commitment that will guarantee contraceptive inputs and methods in the hoped for quantity, opportunity and quality (Secretaría de Salud, 2008:42).

In the 2006-2010 National Health Policy, it was proposed that the 2008-2015 program for the Accelerated Reduction of Maternal and Child Mortality (RAMNI) should be drawn up, containing as a valuable element a methodological family planning strategy concentrating on the adequate operation of services, information, coverage, supervision, evaluation, logistics and training (Ibid:43).

We may conclude that, despite having obtained positive results which have been even more impressive in the last decade, in terms of Family Planning in Honduras, there is still some ground to make up, particularly in terms of specific public policies, knowledge, availability and access to modern contraceptive methods, especially in the poorer, more remote and excluded regions of the country.

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Contraception policies in Panama: advances and setbacks

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In Panama, the government's concerns over fertility regulation and contraception go back to the start of the 1940s, to a social and political backdrop in which women accomplished important social demands as well as the recognition of basic civil rights³, and the problems of the population's health started to occupy a more important position on the government's agenda. Accordingly, the first actions involving female contraception policy, undertaken by the State, particularly those relating to the voluntary sterilization of women, were not directly determined by the existence of a population policy with the explicit aims of regulating births and reducing demographic growth⁴. The growth of the population, inasmuch as it "did not disturb" sustained economic performance, was not a priority public policy issue. In this regard, it should be mentioned that the issue of family planning was initially dealt with by the Panamanian Family Planning Association (APLAFA), a private entity formed around the middle of the 1960s.

The challenges to fertility and contraception policies in Panama are still considerable, particularly the latter. Even though numerous efforts may be observed by the Panamanian government to implement and defend sexual and reproductive rights, of those that have obtained clear progress with the systematic reduction in fertility, there are still obstacles and limitations in terms of their execution. The advances in this area come up against players with conflicting interests. Policies concentrating on the reduction in maternal mortality and those relating to family

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³ In Panama, women's suffrage was included for the first time in the Political Constitution of 1941, though with certain restrictions and limitations in the instances of participation. Law 98 of July 5 brought it into effect. Subsequently, the Political Constitution of 1946 put women on an equal footing with men in terms of their rights as citizens.

⁴ In addition, in the 1960s "practically none of the most important national sectors deemed it necessary for the rate of population growth to diminish", given the low average density of the population and the growth of the economy (Technical Committee for Population, 1994).

planning and contraceptive methods in the country have been backed by various international entities, such as the UN Population Fund and the Pan American Health Organization as well as civil and non-governmental organizations. Nevertheless, other factors which have had a negative impact on the creation of more efficient state actions include the “traditional” values of the social structures, the patriarchal culture, and the ideology promoted by the Catholic Church.

In this context, demographic changes and their consequences for the structure of the population have created new and perhaps more complex challenges. Population growth still constitutes a significant risk to the health system. Despite the fall in fertility, the higher proportion of women of childbearing age is an important factor in the demographic dynamic, with direct consequences for the orientation of the health services. The decline in fertility should be reflected in a relative reduction in the demand for maternal and infant services, however, due to the “demographic inertia” effect and the increased number of women of childbearing ages that were born in the previous conditions of high fertility, this decline in the absolute number of births is lagging behind the drop in fertility.

The history of birth regulation and family planning policies in the country may be regarded as relatively recent. It was only in the 1970s that it assumed greater importance in the programs of economic and social development. Though it is true that laws relating to fertility regulation can be traced back to the beginning of the 1940s, essentially under Law No. 48 of May 13, 1941 (Gaceta Oficial, 1941), through which voluntary surgical sterilization was permitted across the whole country, and which in 1965, through the APLAFA (as previously mentioned, a privately run organization), family planning was introduced to the country, it was not until the end of the decade that public policies began to present a demographic approach, in which the topic received specific content and objectives. Initiatives like the Health and Population Act, signed by APLAFA and a number of government areas including the Ministry of Labor, Social Security and Public Health, and the Ministry of Health, had a sizeable effect at a national level, such as with the broadening of family planning, preventive health actions directed at women, as well as the development of the first initiatives involving sex education and specialized adolescent health care.

The antecedents of the government’s demographic policies on fertility, contraception and family planning is intertwined with the development of the APLAFA, thereby representing the harmonization of government and non-government sectors which is characteristic of the country in this area. Even though, from the 1970s onwards, the Ministry of Health began to provide the population with family planning services, the work begun by APLAFA was no less important. Dedicated to turning itself into the main organization responsible for providing the

services of health and sex and reproductive education in the country, derived decisive actions to enable this goals to be met, including the foundation of the Centro Modelo Maraón, the first family planning clinic in the country, founded in 1966; the creation of the First Comprehensive Health Care Center for Adolescents in 1979; and the forming of the National Committee for Sexual and Reproductive Health in 1999. In 1981, APLAFA became the first non-government entity to be included in the Technical Committee for Population (COTEPO), under the coordination of the Ministry of Planning and Economic Policy (today's Ministry of Economy and Finance). In the same decade, it became part of the First National Population and Development Program, dedicated to educating the population, it led the shaping of the First Panamanian Parliamentary Group on Population and Development, and also took part in International Conferences such as Population and Development in Mexico in 1984 and ten years later the International Population and Development Conference, which was held in Cairo (APLAFA, 2009).

In Panama, as in the rest of Latin America, demographic behavior has changed for the benefit of society, showing a fall in mortality, a decline in fertility and an increased life expectancy for its people. The Panamanian population reached maximum growth in the period between 1960 and 1965, with an average annual rate of growth of 3 percent; between 1965 and 1970 the growth was still 2.9 percent, and dropped to 2.2 between 1980 and 1985, and maintained a sustained decline, falling to a growth of just 1.7 percent in 2005. The country is going through the advanced stages of demographic transition in which it is demonstrating a relatively low mortality and a strong, sustained reduction in fertility. In the period between 1950 and 1955, it had a gross mortality rate of 13.3 deaths per thousand inhabitants, which fell to a rate of 5.1 deaths per thousand inhabitants between 2000 and 2005. In the same period, the birth rate fell significantly. The gross birth rate went from 39.9 to 22.7 births per thousand inhabitants. Fertility declined steadily, moving from an overall rate of 5.7 to 2.7 children per woman of childbearing age over these five decades. The reduction in the total fertility rate in the country is considerable, showing a drop of more than 50 per cent in the last 60 years, representing one of the lowest fertility rates in Central America. However, there exists in the country a high demographic diversity, a high level of fertility in the poor, rural and native communities and a lower level of education. Life expectancy rose in this period from 55.3 to 74.7 years, 72.3 for men and 77.3 for women (Celade, 2004).

The Panamanian government's concerns over the demographic context and the need to push ahead with a comprehensive population policy was reflected in the creation, in 1969, of the National Demographic Policy Commission (CONAPODE), restructured five years later with the capacity to "formulate and adopt decisions

related to the size, growth, structure and geographical distribution of the population which are best adapted to the national objectives”, the integration of COTEPO, at the beginning of the 1980s and its institutionalization in 1987, and the addition of Article 108 to the Political Constitution of the Republic in 1983, in which it was determined that “It is a duty of the State to establish a population policy that caters to the needs of economic and social development in the country”; as well as other actions directed towards the definitive integration of demographic elements in the economic and social development plans at different levels, with direct effects on the State’s regulation of fertility and contraception, directed towards specific programs and groups such as women and adolescents (COTEPO, 1994).

In the country, decisions on the number and spacing of children, as well as the voluntary sterilization of women, was officially a free decision as far back as the first half of the twentieth century. The aforementioned Law No. 48 of May 13, 1941, even though it permitted sterilization throughout the country, subjects it to certain conditions that this law so determines such as the authorization of a Sterilization Council, formed amongst others by the director of the Public Health Section, the president of the National Medical Council, the Nation’s attorney-general and a deputy appointed by the National Assembly. Nevertheless, the scenario in which sexual and reproductive rights in Panama are exercised has serious contradictions. The numbers relating to fertility, awareness and use of contraceptives, teen pregnancy, etc., are extremely inconsistent across the different social segments and regions of the country. Even though it is clear that there has been a significant drop in fertility over the last few decades, a product of cultural, social and economic change, there has also been an evidently varied picture within the different geographic, social and economic groupings.

Certainly in Panama, contraception initiatives are in appreciable, albeit somewhat limited. To a certain degree, the country is experiencing a situation of stagnation and recession, when seen in the light of achievements realized in other countries in the region, in terms of the regulatory framework and the recognition of sexual and reproductive rights. The Comprehensive Health Program for Women, created by the Ministry of Health in 2007, presents major goals concerning this subject, especially in its section on family planning, among which are stated people’s choice to elect their reproductive preferences, as well as to promote the dissemination of reproductive rights and informed demand on reproductive health and family planning, ensuring access without discrimination to quality care and establish technical and administrative procedures for care in family planning services, among others (MINSA, 2007). Similarly, Executive decree No. 2 of February 9, 1999, through which the creation of the National Commission on Sexual and Reproductive

Health was established, represented one of the most important achievements and developments on the topic in recent times, with actions such as the proposal of Bill of Law 442 and the drafting of the National Sexual and Reproductive Health Plan which would bring partial improvements in areas such as the reproductive health of adolescents and young people and safe maternity, becoming one of the entities with the heaviest involvement in the subject. Nevertheless, the rejection of Bill of Law 442, which in effect sought to introduce “measures to establish and protect human rights in terms of sexuality and reproductive health and promote education, information and sexual and reproductive health care”, marks a significant setback in the history of such policies in the country.

One of the key groups towards which contraception and fertility policies should be directed is that of adolescents and young people. The figures for teen pregnancies have increased rather than diminished, not to mention the fact that they are occurring at increasingly earlier ages (MEDUCA, 2009). Programs driven by diverse bodies such as the National Youth Council, the UN Population Fund (UNFPA), APLAFA, amongst other government and non-government organizations, as well as the Panamanian Public Youth Policy, promoted by the Ministry of Youth, Women, Children and Families, whose aim is to “Guarantee the right to comprehensive health and an equitable, quality sexual and reproductive health for young boys and girls, that contributes to their human development”, seek to achieve goals such as involvement of mothers and fathers in the sexual and reproductive health programs, access to information in this area for all youngsters, no matter how vulnerable they may or may not be, specialized teenage sex health care, amongst others. In the same way, Law 29 of June 13, 2002, “Education and Health of the Pregnant Teen” seeks to “guarantee the pregnant teenager the right to receive comprehensive health care, their right to remain in the education system and legal protection in cases where it may be required”.

The most recent discussions of note, in respect of sexual and reproductive rights, took place at the end of 2008 with the previously mentioned proposal of Law 442, on the part of the Ministry of Health, whose central objective is to “establish the overall regulatory bases for the recognition, guarantee, protection and care of sexual and reproductive health, with an emphasis on the all-round formation of the individual, while respecting human dignity, their rights, culture and the values that characterize it, in compliance with the Political Constitution, the laws of the Republic of Panama and International Agreements” and its counterpart, Bill No. 380, “Through which the fortification of the family institution in the education system is promoted as a regenerating feature of society and through which sundry other provisions are prescribed”, a product of the civil initiative that seeks to create a Program of affective

sex education built around marriage and family, developed by the Ministry of Education and various members of society, including religious associations.

In conclusion, government policies and actions with regard to fertility and female contraception are varied, with some notable results, particularly in the reduction of maternal and infant mortality, the dissemination and accessibility of information on family planning and the use of contraceptive methods, with programs especially directed towards adolescents, the native population and to some highly marginalized groups. The emphasis of recent actions has accorded special treatment to the problems of adolescent pregnancy and the planning and development of suitable sex education which, in keeping with the outlined goals, still provides only partial results for which reason greater efforts and intervention by the State, non-government organizations and civil society are required. The lack of comprehensive sex education from an early age, the inadequate supply of free or low-cost contraceptive methods, in environments where elements of a strongly rooted traditional culture predominate, have represented a serious obstacle to the better development of family planning which, on the one hand has translated into head-on opposition to the practice of abortion and its potential legalization, and on the other hand, to the resistance from males to the use of contraceptive methods. These are just some of the socio-cultural factors that bear witness to the setbacks in this area.

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Paraguay: progress and challenges of family planning as a universal right

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The practice of family planning (FP) in the country dates back several decades. The Ministry of Public Health and Social Welfare (MSPBS) has exercised leadership, initially under the label of Family Protection and as a part of its Maternal and Infant Health Program, though by the end of the 1960s, a private institution entitled the Paraguayan Center for Population Studies (CEPEP), subsequently a member of the International Planned Parenthood Federation (IPPF), was slowly taking off in this area. The Ministry's family planning policy and program, however, was not continuous throughout all these years given that, on the instructions of Stroessner's government, the provision of modern methods was suspended during the period between 1982 and 1987, approximately. In the interim, the Ministry promoted FP using natural means though, little by little, it began again to implement its services using modern contraception methods.

In the middle of the twentieth century, the country's total fertility rate (TFR) was still quite high (6.5 children per woman on average) and the debates of demographic explosion was being held in the world and in the region. In spite of this, the Paraguayan government of the time did not consider that the high fertility rates constituted a problem, since it was assumed that Paraguay was a sparsely populated country (approximately 1.4 million inhabitants). In this context, family planning was justified as a maternal and infant health policy, within the realm of the prevention of risky pregnancies and reduction in maternal mortality and of the product of conception and the birth deliveries. Consequently, when Family Planning activities resumed in 1988, these continued to form part of the National Maternal and Infant Healthcare Program.

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From then until the present day, international agencies such as the UNFPA and the PAHO/WHO have backed the Ministry in its efforts to bolster and implement the program, so much so that two years ago the institution began to absorb in its annual budget the cost of Sexual and Reproductive Health and Family Planning inputs as clear proof of its institutionalization. These advances form part of the recent history of reproductive health in an environment of democratic openness, institutional changes and the strong emergence of civil society organizations, particularly those of women, which have been fighting for the acknowledgment and respect of their rights. In this new framework, family planning gradually came to be an element of the National Program for Sexual and Reproductive Health, as part of the Health Policies of this Ministry and as a result of the Program of Action from the Cairo Conference and the Beijing Platform of Action which are currently in force.

In 1992, the National Constitution included article 61 “Family Planning and Maternal and Infant health”, in which it is stated that “The State recognizes the right of individuals to freely and responsibly decide the number and frequency of the births of their children, as well as to receive, in association with the respective agencies, education, scientific instruction and the appropriate services in this regard. Special reproductive health and mother/infant health plans will be established for the poorer segments of the population”. In 1993, the MSPBS implemented the project “Support for Reproductive Health and Family Planning” through which it continued the actions it had begun, one of the objectives being the development of the 1st National Plan for Reproductive Health and Family Planning together with the National Council for Reproductive Health and Family Planning, which today is fully in operation².

When attempting to carry out a quantitative analysis or account of what has taken place in the area of family planning in the country, we are confronted with the limitation that the sources of information represent, which only relate to the female population of childbearing age (15 to 44 years old), when it is known that, in the exercise of reproductive rights, both men and women are involved. Even so, it is possible to present a description of the main indicators, the result of a review of the National Demographic and Sexual and Reproductive Health Surveys (ENDSSR) available between 1987 and 2008.

Regarding to the prevalence of the use of contraceptive methods, understood to be the percentage of women who are married or in a relationship that at the time of the survey were using some form of contraceptive (modern or traditional, except for medicinal herbs on account of the absence of proven effectiveness), a growth of

² Paraguay. MSPBS. 1997. National Reproductive Health Plan, 1997-2001.

2% per year was observed, between 1987 and the most recent data of 2008. During the same period, the TFR has been gradually falling, with a notable drop particularly in the last 10 years. Even though there are various factors influencing this reduction (social, cultural and even economic aspects), in the case of Paraguay, the proximate determinant that has had the major impact in this reduction in fertility has been the significant increase in the use of contraceptives, since the prevalence of use demonstrates an inverse ratio to the total fertility rate.

In fact, in 1987, with an average TFR of 5.4 children per woman, a prevalence of contraceptive use of 37.6% was recorded, whereas almost a decade later, in 1995, the TFR had fallen to an average of 4.3 children per woman and prevalence had risen to 50.7% (5 out of every 10 women), and in 2008 getting to the prevalence of 8 out of every 10 women (79.4%) and an average TFR that has tumbled to 2.5 children per woman. However, the information presented at the national level conceals some differentials, both in terms of contraceptive prevalence and TFR levels, according to some specific women's characteristics, such as, the level of education, the language normally spoken at home, and socio-economic level. In this aspect, the highest fertility levels and, in turn, the lowest levels of contraceptive prevalence are recorded in the most vulnerable groups of women with no education or with only 5 years of completed schooling, speakers of the Guaraní language, and those of the lowest socio-economic level.

In this regard, it should be emphasized that the knowledge of modern contraceptive methods is practically universal today. The three main methods such as the male condom, the pill and the contraceptive injection, are known by more than 95% of women living in Paraguay, in both urban and rural areas. Even so, it is interesting to note that two principal causes that lead women between 15 and 44 years of age to use contraceptive methods are, on the one hand, the decision to space out the births (52% of women, ENDSSR 2008) and, on the other hand, the desire not to have children (a cause cited by 29.9% of women, ENDSSR 2008). Amongst other reasons, the rest of the women mention protection and postponing birth.

Throughout the years of family planning practices in the country, qualitative changes have taken place, which are varied in nature, such as women taking the decision to use contraception and their choice of modern methods. Whilst two decades ago, 6 out of every 10 women did not use any method (62.4% of women in a relationship), at the present time (2008), this number has fallen to just 2 out of every 10 women (20.6% of women in a relationship). Another change of note has been the source used for obtaining modern contraceptive methods. Historically, the drugstores were the main source of supply, but in 2008, thanks to the support

and cooperation of international entities as well as domestic initiatives, the public sector has succeeded in establishing itself as the main provider of modern methods for women aged 15 and 44 years in union. Presently, this sector is responsible for providing contraceptives to 42.3% of those women.

Despite everything said so far, and the attempt by both the government and non-governmental entities to universalize the right to family planning, there is still an unsatisfied demand in the country. The vulnerable group of women who are non-users, at risk of an unwanted pregnancy and needing modern methods, is shaped by those women who are sexually active who are neither pregnant nor presently amenorrheic and who do not wish to have any more children, but who are not using any contraceptive method, as well as those who are using a traditional method (Billings, rhythm, withdrawal). A total of 12.1% of all women are part of the abovementioned group, a figure which rises to 12.9% for women who are married or in a relationship (ENDSSR 2008).

An important indicator for properly evaluating the dissemination, knowledge and family planning services is the use of methods in the first sexual encounter. In this country, sexual relations most often take place prior to marriage or consensual union, therefore there is a tendency for women between 15 and 24 years old to use contraceptive methods at the time of the first premarital sexual encounter, with the obvious exception of those women whose first experience was rape. The first time that information on this indicator was collected was in 1987, when it was revealed that 12.2% of adolescent and young adult females had used some method for their first sexual experience. The next measurement recorded in 1995 and showed an increase of 11% (23.5%) compared to 1987. A similar increase was found in a much shorter period of time, between 1995 and 1998, when the proportion of women that had used some form of contraception at the time of their first premarital sexual experience was 33.2%. Between 1998 and 2004, the proportion rose to 57.6% and has risen by a further 20% by 2008, reaching a figure of 71.3% of adolescent or young women using some form of contraception.

In brief, the advancement of family planning in Paraguay has been developed and supported in an institutional context comprising various actions which have been creating and playing important roles in the promotion of sexual and reproductive health, with special emphasis on family planning. The following merit particular mention:

- The National Reproductive Health Council (CNSR), created in April 1994 by Decree 3197, composed of representatives from government, non-government and external agencies with the aim of coordinating work lines, form action plans and decide on reproductive health policies as well as unify

the various initiatives, resources and benefits, in order to be able to prioritize the welfare of women, teens of both sexes and their families. The CNSR boasts a technical team, a Steering Group, made up of technical professionals who, in 1999, formed the National Committee for Family Planning and Assured Availability of Contraceptive Inputs (PF-DAIA), whose aim was to propose and develop strategies favoring access to services and supplies with the appropriate quality and continuity.

- From 1997 to the present day, National Sexual and Reproductive Health programs are prepared every four years, under the direction of the MSPBS. One of the action lines of these plans is family planning. Moreover, the national plans have their counterparts in departmental plans in each of the departments which divide the country politically.
- Approved in 2005, the Population Policy incorporates family planning in the Family axis strategy making explicit mention of the promotion of information and communication programs and the axis strategies of Human and Social Capital requiring that the Labor Code and Childhood and Adolescence Code be reviewed and updated in terms of access to health and basic family planning services.

In conclusion, over the last decade, it has been possible to confirm a significant increase in the prevalence of contraceptive methods, which shows that counseling and training has grown, both in terms of services and educational institutions. This comes as a consequence of the advances in the institutionalization of the Family Planning Program as an element of Reproductive Health. Greater participation and protagonism has been displayed by the State, which is reflected in both the creation of executive actions of family planning axes and the greater and more efficient supply and uptake in the demand for modern methods. Significant advances have been seen in the execution of the universal right to family planning, though there is still work to do to eliminate inequalities, particularly those affecting women and couples of lower socio-economic levels, with a lower level of education and high levels of parity. Moreover, the continuous provision of modern family planning methods still needs to be assured, both in the public and private sectors, and in social security services, so as to guarantee the principal of voluntary choice given the supply. The challenge for the country is to achieve better awareness and the universal practice of the right to family planning and reproductive health, since accomplishing this the benefits would be twofold: On one side, the full exercise of sacred human rights would be guaranteed and on the other, avoidable deaths through the unsafe practice of abortion on account of unwanted pregnancies would be reduced.

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The context of family planning in Peru¹

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The population of Peru is composed of 28 million inhabitants who are predominantly young city dwellers. Half of all Peruvians are under age of 25 and 76% of the population live in urban areas. In the last 20 years, the public cost of health and family planning has grown and in 2006 it reached 5% of GDP (Peru's Ministry of Health - Memoria 2001-2006) and, as a result of this, health indicators have improved significantly. In the last decade, the total fertility rate (TFR) has fallen dramatically from 3.5 births per woman at the start of the 1990s to 2.6 by 2008. The biggest fall has occurred in rural areas where the TFR dropped from 6.2 in 1992 to 3.7 in 2006. The prevalence of contraceptive methods currently stands at 71% of women in relationships, giving to Peru one of the highest rates of prevalence amongst the countries of Latin America. However, in spite of advances in the field of health, the gap between observed and desired fertility is still one child. Similarly, the recognized gains in the economic area are taking time to reach the neediest sectors, as 36% of the population is still considered to be poor (ENDES 2004 -2006).

Between 1985 and 1990, the first mandate of President Alan García promised to back the creation of a national Family Planning program (FP), but the economic situation of the country and its limited healthcare capacity have prevented this effort from achieving success. In 1991, thanks to external funds (USAID and UNFPA), the National Family Planning Program was officially launched and had, for the first few years, the aim of expanding coverage and increasing contraceptive prevalence (USAID, 2003)

After the 1994 Cairo's Conference, the Ministry of Health's provisions began to include activities which attached importance to the clinical dimensions.

¹ Taken from the article "Balance and Perspectives of population and sexual and reproductive health policies in Peru" by Marcos Cueto, published in May 2006.

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Nonetheless, little importance was attached to education, prevention, information and communication in terms of sexual and reproductive health. In this way, the foundations were created for sporadic interventions that were not part of a comprehensive population policy program. Meanwhile, the population situation showed that it was necessary for the State to carry out more decisive interventions, despite the low rate of population growth, which had doubled in the previous 20 years, reaching 22.6 million people according to the 1993 census.

In the middle of the 1990s, family planning activities concentrated on just one method for regulating the number of children, the so-called Voluntary Surgical Contraception (VSC). In September 1995, after a peak debate, congress modified an article of the law on national population policy to include VSC as a contraceptive method, in which it was ratified that abortion was not a form of family planning. Accordingly, surgical contraceptive goals were established without taking into consideration the quality of services or the wishes of women or their partners. As a result, serious violations of human rights were generated in campaigns mainly focused on tubal ligation, often in exchange for money, food or other products.

Between 1995 and 2000, the government of Alberto Fujimori increased the funds earmarked for family planning and at the same time undertook an ambitious program to expand the network of health establishments. The Reproductive Health and Family Planning program was created by the Ministry of Health, bringing it in line with international agencies and the proposals of the Cairo's Conference, as well as the 4th Women's World Conference, organized by the UN in September of 1995, where strategies were defined such as access of girls to primary and secondary education as a tool to prevent sexually transmitted diseases, adolescent pregnancy, maternal mortality and to guarantee sexual and reproductive rights for women. At the same time, as a consequence of the Cairo's Conference, North American cooperation funding returned with a more active support for population programs and, from 1995, it has supported the REPROSALUD project in Peru. A budget of around US\$ 20 million was donated by the Manuela Ramos NGO, offering sexual and reproductive health education and loans in 8 of the poorest regions of the country, to women with meager resources, little formal education, and limited use of contraceptives (Cueto, 2006).

In 1996 was created the National Policy Coordination Committee for Family Planning and Reproductive Health. The main subject addressed by this committee was maternal mortality, whose rates at the time had reached 261 deaths for every 100,000 live births. Likewise, the country's high level of fertility stood out, especially in the rural areas, where the national average was 3.4 children per woman. Another worrying figure was the high number of clandestine abortions in Peru which, in

1994, according to private sources, produced 271,000 induced abortions, half of which developed health complications.

In 2003, a budget of US\$ 2.8 million was earmarked for the purchase of contraceptives (which the Ministry of Health had been buying since 1999), which accounted for approximately 70% of annual demand. However, given the political transition being experienced by the country, its economic problems and an evident anti-family planning undercurrent that existed in some groups at the Ministry of Health, it is difficult to imagine that the funds earmarked for the purchase of contraceptives will be increased. Current forecasts show a growing deficit in the funding and inventories of these products (USAID 2003).

The governments that took over between 2000 and 2005 lacked a comprehensive policy on population and sexual and reproductive health. It occurred despite the fact that information related to these matters offered greater opportunities to generate debate on the relationship of development with population policies and sexual and reproductive health policies in the country. The US Agency for International Development (USAID) extended restrictions on help for non-governmental organizations offering information or services related to abortion. In the first few years, the Toledo government (2000 onwards) undid the advances that had been made in the aforementioned areas, and on some occasions the health ministers converted their posts into pulpits in order to attempt to impose their conservative views (associated with the Catholic church). Their aims were few but clear: reject all methods of family planning, prohibit the use of terms like “gender”, to distrust the use of notions such as “sexual and reproductive health” and oppose any form of artificial contraception.

At the beginning of this century, the typical problems of Peruvian politics underwent a positive change; more rational policies with regard to sexual and reproductive health met with the interests of civil society. The Health Minister at the time, Pilar Mazetti, found herself engulfed in a public controversy on women’s rights to emergency oral contraception in which she maintained a firm stance. Initially, in 2001, it had been decided that the so-called “morning-after pill” should be made available free of charge in the Ministry’s health establishments, however, members of congress opposed the measure and attempted to remove Mazetti from her post, accusing her of promoting abortion, which is still illegal in Peru (except in circumstances which put the mother’s life at risk). Mazetti defended herself saying that the morning-after pill was not tantamount to abortion and that it would help poorer women to reduce the number of unwanted pregnancies in Peru, and therefore the number of illegal abortions, which at that time were estimated at 410,000 (Cueto, 2006).

More recently, in 2009, this discussion has resurfaced and a significant retrograde step has become law since the highest body of legal decision-making, the Constitutional Court, resolved that the Ministry of Health could not sell or distribute free of charge the so-called morning-after pill or emergency contraception, putting in serious jeopardy the advances achieved to date, with the aim of diminishing the current rates of clandestine abortion, which independent bodies in 2006 put at 370,000 (Ferrando, 2006).

Interest in and official policies on population and sexual and reproductive health in the country are relatively recent. They only go back to the last few decades of the 20th century. This interest has not always translated into population policies and when it has, it has been characterized by a lack of continuity, fragmentation and the onus of the changing agendas of bilateral and multilateral cooperation organizations, particularly the American development agency.

Since 1985, when the Law on National Population Policy was proclaimed, national population plans have sought to analyze and incorporate demographic changes into the country's public development programs, but little has been achieved. After seven years in which the country had no National Population Plan or institutions capable of managing population issues, now in 2009, an attempt is being made to reintroduce the topic into the national agenda by the Ministry of Women and Social Development. Amongst its aims is the treatment of the demographic dividend, the urban explosion, the scattering of the population, ageing and sexual and reproductive rights. It is hoped that this initiative will help to reduce poverty and social inequality of the country's inhabitants within the framework of human rights (2009 National Population Plan).

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The family planning context in Uruguay

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In the global context, Uruguay finds itself within a group of countries that are pioneering the demographic transition process, being the first to start this process in Latin America. There is evidence of a reduction in mortality as early as the 1880s, which leads us to suppose that its beginnings may have been situated in a somewhat earlier period. And few years later, we can identify the beginnings of the decline in birth rates going back to the end of the 19th century, particularly in Montevideo.

In 1963, the overall fertility rate was around 3 children per woman. This situation demonstrates at least two things: Firstly, that the country was at the margin of concerns generated internationally on account of the demographic explosion in Latin America in the 1960s and 1970s. For its part, the most important aspect of the reduction in fertility was achieved in the private arena, before modern contraceptive methods even existed. It was the families (it is not fair just to say it was the women) that came up with strategies or took direct action to reduce the total numbers of children.

Around 1900, infant mortality in Uruguay was a little lower than 100 per thousand births. Along with Norway and Sweden, it shared the privilege of being one of the countries with the lowest infant mortality in the world (Birn, Cabella, and Pollero 2005). The effect that this had on families was one of higher rates of child survival; in fact, between 1889 and 1908, the proportion of children in the average household size in Montevideo rose by 19% (Pollero 2001). The decline in mortality reduced the number of births needed to satisfy family and society's reproduction requirements, and consequently, limiting responses were generated for reproduction and birth.²

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² Evidence exists that the belated age of getting married and celibacy could have operated as a means to control the population at the beginning of the demographic transition process. The contribution of childless women was also significant: practically 25% of those born at the turn of the 19th century (more than half were married) were born out of wedlock, a proportion that declined with those born in the 1920s (Pellegrino and Pollero 2001).

We might ask ourselves, therefore, who were the first people to realize this fact and denounce it? Primarily those who had a certain first-hand access to the evidence: the Church and obstetric doctors (Barrán 2008). Somehow, through the confessions of the faithful, the Church succeeded in acquiring a privileged window on to the secrets and most intimate world of couples. Indeed, in the confession manuals, very direct questions could be found that allowed them to look for the contraceptive “sin” of coitus interruptus. In 1890, the Bishop of Montevideo already uttered a warning about this.³

Gynecologists for their part discovered the most extreme measure to deal with a conception that was already consummated: The increase in the number of abortions. More precisely, given the illegal nature of this practice, abortions subsequently due to complications needed medical intervention, which also implies its total growth⁴. The extent of this practice suggests that there would have been no ethical questioning by a significant number of women (and men). Surely a multiplicity of factors affected this, amongst which the early secularization of Uruguayan society is prominent.⁵ For their part, the explanatory arguments of the doctors of that period included a general lack of knowledge about embryonic life. Nevertheless, it is also possible to imagine that societies so rooted and accustomed to living with premature death (the death of the tiny angels) took away from them the importance of terminating a pregnancy at an early stage.

In a more indirect manner, from the knowledge about the statistical data that revealed the degree of the decline in birth rates, the ruling political class of the various parties also gave notice of the practice of abortion. The 1908 census had resulted in a bitter pill for Uruguayans: it demonstrated that the growth in the population was lower than expected. This fact implied that during the seething final years of the preceding century and start of the 20th century – the last civil war took place in 1904 – the country had ceased to be (momentarily, at least) an interesting destination for European migration. Added to this was the decline in birth rates that came to be likened to the French phenomenon. From a political standpoint, this was regarded as a weakening of the country when compared with the impressive demographic growth experienced by its giant neighbors, Argentina and Brazil.

In 1912, the Republic’s president, José Batlle and Ordoñez, author of the earlier state of Uruguayan well-being, presenting a political argument defending maternity

³ “(...) pity the men who (...) spill forth far and wide (...) at the whim of passion, the mysterious force whose divine origin is found within them (...) pity the mothers who (...) abandon afar (...) these creatures towards nought” Soler, M. 1890. Marriage under religious, moral and social aspects. Tip. Uruguay by M. Martínez. In: Barrán 2008: 214.

⁴ In 1916, the First National Medical Congress declared the problem of voluntary abortion (“intended criminal abortion”) as a serious social peril and called on the Public Authorities to suppress it (Turenne 1917).

⁵ In Uruguay, the separation of Church and State dates from 1919. The first divorce law was passed in 1907.

for single mothers and illegitimate children, said: “After all, we should obtain an outcome that is favorable to nationality, in other words, to a vegetative increase in the national population, a matter of utmost importance in a country such as ours, that is so deficient in terms of population”.⁶ Consequently, having established the existence of a decline in birth rates and weak population growth, a concern materialized in the State over the country’s vulnerability. To a certain degree, the concern was similar to that France had over the size of Germany (Barrán, 2008).

Nevertheless, this did not result in the creation of specific birth-related policies. If, on the part of the State, there had been an initial concern over mother-child health, the progress made in the country in terms of the protection of infants and mothers, particularly poor, working-class mothers, translated into a greater social concern, characteristic of the welfare matrix of Batllist thinking.

In the 1930s, the growth in abortion in society, and essentially the unsafe conditions under which they were conducted, continued to be heavily criticized by the medical sectors. From the chair of obstetrics at the Faculty of Medicine, the publication was recommended of contraceptive practices to avoid conceiving and thus prevent the need to resort to termination⁷. This concern for women’s health resulted in the decriminalization of abortion in the 1934 Penal Code. The measure was short-lived however. The reaction of the conservatives and the catholic sectors was not expected: four years later, after a tough debate, its criminal nature was re-imposed. The newly implemented prohibition did not eliminate the problem. On the contrary, terminations of pregnancies became more common, to the extent that, around 1942, it was estimated that 50% of pregnancies were ending in abortion (Turenne, 1942).

In parallel, since the end of the 1920s, on the international agenda, commitments which the country had signed up for were advocated to give impetus to the implementation of minimum salaries, a wages board and family subsidies in the social security systems.⁸

In 1934, under the framework of the Pan-American organization, and under the stimulus of successive children’s congresses, the Children’s Code was passed – the first of its kind in Latin America – in order to watch over their right to health, well-being and legal protection. It also created programs to help mothers and children and established the right of the working mother to receive half-salary when on maternity leave.

⁶ Diary of Senate Sessions, volume 101, session of June 19, 1912: 541. Address by José Espalter. In Barrán (2008: 196).

⁷ In 1929, Augusto Turenne, professor of gynecology and obstetrics, spread the concept of conscious motherhood, although only valid for poor, multiparous women (Turenne 1929).

⁸ Amongst these were ILO Agreement no. 26 (Geneva, 1928), the Panamerican Conference in Lima (1928), the 2nd American Congress on Eugenics (Buenos Aires, 1934), ILO Conference (New York, 1941), Atlantic Charter (1941) and Work Conferences (Cardozo, R. and Foladori, W. 1970. Family Allowance System in Uruguay. In: Varela (2004).

In 1943, after much delay and following several legislative initiatives, the Family Allowance Law was voted in, which addressed various aspects of social security for workers and covered practically all the formal workforce in the country. Besides the family subsidy, a system of mother-child healthcare was included in sanatoriums acquired for this purpose.

The motivations brandished in the Social Legislation Committee for the approval of the law are evidence that there was still concern over the decline in birth rates and the increasingly low vegetative growth: "(...) we will get to a point where children will no longer be born and where the country enters rapidly into a process of disintegration"⁹. These concerns were very different from those of the rest of the Latin American countries during this period. Thereafter, the State languished in lethargy for half a century in terms of population policies. With the passage of time, the family subsidy allowances got smaller and smaller.¹⁰

In the meantime, the appearance of modern contraceptives in the market helped to reduce (though it did not eliminate) the number of abortions. Towards the end of the 1960s, a first family planning related program began to be developed, the Uruguayan Association for Family Planning and Human Reproduction (AUPFIRH, later AUPF), a private organization with an anti-natalist profile (funded by the IPPF). In an agreement with the Ministry of Public Health, it provided advice and contraceptives with a range of tariffs to public and private health users. It would seem that for 30 years, the Uruguayan State determined that, based on the agreement with this institution, the topic of the population's reproductive health was resolved, since the topic was absent from the country's political agenda (Varela, 2004).

Once again it was international commitments that brought fresh action to bear. Indeed, after the Population Conference in Cairo, the country began to implement sexual and reproductive healthcare programs from a gender and rights perspective. Added to this was a new demographic situation, an increase in teen fertility, which rose 21% between 1985 and 1996¹¹. Accordingly, in 1996 two programs were implemented, one within the domain of the Ministry Of Health and the other via the Montevideo Municipal Council, initially funded by the UN Population Fund with the State making a commitment to continue the program and take over the funding. The target public of the Ministry of Public Health's program ("Selective Maternity and Paternity") was women of childbearing age, both in Montevideo

⁹ Cardozo, R. and Foladori, W. 1970:131. In: Varela (2004: 404).

¹⁰ Since 2008, a new Family Allowance law has been in force via which a greater coverage of minors in socioeconomically vulnerable conditions was achieved. In order to benefit from the system, it is required to comply with certain educational and health prerequisites.

¹¹ From 1998, teen fertility has shown a decreasing trend and since 2004 the overall fertility rate has fallen to values below the population replacement level (Varela, Pollero and Fostik 2008).

and the country's interior. In this program, the welfare nature and the provision of contraceptives were put first. This program ended in 2000 and was followed up by the creation of the "Woman - Childhood" area and the Women's Comprehensive Health Program, thereby constituting a policy definition in sexual and reproductive health (Varela, 2004). The target population of the Montevideo Municipal Council program is needy women in Montevideo, from adolescence upwards. Its conceptual axis is not welfarist, but rather it encourages a change in the sexual and reproductive healthcare model, focusing on gender. It consists of three subprograms: "Informed and voluntary motherhood," "Comprehensive care in pregnancy and childbirth," and "Prevention of breast cancer" (Varela, 2004).

During the execution of these programs, the Ministry of Public Health drafted the national Childhood, Adolescence and Reproductive Health Plan (2000-2003). Subsequently in 2002, a third program was added (INFAMILIA "Adolescence, Infancy and Family at risk"), subordinate to the Presidency of the Republic with financial backing from the Interamerican Development Bank. One of its missions is the prevention and comprehensive care of the pregnant teen. Amongst its activities, it has provided, along with the Ministry of Public Health, training in sexual and reproductive health to health professionals (López and Abracinska, 2009).

In parallel, can be added to this the organized women's movements and in particular the female bloc (in all the political parties) of the Legislative Branch, who have established their own agenda with regard to promoting laws and measures that will lead institutions to implement sexual and reproductive health programs for both women and men (Varela, 2004).

One of the most important projects driven by this parliamentary bloc is that of the protection of the right to sexual and reproductive health which, amongst its provisions, stipulates the right of women to voluntary termination of a pregnancy during the first 12 weeks. The project achieved the preliminary approval of parliament in 2002. It was presented once again in 2006 by two female officialism senators and was passed by the Senate in 2008. However, it was vetoed by the President of the Republic, Tabaré Vázquez, a member of the medical profession, on legal, scientific and technical grounds, as well as philosophical identity and ethical principles. The law ultimately proclaimed by the Executive Branch modified the project's propositions, keeping only the first and last chapters, constituting more of a declaration (the duties of the State and the rights of children in respect of sexual and reproductive health). Accordingly, the decriminalization of abortion cannot be presented again until the next Legislature.

To sum up, the fact that Uruguayan demographic history during the twentieth century demonstrates similar behavior to the more advanced countries, has

probably affected the scant attention to the population issue from political players and the State. Recently, as a result of the Cairo Conference, and in view of the wake-up call that is the increase in teen fertility, the Ministry of Public Health has begun to orchestrate and implement, through its services, a variety of sexual and reproductive health benefits.

One hundred years after the first census of the twentieth century which led to the voicing of concerns over the meager demographic growth, Uruguay finds itself with a fertility that is below replacement level, in a situation of emigration and with an ageing population – in keeping with its precocious demographic transition. Just as then, voices of concern are once again being heard from several quarters.

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Family planning in Venezuela

Anitza Freitez¹

Venezuela entered the second half of the 20th century recording historic levels in the rate of growth, at around 4%, as a consequence of high fertility and moderate, though declining, mortality. By the beginning of the 1960s, fertility was well into the transition process, and Venezuelan women around 40 years old had, on average, 4 fewer children, going by the total fertility rate of 2.6 children per woman estimated at the beginning of the current decade. These changes came about in the midst of an intense urbanization that has led to a situation in which 9 out of every 10 Venezuelans live in urban areas. The precursors of fertility transition are, precisely, the residents of urban areas and those who had reached higher levels of education. Subsequently, somewhat belatedly, rural women and less educated women were brought into the process to the extent that, nowadays, it may be said that all segments of the population have now entered transition (Freitez, 2003).

These changes have been helped by the transformation of the role of Venezuelan women, both inside and outside the home, associated with their increasing access to education, the labor market, social organizations and political activity. In this country, as will be seen shortly, governments have not openly intervened in promoting family planning, nor in imposing limits beyond maintaining the administration of the provision of services.

The forerunners of family planning in Venezuela have, in common with other countries in Latin America, the role played by certain associations or groups of doctors, both in the emergence of the program and in its integration into the national health system. However, they differ in terms of the importance that this subject has had on the agenda of the various governments and in the participation of the private sector in the provision of these services.

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The first family planning initiative by the public sector goes back to 1963, when Dr. R. Domínguez promoted the creation of a service in this area in the “Concepción Palacios” Maternity Hospital, the most important of its kind in the country at the time. Subsequently, in 1965, the Ministry of Health and Social Welfare (MSAS) created a Population Division responsible for steering family planning activities. In 1966, the Venezuelan Family Planning Association (AVPF) was formed with the mission of helping to reinforce and protect families, and with the concept of family planning as the tool to achieve this aim (Bidegain and Díaz, 1988). The family planning program was established, therefore, with the purpose of reducing uncontrolled, involuntary procreation, maternal and infant mortality and induced abortion and this, through the use of contraceptive methods devoted to preventing unwanted pregnancies (Pereira and Freitez, 1994).

At the end of the 1960s and beginning of the 1970s, the activities developed by the AVPF sparked some controversy, especially in some sections of the Venezuelan Medical Federation (FVM), which warned of the risks being run by allowing some of the programs to be freely influenced by foreign agencies indiscriminately offering contraceptive methods. By means of a resolution of the FMV General Assembly, this led to doctors being prohibited from working in family planning clinics as long as these clinics were not controlled by the State (Bidegain and Díaz, 1988).

Up to 1974, “World Population Year”, a large part of family planning activity was undertaken in 132 AVPF affiliated clinics. The Venezuelan government, via presidential decree, then decided to take control of activities in this matter. Hence the creation of the Department of Guidance, Education and Family Planning at the very heart of the Maternal and Infant Division of the MSAS, as well as the Family Planning Program Coordination Workshop, to which the 132 AVPF clinics are attached. By transferring the program from the private sector to the public sector, the AVPF found itself practically devoid of its objectives of direct healthcare and the funds necessary for its operation, until it finally disappeared in 1976.²

The subject of family planning has not figured amongst the main concerns of the various governments, not even at times when high fertility rates were being recorded. During the first mandate of President C. A. Pérez (1974-1978), family planning was introduced into the MSAS prevention programs, mandatorily broadening all the service modules and rural medical centers. With this provision, the intention was not to check population growth; quite the contrary, in President Pérez’s administration,

² Since the AVPF ceased to function in 1976, no other private family planning institution emerged until 1986, when PLAFAM was founded, a government organization created with the financial backing of the International Planned Parenthood Federation (IPPF) (Bidegain, and Díaz 1988).

it was perceived that Venezuela had abundant oil wealth that would allow it to face demographic expansion.

The Christian Democrat government (1979-1983), presided over by L. Herrera-Campins, made no official proclamation on the matter, but under his administration, control over the family planning program moved to the Public Health Department and to the Health Commissioners in the respective States (1980). This measure did not help to broaden its activities since the decisions to support the program depend on the priorities established at the level of each state. On the contrary, the other preventive health programs often benefited from a portion of the funds that were previously assigned to family planning. A new Social Democrat government (1984-1988), presided over by J. Lusinchi, redirected the family planning program, transferring it to the Maternal and Infant Health Department, which seems more appropriate though it must continue to share funding, personnel and budget with other priority health programs, such as: Pre- and post-natal care, breastfeeding and pediatric services (Pereira and Freitez, 1994; Bidegain and Díaz, 1988).

In the course of the 1989-93 presidency, which began with the second mandate of C. A. Pérez and ended with a transition government, no official declaration was pronounced on matters concerning family planning. The program remained assigned to the Maternal and Infant Health Department, but the operational problems became more severe by virtue of the worsening institutional and financial crisis in the health sector³. Throughout the second mandate of Rafael Caldera (1994-1998), the family planning program went ahead without the necessary political backing, so that the problems remained of lack of administrative coordination, poor quality of service, deterioration in facilities and serious deficiencies in the availability of contraceptives, notwithstanding the fact that they were allocated funding to purchase them and distribute them amongst the low-earning population (Venezuela NGOs, 1994). The few references available concerning the coverage of this program show that the proportion of women cared for has fluctuated between 8% and 14% of all women of childbearing age during the period from 1980 to 1995 (UNICEF, 1995).

The limitations that were experienced by the family planning program were noted in the EVA-84 assessment report, in which a summary was provided of the administration carried out between 1974 and 1984, which at the time enabled the identification of errors experienced and the production of a series of recommendations to improve the operation of the program in topics related to: the shortage of human resources, the lack of allocation of materials (contraceptives,

³ This period was characterized by a significant deterioration in the economic situation and profound political and social unrest, which led to the dismissal of President C. A. Pérez.

medical teams, sterilized materials, etc.); the lack of publicity, the latter being basically limited to interviews or chats conducted within the service environment, it was very rare to see work taking place in the communities and the spreading of the message via radio and television providing information on the type of services available was nonexistent; deficiency in record keeping, amongst other aspects.

In Venezuela, the first fertility survey on a national scale took place in 1977, under the framework of the World Fertility Survey project. According to the ENF'77, 60% of women in a relationship used some form of contraception, there still being an appreciable prevalence in the use of traditional methods (14%). More than two decades elapsed before there was another survey similar to that of the ENF'77. In 1998 the National Population and Family Survey (ENPOFAM'98) demonstrated that the percentage of use of contraceptives had risen to 70% helped by the increase in the use of modern methods (from 46% to 62%). The provision of modern methods in Venezuela in the middle of the 1970s was mainly centered on the pill and the IUD. These two methods accounted for almost half the total prevalence recorded at the time of the ENF'77 (29%). At the time of the ENPOFAM'98, the percentage of women in union using the pill rose to 21%, but the most important feature has been the marked growth in female sterilization, whose percentage usage has trebled, moving from 9% to 26% (Freitez, 2001).

The ENPOFAM'98 results concerning the participation of public sector health services as a source of supply for the method being used, namely 17% of women exposed to a risk of conceiving (MSAS, 1984), concurs with the previous reference on the low coverage of the family planning program.

With the Caldera government (1994-1998) coming to an end, a review was undertaken of the Maternal Care and Family Planning Standards in force since 1972 and, welcoming the new approaches on genetic health and reproductive rights, promoted in international conferences such as that of Cairo (1994) and Beijing (1995), a new set of standards was approved based on a comprehensive reproductive healthcare approach. Under this framework, family planning is considered to be one element of reproductive health and is included as a strategy that the services in this area may integrate into those of pre- and post-natal maternal care (MSAS, 1998). The objective assigned to family planning was as follows:

"to guarantee to the entire population access to information, communication, education and services of high quality (...) within the comprehensive framework of reproductive health...". The approach of the family planning program is directed towards the country's entire population, no matter what the social status, being able to freely and responsibly decide the number of children they wish to have, the spacing of the births and to have available the information and means to achieve this..." (MSAS, 1998:55).

Subsequent to the adoption of this comprehensive reproductive healthcare approach came the administration of President Chávez, who ordained the merger of the Ministry of Health and the Ministry for Family in order to create the Ministry of Health and Social Development. Moreover, in 1999, a new constitutional text was passed that enshrined the right of couples to freely and responsibly decide the number of sons and daughters they wished to conceive, and to have access to information and to the means that assure this right may be exercised. In this sense, the State's responsibility was established as guaranteeing comprehensive care and protection for mothers and the supply of family planning services (Bolivarian Republic of Venezuela (RBV), 2000).

In the light of this context of standardization, new, updated documents were drafted for the Official Standards for Comprehensive Sexual and Reproductive Healthcare (Ministry of Health and Social Development, 2003). These transformations in the legal and institutional map pointed to the recognition of the full exercise of sexual and reproductive rights as human rights and their entailment with quality of life and health as well as with human and social development.

In the framework of the current health policy, the National Sexual and Reproductive Health Program (PNSSR) was developed at the national, state and municipal level, under the responsibility of the Ministry of Labor for Health and Social Protection. This Program is the tool that institutionalizes the National Sexual and Reproductive Health Policy, mainstreaming the approaches to gender and sexual and reproductive rights in the management of health services (Ministry of Health and Social Development 2003). With the implementation of the PNSSR, advances have been made in the mapping of norms and the training of health teams in the management of the approved norms in order to improve comprehensive sexual and reproductive healthcare. Efforts have also been made with community training in reproductive rights.

An important measure which reflects the advances made with the mapping of standards has been the inclusion of emergency contraception in the Official Standard for Comprehensive Sexual and Reproductive Healthcare and in the Strategic Guidelines for Comprehensive Prevention in Sexual and Reproductive Health in Emergency Situations, being recommended for cases of rape, unprotected sexual intercourse and interrupted oral cycles.

In Venezuela, demographic surveys are not conducted with sufficient frequency to be able to track the operation of the various programs included in the PNSSR, whose statistical data are also not sufficiently widely known for the purposes of periodically establishing achievements. A fresh assessment of the SSR services and in particular the logistics of contraceptive supply was carried out by the MSDS with

the support of the UNFPA in 2002. This work revealed, amongst other aspects, that there continues to be a low recording of family planning information, that services are concentrated on women, that the choice of method is made by health staff and that the needs of the users are rarely recognized, and the supply of contraceptives bears little relationship to MSDS demand (2003). It has been attempted to deal with these problems via the design and implementation of a Contraceptive Inputs Logistics System (SILOGIA).

Social acceptance of contraception in Venezuela has been quite broad, to the extent that restrictions on access to methods are basically down to the availability of information and the financial means to obtain them. This means that the problems of accessibility are mainly concentrated on the most disenfranchised population groups, on which the PNSSR should be focusing, seeking to reduce the costs of access, especially at times of decline in household economies.

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