



A gender approach to the dynamics of labour markets in Latin America during the twentieth century.

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Abstract

The labour market is an ideal space in which to observe the persistent gender inequality in Latin America. From an historical perspective, a characteristic of the labour market is that women obtain far fewer decision-making positions. In a sense, their domestic situation has been transferred into the labour sphere, where they have been denied technical jobs involving high technology and the best opportunities for personal development.

The aim of this research is to explain women's incorporation into the labour market in Latin America during the twentieth century, in a context of unequal access to opportunities and an unequal distribution of generated wealth.

My strategy is to look at the evidence in a panel of Latin American countries and to present a comparative analysis covering the different trajectories in these developing economies. There is a wide range of differences in the level of economic welfare across countries, and we can look at how a country's economic development over time is associated with changes in the role of women in the labour market. I will employ an empirical approach in three areas of economics: structural change, family arrangements and investment in education.

1. Introduction¹

The labour market is an ideal space in which to observe the persistent gender inequality in Latin America. From an historical perspective, the labour market has been characterized by women obtaining far fewer decision-making positions. In a sense, their domestic situation has been transferred into the labour sphere, where they have been denied technical jobs involving high technology and the best opportunities for personal development.

The main goal of this research is to explain why women's incorporation into the labour market in Latin America during the twentieth century has been late and slow, in a context of unequal access to opportunities and an unequal distribution of generated wealth. My aim is to explore the role played by economic development, educational attainment and demographic differences, all in the context of unequal social relations between men and women.

At the macro level, forming a quantifiable measure of the status of women in the labour market that can be compared across nations is difficult for several reasons. Economic structural transformations, the role of the State and even the complexity of labour markets all differ from country to country. These organizational differences lead naturally to different labour market participation rates, and women's work is usually more invisible than men's. The evolution of women's employment is linked to the process of structural transformation. This process is defined in the literature as the allocation of labour across the three main sectors of production: agriculture, manufacturing and services. The trends suggest that the timing of a country's

¹ This is a working paper that forms part of my PhD research project in Economic History.

transformation from agriculture to manufacturing determines whether female labour force participation evolves through the first, downward portion of the U, as Goldin found for the US. The U-shaped association between economic development and female labour force participation seems to be a feature of economies that went through the transition from agriculture to manufacturing. The manufacturing systems that are a feature of the second half of 20th century, and the rapidly expanding service economy in some developing countries, may be less likely to trigger a reaction against women going out to work.

My strategy is to look at the evidence in a panel of Latin American countries and to present a comparative analysis covering the different trajectories in these developing economies. There is a wide range of differences in the level of economic welfare across countries, and we can look at how a country's economic development over time is associated with changes in the role of women in the labour market. I will employ an empirical approach in three areas of economics: structural change, family arrangements and investment in education.

2. Theoretical approach

In various theoretical approaches it has been suggested that women's empowerment is important for development and the emphasis has been on constructing indicators that measure the freedoms achieved by both sexes. Indeed, in terms of freedom, gender inequalities may be reflected in the unequal opportunities men and women have to access the benefits produced by development, and their unequal contribution to achieving these benefits.

Among the many useful indicators of women's economic status, including their educational attainment, health and legal rights, labour force participation is probably the most fundamental as regards the evolution of gender roles. The labour market and its functioning is the main reason for persistent inequalities, but it is also the place where we might find possible solutions (Mikkola 2005).

The theoretical frameworks suggest that the relation between economic growth and gender equality is not linear: inequality periods are followed by periods with increased convergence. Boserup (1970) finds that patriarchal institutional structures, both macro and micro, can contribute to economic growth even though they maintain the low status of women and limit their employment opportunities. However, as markets continue to expand and labour demand continues to increase, traditional gender structures begin to weaken. Access to employment empowers women, gives them their own earnings, facilitates the development of their human capital and so strengthens their domestic bargaining power. In the same way, because technological advances allow women to spend less time on household labour, their education will yield higher returns and they can be more competitive in the labour market and generate income for households (Goldin 2006).

In general, researchers have found that most of the gender inequality measures (education, labour force participation, health, political participation and even the Gender Development Index) tend to go down as income per capita rises, although societies may achieve different levels of progress on different indicators (Collier 1993, Dollar and Gatti.R. 1999, Forsythe, Korzeniewicz et al. 2000).

As regards the wage gap, the evidence is not clear. We find two extreme cases: Tzannatos (1999), who examines the experience of Latin America in the 1980s,

concludes that if male and female wages had been equal, then production would have been 6% higher. Seguino (2000), in a study of semi-industrialized countries from 1975 to 1995, finds that wage inequality between men and women is positively related to an increase in earnings. Seguino (2006) finds that gender inequalities are more likely to stimulate growth in agrarian economies and in low income semi-industrialized economies

Eastin and Prakash (2009), with data for a large panel of countries, report that in the early stages of development there are higher levels of gender equality, but that in the rapid industrialization stage equity is eroded. Finally, at the highest level of development, gender equity again starts to improve due to increased women's labour force participation, a fall in fertility rates and the acceptance of gender equity. Thus the evidence indicates a strong relation between women's participation in the labour market and growth, depending on the development stage of a country (measured by per capita income).

Over the last few decades, women's labour market participation increased while fertility declined. This pattern confirms the theoretical approaches (Becker and Lewis 1974) that predict that an increase in women's schooling levels and wage rates leads to an increase in their labour supply and to a reduction in fertility. The negative relation between fertility and female labour supply is explained by social, economic, and technical forces that affect fertility and female labour supply, including an increase in the value of women's time due to higher female education levels, expensive childcare, and substitutes for children; an emphasis on the quality instead of quantity of children; an increase in employment opportunities for women; changes in social norms resulting in

more support for women working outside the home; and technical progress in birth control (Schultz 2005, Nguyen Thi Hong 2009).

In a study of the labour participation rate, Goldin (2000) finds that the one major countervailing trend in the twentieth century in the United States was an increase in the work force due to greater women's participation. They joined the labour force in increasing numbers throughout the century, which contributed to raising the aggregate labour force participation rate among 25 to 44 year-olds by about 50%. However, not all the increase in women's paid labour can be directly translated into an increase in national income. Some women's paid hours of work came at the expense of a decrease in home-produced goods like bread and clothing, which came to be produced in the market. But even if none of the increase in female workers augmented national income, the positive evolution of the female work force would still have enormous social and political significance. For adult women, having paid work outside the home enhanced their status and eventually led to a call for real equality.

However, Goldin (1994, 2006) examines the history of the United States and finds a "U" relation between female employment rates and economic growth, due to the relation between education and economic development. At low levels of development, education increases more for men than for women, but as income increases, women's participation decreases. When income increases further, educational resources expand and women receive more education, and this promotes their participation in the labour market. Also Olivetti (2013), using a panel of sixteen developed economies in the 1890 to 2005 period, shows that there is a consistent U-shaped relation between women's labour market participation and the process of economic development, both within and across countries. With more education and with the expansion of non-industrial

employment, women's participation continues to increase and thus forms the "U" (Psacharopoulos and Tzannatos 1989, Schultz 1990). This evolution has been tested using data from countries with different income levels. The results show that countries with higher or lower levels of income have higher female labour force participation rates than middle-income countries (Pampel and Tanaka 1986, Psacharopoulos and Tzannatos 1989, Tzannatos 1999).

Some heterodox approaches have focused on the impact of gender wage gaps in economies with export-led growth. With the new rules in competitive economies the female labour supply increases in certain types of jobs and at the same time unemployment rises and wages fall (Bergmann 1974) or wage gaps persist (Joekes 1999, Seguino 2000, Berik, van der Meulen Rodgers et al. 2003). These studies emphasize the importance of analyzing the distribution of labour between the sexes and of recognizing the potential of having an unemployed female labour force in reserve. They emphasize wage structure in the explanation of the difference in gender wage gaps and underline the negative impact of legislation that discriminates against opportunities for women.

Even in more stratified economies, occupations and industries have been overwhelmingly segregated by sex throughout history, although segregation was more extreme a century ago than it is today, particularly in manufacturing. Around the turn of the twentieth century jobs were integrated in only a handful of manufacturing industries (textiles, apparel, tobacco, shoes, printing, and paper). Furthermore, when men and women did the same job in the same firm, remuneration was invariably on a piece-work basis, not by hours worked. Firms used piecework rates to pay men more than they paid women even though they had the same job title (Goldin 2013). In addition, wage

discrimination has been more evident among those at the upper end of the education scale and among those with substantial work experience. The occupations reserved for college-educated women have been few in number and a long list of occupations were closed to them.

3. Method and sources

The evolution of women's participation in the labour market has been difficult to measure. First, the concept of women's work is often ambiguous and the definition can change over the years and in different time periods. Second, in the selected period it is difficult to obtain comparable data across the countries, in particular in Latin America, due to changes in methodology and the information processing of statistics at the national level. This restriction on data may limit the comparison, but my approach makes it possible to cover an extended period in which the major changes in female participation in the labor market occurred.

In this paper I present a panel of developing and developed countries, The first group is made up of Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Paraguay, Uruguay and Venezuela. The second group consists of Australia, Canada, France, Germany, Italy, New Zealand, Norway, Spain, Sweden, the United Kingdom and the United States. There is scant data to make long run comparisons, and the Latin America panel presents results for all the variables only for Argentina, Brazil, Chile, Colombia, Mexico and Uruguay.

- Data on female and male activity rates are based on International Labour Organization (ILO) statistics and also on the work of Olivetti (2013). Latin

American data are corrected with national censuses; in Argentina this is the Latin America Census and ILO data on 1960-2000. In Uruguay the data are from Fleitas and Roman (2010) and censuses; in Brazil from censuses; in Chile from Godoy and Díaz (2011), in Mexico from INEGI, DGE and censuses from the period 1990 to 2000 – ECLAC 2013.²

- Data on population share in economic sectors are based on International Historical Statistics, (Mitchell , Mitchell 2007) and the International Labour Organization.
- Data on incomes and growth are based on per capita incomes 1900-2000 adjusted for purchasing power parity (expressed in G-K 1990) as reported in Maddison (2010). The data for Latin America were corrected by Bértola & Ocampo (2012).
- Data on schooling are based on Barro & Lee (2012) and refer to the female population aged 25 and over.
- Data on fertility in Latin America are from ECLAC (Guzmán, Rodríguez et al. 2006). For developed countries they are from the United Nations Department of

² The reconstruction of the evolution of female labour force participation in Latin America is not been well documented. The censuses carried out in the first decades of the twentieth century contain incoherencies such as differences in the criteria for registering women's participation in the primary sector. This makes the total population of workers in this sector change atypically because this work tends to be less formalized and many women are involved in productive as well as home care activities.

There is another problem with these sources that affects the first census in Argentina, Chile and Uruguay, which were carried out at the end of the nineteenth century and the early years of the twentieth. These record each individual's profession or job position regardless of whether or not that person was employed at the time. The present day concept of "unemployed" does not seem to be linearly applicable to this earlier stage in which wage labour was the exception rather than the rule. However, this was a period of rapid economic growth with increasing demand for labour and the incorporation of European immigrants, which means that in all likelihood unemployment was very low.

Economic and Social Affairs, Population Division. Fertility rates in Sweden, Germany and France are from Herce, Ahn et al. (2003).

- Data on investment in social spending in Latin America and developed countries are based on Azar, P. & Fleitas, S. (2012)

4. A promise of improvement: the labour market

Female labour market participation may be considered a result of economic development but it could also be considered a pre-condition. As more women enter the labour force, economies can grow faster in response to the greater offer of labour. At the same time, as countries develop, women's capabilities should improve as a result of more public investment in social improvements such as education. Although women's labour force participation tends to increase with economic development, the evidence suggests that at country level this relation is not always linear. Moreover, a comparison between developed and developing countries shows that the result does not only depend on economic growth but is also influenced by social and demographic factors.

Patterns in the female participation rate

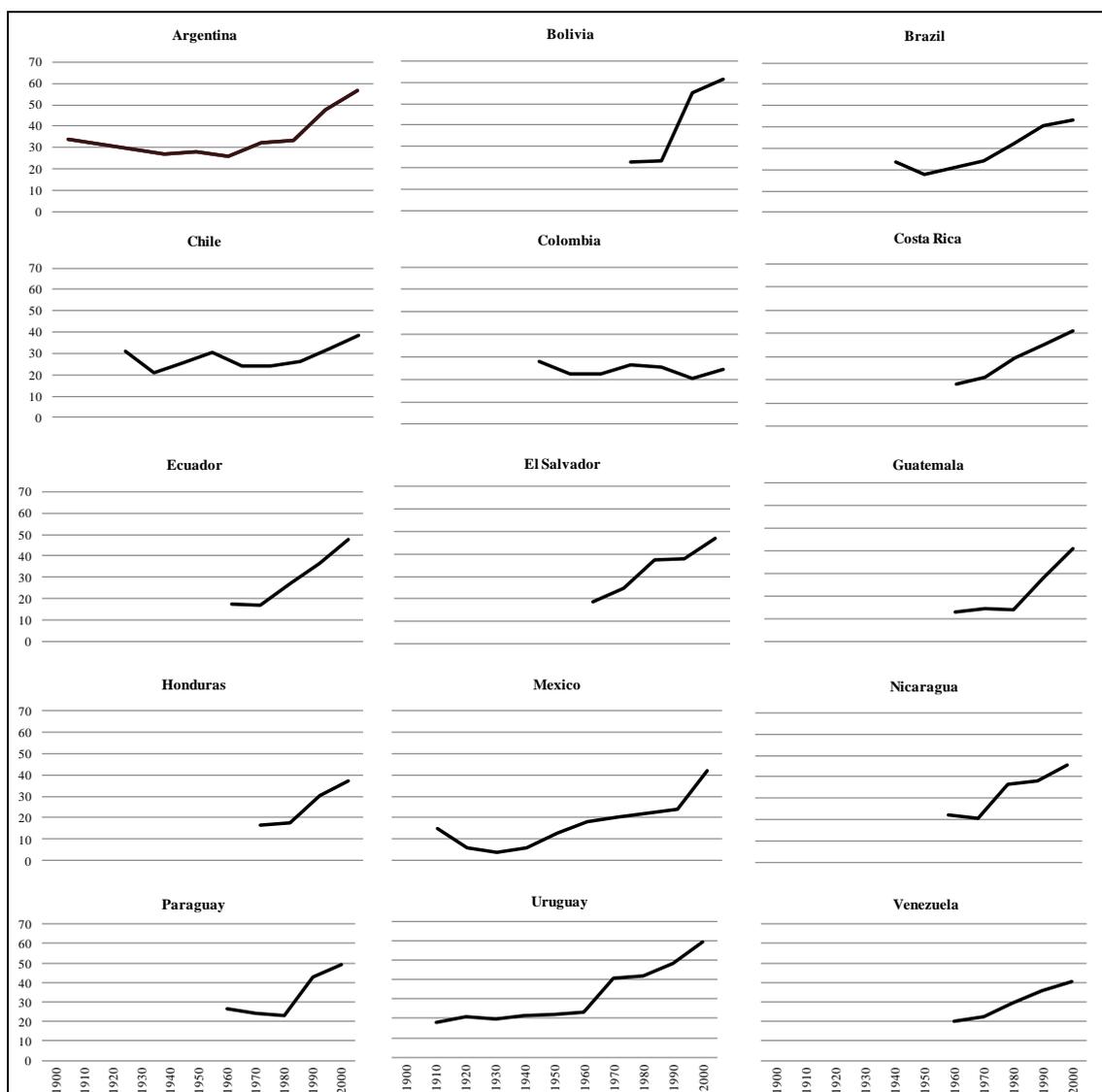
Female labour force participation is a result of regional patterns of economic growth. It may be driven by poverty and at the same time by women's increasing educational attainment and the opportunities to work that are made available in a developing economy.

Early in the period, in particular in times of crisis and in response to economic shocks (World War I, the Great Depression) women were often required to enter the labour

market for a short period in order to smooth household consumption. After that, from 1930 to 1970, women left the labour market during this import substitution period. Authors such as Todaro (2004) and Espino and Azar (2007), with particular reference to Chile and Uruguay, note that the State promoted a sort of male-breadwinner model at that time, which fostered a decrease in women's participation in the labour market. Female labour force participation began to increase moderately in the 1970s and this trend continued into the 1980s. In most countries these decades also saw a high degree of economic and political uncertainty in the form of macroeconomic imbalances, inflation, unemployment, and changes in political regimes. Women might have entered the labour market in increasing numbers to contribute to family survival. Economic adjustment processes, financial crises and prolonged economic downturns probably all forced more and more women to take up economic activities outside the home. However, only in the 1990s did the region show a significant improvement. In a context of increasing unemployment and under-employment (Bértola and Ocampo 2012), probably the competition for jobs became so intense and the costs of interrupted participation so high that women did not leave the labour force even when they had children, and especially if they had large families to support.

An in-depth look at the Latin American countries shows that women's participation in the labour market increased throughout the 20th century, but at different rates in different places. In general, the increase in female labour market activity was not a homogeneous process and there were fluctuations and differences, although the overall long term trend was rising. The evidence shows no single pattern in how these Latin American countries incorporated women into the labour market during their various stages of development.

Figure 1. Evolution of female labour markets in Latin America 1900-2000



Sources: Activity rates based on ILO-Olivetti (2013). Argentina, Latin America Census 1960-2000, ILO. Uruguay, Román and Fleitas and censuses; Brazil, censuses. Chile, Godoy and Díaz. Mexico, INEGI, DGE and censuses. For the period 1990 to 2000, ECLAC 2013.

At the beginning of the period Argentina and Uruguay had relatively high rates of women's participation in the labour market, while Brazil, Colombia and Mexico were much further behind. By the end of the period Brazil and Colombia had caught up with the two leaders.

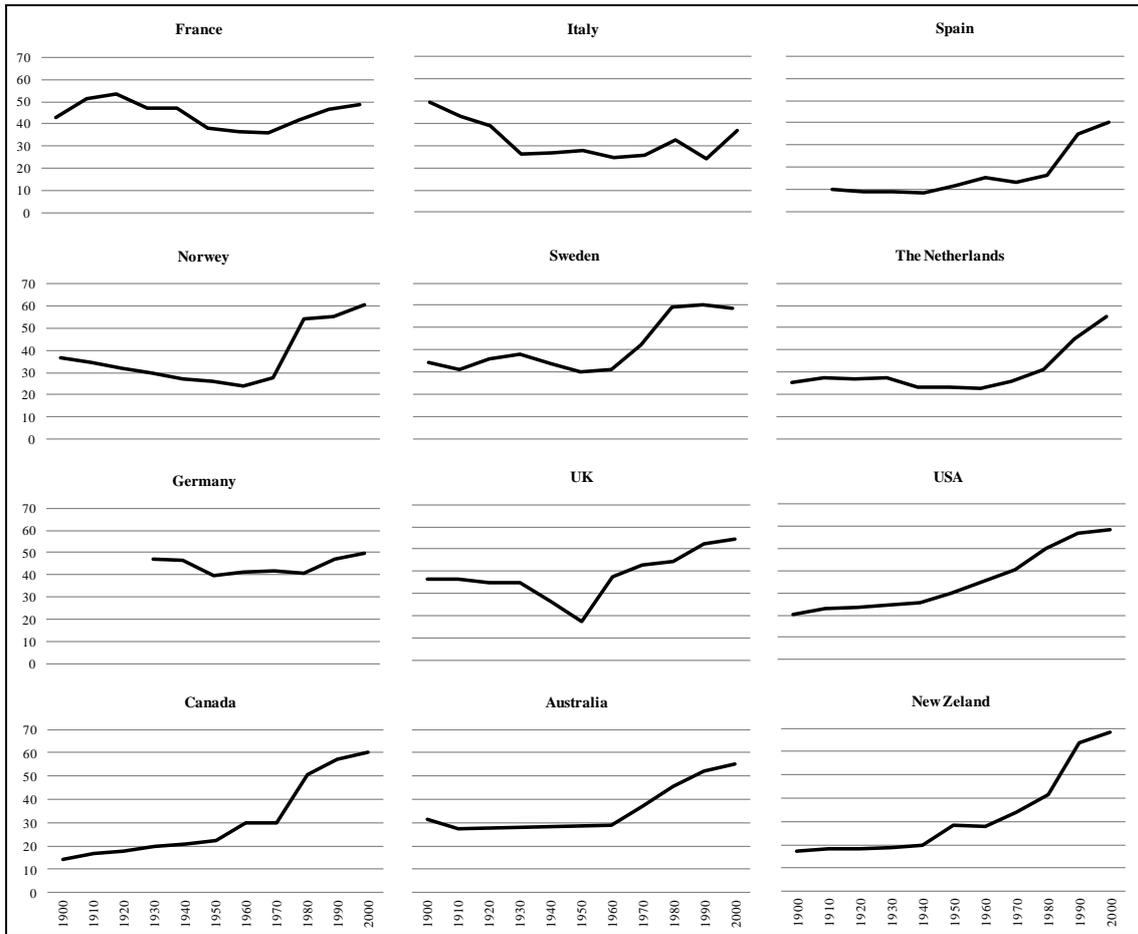
Trends in female labour force participation rates in Chile in the second half of the 20th century are particularly puzzling as they fell from 31% in 1950 to 26% in 1980. This trend was quite similar in the rest of the group. But women's participation did not increase as expected in the last two decades of the century, and this is surprising, particularly if we consider that the country enjoyed remarkable economic growth during the neo-liberal period. Part of the explanation responds to bad conditions in the labour market, the impact of underemployment, informal work and low pay, all of which were common in Latin America and have been highlighted by different researchers studying the case of Chile (Abramo 2004, Selamé 2004, Todaro 2004).

For the rest of the sample, the data show that since the mid twentieth century the other countries considered have had much lower participation rates and, despite some improvement, they have found it difficult to reach the levels of the leaders.

In the developed countries, women's labour market participation rates were higher than in Latin America. At the end of the 20th century the developed world was performing better in economic terms and had a complex and diversified structure that included a greater proportion of women in the labour force.

However, the process was not similar among countries. In Canada and the United States the female labour force participation rate increased steadily. In other countries, the trends in female labour force participation were U Shaped, although in some cases the U was more muted than in others. In particular, Spain and Italy also had a U-shaped female labour rate even though they had lower levels of female labour force participation.

Figure 2. Evolution of female labour markets in developed countries 1900-2000

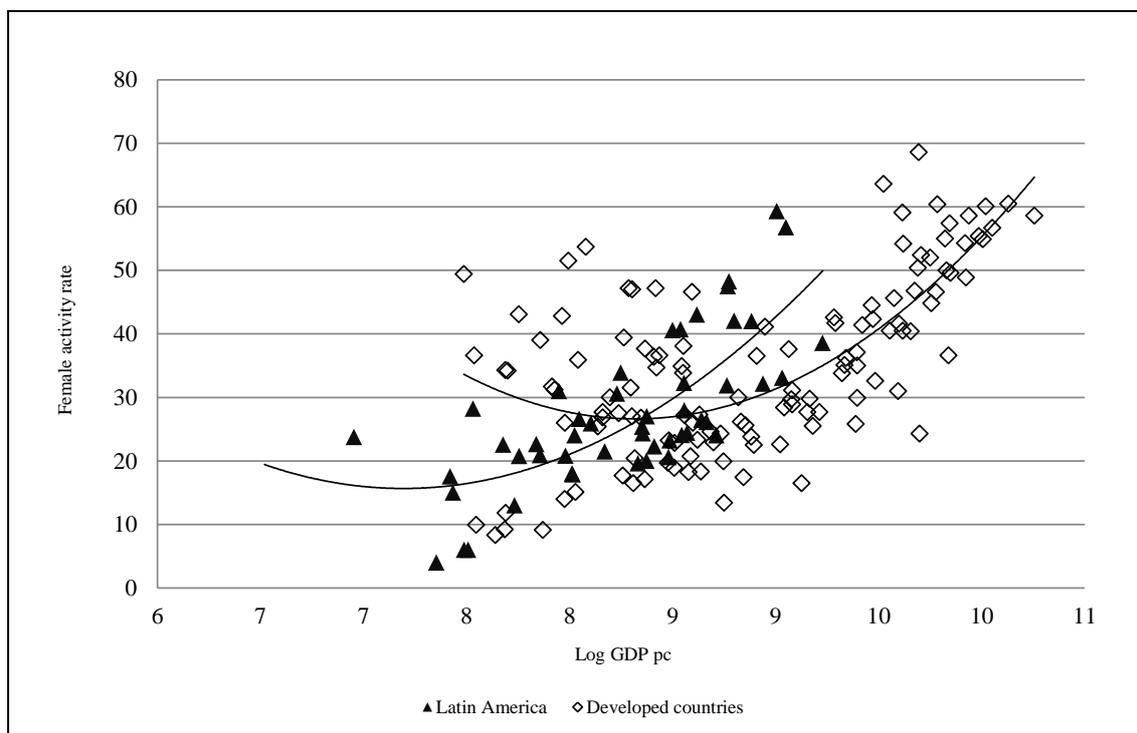


Sources: Activity rates based on ILO - Olivetti (2013).

The U-shaped hypothesis

As an aggregate indicator, the standard labour force participation rate does not show the dynamic of women’s entry into labour markets. It is necessary to know what kind of women's employment was involved and the relation between the demand and supply dimensions of the market. The evolution of women’s education may provide a clue to understanding the situation in Latin America.

Figure 3. Relation between economic growth and female labour market participation (decades, 1900-2000)



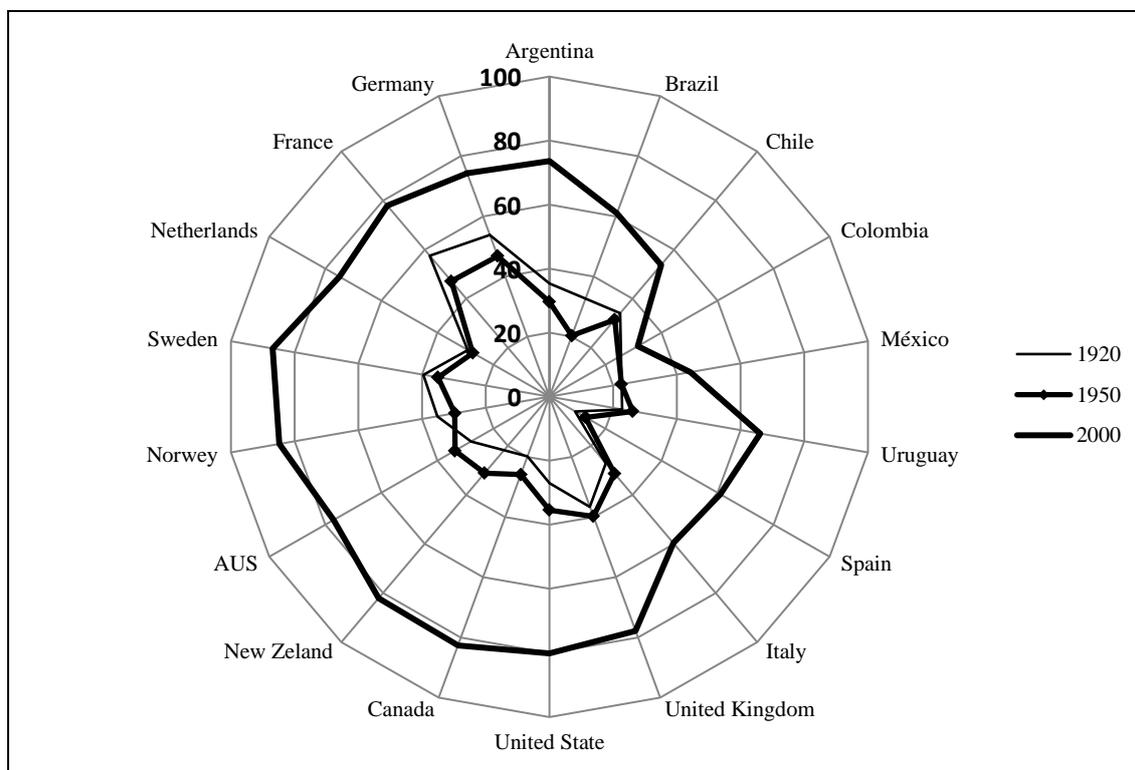
Sources: Activity rate based on ILO - Olivetti (2013). The Latin American countries presented in this graph are **Argentina**: Latin America Census 1960-2000: ILO. **Uruguay**: Román and Fleitas and Census; **Brazil**: Census. **Colombia**, ILO. **Chile**: Godoy and Díaz. **Mexico**: INEGI, DGE. Census. Period 1990 to 2000 - ECLAC 2013. Data on GDP per capita are from Maddison (2010) and Bértola and Ocampo (2012).

As the U-shaped hypothesis describes the correlation between the female labour force participation rate and per capita GDP (a proxy for economic growth), changes in different periods may depend on structural changes in economic activity, changes to household arrangements, and attitudes towards women working outside the home. The data show that female participation rates are higher in a context of low levels of per capita GDP and lower in middle economic-growth countries. If we follow the above-mentioned theoretical approach, as soon as education levels improve and fertility rates fall, women are able to join the labour force in response to growing demand in the services sector.

Throughout the twentieth century this hypothesis seems to be confirmed in both developed and developing countries. While Latin America lagged behind in rate of female participation in the labour market and levels of per capita GDP, the trend was similar in the two groups of countries. As mentioned above, there seems to be a positive correlation between the two indicators and they determine each other. An increase in female participation in the labour market may contribute to greater economic growth, and at the same time economic growth may promote more equity in employment opportunities between the sexes. We can see that over the period the gap between the men's and the women's participation rates narrowed. The divergence between the sexes is considerably less in developed countries.

The data underline the fact that there is no linear correlation between an increase in per capita GDP and greater women's participation in the labour market. In fact, the countries with higher levels of female participation were not those with the greatest economic growth. Such was the case of New Zealand and Norway among the developed countries and Argentina and Uruguay in Latin America. This leads to the conclusion that the factors behind increased female participation should not be sought only in economic growth.

Figure 4. Gender gap in activity rates during the twentieth century



Sources: Activity rates, ILO and Olivetti (2013). Argentina, Latin America Census 1960-2000 and ILO. Uruguay, Román and Fleitas and censuses. Brazil, censuses. Chile, Godoy and Díaz. Mexico, INEGI, DGE and censuses. The period 1990 to 2000 – ECLAC 2013.

Participation in economic sectors by gender

The existence of a U-shaped female labour participation rate might depend on the specifics of the process of structural transformation of an economy. The Latin American countries that industrialized in the twentieth century did so later than the developed economies, and there is a gap between the two in terms of female participation. To explain this, we might suppose that the industrialization process could be associated with an increase in the skilled labour force at the expense of less developed sectors such as the primary sector, where women's labour participation was more intensive. But with the introduction of mechanization and new technologies in the agricultural sector there

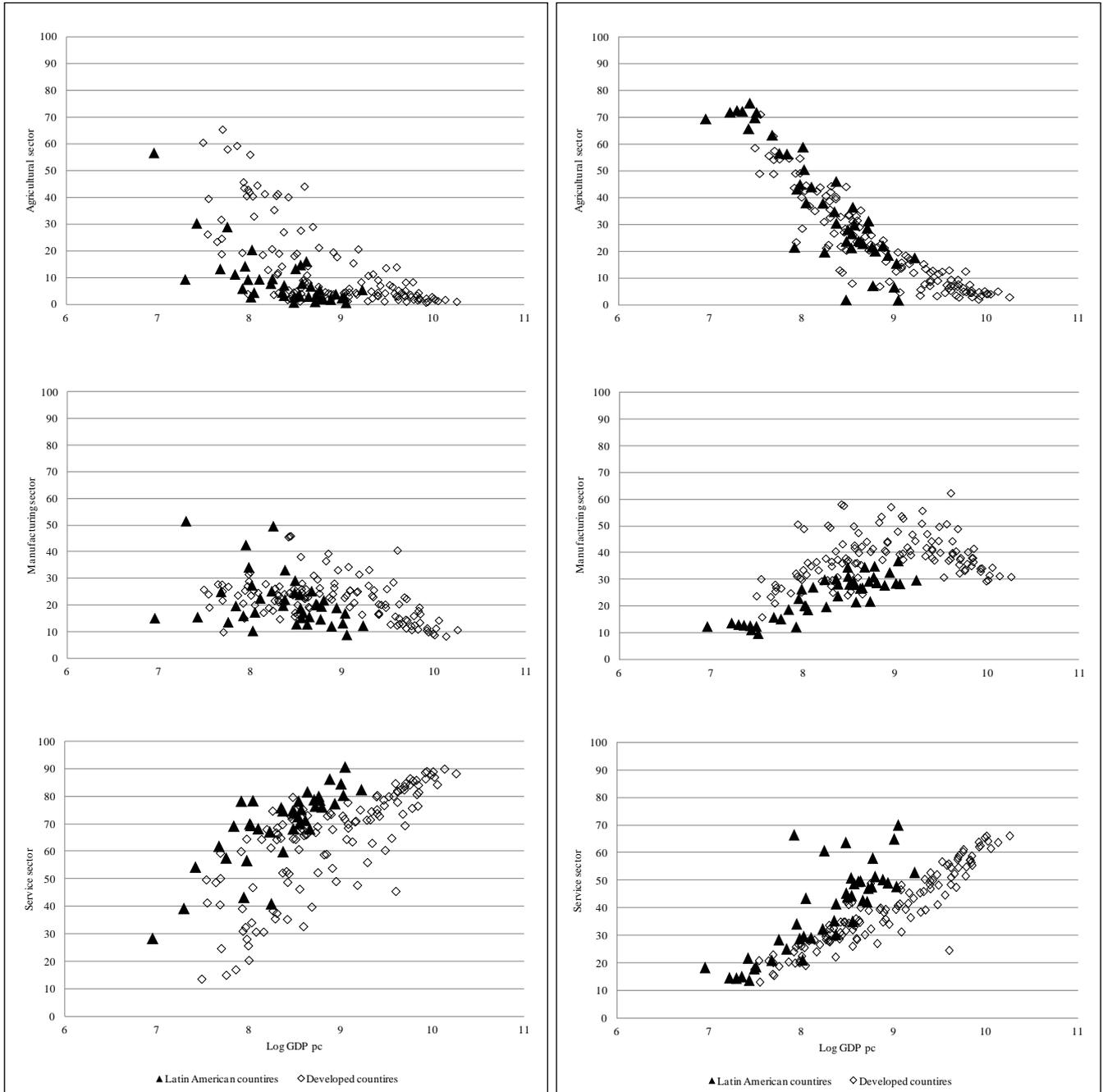
might also be a displacement of small producers, and the traditional systems of production and the balance between the roles of the two sexes in smallholder families might be disturbed. In addition, in its advanced stages, the process of economic development could be associated with the expansion of the service economy, and in this area women have a comparative advantage. These transitions were associated with rising levels of education, declining fertility rates, and shifts in other socio-economic drivers of labour force participation, and there are specific consequences for the situation of women, especially in the labour market. Authors like Goldin (1994, 2006) underline the fact that in the service sector the tasks demand less physical activity and are less risky, so this sector might stimulate the entry of women into the labour force. In Latin America the majority of women who work are in the service sector. Even though this sector tends to have lower productivity than industry and is generally lower-paid, it may provide better working conditions than agriculture and thus create more opportunities for women to continue to obtain better jobs. This could account for women's higher employment share in this sector.

When we consider the sectoral distribution of the economically active population by sex, the trends in the developed and developing countries are very similar. In the agricultural sector, the share of the female economically active population decreases as per capita GDP increases. But the trend among men is stronger, which is consistent with the theoretical approach in terms of the process of structural change. However, the trends for both sexes are evolving more slowly than in the developed countries, which is because Latin America lags behind them in economic development.

Figure 5. Trends in economically active population by sector (%) and per capita GDP (Log) (1900-2000)

Female

Male



Sources: Female and male rates in economic sectors Mitchell (Mitchell , Mitchell 2007). Data on GDP per capita are from Maddison (2010) and Bértola and Ocampo (2012).

In the manufacturing sector the two sexes have different trajectories. Men's participation rates are increasing in step with economic growth, although this process is slower in the Latin American countries. Among women the correlation is not so strong and there are

different trends in different countries and regions. This might be explained by the U shaped evolution of women's participation rates. The industrial sector does not employ women in large numbers and the incorporation of women into it differs depending on the sector's level of development. Even among women in Latin America the decrease in participation in this sector is more pronounced, which is consistent with the process of women joining the labour market, as outlined above.

Women are well-represented in the service sector, and there is a strong positive correlation between this situation and economic growth. In Latin America this sector has had the highest share of the female economically active population even though these countries do not have particularly high per capita GDP. Among men there is a positive correlation between labour force participation in the service sector and economic growth, even though men are evenly distributed across the economic sectors.

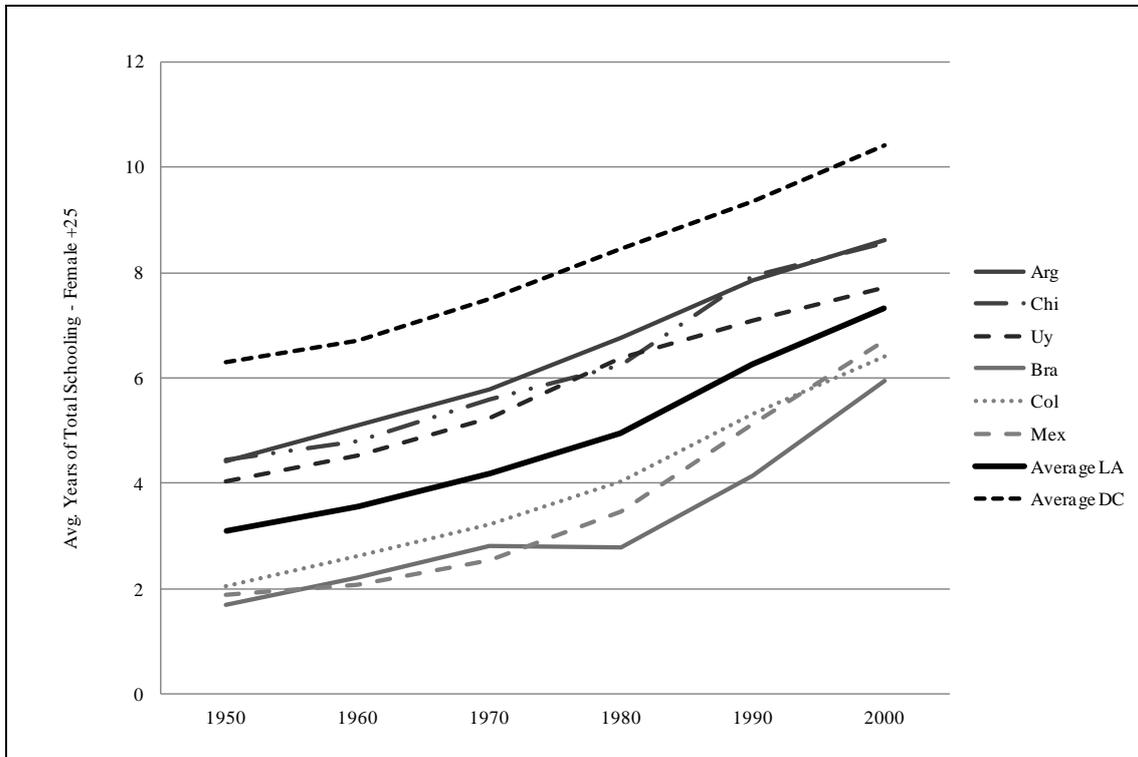
5. Improvements in female education levels

In Latin America women's lives have been changed by structural trends that are reflected in increased life expectancy, improved levels of education and a lower average number of children. These factors have altered female labour participation and also the number of economically active years women spend in the labour force (Arriagada 1997).

One of the strongest determinants of labour market outcomes in both developed and developing countries is education level. The increase in years of schooling has had a big impact on individuals' decisions to enter the labour force. Education is a key factor behind the U-shape hypothesis. At the start, women's education lagged behind that of

men but once their education levels caught up and job opportunities emerged, women started to participate in greater numbers.

Figure 6. Improvement in female education in Latin America and a comparison with the average for developed countries. 1950-2000



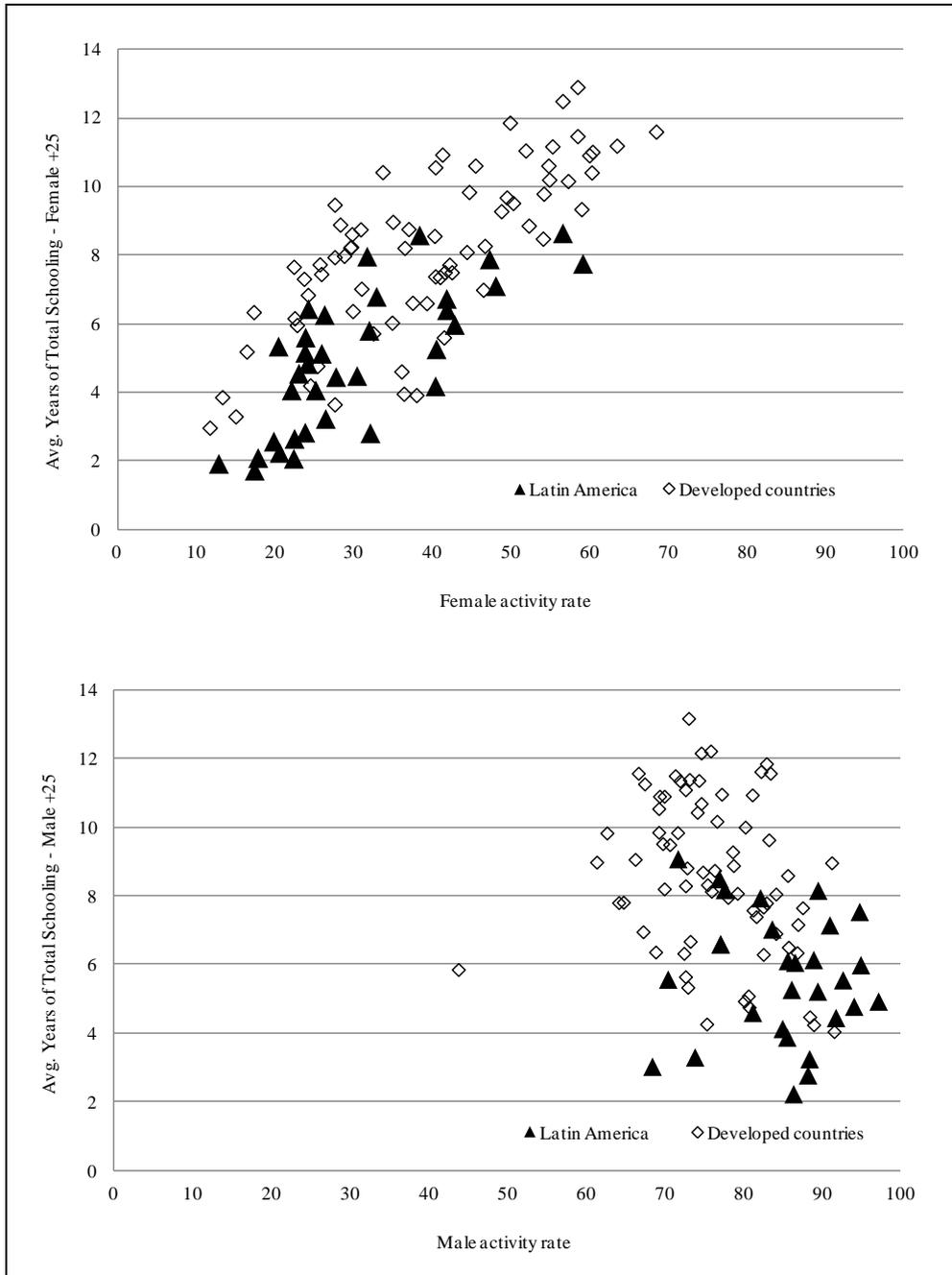
Sources: Barro & Lee (2012).

As was to be expected, the trend throughout Latin America has been for average years of schooling to increase. However, after 1950, Argentina and Chile were clearly in the lead in this respect, and Uruguay followed the trend although its growth rate slowed towards the end of the period.

At the start of the period the other countries in the sample had markedly lower levels and improved only gradually. The hypothesis that this indicator evolves favorably as countries develop is corroborated in this sample. In particular cases such as Mexico and Brazil, the increasing economic growth they enjoyed in the second half of the twentieth

century could have been a factor in governments' decisions to invest in improving education, and this had a positive impact on female schooling rates.

Figure 7. Education and activity rate by sex (1950-2000)



Sources: Activity Rate, ILO and Olivetti (2013). Argentina, Latin America Census 1960-2000, ILO. Uruguay, Román and Fleitas and censuses. Brazil, censuses. Chile, Godoy and Díaz. Mexico, INEGI, DGE and censuses. For the period 1990 to 2000 – ECLAC 2013. Data on education is based on Barro & Lee (2012).

Women's education levels increased considerably in many developing countries throughout the twentieth century and this has contributed to more women entering the labour force. Figure 7 shows that participation rates in Latin America increased considerably with education. It can be seen that countries with low female schooling rates have also had low participation rates, while higher female education levels are reflected in higher participation rates.

In contrast, male labour force participation was relatively constant in spite of educational improvements and did not vary significantly over time. Therefore we can conclude that the rising education levels of women had a significant impact on the pace of labour supply growth in the region.

The correlation between education and the female activity rate is a factor in explaining long-term trends but this is not a linear phenomenon, and many questions remain about the evolution of women's participation in the labour force. There are complex links among these trends, and for this analysis to be improved other social factors will have to be considered.

6. The impact of demographic changes on women's lives

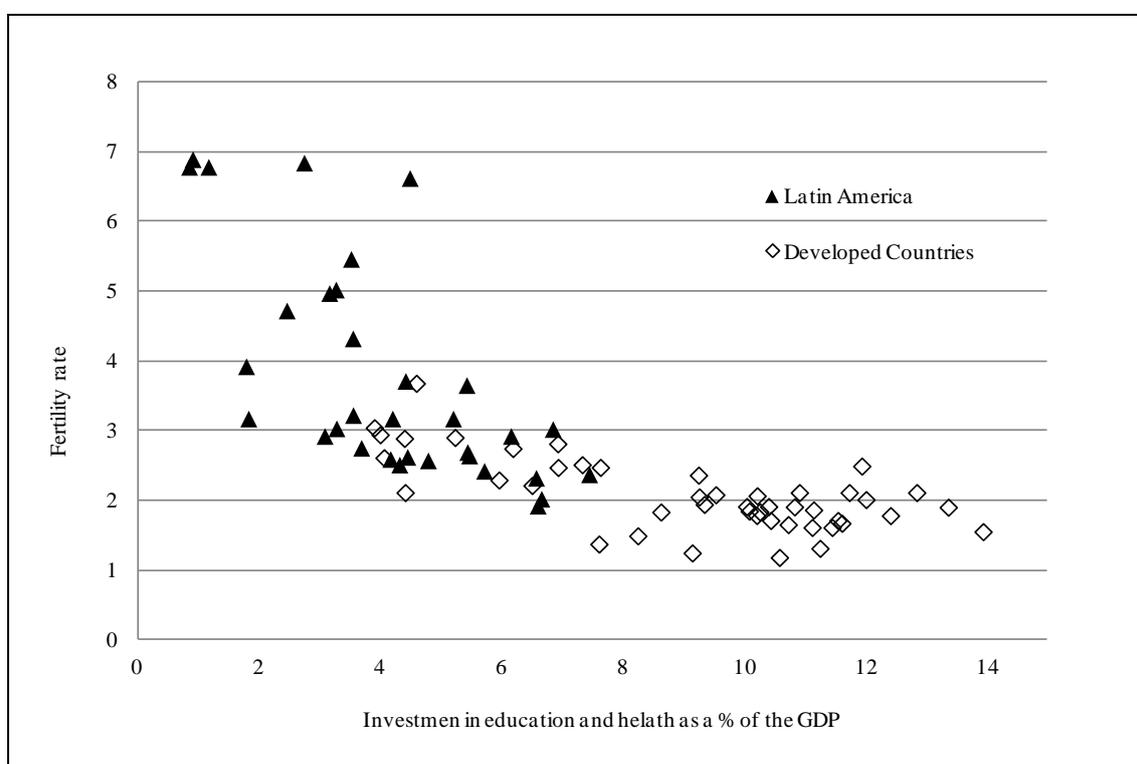
In theory there is an inverse relation between women's availability to participate in the labour market and their obligations in the sphere of care activities. In general, women are overburdened with home care tasks while men are available to work outside the home. Economic development fosters diversification in the labour market, an improvement in women's skills and a reduction in restrictions connected with the home.

As noted above, there is a hypothesis that female labour force participation and economic growth are linked in a U-shaped pattern (Goldin 1990, 1995). Early in the economic process, when the majority of the population worked in the agricultural sector and there were more women in the labour force, fertility rates were high. Most women worked on family farms or in household enterprises, and this allowed them to combine economic activity with raising a family. As society developed, the economy moved towards industrial production and women's participation in the labour market tended to decrease. They were not able to benefit from the emerging opportunities in the manufacturing sector because their education levels were low, it is difficult to care for children while working in paid employment, and in addition there were socio-cultural restrictions on women going out to work. Then, as society developed economically, female labour force participation increased. When they had more years of schooling and when a large service sector emerged, more job possibilities appeared. Women were more able to combine work outside the home with raising children thanks to the decline in fertility, the increasing availability of part-time jobs and more access to child care facilities.

An important factor that helps to explain the increased participation of women in the labour market in Latin America is that in the second half of the twentieth century there were changes in demography and in the family (Arriagada 2005, Guzmán, Rodríguez et al. 2006, Maubrigades 2015). The fall in fertility was one of the most important social changes in the region. The number of children per woman has fallen almost everywhere, and this has resulted in a new demographic profile characterized by a restructuring of the family unit.

It is clear that socio-economic development in Latin America has contributed to the fall in fertility as attitudes have changed and small families and family planning are more and more seen as the norm. Over the last four decades of the twentieth century, the small family became widespread and women tended to have only two or three children. Even though average investment was lower than in the developed countries, increased State spending on education and health has clearly had a positive impact in that fertility is declining.

Figure 8. Public social investment and the fertility rate (1950-2000)



Sources: Data on fertility in Latin America are from ECLAC (Guzmán, Rodríguez et al. 2006). For the developed countries they are from the United Nations Department of Economic and Social Affairs, Population Division. Fertility rates in Sweden, Germany and France are from Herce, Ahn et al (2003). Data on social public investment are from Azar & Freitas (2012).

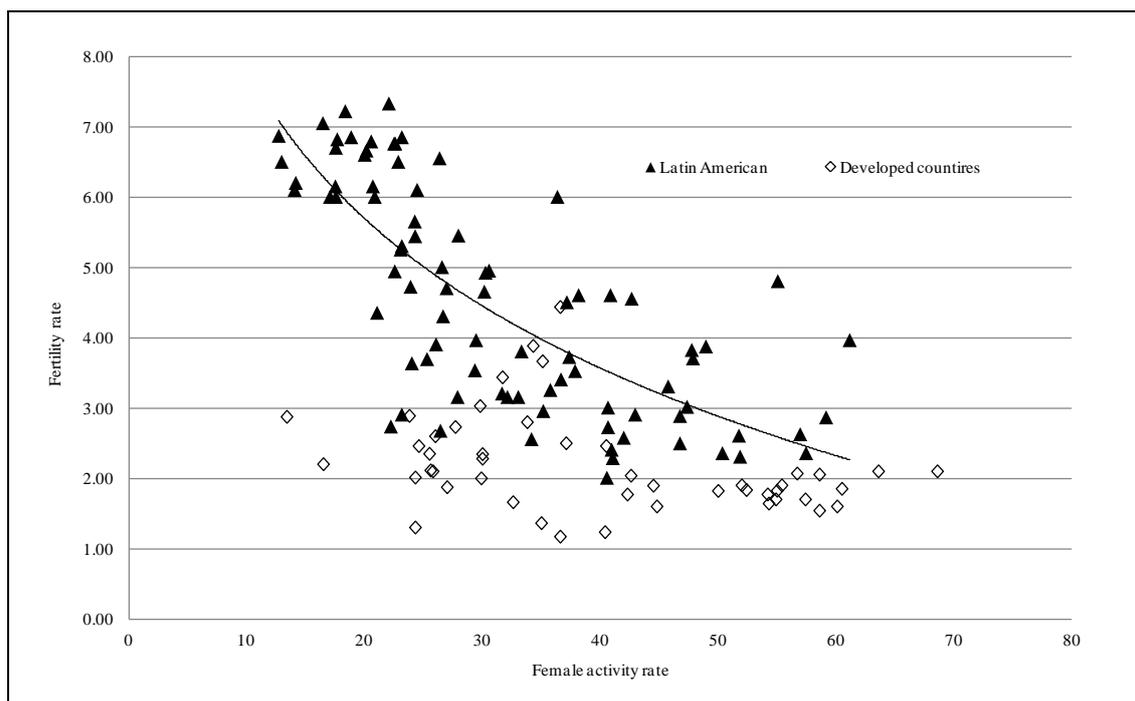
At the time of the second demographic transition in Latin America, the developed countries had already achieved low fertility rates. When examining this trend in developed countries we inevitably find a combination of institutional and human factors, and in particular social policies to promote women's labour market participation

such as benefits for children and family leave systems (Becker, Duesenberry et al. 1960, Becker, Murphy et al. 1994, Jaumotte 2004, Jaeger 2010).

Although the long-term trend for female participation rates to rise is similar in most countries, persistent differences in levels suggest that different countries are constrained by country-specific institutional and social factors. The possibility of combining paid work and child care depends strongly on the occupational structure and labour market arrangements. Changes in the occupational structure, especially as regards part-time employment, could have been a factor behind the expansion of employment opportunities for women. However, the developments of the service sector and greater opportunities for part-time jobs have not increased equally in all the developing countries.

The trends in developed countries during the second half of twentieth century varied considerably. The countries that currently have the lowest fertility levels (Spain and Italy) are those with relatively low levels of female labour force participation, while those with higher fertility levels (Norway and New Zealand) have relatively high rates of female labour force participation. This probably reflects the impact of changes in attitudes towards working mothers and the effects of social policies that make it easier for women to rear children while at the same time working outside the home.

Figure 9. Fertility rates and female labour market participation (1950-2000)



Sources: Data on fertility in Latin America are from ECLAC (Guzmán, Rodríguez et al. 2006). For developed countries they are from the United Nations Department of Economic and Social Affairs, Population Division. Fertility rates in Sweden, Germany and France are from Herce, Ahn et al (2003). Activity rates are based on ILO data from Olivetti (2013). Argentina, Latin America Census 1960-2000, ILO. Uruguay, Román and Fleitas and censuses. Brazil, censuses. Chile, Godoy and Díaz. Mexico, INEGI, DGE and censuses. For the period 1990 to 2000 - ECLAC 2013.

In the 1950s only two Latin American countries, Argentina and Uruguay, had a fertility rate below 5, which was a similar pattern to that in the developed world. The fertility decline occurred in these countries in the first half of the twentieth century, and by the 1950s the average number of children per woman was around 3. This pattern also developed in Chile in the 1960s, in Colombia and Brazil in the 1970s, and in Mexico at the end of that decade. In the late 1990s total fertility rates in Latin America as a whole were around 2 children per woman.

7. Conclusions

In this paper I have explored the main forces behind the increase in female labour force participation in Latin America over the last century. To analyze this, I have reconstructed the evolution of the female activity rate in a sample of countries in the

region and made comparisons with the trend in developed countries during the same period.

The changing pattern of women's participation in the labour market is an important dimension in explaining economic growth, particularly in developing countries. However, the relationship between women's participation and economic development is far from straightforward. Although cross-sectional data indicate that there is a positive relation between female labour force participation and per capita GDP, this link is complex and it is not a consistent trend at the country level. In the final analysis, women's employment is driven by a range of multi-faceted factors including education, fertility rates and State investment.

Firstly, the research finds evidence that female labor force participation is correlated with structural change in ways that are consistent with the theoretical approach underlying the feminization U hypothesis. The structural changes that impacted on Latin America during the twentieth century's economic growth would explain the observed variation in women's economic activity. While it remains possible that today's advanced economies followed the U-shaped evolution over the course of their economic development, the U-shape seems less marked for most developing countries in the sample. Nevertheless, it is important to analyze the historically different initial conditions among Latin American countries as more important drivers of female labor force participation including educational and demographic conditions associated with structural change.

Secondly, there is substantial literature that supports the idea of a strong correlation between education and women's labour market participation, but the process is difficult to interpret. The results in the present paper show that female education has a positive

correlation with the labour market, but the correlation with male education is less clear. Both results suggest that educational improvement is an important condition for women joining the labour market, even if it is not the only one. In the case of men, the market may demand other skill premiums, not necessarily related with formal education but with characteristics of production structure.

Thirdly, my results show that the fertility rates related to social investment are associated with higher female participation in the labour market. Thus we find that, quite apart from economic growth, investment in education and social policies impact positively on women's opportunities and consequently may contribute to development outcomes.

To sum up, many conditions affect women's labour opportunities in Latin America such as structural changes, changing family arrangements, and also the social policies that directly influence female employment opportunities, in particular associated with female education and health..

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