

upna

Universidad Pública de Navarra
Nafarroako Unibertsitate Publikoa

fec >>

school of economics
and business administration

facultad de ciencias
económicas y empresariales

ekonomia eta enpresa
zientzien fakultatea

Facultad de Ciencias Económicas y Empresariales

TRABAJO FIN DE GRADO EN PROGRAMA INTERNACIONAL DE
ADMINISTRACIÓN Y DIRECCIÓN DE EMPRESAS

Migration and female labor force participation in Latin America

Viktoria Imamova Orhanova

Pamplona-Iruña 1 de Septiembre de 2023

Módulo: Economía Española, Internacional y Sectorial

DIRECTORA: Miren Ullibarri Arce

ABSTRACT:

The main objective of this research paper is to analyze the role of the migration rate in the recent decelerating trend of the female labor force participation in Latin America. We also analyze the relationship of the female participation with the economic growth, the fertility rate, and education. Four countries are studied in depth: Colombia, Ecuador, the Dominican Republic, and Nicaragua. We find that the emigration experienced by the young population in the Latin American region in the last years has had a negative effect on the growth of the female participation in the native labor market. For the elaboration of this work, available literature, statistical programs, and official databases have been used.

KEYWORDS:

Participation, deceleration, migration, education, fertility.

RESUMEN:

El objetivo principal de este trabajo de investigación es analizar el papel de la tasa de migración en la reciente tendencia a la desaceleración de la participación laboral femenina en América Latina. También se analiza la relación de la participación femenina con el crecimiento económico, la tasa de fecundidad y la educación. Se estudian en profundidad cuatro países: Colombia, Ecuador, República Dominicana y Nicaragua. Encontramos que la emigración experimentada por la población joven en la región latinoamericana en los últimos años ha tenido un efecto negativo sobre el crecimiento de la participación femenina en el mercado laboral nativo. Para la elaboración de este trabajo se ha utilizado la literatura disponible, programas estadísticos y bases de datos oficiales.

PALABRAS CLAVE:

Participación, desaceleración, migración, educación, fertilidad.

TABLE OF CONTENTS

1. INTRODUCTION.....	4
2. FEMALE LABOR FORCE PARTICIPATION.....	6
3. THE U-SHAPE RELATIONSHIP BETWEEN ECONOMIC DEVELOPMENT AND FEMALE LABOR FORCE PARTICIPATION RATE.....	7
4. DETERMINANTS OF FEMALE LABOR FORCE PARTICIPATION.....	10
4.1 Economic growth.....	12
4.2 Fertility.....	13
4.3 Education.....	15
5. DECELERATION OF THE FEMALE LABOR FORCE PARTICIPATION RATE.....	20
6. THE MIGRATION VARIABLE.....	21
6.1 The effects of emigration on the countries of origin.....	22
6.2 The emigrant profile.....	24
7. REGRESSION MODEL FOR FEMALE LABOR FORCE PARTICIPATION.....	29
8. CONCLUSIONS.....	31
9. REFERENCES:.....	33

1. INTRODUCTION

In the last decades, we have seen an important increase in the involvement of women in the economy and labor markets of developing countries (although, the levels of this increase vary from region to region). In the case of the Latin American territory, female labor force participation has been continuously growing for the past period. In the 1960s, it was about 20.2 percent while in 2021 it reached 51.1 percent, coming to its highest number in 2019 (52.5 percent) (World Bank, 2021). Recent literature (Busso and Fonseca, 2015; Chioda, 2016; Klasen, 2019; Serrano et al., 2018) agrees that several determinants have come into play for this increase to happen, with the most commonly repeated ones being fertility, education, and economic growth. On the whole, the economic and social progress gained in most developing countries since the end of the 20th century has allowed for an increase in the demand for labor and so, the expansion of the role of women in the labor force. As a country develops further, there is a decline in the fertility rates of the population, as well as a rise in overall education. The fertility rates of the Latin American population have undergone substantial changes in the last years, going towards smaller-sized families by reaching an average of 2 children per woman (compared to nearly 3 at the beginning of the 2000s) (ECLAC, 2022). Family structure and female labor force participation are interconnected, the fewer children, the more time a woman would have for other activities, such as work or further educational goals. Easier accessibility to education (with equal quality for both sexes) has allowed female education to expand substantially in most regions and even led to closing enrollment gaps at the secondary and tertiary level with their male acquaintances (Klasen, 2019). The increase in the female schooling years has helped them upskill to the degree of expanding their occupational choices (at the same time contributing to the economic and social development of a country). In particular, the share of women (between 25 and 59 years old) in Latin America who fulfill 13 or more years of education (university degree and higher) has grown from 15.8 percent in the year 2000 to 27.6 percent in 2021 (ECLAC, 2022). Conversely, still to this day, social and cultural norms have a negative effect on the female labor force participation rate of some regions perpetuating gender-based inequalities in the labor markets.

Despite the assembly of favorable characteristics, since the 2010s, its growth rate has been experiencing a drop. There could be many different reasons for this phenomenon.

In this paper we will pivot mainly on the migration variable (focusing on emigration), and how it could be one of the causes for this deceleration in the rate. Latin America has been an emigration territory since the 1960s, and in recent years emigration has been continuously growing. In general, the reasons for this departure are due to searching for better opportunities (work-related, educational, societal, etc.) in higher-income territories, such as Europe or North America. We have found out that the majority of the recent Latin American emigrants are young people (in their prime years of working) with high education. To add on, the population that is leaving is majorly feminized. More in-depth, the female labor force participation of the Latin American emigrant population (in Spain or other OECD countries) is more than 10 percentage points higher than the one for the women who stayed in Latin America. Taking the previous considerations into account we find that emigration could play a role in the deceleration of female labor force participation.

In sum, this research paper will be focused on the female labor force participation in Latin America as a whole, and four specific countries: Colombia, Ecuador, the Dominican Republic, and Nicaragua. It will analyze the influence that economic growth, fertility, and education can have on female participation in the markets, and it will present migration as a factor that can negatively affect the growth rate of female labor force participation.

The first section of the research will define what is considered as female labor force participation, and what ages and periods of time will be covered. The second section will go over the U-shape theory of female participation. Afterward, we will analyze the most commonly mentioned determinants of the female participation rate trends: economic growth, fertility, and education, and how they have positively contributed to the increase Latin America experienced in the previous years. In section five, we will present the deceleration phenomena of the female participation growth rate in the region studied and will later introduce the migration variable, which is one of the several that could be contributing to the drop. In section six, we will define migration, reviewing the destinations the majority of the flows go towards and the general profile of the emigrant individual coming from Latin America. We will also compare female labor force participation rates for the emigrants and the ones who stayed in their native regions. In section seven, a regression model will be illustrated, trying to demonstrate the relationship between the four variables previously commented on and the female

participation rate in Latin America. To finalize, section eight will present the conclusions gathered from this research.

2. FEMALE LABOR FORCE PARTICIPATION

The research at hand will be primarily centered on female labor force participation, so it is important that its meaning is fully defined: the percentage of the female population that is working, for pay, or searching for a job. In this context, women in charge of household chores and caretaking that are not reimbursed financially will not be included. The age span that will be mainly analyzed is going to be from 25 to 59 years old. This particular range will be the one concerned due to its favorable characteristics for studying the labor supply, containing predominantly the share of the population that is in their prime age of working. This would considerably eliminate the risk of having higher age groups where health problems are more prone to appear and where pensions could play a role that could affect the labor decision-making of the individuals. On top of that, it would remove the younger part of the population, where individuals' labor decisions are usually strongly affected by education and fertility variables. The period of time in which this study will be centered will be mainly between the years 2000 to 2021, even though in some cases information up to this year has not been yet available, and the countries that will be contemplated in depth are Ecuador, Colombia, the Dominican Republic, and Nicaragua. They are selected due to both their similarities and their differences. These northern Latin American countries all have been part of the region's general increase in the female labor participation of the 2000s. In terms of GDP per capita growth, educational development, and fertility rate decline, they all have been following similar trends but at different levels/speeds. In terms of emigration, for all four, there has been a positive and growing tendency that we could relate to the female participation's growth decelerating trend.

3. THE U-SHAPE RELATIONSHIP BETWEEN ECONOMIC DEVELOPMENT AND FEMALE LABOR FORCE PARTICIPATION RATE

Over the past decades, several theories have emerged trying to explain the trend that female labor force participation follows. One of the most commonly known ones is the U-shape relationship between the economic development of a country and its female labor force participation rate. The U-shaped theory was first suggested by Sinha in 1964, afterwards, many other researchers tried to recreate it. In her work, Goldin (1995) states that “across the process of economic development, adult women’s labor force participation rate is U-shaped”. The author represents the figure by depicting the female labor force participation in different countries at separate stages of economic development. As a measure of the latter, GDP per capita is used, although, as she herself mentions, it is not considered the best proxy for economic development. In this perspective, female labor force participation presented as a U-shaped relationship could be divided into three distinct segments. The first one would be the higher part of the U-shaped curve, the starting point, at which in spite of the fact that incomes are especially small, women make up a great share of the labor force in a country. This section would include impoverished countries where female labor force participation is very high. The population’s time and effort are dedicated to activities of the primary sector. From family farms to household businesses, like small craft shops, where all or almost all of the house residents participate in the activities, for pay or unpaid.

The second part would be observed by a country moving towards more economic development, through the expansion of markets or the incorporation of new technologies (Goldin, 1995) that could eventually raise the living standards. Here, the manufacturing sector, with manual and machine tasks in construction and factories (considered as more “masculine jobs” in terms of societal agreements) will be a central part of the labor demand. Even though income would rise thanks to economic development, women’s labor force participation would initially drop, moving them out of the labor force. Goldin (1995) talks about the social stigma against women working outside of their homes for wages and how this effect is greater for married women. In their work, Mammen and Paxon (2000) also state that blue-collar jobs are perceived negatively for married women to work into, and thus make female labor force participation decline during industrialization, and prevent women from entering the paid labor force and earning fair wages, as income from manufacturing is higher than for

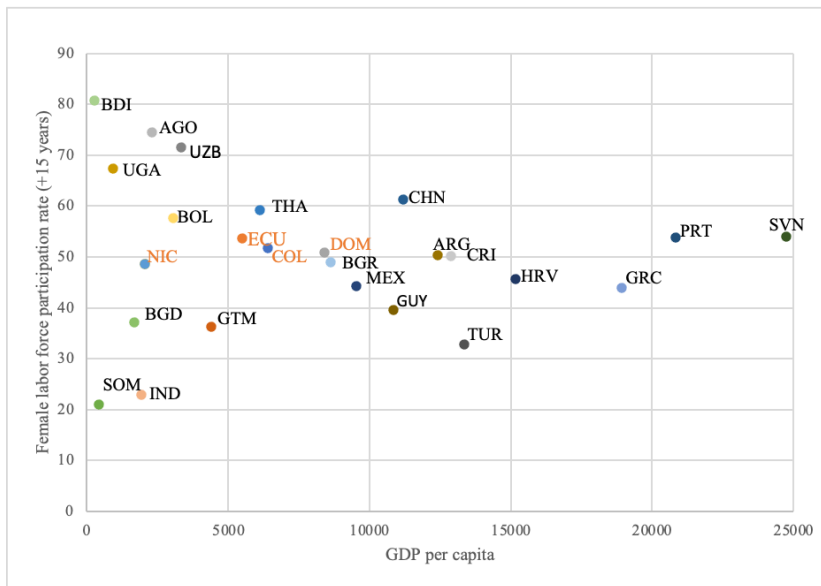
agricultural or artisanal production. To add on, it can be stated that at-home production, where most women would be working, will be greatly displaced by the competition of the outside market (Goldin, 1995). In all, this creates a greater gender gap in terms of wage and labor between men and women. There might also be social norms or mental models limiting the scope of women to accept paid employment, especially manual jobs. Women might not take outside-of-household jobs due to the possible incompatibility with raising their children, and so, when agriculture's weight in a country's economy decreases and fewer family farms remain, the opportunities for women to work will decline, decreasing the female labor participation rate. Ultimately, the type of work a woman will choose will depend on her family structure and the opportunities she is given at home to develop (Mammen & Paxon, 2000).

The improvements in the economic aspects of a country result in enhanced labor and wage conditions in cities, and thus structural changes begin to occur. Individuals begin choosing better jobs at factories leaving behind the family businesses. As stated in "Economic Cycle and Deceleration of Female Labor Force Participation in Latin America" (2018) the labor situation for men considered as the less skilled workers would improve. Now for the women's labor supply, the effect of economic growth can be "positive or negative depending on whether the substitution or the income effect prevails". If the substitution effect prevails, it will encourage a growing female labor force participation, whereas if the income effect abounds, the inverse added-worker effect appears (Serrano et al., 2018), as the economic conditions are better off and their husbands gain a higher income for the household, women feel less pressure to search for a job, and so they postpone their entry into the labor market. As indicated in their work, this effect has even stronger implications for women with low levels of education. The third part of the U-shaped curve can be seen with the increasing portion of the "U". With even higher levels of economic development, gender equality (in principle) should be reinforced, driving the female labor force participation levels to grow again. Education in general increases due to the better socioeconomic situations and so does the female one. More women will have an education beyond elementary school and so they will have more opportunities to obtain white-collar types of jobs (paid employment) such as teaching and nursing, or in offices, allowing labor force participation rates for women to rise. Further structural transformations will happen with GDP per capita growth, with increases in white-collar jobs and decreases in the

agricultural sector. After their schooling years, women could take on those positions immediately, but the impact on the labor force participation of married women could take several decades more (Goldin, 1995).

Figure 1

Female labor force participation rates (more than 15 years old) and GDP per capita (at constant prices in dollars base year 2010) for the year 2021



Source: Labor force participation rates: International Labour Organization. “ILO Modeled Estimates and Projections database (ILOEST)” ILOSTAT.; GDP per capita: The World Bank national accounts data and OECD national accounts data files

Notes: AGO (Angola), ARG (Argentina), BDI (Burundi), BGD (Bangladesh), BOL (Bolivia), BGR (Bulgaria), CHN (China), CRI (Costa Rica), COL (Colombia), DOM (Dominican Republic), ECU (Ecuador), GRC (Greece), GTM (Guatemala), GUY (Guyana), HRV (Croatia), IND (India), MEX (Mexico), NIC (Nicaragua), PRT (Portugal), SOM (Somalia), SVN (Slovenia), THA (Thailand), TUR (Turkey), UGA (Uganda), UZB (Uzbekistan),

In Figure 1, we have recreated the U-shaped trend using several countries, including the ones relevant to our study. It can be observed that Nicaragua is among the countries with smaller GDP per capita while having the lowest female labor force participation among our chosen countries. Ecuador, Colombia, and the Dominican Republic seem to appear near the lower part of the U-shape drawing, having more economic development and less female participation than the countries in the upper part of the U-shaped trend. In all, the four countries have similar participation rates. With further economic

development, it would be expected that these countries would move to the upper-right side, achieving higher female participation again.

Gaddis & Klasen, (2014) show that the U-shaped hypothesis is “shallow” and can’t explain the different trends or levels at which the female labor force participation is in different countries around the globe. They find that “initial conditions, factor endowments, and historical contingencies” are better determinants of female labor force participation rates. Klasen (2018) concludes that in the case of Latin American countries, they do not follow a U-shape. Several authors, including Chioda (2016), Gasparini y Marchionni (2015), Álvarez et al. (2019), and Klasen (2018) agree upon the need to research other determinants, like preferences, values, attitudes, and social factors that women are exposed to.

On the other hand, literature (Busso and Fonseca, 2015; Chioda, 2016; Klasen, 2019; Serrano et al., 2018) agrees that economic growth, fertility, and education are crucial determinants in the trends that female labor force participation follows.

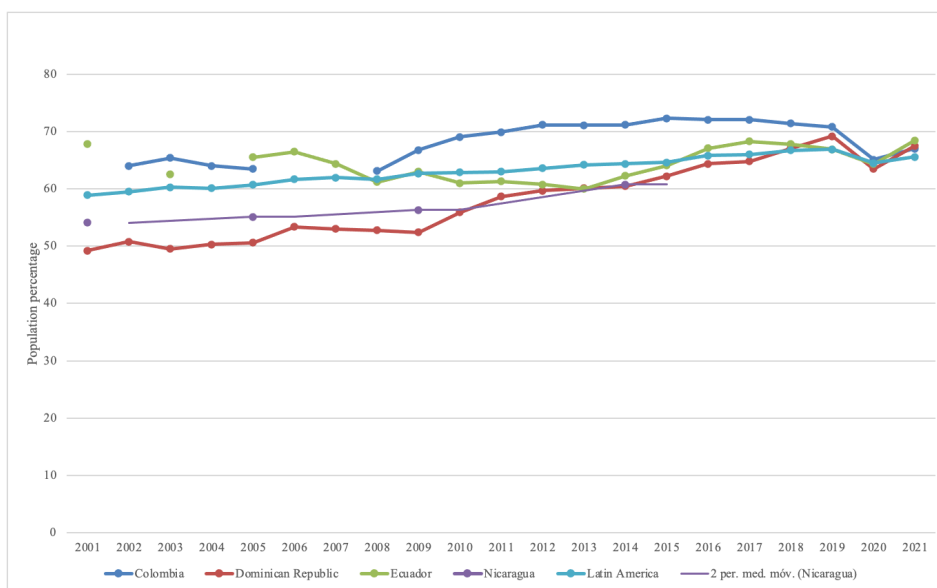
4. DETERMINANTS OF FEMALE LABOR FORCE PARTICIPATION

Compared to other regions in the world, historically, Latin America has had lower female labor force participation rates, however, in the past decades this has been gradually changing. Female participation rates have been increasing all over the region. In general, the Latin American rate has grown from around 40 percent in the 1990s to 55 percent in 2020¹ (ECLAC, 2022). Ecuador has had the biggest leap, with 25.87 percentage points (pp) of difference between the period aforementioned, followed by Colombia with 13.72 pp, and the Dominican Republic and Nicaragua with 11.12 and 9.19 pp respectively. Several researchers (Busso and Fonseca, 2015; Chioda, 2016; Klasen, 2019; Serrano et al., 2018) agree that these increases are likely due to changes in several determinants, where the decline of the fertility rates, increase in the educational levels of the population, and the economic growth of the countries, are the most salient ones.

¹ The female labor force participation rate data indicated differs from the one illustrated in Figure 2 due to the latter comprising the active population of 24 to 59 years old while the first one contains the population of 15 years old and older.

Figure 2

Female labor force participation rates (%) (population between 25 and 59 years old)



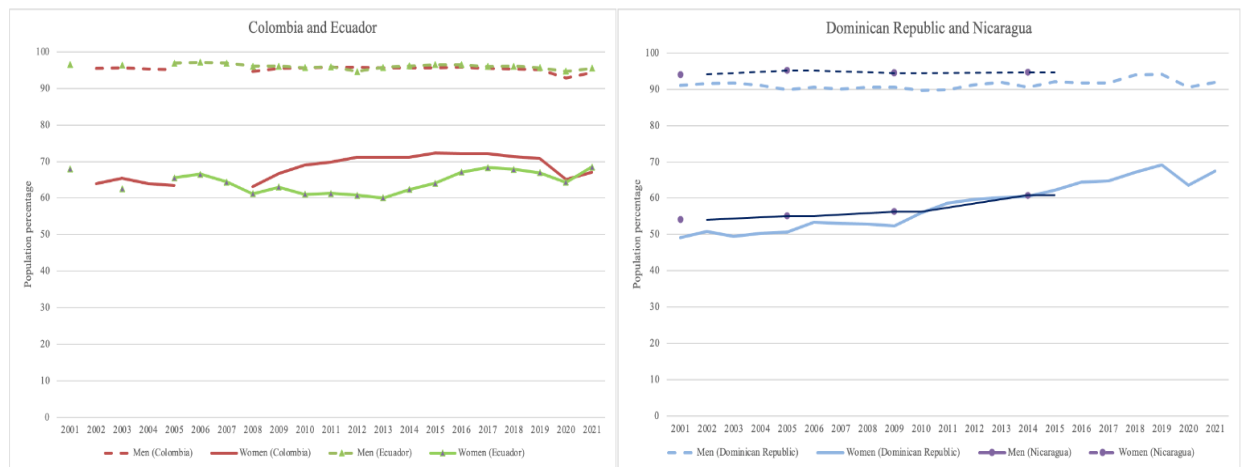
Note: Data for Colombia, years 2001, 2006, and 2007, and for Ecuador, 2002 and 2004 were not available. In the case of Nicaragua, the only accessible data was for 2001, 2005, 2009, and 2014.

Source: ECLAC / Economic Commission for Latin America and the Caribbean / Based on data from Household Surveys Database (BADEHOG)

In figure 2, the female labor force participation rate for the population between 25 and 59 years old is depicted for the concerned countries. On average, in Latin America, the rate has increased by 6.7 pp between 2001 and 2021. For all countries observed, the participation rate has increased in the period (except for 2020, attributed to the COVID-19 world pandemic), although from 2015, in general, the growth rate started to follow a decelerating trend. The labor participation gap between men and women in the countries studied is still present today, but it is gradually becoming smaller as observed in Figure 3. For all the concerned countries we can conclude that there was an increase in the female labor participation, particularly in the Dominican Republic with approximately 20 pp of difference between 2001 and 2021. Over the period, Ecuador and Colombia have achieved similar female participation rates, close to 70 percent. Even though more recent data on Nicaragua is not available, it can be seen that the trend it follows is increasing. Men's labor force participation on the other hand has been, in general, constant (Figure 3). This is not surprising as female participation started at far lower rates in the period than male ones.

Figure 3

Evolution of the labor force participation rates for the population between 25 and 59 years old divided by sex



Note: For Ecuador, information between 2001 and 2004 was not available, and neither information for Colombia years 2001, 2006, and 2007. In Nicaragua’s case, the only accessible data was for 2001, 2005, 2009, and 2014.

Source: ECLAC/Economic Commission for Latin America and the Caribbean / Based on data from Household Surveys Database (BADEHOG)

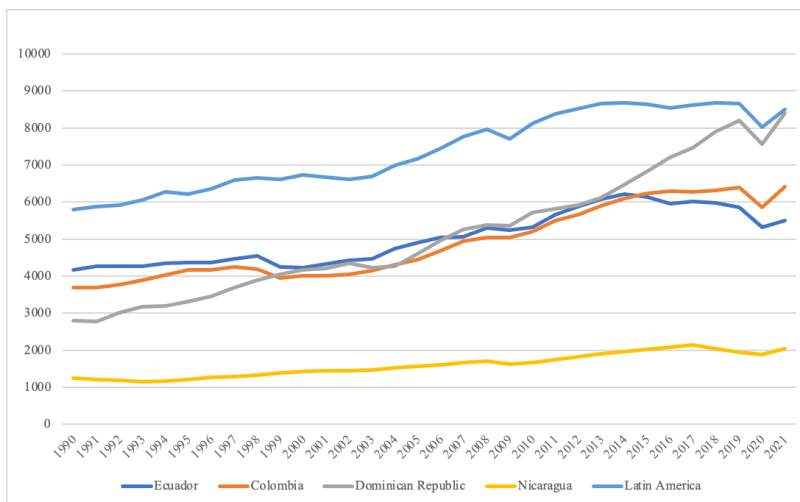
4.1 Economic growth

In his study, Klasen (2019), finds that per capita income has a strong positive effect on female participation in the case of Latin America. Since the 1990s, economic growth has been continuously increasing in most developing countries, including the Latin American ones (Figure 4). This in turn should make the labor demand for its inhabitants increase, and achieve more economic development through investment concerning social services provided, like accessible education and healthcare, increasing particularly the female participation in the workforce, “as male participation rates already were very high” (Klasen, 2019). With the development of a country, “white collar” types of jobs tend to gain relative importance, being those, typically more accepted for women, so it will increase their incentives to work away from home and obtain an income (Mammen and Paxon, 2000). On the other hand, given the development of social programs and eventually the higher earnings of their spouses, women in Latin America might delay their entrance into the labor market (Serrano et al., 2018). In brief, higher wages as a consequence of economic growth could have different effects on the woman’s decision to join the labor force. It could have a

substitution effect, where working or working longer is more attractive, or an income effect. The latter refers to the income earned by the woman’s family or husband (Mammen and Paxon, 2000). If this income increases, there could be the possibility of female removal from the workforce as the other part could have higher and sufficient earnings for women to not have to work for pay outside of the household. Women might get out of the labor market or not feel pressured to enter due to the fact that now they have the opportunity to select a job they like and fit their preferences, making it a choice to have a job, not a need. Although, Mammen and Paxon (2000) state that “if women's wages rise along with men's wages, then increases in the wages of women may result in greater levels of female labor force participation”.

Figure 4

GDP per capita for Latin America, Ecuador, Colombia, the Dominican Republic, and Nicaragua from 1990 to 2021



Note: Gross National Product (GDP) at US\$ constant prices of 2010 for Latin America, Ecuador, Colombia, the Dominican Republic, and Nicaragua.

Source: The World Bank national accounts data and OECD national accounts data files

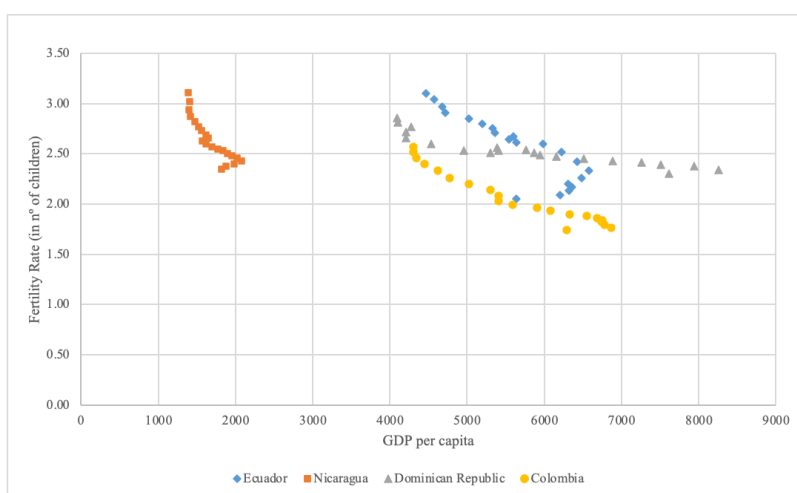
4.2 Fertility

The next important variable is the fertility rate. As a country moves further into development, economically and socially, child mortality rates tend to fall, allowing for lower fertility levels. Parents would have a smaller number of offsprings as the probability of a child not dying at a young age and being able to grow old would be higher. Also, with the rise in incomes, the extent to which one child could be able to

provide for the parents (or vice versa) will be greater, not to forget the pension systems that generally arise with the development of a country, which would further alleviate the providing children's burden. Once the fertility rates decline, the number of children born into a household becomes smaller, allowing for the women (who usually are the ones to take up most of the caring tasks) to have more time available for other occupations, spending less time being pregnant and/or tending to the infants. This freeing up of time could result in greater female participation in the labor force (Klasen, 2019). Figure 5 depicts how the fertility rate (expressed in the number of children per woman) evolves over time, taking into account the GDP per capita changes. For the four countries studied, as GDP per capita grows with time, fertility rates fall. In the case of Ecuador and the Dominican Republic, the countries are coming near to the average of 2 children per woman, which is considered the average number per woman that would ensure a stable population. For Colombia, the fertility rate is approaching the number of 1.5 children. This is a similar rate to countries like the United States, Germany, and Australia (World Bank, 2021). Nicaragua, in comparison with the others, has the lowest growth of GDP per capita during the period and its fertility rate is close to 2.5 children.

Figure 5

Fertility rates (in number of children) and GDP per capita (at constant prices in dollars base year 2018) between the years 2000 and 2021



Source: Fertility rate: ECLAC / Economic Commission for Latin America and the Caribbean / CELADE. Population Division of ECLAC. 2022 Revision and United Nations, Population Division. Department of Economic and Social Affairs, World Population Prospect. 2022 Revision; GDP per capita: ECLAC / Economic Commission for Latin America and the Caribbean / Own estimates based on national sources

Mammen and Paxon (2000) find that increases in the supply of work for a wage and the decline in fertility rates are closely intertwined. It could be stated that the increases in GDP per capita, are related to paid work supply in higher amounts, so more people decide to join the labor market. Moreover, as a country develops economically, it evolves socially too. Healthcare, family planning services provisions, and affordable child-care facilities that could be developed may help with the increase of the female gender presence in the labor force of a country and with it the decline of the fertility rate (Figure 5). Data suggests that the most developed countries have the lowest fertility rates. In the case of the Latin American region, composed of developing nations, it can be observed that they are experiencing a fertility decline (Figure 5). In the study carried out by Klasen (2019), he states that of all the developing regions of study, a “strongly negative relation between fertility and female participation only exists in Latin America”.

4.3 Education

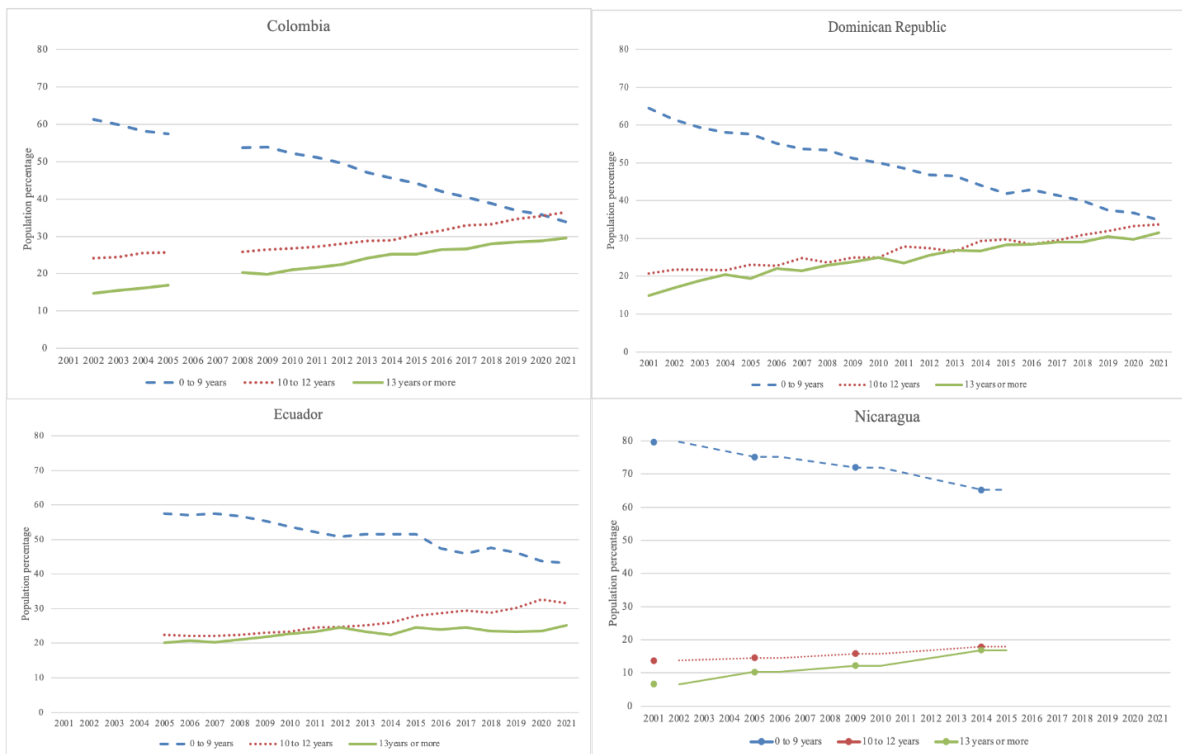
Proceeding with education, Schultz (1988, p. 604) points out that "until women can acquire the requisite schooling and transferable skills to find suitable employment in firms in expanding sectors of the modern economy, the opportunity value of women's time relative to men's time may decline". Even though in the last decade more countries have achieved socioeconomic developments, historical gender roles still remain influencing today's decisions in terms of female labor. Women's work decisions still depend to a great extent on the economic conditions of the household, and what is considered as “appropriate jobs for women” (Klasen, 2019), and even so, in poorer countries, boys are yet favored in the choice of having an education, while girls barely receive the basic (Mammen and Paxon, 2000).

As the economy grows in a region, education rises. This is to be expected. Mammen and Paxon (2000) indicate that education is a “consumer good”, “more of which is demanded at higher income levels, and a productive asset which results in higher income”. Female education in developing countries is expanding continuously in some cases even faster than that of men, being able to get closer to closing the gender gaps (Klasen, 2019). As the living standards in a country rise, education for both genders rises as well (Mammen and Paxon, 2000). Klasen (2019), affirms that the expansion of female education is a consequence and result of the fertility rate decline, achieving

greater female involvement in the workforce due to their increased qualifications. In his study, he concludes that Latin America shows a strong positive correlation between female education and participation.

Figure 6

The evolution of female education in three schooling levels, 0 to 9 years of education, 10 to 12, and more than 13 years of education for the period of 2000-2021 (for the population between 25 and 59 years old)



Note: For Ecuador, information between 2001 and 2004 was not available, and neither information for Colombia years 2001, 2006, and 2007. In Nicaragua’s case, the only accessible data was for 2001, 2005, 2009, and 2014.

Source: ECLAC / Economic Commission for Latin America and the Caribbean / Based on data from Household Surveys Database (BADEHOG).

In Figure 6, concerning the countries studied, it is shown the population percentage that falls into one of the three educational level groups: 0 to 9 years of education, 10 to 12, or more than 13 years of education (university level and above). For all four regions, the population share that only has between zero and nine years of education is following a decreasing trend. Taking into account the increasing direction of the other two groups,

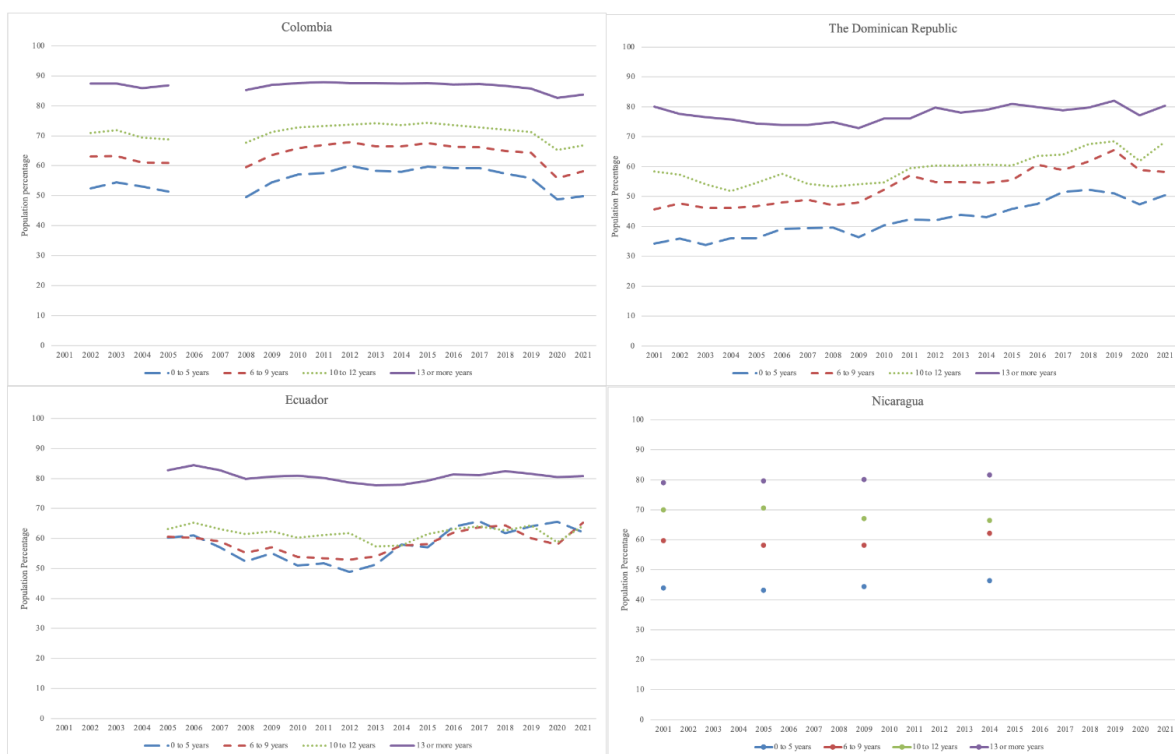
this would mean that the schooling level of the country's citizens is increasing. For Colombia and the Dominican Republic, the share of citizens who have 10 to 12 years and more, is surpassing the zero to nine group steadily. Colombia's share of the population in the 10 to 12 years is the largest, with around 38 percent. For Ecuador, with the exception of a slight growth decline in 2020 (assumed to be due to the COVID-19 world pandemic) the population with schooling years from 10 to 12 has increased steadily, while the higher educational level, of 13 years or more has remained approximately uniform during the period. In the case of Nicaragua, with the data available, the same patterns of growth and decrease can be seen, expecting it to follow similar trends to Ecuador. The average education level of women can increase, but slowly due to the fact that it only occurs as the younger cohorts, usually with more education, replace the older ones.

As more girls are achieving higher levels of educational degrees, it is presumed that female participation in the labor force will increase accordingly, as women would have more opportunities to be employed and earn a wage. In figure 7, it is illustrated how female participation in the workforce increases as the schooling years for those women increase as well. For all concerned countries, Colombia, the Dominican Republic, Ecuador, and Nicaragua, the share of the population with 13 or more years of education has the highest rate by far of female participation. The opposite happens with the lowest schooling years group.

For the period studied, in all countries (except for Nicaragua, as the data available is until 2014), the participation of the share of the population with the highest schooling years has been mostly uniform, with countries ending up in 2021 with the same rates as at the beginning of the century. Meanwhile, the participation rates for the other groups of schooling levels have been increasing, with some variation in the period concerned.

Figure 7

Female labor force participation rates differentiated by years of schooling of women between 25 and 59 years old

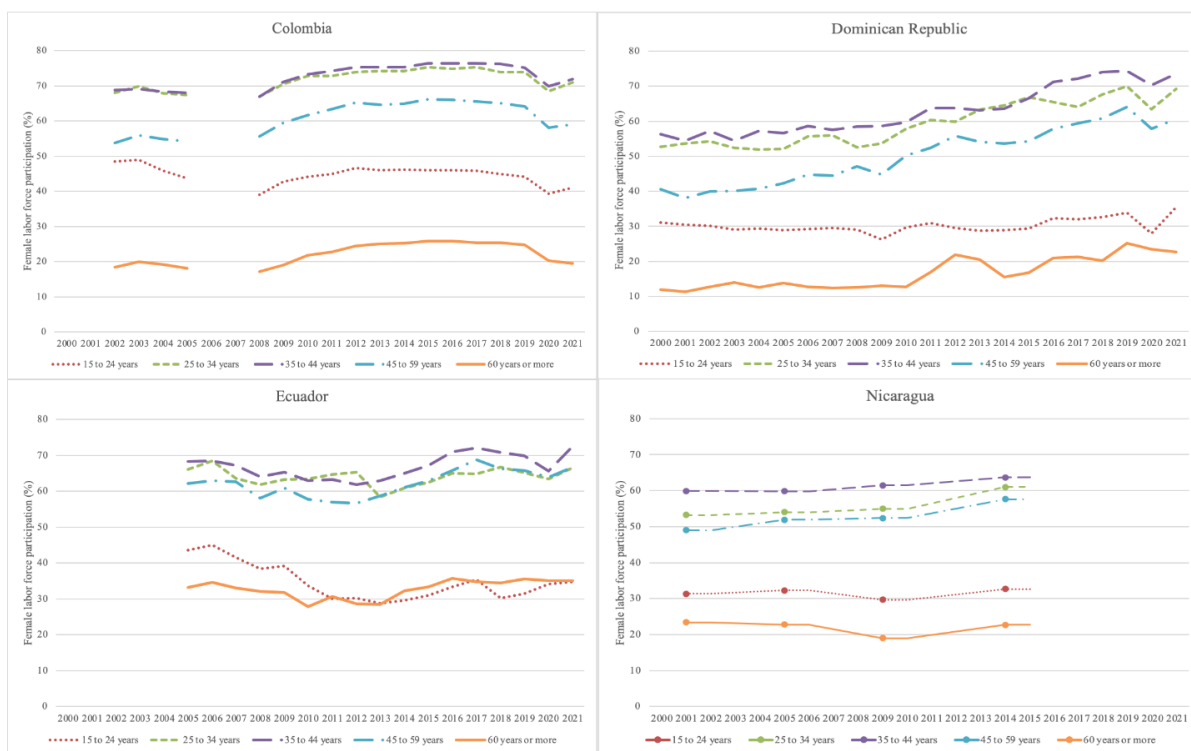


Note: For Ecuador, information between 2001 and 2004 was not available, and neither was information for Colombia years 2001, 2006, and 2007. In Nicaragua's case, the only accessible data was for 2001, 2005, 2009, and 2014.

Source: ECLAC / Economic Commission for Latin America and the Caribbean / Based on data from Household Surveys Database (BADEHOG).

Figure 8

The evolution of female labor force participation by age segments 15-24, 25-34, 45-59, 60 and over.



Note: For Ecuador, information between 2001 and 2014 was not available, and neither information for Colombia years 2001, 2006, and 2007.

In Nicaragua’s case, the only accessible data was for 2001, 2005, 2009, and 2014

Source: ECLAC / Economic Commission for Latin America and the Caribbean / Based on data from Household Surveys Database (BADEHOG)

Figure 8 depicts how the female labor force participation rate has evolved over time for five different age groups, for the regions covered in this paper. The countries' trends follow similar patterns, in all of them, the age group with the highest participation rates is the one comprising women from 35 to 44 years old, which is closely followed by the 25 to 34 years group (both considered as being in the “prime age” of working). In Colombia, more than 70 percent of the women falling into one of those two groups are in the labor force. In the case of Ecuador, more than 65 percent of the women between 25 to 59 are part of the workforce. Nicaragua follows comparable trends.

For the age group of 60 years old or more, in Colombia from 2008 labor force participation increased until 2020, and for the Dominican Republic, it continuously

rose. As new cohorts of women enter this group, with expected more education, and better economic and health conditions, it grows as they can stay in the labor force for a longer period of time. On the other hand, for Ecuador and Nicaragua (based on the data until 2014), the participation of women at the end of the period remained close to the one at the beginning.

For Colombia and Ecuador, the female labor force participation for the age groups of 25 to 34 years and 35 to 44 years (prime work age) had a modest decreasing trend from the year 2015. In the Dominican Republic's case, the 25 to 34 years group decreases for a couple of years from 2015 till 2017 when it begins to grow again.

Authors (Chioda, 2016; Gasparini & Marchionni, 2015; Klasen, 2018; Serrano et al., 2018) agree that even though education, decreasing fertility rates, and economic growth play important roles in determining female labor force participation, they are not sufficient to explain its trend in the Latin American region.

5. DECELERATION OF THE FEMALE LABOR FORCE PARTICIPATION RATE

In the 90s and early 2000s, the Latin American area “experienced the highest growth in female labor participation in the world” (Álvarez et al., 2019). Despite the progress made, with the increase in education levels, the lower fertility rates, and the economic and social developments achieved in recent years, current data confirm the existence of a decelerating trend (since approximately 2010) in the female participation in some regions. This phenomenon could be attributed to different sources that have yet not been taken into account. In Figure 2 it can be observed how the growth of female labor force participation rate begins to decline from around the year 2015 for Latin America in general and for the specific countries studied in the paper. And in Figure 8, as mentioned, it can be seen how from approximately 2015 the female participation in Colombia, Ecuador, and the Dominican Republic (not including Nicaragua due to missing data) slightly decreased for the cohorts in prime working ages (25 to 44 years old). It should be expected that the more educated young female cohorts would have high participation, replacing the old ones, but it has grown weakly.

There could be different variables at play that contribute to the deceleration in the growth rate of the female labor force participation. For instance, it could be associated

with the emigration of the younger population in Latin America, which could potentially hinder the expansion of female labor force participation in some areas.

6. THE MIGRATION VARIABLE

Countries can be at the same time immigration and emigration territories whose inhabitants make the decision to migrate for several different and individual reasons. Migration is defined as the movement of people from one place to another. It takes place in different contexts and for different reasons, usually because of political instability, violence, or economic insecurity in the origin country, searching for better life opportunities in other places. It can also result from educational desires or family reunification plans. Most of the time we can talk about economic or labor migration, where people move out to search for better economic and job opportunities in other countries. Migration can be permanent but also temporary, for a specific number of years to study and/or work (United Nations & ILO, 2017). The decision-making process of choosing to emigrate is complex and different for each individual. Many factors are at play and some have to do with the household income, the education one possesses or pursues, and family formation variables like marriage and fertility.

Latin America as a whole, has been a net emigration territory since the 1960s, meaning that more natives have been leaving their homeland than individuals born outside the region arrive (see Figures 9 and 10). When a region has a high emigration level, this could be an indication of problems in the country of origin. For the territories studied, the majority of the migrants are the economic type, with some being political. One of the main drivers for economic migration is the insufficient or inadequate work options that people face in their native countries. Usually, employment, wage, and social opportunities are superior in the destination regions compared to the origin ones. (United Nations & ILO, 2017). Now, even though this could enhance the well-being of migrants, they could face a complex integration process in the workforce and social environment due to factors such as discrimination, language barriers, etc. Still, there is vague information about the integration process and experience of the different immigrant communities in the destination regions (Morales & Rodríguez, 2022).

Usually, emigration is either directed towards higher-in-income destinations or to countries that are regionally close, mostly neighboring ones (such as Haitians migrating

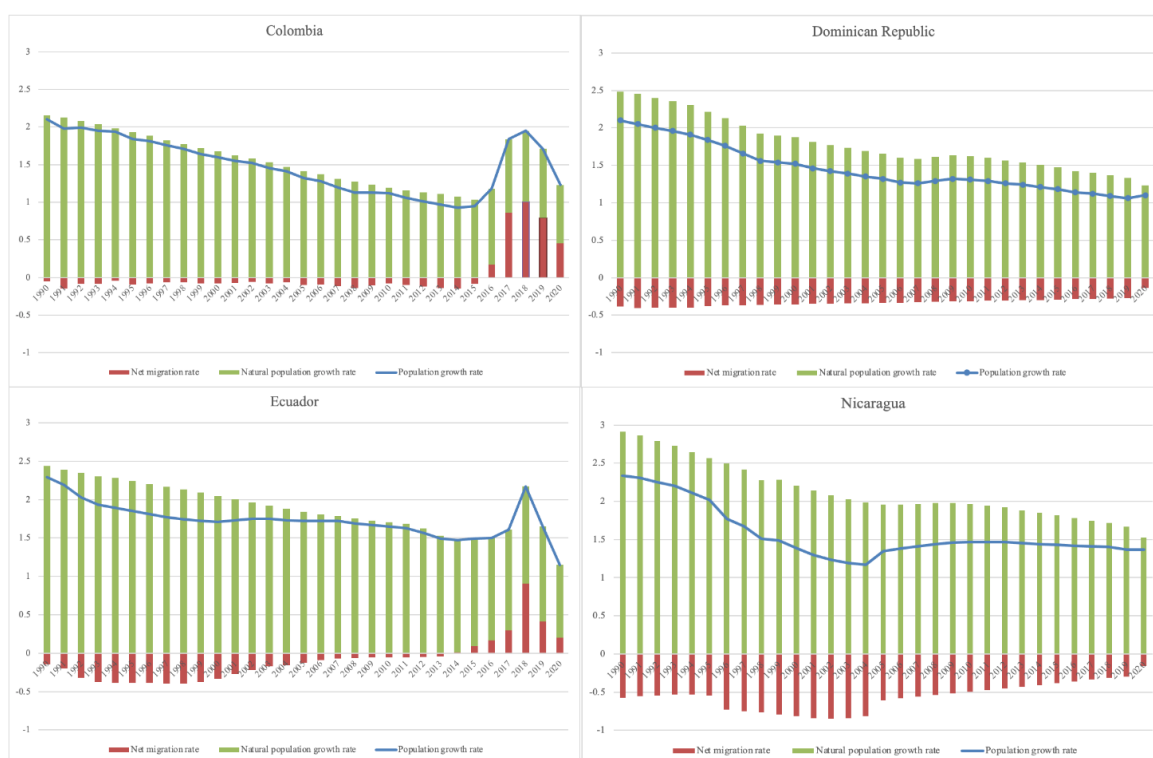
to the Dominican Republic or Nicaraguans to Costa Rica). In the 1990s, the immigrant flows from Latin America were mainly directed to the United States, and to Argentina, the Bolivarian Republic of Venezuela, Costa Rica, and the Dominican Republic (United Nations & ILO, 2017). After the 2000s, some Latin American emigrant flows have been directed towards the European Union countries, especially the southern part such as Spain, Italy, and Portugal, as well as other richer countries like Switzerland and the United Kingdom (Pellegrino, 2004). European destinations became popular due to the implications of having a European citizenship or residence permit, allowing access to the social security systems in the country and also to benefit from the “free” movement of people in the European Union, making it possible for the residents of one country to work and study in different European area territories.

6.1 The effects of emigration on the countries of origin

Migration affects both the origin and the destination country through wage and employment changes. The effects that immigrants could have on the native labor force depend on the skill sets that the groups possess. Immigrants can be substitutes or complements of the native labor market, competing for similar jobs, causing lower wages and displacement of workers, or increasing the demand for complementary skills (Blyde, 2020). Low-skilled migrants have a large positive effect on high-skilled women’s employment and earnings, while having negative and small effects on the low-skilled population due to similar skill levels. The latter would be the case of the Nicaraguan immigrants in Costa Rica (Blyde, 2020). Migration from the developing world, for instance from Latin American countries to European ones with characteristically declining birth rates and rising life expectancy, could contribute to alleviating the decline of the labor participation rates in those destination countries (Hilgenstock & Koczan, 2018). On the other hand, the immigrant population could contribute to the destinations by paying taxes, increasing demand for goods and services, including state-provided ones like healthcare, education, transport, etc. (Morales & Rodríguez, 2022).

Figure 9

Annual population growth rate, net migration rate, and the natural population growth rate



Source: ECLAC / Economic Commission for Latin America and the Caribbean / CELADE. Population Division of ECLAC. 2022 Revision and United Nations, Population Division. Department of Economic and Social Affairs. World Population Prospect. 2022 Revision

Figure 9, for the four territories studied, illustrates how emigration has affected the population’s growth, considering the net migration rate and the natural growth rate of each country’s population. The population growth rate would be the aggregate of the two variables mentioned, showing the “real” growth of the inhabitants.

For the period concerned, the Dominican Republic and Nicaragua have been having more people exiting the country than entering, thus resulting in a lower number of residents than it would naturally occur. The main destinations for the Dominican emigrants have generally been the United States, Spain, Puerto Rico, and Italy (United Nations, 2020). On the other hand, Haitian migrants in the Dominican Republic represent the highest number of immigrants, specifically, 86.5 percent (Morales and Rodríguez, 2022) of the around 4 percent of the inhabitants in the Dominican Republic that are foreign-born. The second-highest share of immigrants comes from the

Bolivarian Republic of Venezuela (Morales and Rodríguez, 2022). In the case of Nicaragua, the country shares a border with Costa Rica, by which they have been migrating to for several years due to the proximity, the higher living standards, and the political stability that Nicaragua has lacked.

Regarding Ecuador and Colombia, both had a net emigration rate until approximately 2015, with a new wave of immigrants coming in, mostly Venezuelan citizens, being Colombia the country with the largest number of Venezuelan migrants. For Ecuador, Herrera (2022) states that at the end of the 20th century, “an emigration like never seen took place” with the main destinations being North America and Southern Europe. This was caused due to different reasons, including the economic crisis that hit the country at the end of that period, leaving very high unemployment indicators.

The data shows that, indeed, people have been leaving their native countries and moving to other ones, usually with better opportunities, slowing down the population growth rate (Figure 9). If the people who are departing are considerably made up of women in their prime age of working, this could be one of the explanations for why the female labor force participation rate in Latin America has been decelerating.

6.2 The emigrant profile

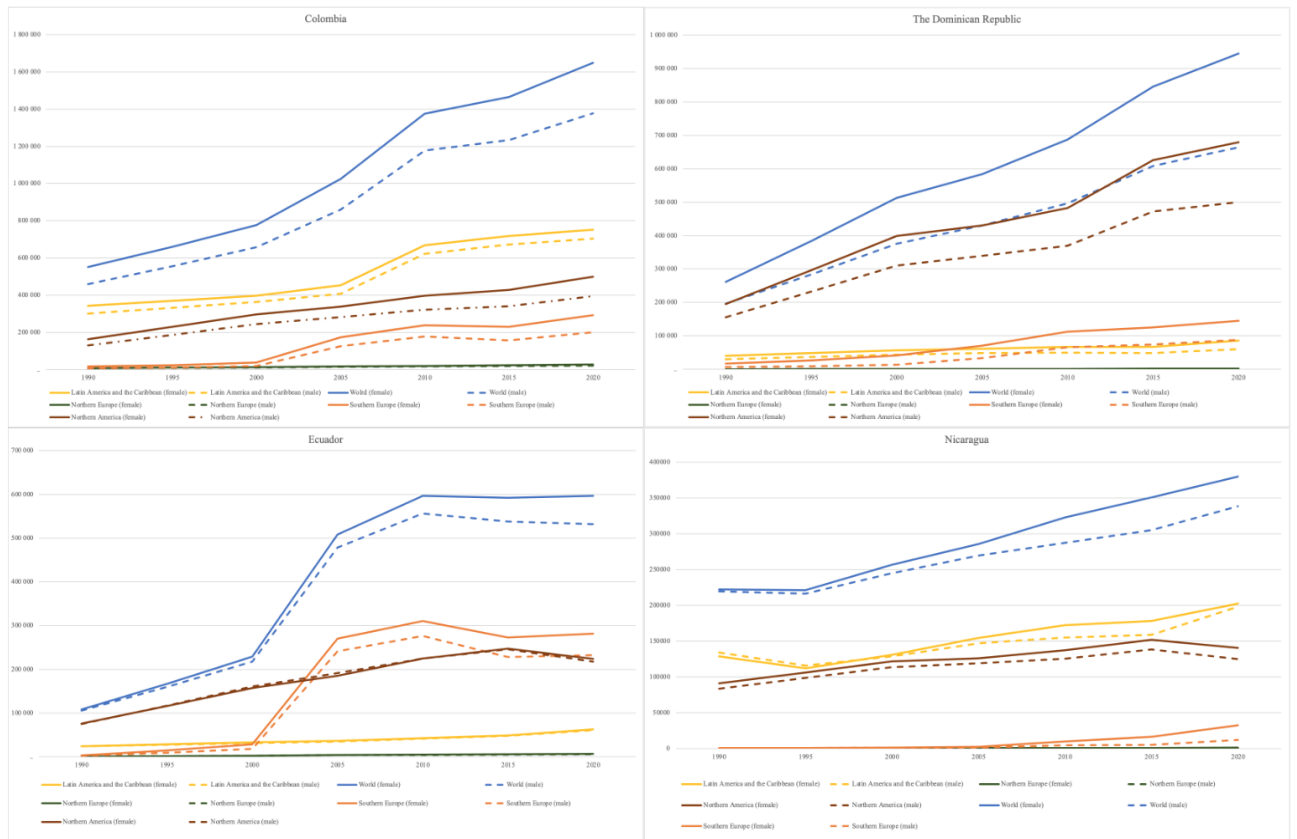
Migration not only has an effect on the population size of the countries but also on the characteristics of said population. The immigrants that come from Latin America are very diverse in terms of age, education, workforce participation, and other elements (United Nations & ILO, 2017), but the demographic profile of the majority of individuals who emigrate from the region is young people, around 30 years old with at least a high school diploma (higher probability to emigrate with higher studies). This results in a change in the population's age and schooling composition, usually leaving the country with a higher share of aging citizens which in turn causes labor shortage for the origin countries because the prime-age workers are leaving, potentially causing a brain-drain effect and a considerable demographic loss. In terms of the sex of the emigrants, it varies, but women seem to make up the majority of the lot (Figure 10). The sectors of work in which the emigrant population of Latin America is generally located in the destination country are services, education, health, and construction (Morales & Rodríguez, 2022). The more educated migrant population has a larger presence in sectors that require high-skilled workers, like finances, business, and social

services (United Nations & ILO, 2017). In the case of Nicaragua, emigrants are mostly low-skilled individuals of working age who are employed in elementary occupations (Blyde, 2020). Regarding the Dominicans emigrating to Puerto Rico, 60% are women and work mainly in domestic positions (Morales & Rodríguez, 2022). In a study by Iglesias Martínez et al. (2015), they found that of the Ecuadorian immigrants in Spain, only 3.5 percent were part of medium and high-skilled activities, and 63.8 percent were in unskilled ones. This difference was more significant among women where “73 percent of them are engaged in unskilled activities compared to 53.6 percent of men”. In Spain, due to the economic growth and development, native women have increased their presence in the labor market, leaving a place for immigrant women, mostly Latin American, to take over the domestic tasks, care, and others that they don't have time to fulfill or simply don't want to. (Contreras & Alcaide, 2021). For all Latin American countries, there is a clear division in the sectors of labor based on the gender of the immigrant population (United Nations & ILO, 2017). Women are mainly employed in the service sector, having a higher insertion in higher-female-demand jobs, mostly domestic service, taking care of the elderly, and children, while for the male gender, the agricultural and construction sectors are important in most cases.

Pellegrino (2004) states that the migrating population from Latin America is “highly feminized” and that over half of the Latin American immigrants are women. Overall for the countries concerned in the study, Colombia, Ecuador, the Dominican Republic, and Nicaragua, emigration has been increasing incessantly since the 2000s, and women emigrate in higher numbers than men (Figure 10). For Colombia and Nicaragua, regional migration (from and to other Latin American and Caribbean countries) is very important, followed by emigration to North America and to the South of Europe, with the female population having higher emigration trends than the male one (Figure 10). For Ecuadorians, the preferred destination is Southern Europe since 2005, with more females leaving than men. North America is the second target with approximately no difference in the sex of emigrants. The Dominican Republic's most dominant option is Northern America, with an important number of females surpassing the opposite sex. Women comprise the majority of the migrant stock in the regions concerned, showing a feminization of the Latin American emigrant population (Figure 10).

Figure 10

International stock migration divided by sex and destination region (the World, Latin America and the Caribbean, Northern Europe, Southern Europe, and Northern America) for the countries concerned



Source; United Nations Department of Economic and Social Affairs, Population Division (2020). International Migrant Stock 2020.

In general, the population that emigrates at higher rates is the one younger in age, usually in their working years (those that would have a higher participation rate in the labor force), and as we have seen previously, women constitute the majority of the emigrant share (Figure 10). To add on, individuals with more schooling years usually have a greater probability of emigrating. Taking this into consideration, emigration should affect the female labor force participation of the native countries and of the destination countries the migrants decide to move to.

In Table 1, data for female labor force participation is divided by population in their native country and the population that emigrated, in this case, to Spain or to one of the OECD countries (higher income territories than their native regions) for the year 2015 (more recent information about the female participation of Latin American immigrants in the OECD area was not accessible). Women are separated into the Low or High group depending on the schooling years completed, the latter being 10 or more years, whilst the first one, 9 or less. Between the Low and High groups, there exists a difference in the participation rate for all regions, being the one with higher educational levels that with more participation in the labor force. For instance, for Latin America as a whole, the difference between the participation of women who stay in their native region, that are in the Low group versus the ones in the High group is 18.23 pp.

For both educational groups and all destination regions, the participation rate for the emigrant women (in the destination countries) is higher than the participation rate in their native country (except for the women in the High educational group in the OECD territory). For the Low group, taking Spain as a destination country, women's participation is 17.67 pp higher than in their native region (for Latin America in general). Similarly, the High group's female labor force participation in Spain is 9.09 pp higher than in Latin America. It can be seen that the difference is more predominant for the ones with lower schooling years (Low group).

The reasons for this phenomenon could be multiple. It might be related to the younger, more educated population leaving their native countries (slowing down their participation growth rate), or even due to more and better job opportunities in the destination territories.

Table 1

Female labor force participation rate in origin and destination countries by schooling level (%)

	Women who have not migrated, 2015			Women who have migrated to an OECD country			
		Low*	High*	to Spain, 2015**		to OECD countries***	
				Low	High	Low	High
Colombia		62,22	80,33				
Ecuador		57,85	69,89				
Nicaragua		53,81	73,78				
Dominican Republic		50,73	70,45				
Latin America		55,48	73,71	73,15	82,8	63	64,26

*The figures by educational level are calculated based on the 4 levels of education provided by ECLAC. The low level includes the population with 9 or fewer years of education and the high level includes the population with 10 or more years of education (25 to 59 years old women) Source: ECLAC / Economic Commission for Latin America and the Caribbean / Based on data from Household Surveys Database (BADEHOG).

** The participation rate in Spain for women who have foreign nationality and come from a Latin American country (data from the second quarter of 2015) Source: INE (Instituto Nacional de Estadística)

*** The participation rate in the OECD countries of Latin American immigrants.

Source: DIOC (Database on Immigrants in OECD countries and non-OECD Countries). Note: The sample used is from 900 individuals, and the figures are smaller due to containing the population between 15 and 64 years old.

The data presented indicates that Latin American emigrant women have greater participation in the market of the destination country than in Latin America. In this case, emigration could be presented as a variable that has a negative effect on female labor force participation in the country of origin.

7. REGRESSION MODEL FOR FEMALE LABOR FORCE PARTICIPATION

As discussed earlier, several studies have agreed for the most part that there are at least three variables that have an effect on the female labor force participation rate: fertility rate, education, and economic growth. After the previous analysis, we conclude that the migration rate is also a variable to be taken into account with the growing importance of emigration. In order to illustrate how these four variables affect the participation of women, we have constructed a linear regression model based on the ECLAC databases (Economic Commission for Latin America and the Caribbean), with a total of 85 observations.

We will take into consideration the labor force participation rate of Latin American women between 25 and 59 years old, the fertility rate (measured in number of children per woman), the emigration rate, the economic growth (as the GDP per capita growth rate) and education (measured as the share of the population that has schooling years equal or above to ten).

Table 2

Latin America's female labor force participation rates and the effect of fertility, education, economic growth, and emigration (for women aged between 25 and 59 years old; linear probability model)

Number of obs	=	85				
F(4, 80)	=	28.76				
R-squared	=	0.5898				
Adj R-squared	=	0.5693				
Female labor force participation	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
Fertility	-3.971249	.798780	-4.97	0.000	-5.560872	-2.381626
Emigration	-.5061417	.18551	-2.73	0.008	-.8753183	-.1369651
Economic growth	.1744438	.1232258	1.42	0.161	-.0707833	.4196709
Education	.1179693	.0604083	1.95	0.054	-.002247	.2381856
_cons	70.43324	4.576425	15.39	0.000	61.32587	79.54062

Source: ECLAC / Economic Commission for Latin America and the Caribbean / Based on data from Household Surveys Database (BADEHOG)

Taking into account the model, 58.98 percent of the variance of the female labor force participation rate can be explained by the variables studied.

Starting off with the fertility rate, the effect that one more child per woman has on female labor force participation is negative, making it decrease by 3.97 percentage points (pp). This result is consistent with the previously discussed literature, as the fertility rate of a country declines, female participation increases. Women, in theory, are expected to spend less time taking care of their children and being pregnant, so they will be left with more hours in the day that could be dedicated to paid labor or other activities (depending on their household dynamics).

On the other hand, education (universal) as expected, has a positive effect on female participation. More schooling years generally mean a higher degree of achievement, which in turn can be expected to yield a paid, stable, and good job position. With more education, women would be able, in essence, to have it easier to enter the labor market. Regarding the model, the contribution of a 1 percent increase in the population with higher or equal than ten years of education, would increase the female labor force participation by 0.12 pp.

In terms of the economic growth variable, in the displayed regression model it is not considered significant. By repeating the demonstration, with fewer observations (80 instead of 85)², it gained significance: the p-value became 0.110 instead of 0.161. After the paper's analysis, we would expect that as the economy of a country grows, it will also develop further. It is possible that this could result due to the region investing in more public services, like education or affordable childcare programs, and that the minimum wage is raised, all of which in consequence would motivate women to join the labor force.

In the case of the emigration rate, it has a negative relation with female labor participation. As the population of a region emigrates, participation decreases. More into detail, if the emigration rate would increase by 1 percent, the female participation would drop by 0.51 pp. As discussed, the standard emigrant profile for Latin America is young individuals in their prime age of working. It is understandable that as the share of the young female population that moves outside of a territory increases, participation in the region would diminish.

² In this second model, although better results are achieved for the economic growth variable, the education variable becomes not significant as the p-value changes to 0.149 (from 0.054 that was obtained previously)

The results of the regression model are consistent with the proposed theory that emigration is one of the variables that is negatively affecting female participation in Latin America, and could be a cause for its decelerating growth trend in recent years.

8. CONCLUSIONS

Female labor force participation in Latin America has been increasing since the 1960s, but currently its growth rate is experiencing a decelerating trend. In this paper, we have analyzed the variables of education, fertility rate, and economic growth (which are the ones most commonly mentioned as determinants of female participation) and how they have jointly contributed positively to its increase. Since the 1990s Latin American GDP per capita has been growing continuously, in turn creating more labor demand and increasing the importance of the service sector and thus the incorporation of women in the labor force. With economic growth, both the fertility rates and education of Latin America have been affected beneficially. For the period studied (2000 to 2021), family structure in the region (including the four countries studied in depth: Ecuador, Colombia, the Dominican Republic, and Nicaragua) has become smaller, allowing women to spend less time bearing children, and freeing up their time to do other activities, mainly work for pay or study, having positive effects on female labor force participation. To add on, the schooling years for women have risen in the period. As we have seen with greater education, labor participation becomes higher (as they can achieve more skills in order to enter the labor force market more easily), thus affecting positively the female participation.

Even with this intricate interplay of factors, from the 2010s the female labor force participation growth rate started decelerating. This would mean that there should be other variables engaged in the female participation trend that have been not considered. We proposed the migration rate variable and tried to demonstrate the negative effect of emigration on female participation. We found that the share of the Latin American population that emigrates in higher numbers is the one younger in age, usually in their prime age of working, with generally high educational levels, and in terms of sex, women comprise a major part. In addition, while comparing the female labor force participation for Latin Americans in their origin country and Latin Americans abroad (Spain or an OECD country) we discovered that the participation rates were higher for

the emigrant women than for the native ones. Lastly, by conducting a regression model with the Latin American data we confirmed that the emigration rate had a negative effect on the female labor force participation rate in the region and countries studied.

This makes us conclude that the migration rate could be a variable affecting female participation and one of the causes for its decelerating trend in the region and period studied. In closing, female labor force participation is a complex and broad phenomenon that needs more extensive research and further studies in this area in order to extensively identify the reasons behind such deceleration.

9. REFERENCES:

- Álvarez, A. C., Godoy, J., & Mata, L. M. (2019). The effect of women's identity and emancipative values in female labor force participation: a comparison between Latin American and OECD countries. *Nova Scientia*, 11(22), 323–356. <https://doi.org/10.21640/ns.v11i22.1785>
- Blyde, J. S. (2020). Heterogeneous Labor Impacts of Migration Across Skill Groups: The Case of Costa Rica. In RePEc: Research Papers in Economics. RePEc: Research Papers in Economics. <https://doi.org/10.18235/0002595>
- Busso, M., & Fonseca, D. R. (2015). Female Labor Force Participation in Latin America: Patterns and Explanations. Research Papers in Economics. <https://econpapers.repec.org/RePEc:dls:wpaper:0187>
- ECLAC Economic Commission for Latin America and the Caribbean (2022). CELADE <https://statistics.cepal.org/portal/cepalstat/dashboard.html?theme=1&lang=en>
- Contreras, P., & Alcaide, V. (2021). Mujeres inmigrantes latinoamericanas: procesos de agencia en contextos de vulnerabilidad. *Papers: Revista De Sociologia*, 1–25. <https://doi.org/10.5565/rev/papers.2940>
- Del Castillo, I. Y. (2014). Escenarios de la migración latinoamericana: la vida familiar transnacional entre Europa y América Latina. CEIC (Centro De Estudios Sobre La Identidad Colectiva), 2014(2). <https://doi.org/10.1387/pceic.12992>
- Gaddis, I., and S. Klasen. 2014. “Economic Development, Structural Change, and Women's Labor Force Participation: A Re-Examination of the Feminization U Hypothesis.” *Journal of Population Economics*, 27 (3): 639–81.
- Gasparini, L., & Marchionni, M. (2015). Bridging Gender Gaps?: The Rise and Deceleration of Female Labor Force Participation in Latin America: An Overview. RePEc: Research Papers in Economics. <https://EconPapers.repec.org/RePEc:dls:wpaper:0185>
- Goldin C. The U-Shaped Female Labor Force Function in Economic Development and Economic History. In: Schultz TP Investment in Women's Human Capital and Economic Development. University of Chicago Press; 1995. pp. 61-90

- Herrera, G. (2022). Migración y política migratoria en el Ecuador en el período 2000-2021. *PNUD América Latina y El Caribe SERIE DE DOCUMENTOS DE POLÍTICA PÚBLICA*, 35.
- Hilgenstock, B., & Koczan, Z. (2018). Storm clouds ahead? Migration and labor force participation rates in Europe. *IMF Working Papers*, 18(148), 1. <https://doi.org/10.5089/9781484363058.001>
- Klasen, S. (2019). What Explains Uneven Female Labor Force Participation Levels and Trends in Developing Countries? *The World Bank research observer (Print)*, 34(2), 161-197. <https://doi.org/10.1093/wbro/lkz005>
- Mammen, K., & Paxson, C. (2000). Women's Work and Economic Development. *Journal of Economic Perspectives*, 14(4), 141–164. <https://doi.org/10.1257/jep.14.4.141>
- Morales, D. M., & Rodríguez, C. R. (2022). Migration in the Dominican Republic: Context, Challenges, and Opportunities. UNDP LAC PDS, 31.
- Pellegrino, A. (2004). Migration from Latin America to Europe. IOM Migration Research Series. <https://doi.org/10.18356/26c98788-en>
- Schultz, T. P. (1998). Handbook of Development Economics(p. 604, Vol. 1). ELSEVIER NORTH HOLLAND.
- Serrano, J., Gasparini, L., Marchionni, M., & Gluzmann, P. A. (2018). Economic cycle and deceleration of female labor force participation in Latin America. *Journal for Labour Market Research*, 53(1). <https://doi.org/10.1186/s12651-019-0263-2>
- United Nations & ILO. (2017). Employment Situation in Latin America and the Caribbean. ECLAC/ILO, 16.
- World Bank (2021). World Bank Open Data <https://data.worldbank.org/>