THE END OF THE DEMOGRAPHIC DIVIDEND IN LATIN AMERICA: CHALLENGES FOR ECONOMIC AND SOCIAL POLICIES

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ABSTRACT

Population ageing is a major global challenge. The Latin American economies have a younger population structure than other emerging and advanced economies, which has allowed them to enjoy the so-called demographic dividend (a favourable working age/non-working age population ratio). However, according to the latest demographic projections of the United Nations (UN), it is estimated that in 2020 the Latin American population pyramid will resemble that of the advanced economies in 1990 and that, by around 2050, both groups will have similar population profiles. This article documents the current demographic trends in Latin America and discusses the main related challenges, in particular, those arising from the adaptation of social welfare systems to population ageing.

Keywords: demographic dividend, ageing, pension systems, dependency ratio, total factor productivity.

Introduction

Population ageing is a major global challenge. In recent decades, the analysis of this phenomenon and its economic consequences has focused on the advanced economies. In contrast, the emerging countries enjoyed the so-called demographic dividend. This refers to the potential benefits of a population structure in which the younger generations have a larger share, leading to a favourable working age/non-working age population ratio. The economic literature documents how, when these generations are educated and incorporated into the labour market, growth, economic development and the sustainability of public finances improve.

In the case of Latin America the window of opportunity to benefit from this demographic dividend is closing. According to the latest demographic projections of the United Nations (UN), the speed of ageing projected for this region over the next three decades is greater than for other economies, such as the European ones. Against this background, this article documents the current demographic trends in Latin America, from a global perspective. It presents the main challenges associated with these trends, which the advanced economies have already been facing for some time. In particular, it focuses on the challenges for pension systems, which in Latin America have particular characteristics, and also a high degree of cross-country heterogeneity.

Demographic drivers in Latin America

Over the past six decades, Latin America has recorded an ongoing decline in the share of the younger generations (the under-14s), measured as a percentage of the working-age population, while the percentage of elderly persons (the over-65s) has trended upwards (see Chart 1). These trends have been seen in all regions of the world, but their rates have been especially pronounced in Latin America and Asia.

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1 See Bloom et al. (2003).
2 The inverse of this latter indicator – the number of potential workers for each person over the age of 65 – is also used in the literature.
The dependency ratio in Latin America is at a low level, owing to the fall in the fertility rate. However, this situation is not projected to last. According to current demographic projections, Latin America will face similar population ageing to that seen in the advanced economies, which will lead to an increase in the dependency ratio.

**Chart 1: DEPENDENCY RATIO**

1. MEDIAN DEPENDENCY RATIOS IN LATIN AMERICA (a)
2. MEDIAN DEPENDENCY RATIOS IN SOUTH AND SOUTH-EAST ASIA (b)
3. DEPENDENCY RATIOS IN CHINA
4. DEPENDENCY RATIOS IN AFRICA (c)
5. MEDIAN DEPENDENCY RATIOS IN THE ADVANCED ECONOMIES (d)
6. MEDIAN DEPENDENCY RATIOS IN EASTERN EUROPE (e)

**SOURCE:** Authors’ calculations, based on UN data.

- **a** South and Central American countries (UN classification, which includes Mexico in the latter group) with at least one million inhabitants in 2019.
- **b** South and South-East Asian countries (UN classification) with at least one million inhabitants in 2019.
- **c** African countries with at least one million inhabitants in 2019.
- **d** High income countries according to the World Bank classification with at least one million inhabitants in 2019.
- **e** Eastern European countries (UN classification) with at least one million inhabitants in 2019.
According to the UN’s projections, these dynamics are expected to continue, especially in Latin America. The population structure of this region is currently similar to that of the world as a whole (see Chart 2), as compared with a much younger structure in the 1950s, when it was similar to that of the African continent. However, it is estimated that the population pyramid of Latin America in 2020 will be similar to those of the advanced economies in the 1990s and, according to the projections available, these two groups of countries will have similar population profiles by 2050.

As in other areas of the world, population ageing in Latin America is primarily a consequence of a fall in fertility and an increase in life expectancy over the past six decades (see Chart 3.1). In Latin America, moreover, the demographic transition has been boosted by a higher relative incidence of net population outflows (see Chart 3.2), and an emigration profile that has tended to be based on younger, working-age population strata (see Chart 3.3). Although net emigration has fallen in recent years, relative to the final decades of the twentieth century, net population outflows have, on aggregate, continued to be more significant in Latin America than in the rest of the world.³

Also as in other areas of the world, the fall in fertility in Latin America was accompanied by the incorporation of women into the labour market. The female participation rate in

³ The decline in population growth may also involve an increase in immigration into the region, especially in the cases of Brazil and Mexico (See Campos (2017)).
The region has doubled since the 1960s (see Chart 4.1), offsetting the downward trend in the male participation rate (see Chart 4.2). However, in recent decades, the rate of incorporation of women into the labour market has slowed and, in most of the countries of the region, the female participation rate has reached levels close to those in advanced countries, which may indicate that this transition is coming to an end.

The challenges of ageing

The faster demographic transition projected for Latin America means that the region will have less time to adapt to the consequences of ageing. This phenomenon has
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Significant effects on economies’ aggregate supply and demand, and on macroeconomic and social policies. As explained in Banco de España (2019), demographic changes affect household consumption, business investment, employment, productivity and wage and price-setting processes. These changes affect the efficacy of monetary and fiscal policies, because, on one hand, the lower growth of the working-age population makes it more likely that real interest rates will remain low, while on the other hand, both the level and the composition of public spending and revenues depend on the age structure of the population.

Latin America is growing at a slower pace than the other emerging regions, partly owing to the absence of total factor productivity growth. The transition involving the incorporation of women into the labour market seems to have come to an end.

**Chart 4**

**Potential growth and determinants**

Latin America is growing at a slower pace than the other emerging regions, partly owing to the absence of total factor productivity growth. The transition involving the incorporation of women into the labour market seems to have come to an end.

**Sources:** IMF, UN and own calculations drawing on Penn World Table 9.1 data.

- **a** Latin America-6: Argentina, Brazil, Chile, Colombia, Mexico and Peru. Weighted by purchasing power parity.
- **b** To estimate potential growth, the IMF forecast available at the time for the longest term (five years) was used for each year.
These demographic trends may aggravate a situation in which the region’s economic growth (only 1.4% in annual average terms over the last five years) and potential growth are already low relative to other emerging regions, partly due to scant productivity growth (see Charts 4.3 and 4.4). Here, it is essential to point out that Latin American labour markets are characterised by a large informal sector, which accounts for more than 50% of total employment, with a high degree of heterogeneity across countries, and by their rigid regulation. The first characteristic tends to smooth the adjustment of the economies to shocks, but hampers productivity growth, while the latter has a negative impact on their potential growth, according to the evidence available (David et al., 2020).

Against a background of increasing spending pressure associated with population ageing, the weak potential growth and the characteristics of the Latin American labour market pose significant challenges to the ability to raise extra revenue through the tax system. As to social policies, it should be noted that the need for spending on pension, health and long-term care systems is directly related to the size of the older population, a structural factor that exerts pressure on public spending.

Pension expenditure in Latin America

According to the economic literature, pension system coverage is one of the main challenges posed by population ageing, on account of its importance for fiscal sustainability. In the case of Latin America, the arguments that feature in the debate taking place in advanced economies – especially in Europe, where the debate has been most active – cannot be directly extrapolated as there is no single pension system model in place in the region.

In 1981 a reform was approved in Chile that completely replaced the pay-as-you-go (PAYG) public pension system with an individually-funded system administered by the private sector. This reform, which has given rise to a lengthy transition period in which both systems co-exist, was very influential in the region and various other countries introduced an individually-funded system, either as a main component of their pension system (Mexico in 1997) or to complement the traditional PAYG system (Peru in 1993, Colombia in 1994). The latter option is generally known as the parallel

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4 Under the PAYG system, contributions made to the pension system fund current pension benefits and also guarantee the rights of future beneficiaries whose pensions will be funded with the contributions of the new generations. This is a state-run system based on both inter- and intra-generational transfers, with benefits determined by law (the replacement rate, access requirements and adjustability of pensions are generally stipulated). Contributions are also set by law and may be borne by workers, employers and the State.

5 The individually-funded system has the following characteristic features: i) a funded system based on individual accounts; ii) the pension funds and individual accounts are mainly privately run but may also be run by the State; iii) benefits are funded by the capital built up in individual accounts, with no replacement rates determined by law (in other words, benefits depend on each individual’s ability to save and on the returns obtained on the funds); and iv) contributions are determined by law.
model, in which workers have to choose between the public PAYG system and the individually-funded system. Among the countries that have a PAYG public pension system, Argentina⁶ and Brazil stand out. Both these countries have recently introduced reforms (Brazil in 2019 and Argentina in 2017) and Argentina is currently discussing further reforms. In general, these reforms set stricter conditions for retirement and adjusted benefits (replacement rates),⁷ seeking to address the ageing problem and to strike a balance between sufficient coverage and benefits, on one hand, and financial sustainability, on the other. In the specific case of Brazil, the most notable aspects of the latest reform are the increase in the retirement age and in the number of years of contributions required, and making workers’ social security contributions progressive.

However, individually-funded systems are chiefly designed for the segment of the population who have formal, stable employment, receive medium-high incomes and make contributions most of their working life, and this is not generally the case of workers in Latin American countries, given the significance of informal labour markets and the low density of contributions in the formal ones (see Chart 5.1). In consequence, there is a certain degree of consensus among analysts⁸ that individually-funded pension systems based on individual ability to save have not produced the desired results in terms of coverage and sufficiency of benefits.

Accordingly, some Latin American countries have recently reformed their pension systems by reinforcing public funding, to narrow the gap between the beneficiaries of the pension system insofar as coverage and quality of benefits are concerned. For instance, the reform of the Chilean pension system in 2008, which created an integrated model consisting of a minimum base and individually-funded systems, entails a return to a pension system administered and funded by the State. The recent social unrest in Chile has reopened the debate about potential reform of the pension system, highlighting the creation of new solidarity mechanisms such as, for example, the proposal to increase the employer contribution rate by 5 pp (from 10% to 15%), to create a solidarity fund to boost current and future pensions via inter- and intra-generational transfers.⁹ This places pressure on public spending, owing to the need to reinforce and extend the coverage of non-contributory schemes and to complement contributory pensions in order to achieve minimum sufficiency levels.

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⁶ In 1994 an integrated model was introduced in Argentina, so named because it included a universal solidarity base that was part of the pension system. In 2008 the individually-funded system was eliminated, leaving just the state-run PAYG system.

⁷ The replacement rate is defined as the amount of a person’s pension as a percentage of his/her last wage before retirement.

⁸ See, for example, Arenas de Mesa (2019) and some of the works referenced there.

⁹ By contrast, in Mexico, there have been no subsequent major changes and the main changes made have been focused on the non-contributory pension system, resulting in increased coverage for over-65s with non-contributory pension schemes.
Since 1995, pension expenditure as a percentage of GDP has doubled in Latin America (weighted average of Argentina, Brazil, Chile and Mexico) owing to the greater generosity of the pension systems and the increase in the dependency ratio. If the other determinants were to remain unchanged, the growth in the dependency ratio projected by the UN alone would push pension expenditure in the region up to 15% of GDP in 2050.

**AGEING DRIVES UP PENSION SYSTEM EXPENDITURE IN LATIN AMERICA**

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**SOURCES:** Own calculations, with data from World Bank, ECLAC, UN, OECD, Penn World Tables 9.1, IMF and national welfare systems.

- a Aggregate of Argentina, Brazil, Chile and Mexico.
- b Measures the contribution to pension expenditure/GDP of the wage share of GDP.
- c Measures the contribution to pension expenditure/GDP of the change in the employment rate (employed population to working-age population).
- d Measures the contribution to pension expenditure/GDP of the change in the dependency ratio (population over 65 to working-age population).
- e Measures the contribution to pension expenditure/GDP of the change in the product of the benefit rate (ratio of average pension to average wage) and the coverage ratio (percentage of population over 65 receiving a pension).
- f Cumulative percentage change in ratio of pension expenditure to GDP, measured as the log difference compared with the 1995 figure.
Table 1 presents the key characteristics of public pension systems in the countries with the largest economies in Latin America.\textsuperscript{10} Despite the progress made with the latest reforms, there is still a large gap between the level and quality of coverage of the pension systems in Latin America and those of the OECD countries. In 2017, for example,\textsuperscript{11} only 45% of the labour force in the region as a whole contributed to a pension system (see Chart 5.4), compared with the OECD average of close to 80%. This means that more than half the current labour force may need some kind of financial supplement or support from the State in their old age to avoid falling below the poverty line. In turn, 76% of the over-65s were receiving a pension in 2017; this is an increase of almost 25 pp compared with the year 2000, but still considerably lower than the average of the OECD countries (close to 95%). Moreover, partly owing to their sharp growth in recent years, non-contributory pension systems account for 30% of coverage of pensioners in Latin America. Judging the quality of this coverage, as measured by the replacement rate, is not straightforward in individually-funded systems. However, according to the

\begin{footnotesize}
\textsuperscript{10} Although they are not included in Table 1, Costa Rica, Panama and Uruguay all have mixed models, i.e. pensions are funded mainly through the public PAYG system, complemented by an individually-funded system that may be public or private.

\textsuperscript{11} See Arenas de Mesa (2019).
\end{footnotesize}
literature,\textsuperscript{12} coverage quality is generally higher in PAYG systems than in individually-funded ones.

As Chart 5.2 shows, in recent decades public pension expenditure in Latin America\textsuperscript{13} has gradually risen as a percentage of GDP, doubling between 1995 and 2016 (see Chart 5.2). To understand the reasons for this increase, we decompose pension expenditure (expressed as a percentage of GDP) into its determinants. Pension expenditure depends positively on the dependency ratio (population over 65 to working-age population), negatively on the employment rate (employed population to working-age population) and positively on the wage share of GDP and the generosity of the pension system (which in turn is the product of the coverage ratio (percentage of population over 65 receiving a pension) and the benefit rate (ratio of average pension to average wage)). This is expressed in the following equation:\textsuperscript{14}

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Pension \text{ expenditure/GDP} = \text{Dependency ratio} \times \text{Coverage ratio} \times \text{Benefit rate} \times \frac{\text{Wage share of GDP}}{\text{Employment rate}}
\]

As Chart 5.3 shows, in Latin America public pension expenditure rose between 1995 and 2005 mainly on account of the increased generosity of the pension system, owing either to a higher public coverage ratio or a higher benefit rate. However, since 2005 the higher dependency ratio has been the main driver of the increase in expenditure. Likewise, public pension expenditure is expected to continue to grow owing to ageing of the region’s population.

Chart 5.4 sets out the result of a simulation of pension expenditure, assuming the increase in the dependency ratio projected by the UN while keeping all other determinants unchanged at their present levels.\textsuperscript{15} According to this simulation, public pension expenditure could increase from around 6% of GDP in 2020 to 15% in 2050. It is expected, therefore, that governments will continue to reform their pension systems, to address the challenges of the demographic transition facing the region.

\textsuperscript{12} See Arenas de Mesa (2019) and the works cited there.
\textsuperscript{13} Aggregate of the region’s four economies for which there are complete data available (Argentina, Brazil, Chile and Mexico).
\textsuperscript{14} The lack of uniform data for Latin America makes it impossible to calculate the coverage ratio and the benefit rate separately, which is why the analysis focuses on the product of the two, which measures the generosity of the pension system.
\textsuperscript{15} In the simulation the coverage ratio is constant. If it were to rise in the future, as it has in recent years, this would pose an additional challenge.
REFERENCES


