



# Pension and healthcare systems in Latin America



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posed by aging,  
technological change,  
and informality

**Executive  
Summary**



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# Social protection for older persons and the demographic and labor market context

Throughout their lives, people face risks and circumstances that could compromise their quality of life. Being born in an unfavorable social context affects individuals' capacity to develop fully and build up their skills. Disease, accidents, and job loss impact workers' ability to earn an income. As people age, they face increased health risks and the danger of not having enough resources to meet their consumption needs.

The state helps individuals to address these risks at the various stages in their lives, by providing insurance and promoting social inclusion through a broad range of programs known collectively as social protection. Social protection is therefore a powerful development instrument, particularly in economies with major socioeconomic disparities like those in Latin America.

This report focuses on the instruments that provide protection for older persons, an especially vulnerable population segment. In other words, the report basically examines pension systems and healthcare and broader care services, as well as aspects of the labor market that affect these systems' coverage and funding. The main reason to take this approach is that Latin America is set to face a major challenge in the near future—aging, a phenomenon that is widespread and accelerating and is expected to have a significant fiscal impact.<sup>1</sup>

Social protection for older persons is believed to be important, but also to require considerable expenditure. In Latin America, expenditure on pensions is equivalent on average to 4.3% of GDP, while public health expenditure amounts to 4.1% of GDP.<sup>2</sup> However, in many countries around the region, social protection systems also face challenges in terms of their coverage and quality, which in turn put extra pressure on expenditure.

This report provides a timely, comprehensive outlook on social protection for older persons. It addresses two fundamental questions: What challenges does the design of pension and healthcare systems face in Latin America, given the prevailing demographic trends and a scenario where informality and technological change dominate work environments? And how could these challenges be addressed to favor universal, good-quality social protection for older persons?

## Two crucial challenges—aging and informality

Latin America is still relatively young, but it will not stay that way for very long. Just over 8% of the region's population is 65 or older, well under Europe's 18%. By 2050, however, this percentage is expected to more than double, to reach 17.5%. And by the end of the century it will foreseeably top 30%. A similar pattern can be found for people who are 80 or older, expected to be 5% of Latin America's population in 2050 and more than 13% at the end of the century (Figure 1).

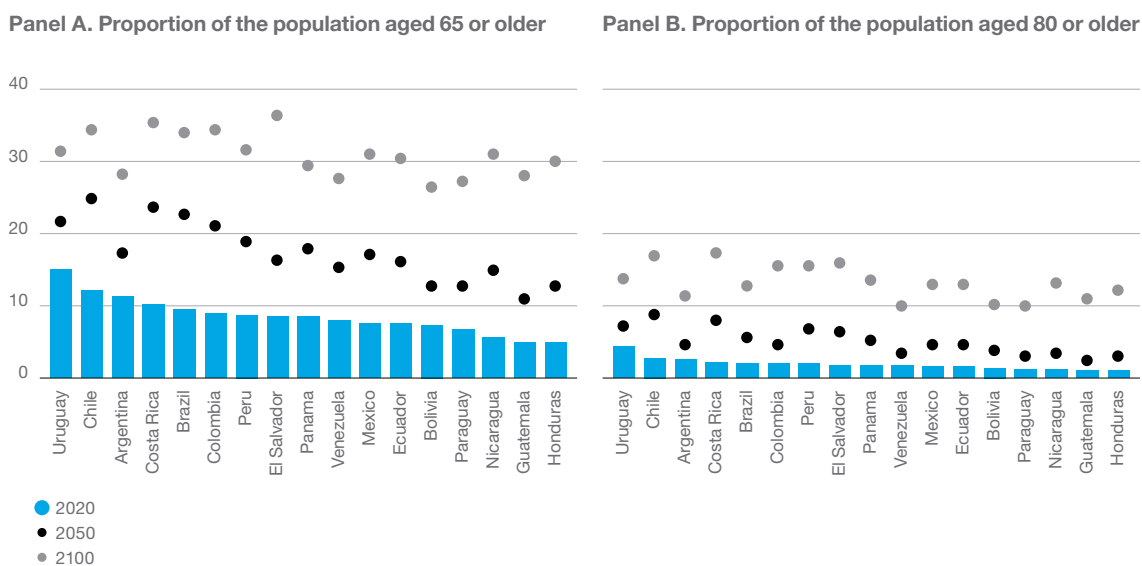
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1. This approach obviously does not mean to ignore the crucial importance of social expenditure at earlier stages in life. The significance for development of expenditure on education is beyond question. Further, insurance against various labor market contingencies can enable better careers. Indeed, well-being in old age is closely linked to skill-building and work history, and therefore to the protection obtained at earlier stages in an individual's life cycle.

2. Data are limited, so public health expenditure is linked to overall healthcare provision for the whole population. As we will see later, health expenditure increases considerably in old age. A society's age structure therefore affects the size of its public healthcare budget.

Uruguay has the largest proportion (15%) of its population over the age of 65, not far from the European average. It is followed by Chile, Argentina, and Costa Rica, all of them with more than 10% of their population over 65. In all other Latin American countries, this proportion remains in single digits. Even in countries with older populations, the proportion of older persons is expected to more than double by the end of the century, so aging is a common trend for Latin American countries.

**Figure 1.**  
Aging, a widespread phenomenon



Source: Calculated by the authors, based on United Nations (2019b).

Demographic aging is expected to be relatively fast in the region. In most countries in Latin America, the proportion of older persons (aged 65 and older) is estimated to have doubled (from 7% to 14%) or is expected to double over a period of 20–30 years.<sup>3</sup> By contrast, France and Sweden experienced similar growth over a much longer period, respectively 115 and 85 years (Aranco, Stampini, Ibararán, and Medellín, 2018). Demographic trends, particularly aging, have major implications for social protection systems and their funding. The most significant challenge in terms of funding is related to the increase in public expenditure on protection schemes targeting older persons, due to the increase in these systems' target population. Figure 2 shows the increase in public expenditure on pensions and healthcare, as a proportion of GDP, over the period 2015–2065, as a consequence of the expected demographic changes, keeping constant current conditions in terms of coverage and transfers per beneficiary.<sup>4</sup>

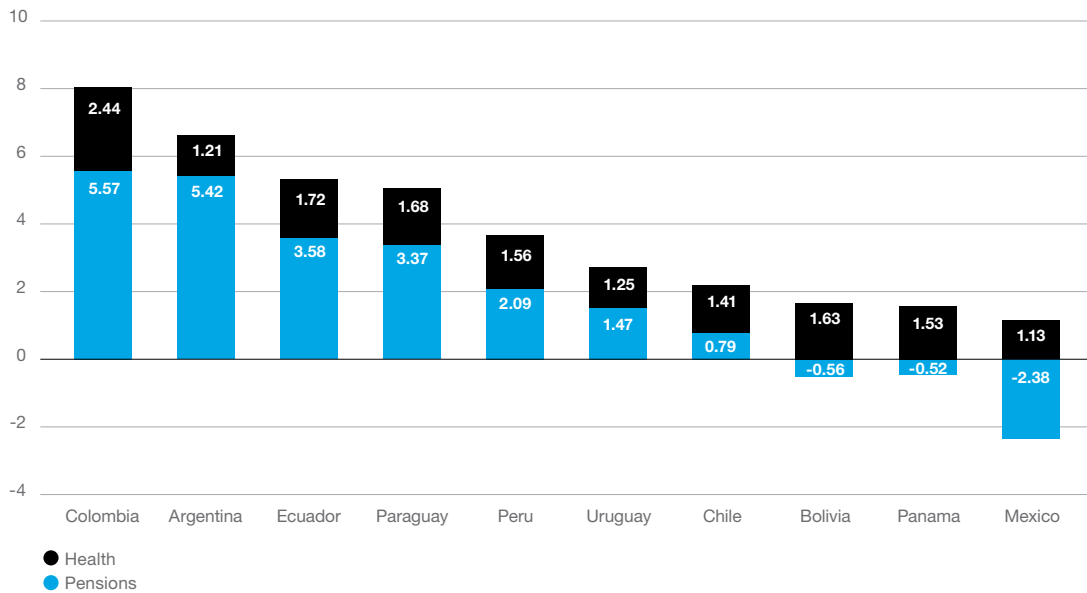
3. Within Latin America, aging has been more gradual in Uruguay and Argentina, where it respectively took 76 and 67 years. This is in line with the findings of a recent research study on demographic transitions over time and in different countries. This research concludes that the transition has been faster in the countries where it has happened more recently (Delventhal, Fernández-Villaverde, and Guner, 2019).

4. In several countries (including Bolivia, Chile, and Mexico), pension system reforms implemented in recent decades imply that current coverage and payouts partly reflect past schemes that are expected to disappear over time. Daude and Pena (2020) provide further details of this simulation exercise, reflecting these sorts of transitions.

In some countries, including Colombia and Argentina, the projected increase in expenditure on pensions and healthcare over the next 40 years tops 6 percentual points of GDP, as a consequence of aging. The pension component is generally the one with the largest increases, except in countries—like Chile—that have implemented capitalization schemes or are currently transitioning to capitalization-based or mixed schemes. In some countries that are immersed in the transition, like Mexico, pension spending is expected to fall as a percentage of GDP, despite an aging population.

**Figure 2.**

Aging will be costly: Change in expenditure on pensions and health as a proportion of GDP, 2015–2065



**Source:** Compiled by the authors, based on data issued by IERAL (2020) on pension spending and by WHO (2019b), Crosta, Porto, Carella, and Cerimelo (2019), De la Mata and Valdés (2020), Buitrago and Torres (2020), and United Nations (2019b) on health expenditure.

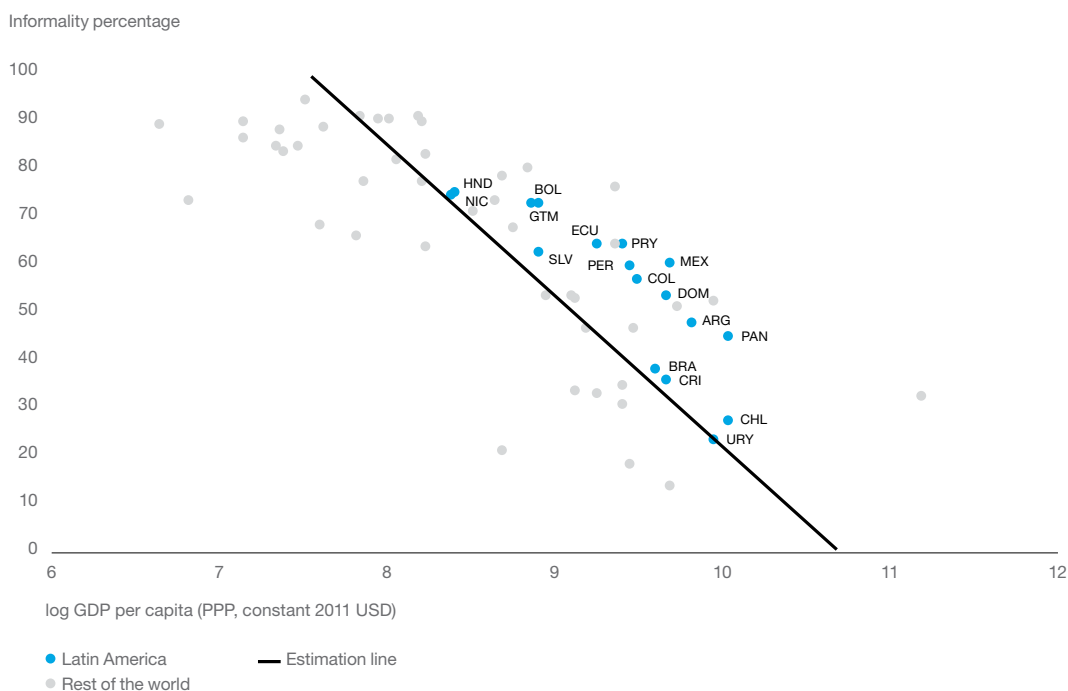
Demographic challenges are compounded by labor market factors. The most significant among these is without a doubt high and persistent informality. Aging and informality are in fact similar phenomena, in the sense that both erode the contribution base of social protection systems relative to the number of beneficiaries. Calculations conducted in this report suggest that informality worsens the contributor base by margins that are comparable to those expected to result from aging over the next 40 years. Further, informality implies that a high proportion of individuals currently in employment are not included in contributory healthcare schemes and risk not making the contributions necessary to access contributory pensions when they retire. Informality also constrains social protection system design, since these programs' features and funding may weaken incentives to encourage formal employment in contexts with low labor productivity and poor auditing.

On average, almost 63% of all employed individuals in Latin America have informal jobs, with informality rates ranging from approximately 30% in Chile and Uruguay to 80% in Bolivia, Guatemala, Honduras, and Nicaragua. Informality is apparent in the high prevalence of self-employed persons, who are mostly not registered with social protection systems and amount on average to 40% of all employed individuals.

However, there is also high informality among wage earners (43% on average), particularly in firms with fewer than 10 workers (who have 75% of all informal wage earners).

Informality in Latin American countries is high even compared to countries with similar per capita incomes. Figure 3 shows that all Latin American countries except Uruguay have informality rates above the line drawn at the expected average for each income level. Mexico, Panama, and Paraguay stand out with informality rates 28, 24, and 23 percentage points, respectively, above the expected average. Informality rates in Argentina, Colombia, the Dominican Republic, Ecuador, and Peru are around 20 percentage points above the expected average. This report estimates that, if Latin American countries could attain the average informality rates for their per capita incomes, that would entail extra contributions to pension and healthcare systems worth approximately 0.85% of GDP.

**Figure 3.**  
Excessive informality: Informality rates and per capita incomes



Notes: The estimated line reflects all estimates for a regression model with fixed impacts per country, over the period 2000–2018. This line specifically reflects the average fixed impact. The points shown in the figure reflect the most recent available data for each country in the sample. All data for Latin American countries are for 2018, except the data for Brazil (2015), Guatemala (2017), Honduras (2017), Nicaragua (2012), and Mexico (2004).

Source: Calculated by the authors, based on data from ILO (2020).

Over the period 2005–2018, informality was reduced in Latin America, with a drop of almost 9 percentage points in the proportion of informal wage earners. However, major formal employment destruction in connection with the COVID-19 pandemic poses challenges in this respect, unless the labor market reallocates workers who have lost their jobs to quality employment and prevents these workers from having to seek refuge in subsistence work.

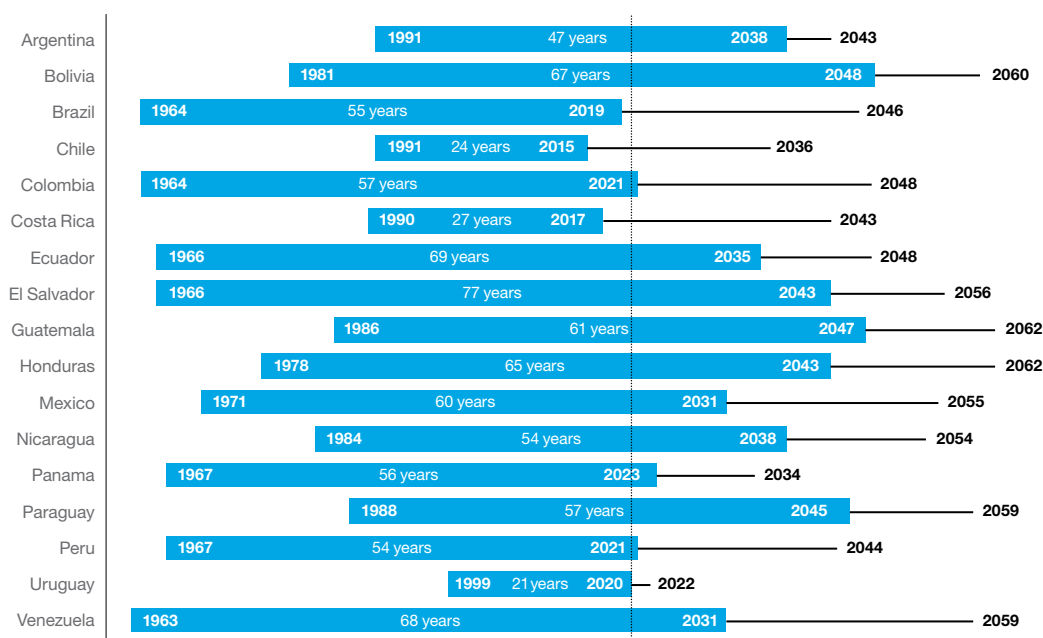


## Aging and its impact on the dependency ratio

The increase in older persons' share of the population across countries is set to happen at the expense not only of individuals below 15 years of age (who are set to go, on average, from over 25% of the total population in 2020 to less than 14% toward the end of the 21st century) but also of individuals aged 15–65 (who are set to go from 66% to 55% of the total population over the same period). The ratio of the population that brings together individuals under 15 and over 65 relative to individuals aged 15–64 is known as the dependency ratio, and it is expected to undergo major changes until the end of the century.<sup>5</sup>

On average, Latin America is approaching its minimum dependency ratio, and this ratio is expected to grow in the region from 2023. However, Latin America is currently expected to take 40 years to reach the current OECD average. Most Latin American countries still have decreasing dependency ratios, although some (like Chile) have already reached minimum levels and others (like Colombia and Peru) are expected to reach them soon. By contrast, countries like Bolivia, Guatemala, and Paraguay are expected to have decreasing dependency ratios until at least 2045 (see Figure 4).

**Figure 4.**  
Currently favorable dependency ratio, but approaching an increase



Notes: Horizontal black lines refer to the period where the dependency ratio is rising, from its minimum level to the 2020 average for OECD countries (55.4%). The dependency ratio is based on the proportion of the population in the following age ranges: (0–14 and 65+) / 15–64. The pointed vertical line shows the year 2020.

Source: Calculated by the authors, based on United Nations (2019b).

5. For a given productivity, changes in the dependency ratio trigger changes in output per resident, in what is known as the first demographic dividend. Latin America as a whole seems to be closer to its minimum dependency ratio, from which the first demographic dividend becomes negative.

This means that, while the aging process is common to all countries, different countries are at different stages in their demographic transitions. Some countries are currently going through a very favorable period, with a dependency ratio that is still decreasing. This opens a unique window of opportunity to reform social protection schemes in less adverse contexts.

## Technological change and social protection

A further global trend is the advance—at varying speeds—of digitization and automation in production processes. These technological changes can affect the provision of social protection through their impact on the structure of occupations, careers, and wage distributions. On the other hand, they can also increase employment in non-traditional jobs and in jobs with different propensities to contribute to social protection systems. Platform-based jobs are one example of this kind of employment.

### Technological change and routine tasks

Technological progress can favor worker replacement by machines or the digitization of routine tasks (whether manual or simple cognitive tasks), increase the productivity of some workers in non-routine tasks, and expand work opportunities to enable new tasks. The first of these processes could cause a revenue reduction for social protection systems if some of the workers who currently do routine tasks lose their formal jobs or if their wages are reduced. This has implications not only for the current revenues of pension and healthcare systems, but also for their future spending and sustainability, since it affects whole careers and therefore all individuals' contributions by the time they reach the retirement age.<sup>6</sup>

We might then wonder what proportion of employment in Latin America involves highly routine-based occupations, and what types of workers are particularly exposed to the consequences of increased technology use in productive processes. According to the CAF 2019 survey, ECAF 2019 (CAF, 2020), almost half of all workers in Latin America's cities are in occupations that involve a high proportion of routine tasks (an average of 47% in the region's main cities, compared to 41% in the United States). This points to a significant concentration of workers in occupations that are relatively vulnerable to automatization (see Figure 5).

An analysis that takes into consideration workers' sociodemographic characteristics suggests that those with lower education levels could lose out to automatization, since they are more exposed to occupations with higher routine content and therefore face greater risks of having their tasks replaced by machines. Young people also emerge as a likely vulnerable group.<sup>7</sup> The deterioration of working conditions for these two groups of workers (individuals with lower education levels and young people) could erode the contributions pillar in social protection systems.

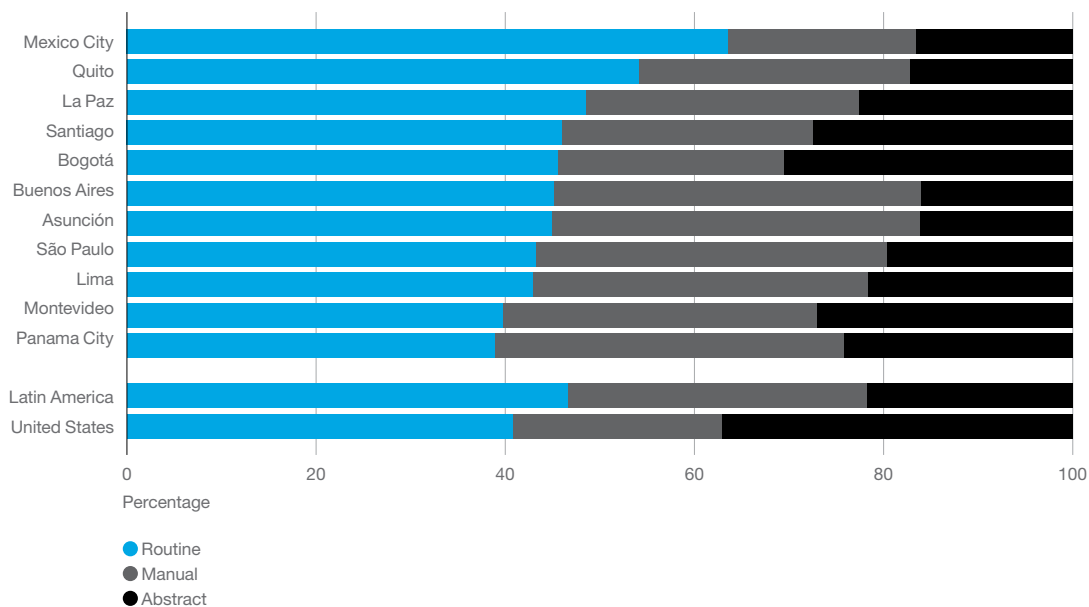
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6. Contribution density determines—along with the system's legal requirements—whether a worker is eligible for a contributory or non-contributory pension, as well as the size of any benefits.

7. According to Brambilla, César, and Falcone (2020), automatization of production in Chile reduces the demand for occupations with high routine content, and this is bad for younger workers who are more likely to lose their jobs than adults in similar situations. Among young workers, those who are more experienced or skilled manage to migrate to non-routine occupations, while those who are less experienced or skilled become unemployed.

**Figure 5.**

Jobs that are vulnerable in the face of automatization: Skill content required in occupations in various cities in Latin America and in the United States



Notes: This classification of occupations and the generation of indicators are based on Acemoglu and Autor (2011) and on Hardy (2016).

Source: Calculated by the authors, based on O\*NET 24.2 (O\*NET Resource Center, 2020), ECAF 2019 (CAF, 2020), and Occupational Employment Statistics (US Bureau of Labor Statistics, 2018).

## Is platform-based work an opportunity?

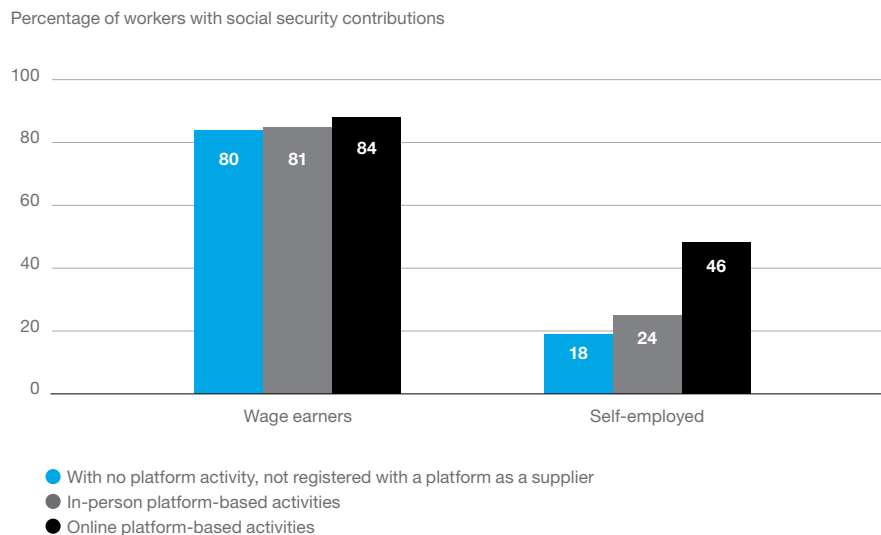
Technological innovations enable employment opportunities with new forms. One example is platform-based work (that is, activities where the demand for and supply of labor are mediated by online platforms). These platforms include diverse contractual arrangements between the various agents involved, going from locally supplied services (where typical examples include transport services like Uber and product delivery services like Rappi) to services that are traded and provided online (where typical examples include the performance of specific tasks like Amazon Mechanical Turk and the provision of specialized services like Upwork).

These jobs, while still relatively new, are growing as a proportion of total employment. According to ECAF 2019 data, an average of 9.4% of all respondent workers said they had provided a service through a platform over the previous month, while 6.7% had registered with a platform as suppliers although they had not supplied any services over that period. This means that around 16% of all employed persons can be considered active or potential platform workers. This proportion is highest in Panama City (23%), Bogotá (20%), and Quito (19%). On average, platform employment amounted to the main income-generation activity for 41% of all workers who had provided services through a platform over the previous month. The data also show that platform workers tend to be younger than non-platform workers and that they are more likely to be men and to have attained higher levels of formal education.

Are platform workers more or less likely to be included in social protection schemes? Analysis based on the ECAF data suggests two relevant results (see Figure 6). First, formality levels tend to be higher among platform workers than among workers who do not use digital platforms. This is obvious in the case of the self-employed, but it is also apparent to a lesser extent among wage earners. This higher formality among platform workers cannot be linked to educational differences. Differences in formality rates persist when we compare individuals with similar education levels.<sup>8</sup> Second, among different types of platform work, formality rates are higher for individuals who do their work online than for those who deliver products or provide their services in person.

This higher propensity to offer formal employment in a sector that is clearly growing offers an opportunity to increase funding for social protection schemes. The higher observed formality could partly be linked to easier auditing of activities that are mediated by digital platforms. Easy auditing helps to address two issues that have typically prevented freelance workers from joining contributory schemes—difficulties to establish the income base to calculate contributions and the possibility of underreporting income.

**Figure 6.**  
Platform workers are more prone to formal work in Latin America’s major cities



Notes: Each bar shows the percentage of workers with social security contributions. Workers who say they have performed platform-based activities both in person and online are not included in this calculation, because there are very few cases (1.7%).

Source: Compiled by the authors, based on data from ECAF 2019 (CAF, 2020).

8. The probability of making social security contributions is six percentage points higher for platform workers than it is for workers who do not use platforms, for any given form of occupation (wage earner, self-employed, or employer), education level, age group, gender, and city of residence.

## Discontinuous careers and their implications for access to social protection

Though eloquent, this picture is not enough to fully understand the implications of labor informality for the provision of social security. We also need to look at careers. It is whole careers that define how stable employment formality is over time, and therefore how stable worker access to the benefits of contributory social protection is. And it is also whole careers that define the social security contributions workers accumulate over the course of their working lives, which will in turn define their access to contributory retirement benefits.

Based on data taken from the administrative records of social security systems, this report examines contribution patterns over the course of whole careers in four countries—Argentina, Brazil, Ecuador, and Uruguay. Data have been collected monthly, while the collection period varies by country: 13 years in Brazil (2005–2017) and Ecuador (2006–2018), and 20 years in Argentina and Uruguay (in both cases, 1996–2015).<sup>9</sup>

This analysis suggests, first of all, that there is a high rotation between scenarios with and without social security contributions. Of the total number of individuals registered with the system in a given month, the proportion who become non-registered in the following month is 3.7% in Argentina, 2.8% in Brazil, 2.7% in Ecuador, and 3.5% in Uruguay. These rates imply that, over the course of any given year, approximately 35% of all workers lose coverage in Argentina and Uruguay, while the proportion falls to 29% in Brazil and Ecuador.<sup>10</sup> Of the total number of individuals who are not registered with the social security system in a given month, the proportion who become registered in the following month is 1.6% in Argentina, 2.6% in Brazil, 2.3% in Ecuador, and 3.1% in Uruguay. This implies that, every year, an average between 18% of all informal workers in Argentina and up to 31% in Uruguay attain social security coverage, with the proportion for Brazil and Ecuador at around 25%.

These dynamics imply short continuous contribution periods. The average contribution period lasts only 26 months in Argentina, 27 months in Uruguay, 29 months in Brazil, and 32 months in Ecuador. Further, half of all contribution periods last just 6 months in Argentina and Uruguay, and 12 months in Brazil and Ecuador. The data again show Latin America's typical labor market instability.

High rotation between scenarios with and without social security contributions and short contribution periods imply reduced accumulated contributions over a person's working life. The average worker has been registered for 35% of their working life in Argentina, 51% in Brazil, 47% in Ecuador, and 50% in Uruguay. However, these averages hide one crucial element: few workers make social security contributions almost their whole working lives, while many make social security contributions for very short periods (Figure 7). Some 50% of Argentina's workers make social security contributions over less than a quarter of the time they could have contributed to the system. The proportion is 34% in Ecuador, 30% in Uruguay, and 28% in Brazil. At the other extreme, the proportion of workers who have made social security contributions for at least three quarters of their working lives stands at 15% in Argentina, 23% in Ecuador, 27% in Uruguay, and 29% in Brazil. As we will see later, these figures imply that a high proportion of the labor force runs the risk of not attaining the minimum years of social security contributions required to access a contributory pension.

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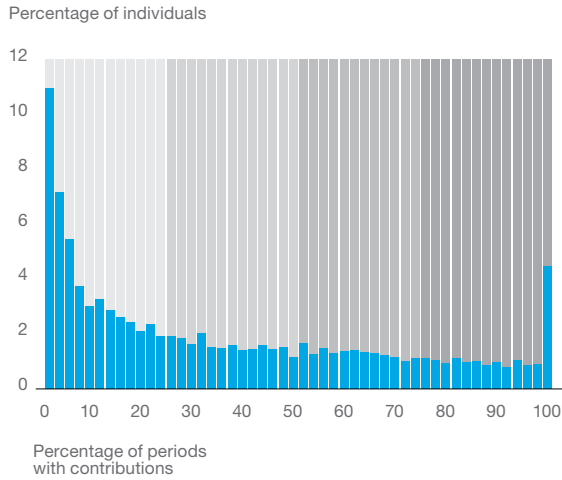
9. Given restrictions in the available data, calculations for Argentina include only work transitions to and from wage-earning work in the private sector. It is not possible to establish whether this transition is from or two a public-sector job, unemployment, informal employment, or self-employment.

10. Levy (2019) documents a similarly high-rotation scenario for Mexico.

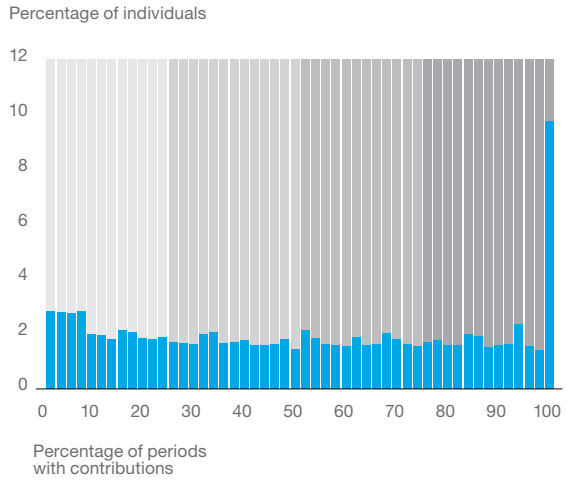
**Figure 7.**

Many workers make contributions over a short time: Social security contribution density

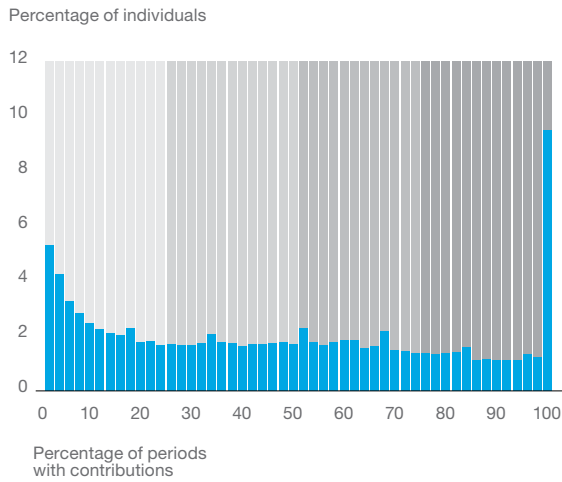
**Panel A. Argentina**



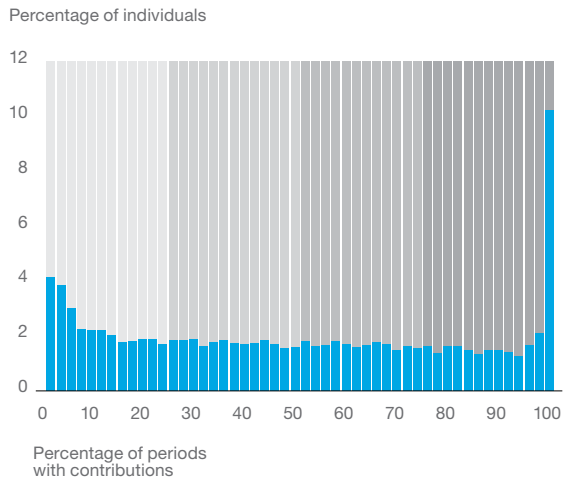
**Panel B. Brazil**



**Panel C. Ecuador**



**Panel D. Uruguay**



**Source:** Compiled by the authors, based on administrative social security records for each country.

# Social protection systems in Latin America

## Pension systems

Pension systems have two objectives. On the one hand, they enable individuals to have an income after they retire, in exchange for contributions made during their working lives. On the other hand, pension systems prevent poverty in old age. In an aging context, these systems become increasingly important for well-being, but they also imply major challenges for countries' fiscal sustainability.

Aging will make pensions even more relevant for well-being in Latin America, insofar as it increases the proportion of the population with a pension as their main source of income. The flip side of this situation is increased spending and lower aggregate revenues for pension systems, and therefore greater fiscal sustainability challenges.

Latin American countries structure their pension systems in very different ways. Two binary classifications are useful to describe the overall structure of the contributory component of pension systems around the region. On the one hand, contributory pensions can be funded through pay-as-you-go or capitalization systems. In pay-as-you-go systems, current pensions are funded with the contributions made by active workers. In capitalization systems, each pension is funded with the accumulated contributions made by the beneficiary throughout their working life. On the other hand, contributory pension payouts can be established using a defined benefit system or a defined contribution system. In defined benefit systems, pension payouts depend on a combination of past wages and years of contributions, but they do not necessarily reflect each given worker's accumulated contributions. The opposite happens in defined contribution systems, where the system specifies how much each worker needs to contribute and pension payouts then emerge from the distribution during old age of all contributions accumulated during individuals' working lives. In general, pay-as-you-go systems are associated with defined benefits, while pension payouts in capitalization systems depend on the contributions that have been made (defined contributions).

Pay-as-you-go, defined benefit schemes dominate contributory pension systems in Argentina, Brazil, Ecuador, Paraguay, and Venezuela, while capitalization components are dominant in Bolivia, Chile, and Mexico. Colombia, Costa Rica, Panama, Peru, and Uruguay have mixed systems, with components of both capitalization and pay-as-you-go schemes. In Costa Rica, Panama, and Uruguay, the components of capitalization and pay-as-you-go systems are complementary—a portion of the payout for a given pension may be funded through capitalization and another portion may be pay-as-you-go. In Colombia and Peru, on the other hand, these components are mutually exclusive—a given pension may only be funded with one type of contribution, which in turn implies that workers must choose the system they wish to join.

Beyond contributory pensions, which are mainly associated with the goal of saving for old age, all Latin American countries except for the Dominican Republic have some kind of non-contributory pension in place that reflects the goal of reducing poverty. These pensions experienced major expansion in the region during the first two decades of the current century. Over the period 2000–2016, the number of countries with non-contributory pensions in Latin America and the Caribbean increased from 7 to 26. Further, in at least 10 countries the proportion of older persons who received these pensions rose by more than 20 percentage points.

In general, to access a non-contributory pension in the region, older persons need to prove that their income is below a certain threshold or that they do not receive a contributory pension. These are known as targeted non-contributory pensions. The only exceptions to these targeted criteria for access to non-contributory pensions are Bolivia and Mexico, where all adults over the age of 60 (in Bolivia) or 65 (in Mexico) have the right to a pension of this kind.

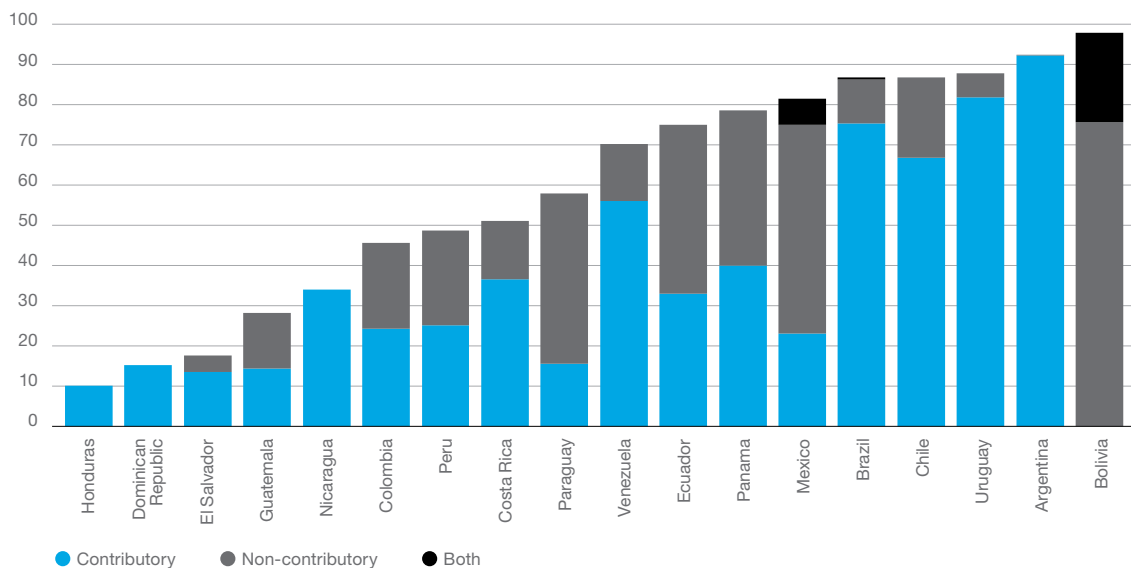
## Pension coverage

Different Latin American countries have very different institutional designs to pay their pensions, and there is also great heterogeneity in the proportion of older persons who receive a pension in each country. And yet this heterogeneity is not directly linked to the way the system is funded, whether capitalization-based, pay-as-you-go, or mixed.

Figure 8 shows the proportion of individuals over the age of 65 who receive a pension in each country, differentiating between the proportion who receive non-contributory pensions, contributory pensions, or a mix of both. The six countries with the most significant coverage, all of them above 80%, have very different system architectures. The country with the highest coverage, Bolivia, has attained coverage levels comparable to those of developed countries, mainly through a universal non-contributory pension program that works in conjunction with a capitalization-based contributory pension component. Along similar lines, Mexico has attained major coverage with broad-based non-contributory pensions and with a capitalization component in its contributory pensions. Argentina and Brazil have achieved broad coverage with pay-as-you-go systems and smaller non-contributory components. Uruguay has a mixed system, with more limited coverage for non-contributory pensions. Chile has attained high coverage for its capitalization-based contributory pensions, supplemented with non-contributory pensions received by around one fifth of all individuals over the age of 65. This diversity in pension system design and coverage is also apparent in other countries.

### Figure 8.

Heterogenous challenges in coverage: Proportion of individuals aged 65 or older who receive a pension by country, 2017



Note: In the case of Argentina, pensions that stem from various moratoriums are classified as contributory.

Source: Compiled by the authors, based on administrative data reported by Arenas de Mesa (2019).



Only the countries with the lowest informality rates, like Argentina, Brazil, Chile, and Uruguay, can attain high levels of coverage through contributory pensions.<sup>11</sup> In all other countries, attaining high levels of coverage necessarily requires broad-based non-contributory pensions, as shown above by the cases of Bolivia and Mexico, and also to a significant extent by those of Ecuador and Panama, two countries where more than two thirds of individuals over the age of 65 receive non-contributory pensions. This link between formality and contributory and non-contributory pensions is also apparent between different types of workers within specific countries. Among workers with lower education and income levels, high informality rates imply that contributory pensions are difficult to access, so having an income during old age requires access to non-contributory pensions.

While informality clearly restricts the potential range of coverage for contributory pensions, there is one crucial aspect of the rules to access this type of pension that implies additional restrictions—the minimum number of years of contributions required to receive a retirement pension. A simulation exercise was conducted for this report based on the administrative social security records of Argentina, Brazil, Ecuador, and Uruguay. The results of this exercise are presented in Figure 9.<sup>12</sup> They show how important the minimum number of years of contributions is to determine contributory pension coverage. In Argentina and Uruguay, two countries whose main retirement schemes require 30 years of contributions to be able to access a contributory pension, reducing this requirement to 15 years would increase the number of workers who attain the threshold by the age of 65 respectively by 45 and 55 percentage points.<sup>13</sup> In the case of Ecuador, this simulation suggests that the current minimum, 15 years of contributions at age 65, would enable almost 90% of all workers to access retirement, while the same thing would happen in Brazil if the minimum number of years of contributions required for men were reduced from 20 to 15 years (it already stands at 15 years for women). Beyond Argentina and Uruguay, other countries that require too many years of contributions include Colombia's pay-as-you-go component (25 years), Mexico (24 years in the private sector, 25 in the public sector), Panama (20 years), and Paraguay (25 years).

Given the relevance of self-employment in Latin America and the small proportion of self-employed workers who make contributions to pension systems, one crucial element to increase coverage is to attain higher contribution levels among the self-employed. One way to ensure this involves making it mandatory for self-employed workers to make social security contributions, just as it is mandatory for wage earners. In Bolivia, Mexico, Paraguay, and Peru, self-employed workers have no obligation to make contributions toward retirement pensions. According to data from ECAF 2019, in countries where contributions are mandatory, self-employed workers accumulate 33% fewer years than wage earners, while in cities where contributions are not mandatory the difference stands at 46%.<sup>14</sup> Similarly, the difference among self-employed workers and private-sector wage earners within the first group in terms of individuals who expect to receive a retirement pension stands at 21 percentage points, while it stands at 29 percentage points in the second group. Prior experience in countries that have made contributions mandatory (Argentina, Brazil, Chile, and Uruguay) suggests that doing so can increase contributions and social protection among self-employed workers. Beyond introducing mandatory requirements, the experiences

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11. In Argentina, high contributory pension coverage is due to repeated social security moratoriums, which enable access to a retirement pension without having reached the minimum number of years of contributions, as long as the individual in question makes the missing contributions through deductions from their pension.

12. As mentioned in footnote 9, the data for Argentina include only private-sector workers. To assess the effect of this restriction, an exercise was conducted in Brazil, Ecuador, and Uruguay, taking into consideration only data for these workers. The results of this exercise suggest that using only data for private-sector workers leads to an underestimate in the proportion of workers with more than 30 years of contributions that amounts to 5.6 percentage points in Brazil, 12.6 percentage points in Ecuador, and 12.3 percentage points in Uruguay. These differences are significant, but when placed in Argentina's context they support the conclusion that the country's required years of contributions are quite demanding.

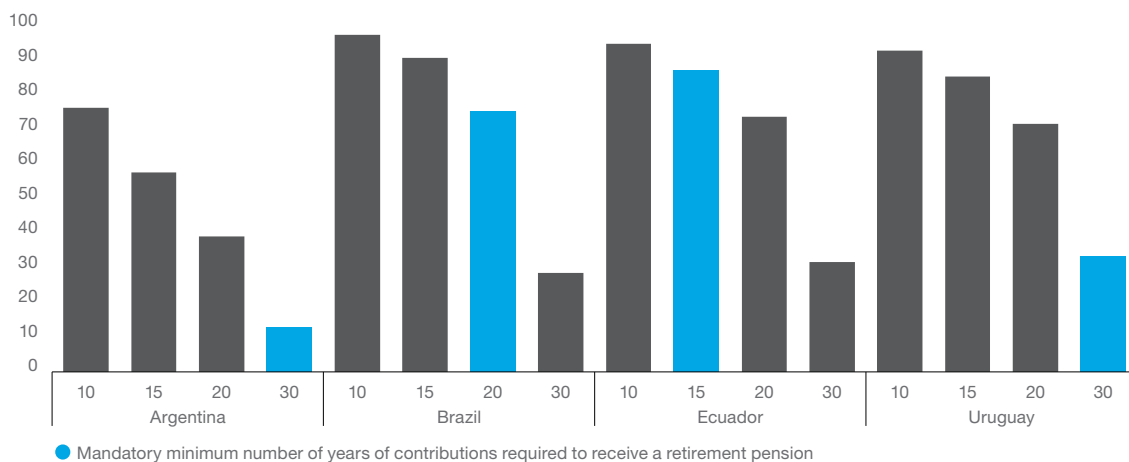
13. In practice, both Argentina and Uruguay have implemented various *ad hoc* flexibilizations of requirements to access contributory pensions. This is crucial to reconcile the high contributory pension coverage shown in Figure 8 with the low proportion of workers who would attain the required number of years according to Figure 9.

14. Both figures focus on workers between the ages of 45 and 64.

of Argentina, Brazil, and Uruguay also show the potential of introducing simplified contribution regimes for these workers to achieve higher coverage levels.

### Figure 9.

Informality and the requirement for a significant minimum number of years of contributions restrict coverage: A simulation of the proportion of wage earners who attain 10, 15, 20, and 30 years of contributions by the age of 65



Note: See Alves, Brassiolo, and Martínez-Correa (2020) for more information on the sources of data and the methodology. In the case of Argentina, this simulation only considers the number of years of social security contributions made by workers as private-sector wage earners. For other countries, the data also include social security contributions made by workers as public-sector wage earners and in some types of self-employment. For Brazil, the mandatory minimum number of years of social security contributions shown is the one for men. The mandatory minimum for women is 15 years. In Ecuador, the minimum number of years refers to the requirement to access a retirement pension at age 65. In Ecuador, the minimum number of years of social security contributions is 30 years to retire at 60 and 10 years to retire at 70. In Uruguay, women count an extra year of social security contributions for each child, which implies that the minimum shown in the graph is lower for women who have children. These proportions emerge when we apply the same methodology to each country. Alternative methodologies have shown greater or smaller proportions depending on the country, but they still support the qualitative conclusion that a 30-year social security contribution threshold would exclude very significant portions of workers from accessing contributory pensions (see, for example, Forteza *et al.* (2009) and de Melo *et al.* (2019)).

Source: Compiled by the authors, based on administrative social security records.

## Pension payouts

Pension payouts can be assessed based on the two goals of pension systems—providing a savings mechanism that enables workers to have an income when they retire and preventing poverty among older persons.

The pension replacement rate is commonly used to assess pension payouts according to the first goal. This rate is defined as the ratio between the first pension payout received and the income received by the same worker prior to retirement, and it therefore shows whether a given person's pension enables the same consumption capacity as the wage they used to earn.

The replacement rates estimated in this report confirm what is already a stylized fact for Latin America—these rates are significantly higher in defined benefit, pay-as-you-go pension systems than in defined contribution, capitalization-based pension systems, with supplementary mixed regimes somewhere in the middle. The pattern of higher replacement rates in pay-as-you-go than in capitalization-based schemes is also apparent in the two countries with mixed but mutually exclusive systems (Colombia and Peru).

Taking as a reference the average replacement rate for OECD countries, which stands at 59%, Latin American countries with pay-as-you-go systems are generally above that average and would therefore not face problems caused by insufficient pension payouts. Replacement rates for capitalization schemes, on the other hand, are significantly below the OECD average, which points to potential sufficiency issues. In this second group, Chile and Mexico both have relatively low contribution rates as a proportion of wages, which partly explains their sufficiency problems.

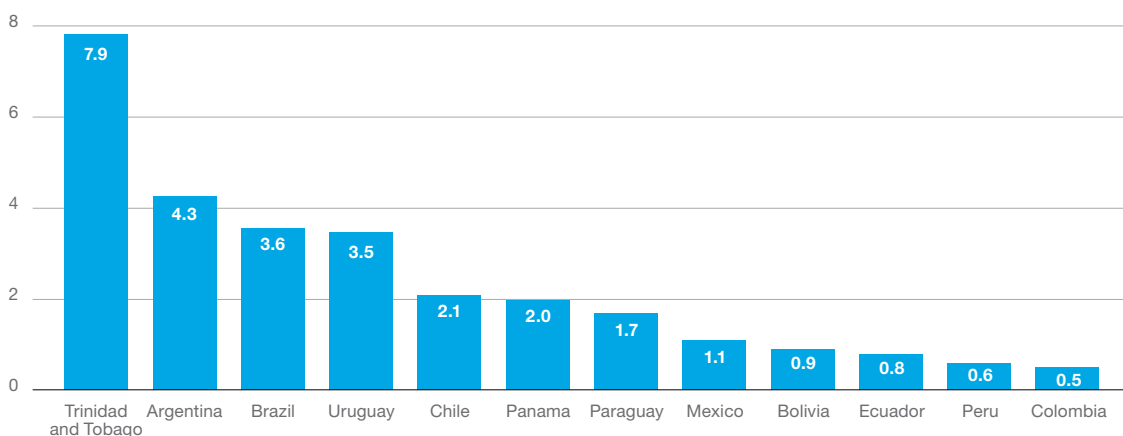
As noted above, in Latin America's high-informality context, non-contributory pensions are a crucial tool to reduce poverty. Examining these pension payouts is therefore crucial to know whether they are sufficient relative to the goal of preventing poverty. Further, non-contributory pensions set the floor for contributory pensions, so assessing them is also relevant to assess contributory pensions' poverty-reduction potential.

Figure 10 shows non-contributory pension payouts in various Latin American and Caribbean countries, relative to a USD 4 per day poverty line, adjusted for purchasing power parity (PPP). In Bolivia, Colombia, Ecuador, and Peru, pension payouts remain below the poverty line, although a more substantial pension is available in Ecuador for older persons with little income. In the region's highest-income countries, such as Argentina, Chile, Mexico, Panama, and Uruguay, a USD 4 per day poverty line might not be demanding enough. To assess whether non-contributory pensions in these countries are sufficient relative to the average level of income in their economies, we compare these pension payouts with GDP per capita. Based on these calculations, there is room to improve these pensions' sufficiency in Chile, Mexico, and Panama.

### Figure 10.

Non-contributory pensions are insufficient in some countries: Non-contributory pension payouts relative to a USD 4 per day poverty line, 2017

Comparison to the poverty line



Notes: All data are for 2018, except the data for Mexico, which are for January 2019. In the case of Colombia, payouts vary by municipality. The authors of the report used the highest payout outside Bogotá, since this is the most common payout among the country's municipalities. In the case of Trinidad and Tobago, payouts vary based on income. The authors of this report used the highest payout for reference. In Ecuador, payouts refer to the Pension for Older Persons program, the non-contributory scheme with the highest number of beneficiaries in the country.

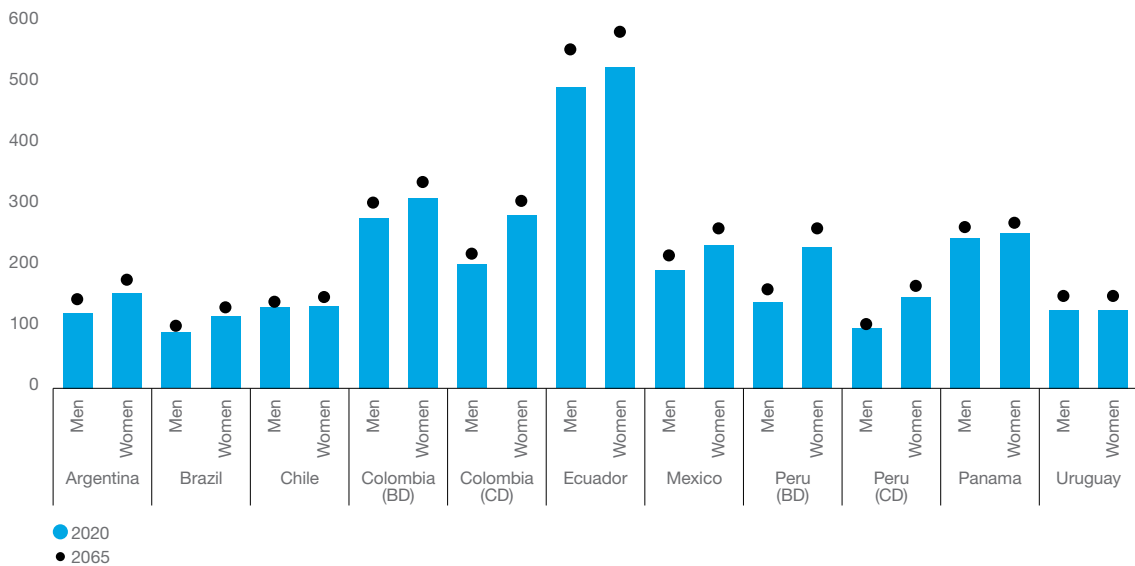
Source: Compiled by the authors in terms of pension payouts, while GDP per capita adjusted for purchasing power parity is based on World Bank (2020).

## Balance between today's contributions and tomorrow's pensions

How does the total flow of pensions received in old age compare to the total flow of contributions made by a worker throughout their working life? This report conducted a simulation exercise for contributions and pensions for the average worker in each country.<sup>15</sup> The results show that Brazil (following the reform implemented in 2019) and Peru with its capitalization scheme were the only countries with relatively self-sufficient contributory schemes for the average worker, with ratios that are below or around 100% (see Figure 11).<sup>16</sup> Argentina, Chile, and Uruguay are in intermediate positions, with ratios between 10 and 40 percentage points above 100%. In all other cases, and particularly in Ecuador and in Colombia's defined benefit scheme, ratios are very unbalanced, which suggests a need to adjust the formulas used to calculate pension payouts.

**Figure 11.**

Ratios between total benefits and total contributions are unbalanced in 2020 and will be even more so in 2065



Notes: Separate data are provided for defined benefit (DB) and defined contribution (DC) schemes in the cases of Colombia and Peru. DB ratios in the latter reflect the average number of years of contributions for wage earners and the minimum number of years for self-employed individuals. Estimates for 2065 take into consideration life expectancy data.

Source: Compiled by the authors, based on Allub, Alves, and López (2020).

15. This exercise gathers workers' average wages and numbers of years of contributions based on the findings of household surveys in various countries. In cases where the average number of years of contributions is below the required minimum number of years to access a retirement pension in the country, it shows results for a worker who exactly attains the minimum number of years of contributions. This is the case for Argentina, Ecuador, Mexico, Peru, and Uruguay. See Allub, Alves, and López (2020) for further details on this exercise.

16. In the case of Brazil, these calculations reflect the new retirement and social security contribution rules set in the 2019 reform. While in capitalization schemes the ratio should in principle be 100% by definition, all countries with this type of system include state supplements for pension payouts that fail to reach the required minimums.

Beyond calculations for wage earners, the report presents a similar exercise conducted for self-employed workers. This shows hugely unbalanced ratios for most countries, with benefits on average 6–7 times greater than contributions. This huge imbalance is due both to the fact that social security contributions are very low and to the common existence of relatively high minimum pensions in contributory systems.

Figure 11 also presents ratios between benefits and contributions simulated based on the life expectancy that is expected for 2065. This illustrates the threat that aging poses for systems' financial sustainability. The countries that currently have the most balanced ratios (Brazil and Peru's defined contribution scheme) show ratio increases around 10 percentage points by 2065, while the countries with the most unbalanced ratios (Ecuador and Colombia's defined benefit component) show considerably more significant increases.

## Policy guidelines for pension systems

Pension system design in Latin America should follow three general guidelines, regardless of whether they are capitalization-based systems, pay-as-you-go systems, or a mix of both. First, older persons should receive a sufficient minimum income. This first guideline has major support from the region's citizens, according to ECAF 2019 (see Table 1). On average, more than 55% of respondents "strongly agree" (and 75% at least agree) with ensuring that pensions grant a minimum income to all older persons, regardless of how much they have contributed to the social security system.

In terms of pension coverage, this first guideline implies continuing to expand non-contributory pensions in all countries except in Bolivia, where they are almost universal already. This report estimates that attaining universal coverage using the non-contributory pension schemes that are already in place in each country would cost 0.24% of GDP on average (see Table 2 on page 32). The exact percentage will vary for different countries, depending on how generous payouts are in the existing schemes, the proportion of the population that is still not covered, and the proportion of older persons relative to the total population. Beyond extending coverage, this first general guideline would require increasing non-contributory pension payouts in countries where these payouts are currently too small.

A second general guideline involves ensuring that contributory pension components aim for financial balance. Concerning citizen support for this second general guideline, while views are slightly less univocal than they are concerning minimum retirement pensions, the principle that pensions should be proportionate to the social security contributions each worker made during their working life also enjoys significant support, particularly in Montevideo, Panama City, and Buenos Aires (Table 1).

Our analysis of actuarial ratios in different schemes showed very significant deficits in Ecuador's contributory pensions and in defined benefit schemes in Colombia and Peru, and these deficits are expected to increase as a consequence of aging. In the case of Colombia, the contribution rate is already relatively high, so corrections could target benefits and the minimum retirement age. In the cases of Peru and Ecuador, on the other hand, contribution rates are some of the lowest in Latin America, so increasing them could be a viable way to improve their systems' financial sustainability.

Our simulations of actuarial ratios show that increasing the minimum age for retirement by one year tends to reduce these ratios by 5–10 percentage points for wage earners. In countries where minimum ages are yet to converge to the standard age of 65, this is therefore a powerful tool to improve systems' financial sustainability.<sup>17</sup> This implies considering retirement age increases for both men and women in Ecuador, Paraguay, and Uruguay, and for women in Argentina, Brazil, Chile, Colombia, and Panama.

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17. Age 65 is the most common threshold for men in Latin America and for both men and women in OECD countries.

**Table 1.**

Citizens support minimum pensions and favor pension payouts that are proportional to past contributions

Region	Panel A. View on granting minimum pensions regardless of contributions (percentage of respondents)					Panel B. View on pension payouts (percentage of respondents)				
	Response					Response				
	1 Strongly disagree	2	3	4	5 Strongly agree	1 The same for everyone	2	3	4	5 Proportionate to contributions
Asunción	5.2	1.4	4.0	9.4	80.0	44.8	2.4	7.9	8.7	36.2
Bogotá	6.0	5.2	12.4	23.2	53.2	25.8	4.6	15.2	23.7	30.8
Buenos Aires	6.5	3.8	11.9	19.3	58.5	28.0	2.8	11.6	15.3	42.3
La Paz	4.8	6.0	15.9	27.2	46.2	25.4	5.5	21.5	21.0	26.7
Lima	4.4	5.8	12.0	37.0	40.8	18.9	10.7	19.4	25.8	25.2
Mexico City	5.2	5.0	14.8	29.3	45.7	20.3	9.8	19.3	27.2	23.4
Montevideo	12.3	2.4	10.7	15.0	59.6	17.9	3.5	11.6	17.6	49.4
Panama City	14.4	6.0	11.0	19.0	49.6	22.8	5.0	10.3	14.8	47.1
Quito	11.0	5.4	15.7	18.1	49.8	23.6	7.8	18.6	17.5	32.5
São Paulo	6.9	3.2	7.7	17.1	65.1	30.5	4.6	9.2	16.8	38.9
Santiago	4.9	3.7	15.3	13.1	62.9	34.5	11.5	26.4	14.5	13.1
Average	7.4	4.4	11.9	20.7	55.6	26.6	6.2	15.5	18.4	33.2

Notes: The question for Panel A is: On a scale from 1 to 10, where 1 stands for “Strongly agree” and 10 stands for “Strongly disagree” to what extent do you agree with the statement, “The state must grant a minimum income to all older persons, regardless of their social security contributions”? The question for Panel B is: Where would you place your views, on a scale from 1 to 10 where 1 means that retirement pensions must be the same for everyone and 10 means that retirement pensions must be proportionate to the contributions a given worker made during their working life? The following recodification has been used in the response scale for this Table: (1 = 1) (2–4 = 2) (5–6 = 3) (7–9 = 4) (10 = 5).

Source: Calculated by the authors, based on data from ECAF 2019 (CAF, 2020).

The third guideline refers to more specific aspects of contributory pension design, with a special focus on incentives to make social security contributions that the various systems provide. On the one hand, it would be healthy for countries with a high minimum number of years of social security contributions to reduce that number. Otherwise, substantial portions of the workforce in those countries would lack incentives to make social security contributions, since they would not expect to attain the minimum number of years of contributions (or may even be unable to attain them altogether, given their age and the few years of contributions made). On the other hand, contributions made to this component should be mandatory for all workers, including the self-employed, to guarantee that they are insured and to prevent potential behavioral biases that lead workers to not save enough voluntarily. Further, ensuring that wage earners and self-employed workers face similar conditions is crucial to prevent the pension system from incentivizing one form of work rather than the other, which could be detrimental for countries’ productivity.

## Healthcare and long-term care in Latin America in a context of aging

### Aging, disease, and health expenditure

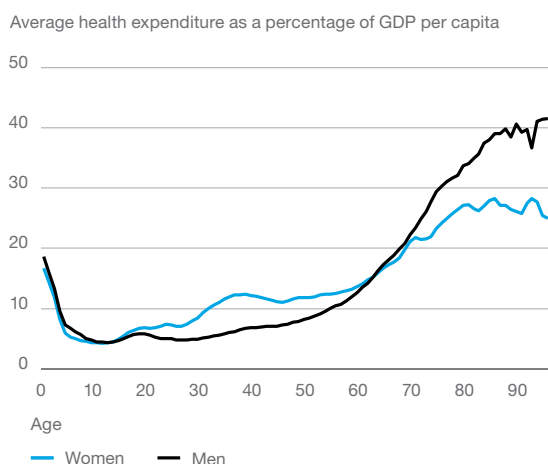
Aging brings with it changes in the demand for healthcare services that require increased expenditure. Recent research focused on developed countries shows that per capita health expenditure for 80-year-olds is on average 3–6 times greater than it is for 30-year-olds. In Latin America, however, little research has been conducted on this relationship between expenditure and age, and this would be crucial to estimate the impact of aging on aggregate health expenditure.

For this report, two pieces of research were commissioned to document this relationship for Chile and Colombia. The data obtained for these two countries show a very similar pattern to the one observed in developed countries (see Figure 12). Expenditure drops after the first year of life and stabilizes around the age of 5. Later, expenditure on women is higher than that on men during the reproductive stage, and it starts to rise fast from the age of 50, especially among men, to reach a maximum between the ages of 80 and 90.

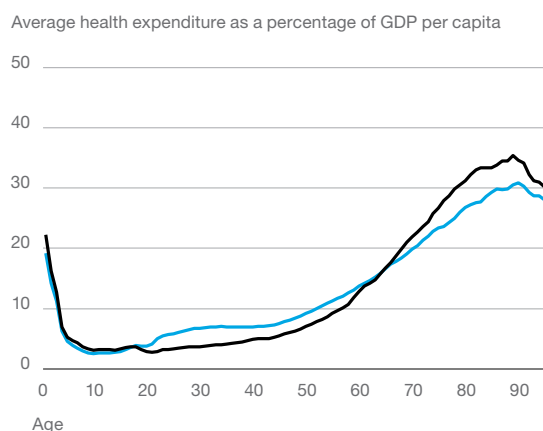
**Figure 12.**

Per capita health expenditure increases with age

**Panel A. Chile (private insurance subsystem), 2018**



**Panel B. Colombia (contributory scheme), 2017**



Notes: Expenditure in Chile includes all spending by individuals who contribute to the contributory healthcare system but voluntarily opt for private coverage (ISAPRES), approximately equivalent to a quarter of Chile's population. It includes both expenditures made by the insurer and spending (in the form of copayments) made by individuals. Expenditure in Colombia includes contributions to the contributory healthcare system, which covers 47% of the country's population, but not out-of-pocket spending in the form of copayments. The data are smoothed using a moving average of the last three age observations.

Source: Compiled by the authors, based on De la Mata and Valdés (2020) for Chilean data and on Buitrago and Torres (2020) for Colombian data.

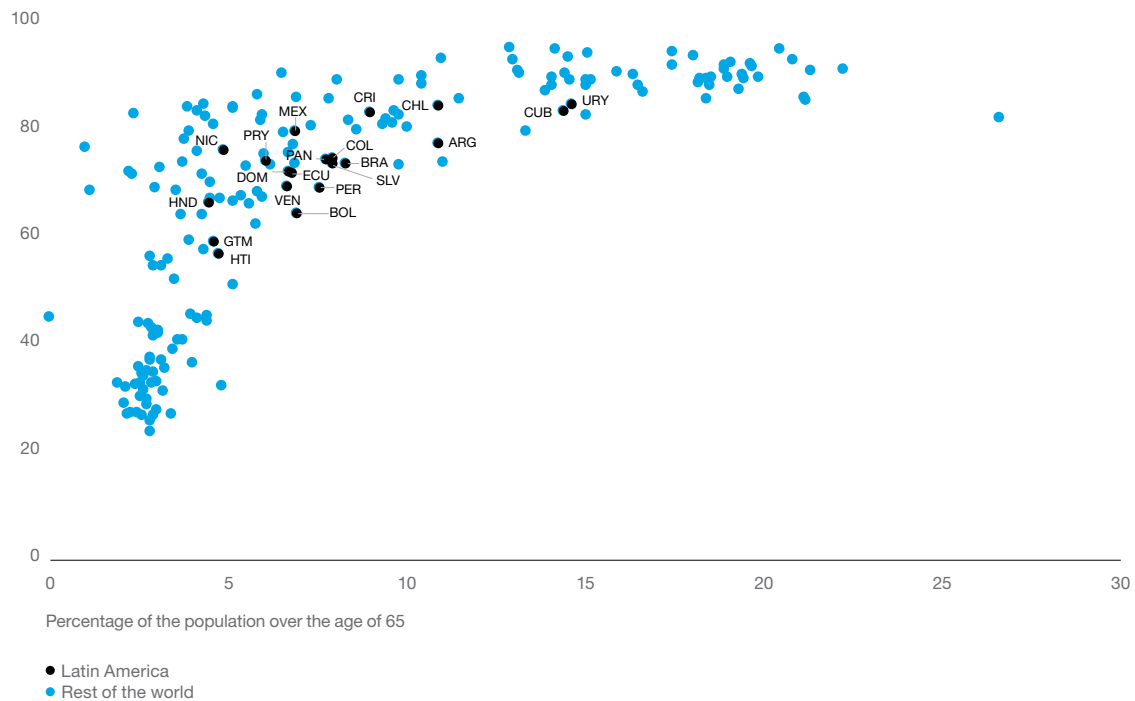
The data confirm that this increase in expenditure with age is associated with a higher prevalence of non-communicable diseases, like cancer, diabetes, mental health disorders, and chronic circulatory and respiratory diseases. These pathologies trigger more consultations and hospital admissions, as well as longer stays in hospital. These five non-communicable diseases cause half of the hospital expenditure of people aged 60 and older in Chile, and approximately 40% of that expenditure in Colombia.

The link between the increased relevance of non-communicable diseases and age implies a positive correlation between the incidence of these diseases in the total population and the extent to which given countries age. Figure 13 confirms this correlation and shows the weight of non-communicable diseases in total deaths in 2016 among people aged 65 and older, for each Latin American country and for a selection of countries in the rest of the world.

**Figure 13.**

Non-communicable diseases become more relevant with age

Percentage of deaths caused by non-communicable diseases



Notes: This figure takes into consideration non-communicable diseases included in categories C00 and R99 of the international classification of diseases ICD-10.

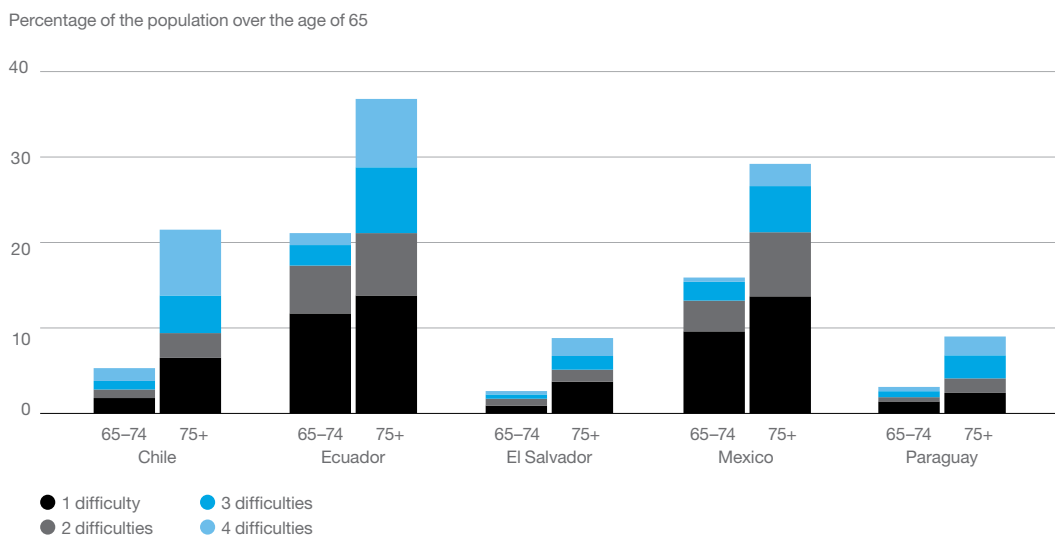
Source: Compiled by the authors, based on WHO's mortality database (2019c) and on United Nations (2019b).

The possibility of living longer lives also increases dependency, partly as a consequence of the higher incidence of chronic diseases. These situations emerge when individuals require major assistance or help to carry out daily tasks, for lack or loss of their physical, mental, or intellectual autonomy. Figure 14 shows the proportion of 65–74-year-olds and of individuals aged 75 and older in five Latin American countries who have difficulties to carry out four basic daily activities: bathing, eating, lying down or getting up, and getting dressed. In all countries, it is apparent that for individuals over the age of 75 this proportion at least doubles the proportion for 65–74-year-olds. The figures differ for different countries, but they invariably attain very significant proportions among older persons.



**Figure 14.**

A high proportion of older persons needs help to carry out basic daily tasks, 2015 or more recently



Notes: This figure takes into consideration difficulties to get dressed, bathe, eat, and get into or out of bed. In Chile, El Salvador, and Paraguay, interviewees are asked whether they “usually need help or have difficulty” to carry out each of these activities. In Ecuador and Mexico, interviewees are asked whether they “have difficulty” to carry out the same activities.

Sources: Compiled by the authors, based on microdata from the Longitudinal Social Protection Survey in Chile (2015), El Salvador (2013), and Paraguay (2015); the National Survey on the Quality of Life of Older Persons in Argentina (2012); the Survey on Health, Well-Being, and Aging in Ecuador (2009); and the National Survey on Health and Aging in Mexico (2015).

The data show that this need for care among older persons currently entails little explicit spending in Latin America, because care is mainly provided informally and families play a major role in provision. For example, less than 1% of individuals aged 65 or older in Brazil, Costa Rica, Ecuador, and Uruguay live in institutional homes, and the situation is not very different among individuals aged 85 or older. In OECD countries, the average proportion is 9.8% for individuals aged 80 or older (OECD, 2020c).

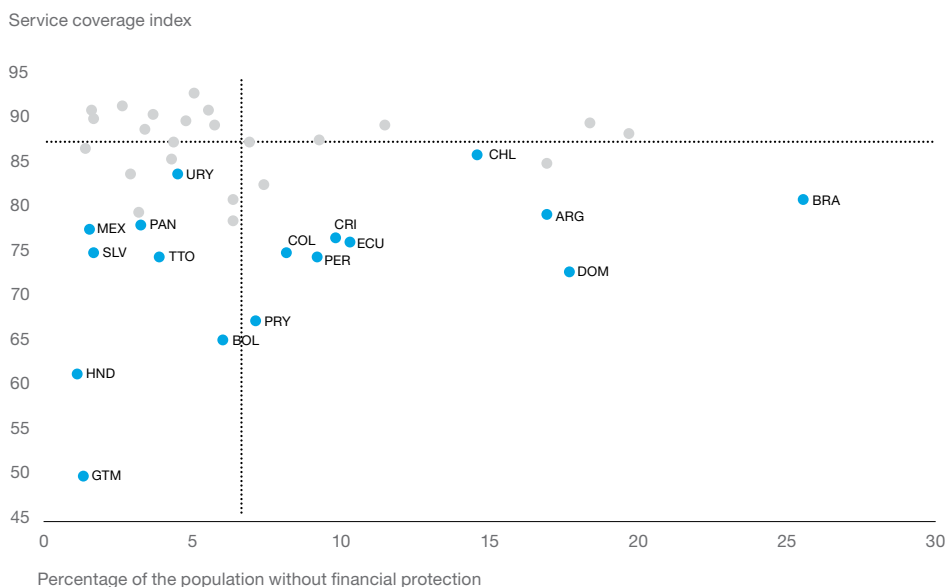
The flip side of this small proportion of older persons in institutional homes is that 86% of adults aged 60 or older in Latin America share a home with people below that age. This highlights the importance of relatives who perform unpaid care work. For example, in Argentina, 77% of primary carers are relatives, while this proportion is above 95% in Mexico. Families’ relevance as care providers for older persons may suffer major changes in the future, since the aging process itself implies on the one hand an increase in the demand for care and on the other a reduction in the number of potential carers as family size shrinks. This is compounded by the trend toward a rise in education levels and an improvement in work opportunities for women, who play a disproportionately significant role in care tasks (Marchioni, Gasparini, and Edo, 2019).

## Healthcare systems in Latin America: Fragmentation and high out-of-pocket spending

All countries in the region have explicit dispositions recognizing the right to health in their constitutions and other legal instruments. Almost all Latin Americans have some form of healthcare coverage. However, there are several countries where this coverage is far from adequate for all residents, and in most countries in the region there are quality differences among various subsystems.

Figure 15 presents one way to measure effective healthcare service coverage (see WHO, 2020), as well as an indicator of the financial protection provided by each country's system. Concerning effective coverage, all Latin American countries are below the OECD average, and there are major differences between countries. Chile and Uruguay are relatively close to that average, while Paraguay, Bolivia, Honduras, and Guatemala have the lowest levels in terms of this indicator. Concerning the level of financial protection provided by the healthcare system, measured in terms of the weight of out-of-pocket medical expenses relative to household income, Brazil, the Dominican Republic, Argentina, and Chile are the worst performers.<sup>18</sup>

**Figure 15.**  
Coverage and financial protection deficits in Latin American healthcare services



Notes: The coverage index is an average of three components of the World Health Organization's compound service coverage index (see WHO, 2019d): the reproductive, maternal, newborn, and child health component; the infectious disease component; and the healthcare system capacity component. It is measured on a scale from 1 to 100, where higher scores indicate better performances. The lack of financial protection is shown as the percentage of families whose medical expenses top 10% of household income. Gray dots show OECD countries. The intersection of both pointed lines shows the OECD average.

Source: Calculated by the authors, based on WHO (2020).

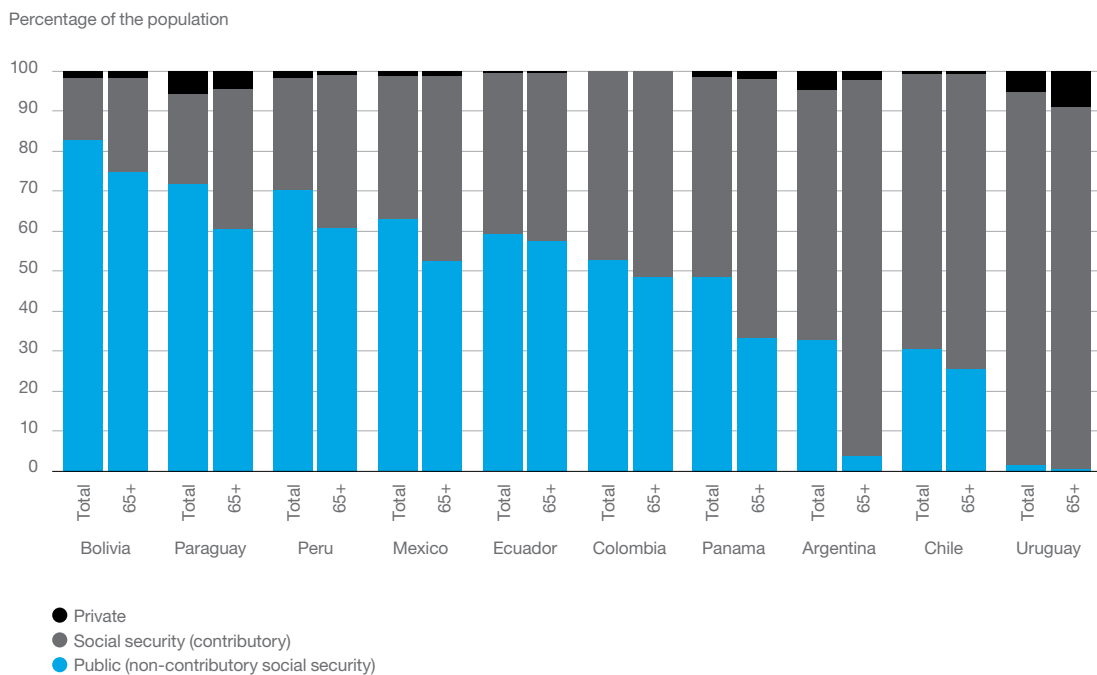
18. The lower level of financial protection provided on average by Latin American healthcare systems, relative to OECD levels, is also apparent in the greater weight of out-of-pocket spending relative to total health expenditure in the region, compared to the OECD.

Some of these coverage and financial protection deficits relative to OECD levels might be explained by two facts that will be addressed later: lower public health expenditure relative to GDP in Latin America than in the OECD on average, and less efficient expenditure. These two facts are also linked to a general feature of Latin American healthcare systems: two or more subsystems coexist in each country to provide coverage to different population segments. In general, these subsystems are also not integrated and differ significantly from each other, both in the quantity and the quality of the healthcare services they provide and in the level of financial protection they grant to address adverse health events.

There are three major types of healthcare subsystems in Latin America—contributory or social security subsystems, non-contributory or public health subsystems, and private insurance. Figure 16 presents the distribution of coverage for each of these three subsystems in 10 Latin American countries, both for the total population and for adults over the age of 65. In general, with the exception of Argentina, there are no significant differences in coverage between older persons and the rest of the population. Participation in the private subsystem is minimal in all countries, and the distribution between the social security and public health subsystems reflects each country's labor formality level.

### Figure 16.

Fragmented healthcare systems: Healthcare coverage by age and type of insurance in Latin American countries, 2015



Source: Compiled by the authors, based on data from Costa (2019).

Not taking private insurance into consideration given its scant relevance in the region, the contributory subsystem generally involves a higher level of expenditure per beneficiary than the non-contributory subsystem. With the exception of Argentina, this applies to all the countries for which data are available

on expenditure for each subsystem. The differences in expenditure between subsystems attain extreme levels in Colombia, Chile, and Bolivia, where non-contributory subsystem expenditure respectively amounts to only 10%, 12%, and 27% of contributory system expenditure. Ecuador, Mexico, Panama, Peru, and Paraguay are all at intermediate levels, with deficits that go from 45% in Peru to 87% in Ecuador.

In general, the available data suggest that these differences in expenditure between contributory and non-contributory subsystems imply that financial barriers to access healthcare services are less significant in the former. The proportion of out-of-pocket spending relative to total health expenditure is an indicator of financial vulnerability, and this vulnerability is lower in countries with greater social security coverage, except for Chile. However, whether the contributory subsystem implies access to better quality services remains unclear, or that is at least the perception of residents of Latin America's main cities. According to data collected in ECAF 2019, individuals who went to the doctor did not report substantially different levels of satisfaction with the assistance they had received for different subsystems in most countries.

## **Guidelines for healthcare and long-term care policies in an aging context**

Policy recommendations for healthcare systems in Latin America include four main guidelines: better integration between different subsystems to ensure more homogeneous quality and benefits; mechanisms to control expenditure and ensure more efficient use of resources; prevention policies; and care policies.

As suggested by the indicators that were mentioned above, improving integration between different subsystems to ensure similar benefits and provision (or expenditure) between them is a common challenge for all Latin American countries. However, it is important to note that this process may imply significant cost increases in several countries. Estimates conducted in this report show that, in Bolivia, Colombia, and Peru, increasing per capita expenditure in non-contributory systems to match those in contributory subsystems would increase expenditure by at least as much as the demographic changes expected by 2065.

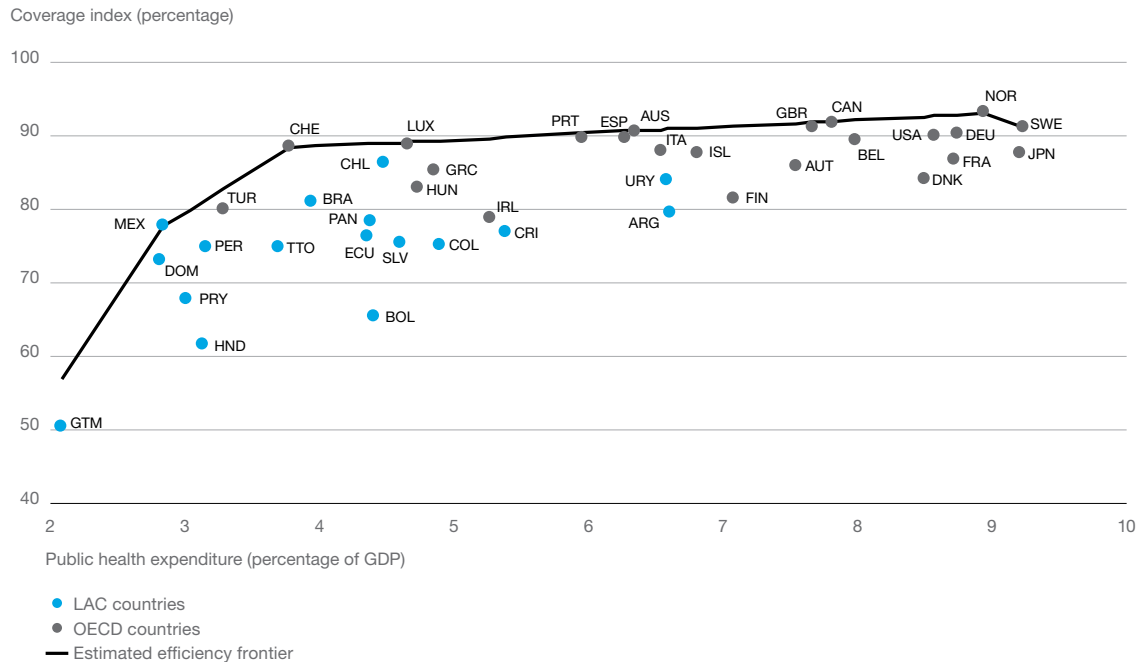
One valuable tool to improve homogeneity in the benefits provided by different subsystems would be to publish explicit healthcare plans. Almost all European countries with tax-funded healthcare systems have explicit healthcare plans, but there is still a lot of room for improvement in the adoption of these plans in Latin American countries (Giedion, Bitrán, and Tristao, 2014).

The second guideline refers to the adoption of policies to control expenditure and ensure an efficient use of resources. Figure 17 shows the results of an assessment on the efficiency of health expenditure in terms of the coverage attained. This assessment evidences a significant margin to improve efficiency in most Latin American countries. Results suggest that countries could on average increase their coverage by 10.6 percentage points with the same expenditure. With an average gap of 13.4 percentage points in their coverage index data relative to the OECD average, this means that almost 80% of the gap could be eliminated just by improving efficiency.

Payment schemes for medical service providers, healthcare technology assessment mechanisms, and the development of integrated information systems are examples of policies specifically aimed at controlling expenditure and improving efficiency. Detailing explicit coverage plans—mentioned above as a tool to make quality more homogeneous among the various subsystems—can also help to make expenditure more efficient.

**Figure 17.**

There is room to improve efficiency in health expenditure:  
Coverage index and public health expenditure



Source: Compiled by the authors, based on data from WHO (2020).

In Latin America, there is room to improve various regulatory aspects that influence the incentives faced by providers of goods and services in the healthcare sector. In particular, the way healthcare providers are paid affects these incentives and may encourage an inefficient use of resources (Alvarez, Pellisé, and Lobo, 2000). This is particularly crucial for more complex and more costly forms of treatment which require a medical prescription.

Doctors are the most important providers in healthcare systems. The way they are paid has key implications for system efficiency, because the decision about when to apply a certain form of treatment is ultimately up to them. Combining no copayment or small copayments for patients with lax payment schemes for doctors, such as retrospective payment per services provided, may encourage an induced demand by doctors that leads to inefficient expenditure and does not entail major health benefits for treatment recipients (McGuire, 2000).

Introducing costly new technologies is one source of upward pressure on health expenditure, and controlling this practice is a powerful tool to contain expenditure. While the existence of specific agencies that assess effectiveness and the cost-effectiveness ratio of new medical technologies to make decisions on coverage using public funds is common in OECD countries, their use is still limited in Latin America.

Expenditure control management relies on the existence of information systems, and this is particularly valuable for the healthcare sector given the prevalence of asymmetric information in all its activities. Technological progress applied to computerization and data management in recent decades provides an opportunity to improve decision-making for doctors and healthcare center administrators, which in turn also encourages interaction between different healthcare institutions and different subsystems.

The third general guideline refers to prevention and health promotion policies. These policies could play a key role to reduce the prevalence of chronic diseases that, as noted above, tend to be financially costly as well as more prevalent among older persons. ECAF 2019 data show that, on average, 19% of all individuals aged 45–64 are currently smokers, 50% get no regular physical exercise, 48% eat fast food at least once a week, 14% drink alcohol at least three times a week, and 35% are obese. The data suggest that there is room to develop or strengthen programs to reduce the prevalence of these risk factors.

The fourth and last guideline refers to policies in response to the growing demand for long-term care services. Using for reference the experience of developed countries, we observe a wide variety of institutional alternatives in terms of long-term care policies. However, three options stand out: mandatory public insurance, subsidies for long-term care service users, and the public provision of these services. Most Latin American countries lack systematic policies where the state plays a role in long-term care services. The experiences of Chile and Uruguay, two of the countries with the eldest populations, are exceptions and may provide valuable references for countries that increase public-sector participation in this field in the future.

## **Assembling the puzzle**

### **Ensuring sustainability for Latin American social protection systems**

Public expenditure and revenue data (summarized in Table 4 on page 34) suggest that the combined financial balance of pension and healthcare systems evidences deficits equivalent to at least 3% of GDP. This implies that these two fields pose major challenges in terms of overall fiscal accounts in all countries. In approximately half the countries, the largest deficit is in the pension system. In the remaining half, it is to be found in the healthcare system.

If we focus on the financial situation of pension systems, we see that Bolivia, Brazil, Chile, and Uruguay currently have the largest deficits, at over 3% of GDP. Most Latin American countries, including Argentina, Ecuador, Panama, Paraguay, and Peru, have smaller deficits in their pension systems, at less than 1.5% of GDP. Colombia and Mexico are somewhere in the middle, with deficits of 2–3% of GDP.

The situation is clearly different in each of the four countries with the largest pension system deficits. In Brazil and Uruguay, the deficit is caused by high expenditure, several percentage points higher than it is in other countries. This higher expenditure is in turn due to wide coverage, to the prevalence of payouts beyond minimum sufficiency criteria, and to the weight of pay-as-you-go components in program architecture. In Brazil, recent reform is expected to reduce this deficit. In the cases of Bolivia and Chile, the prevalence of capitalization components means that expenditure is relatively low. Their deficits are due to two other factors that are common to both countries. First, a major portion of the current deficit in these two countries was caused by pay-as-you-go components that were introduced before the reforms

that adopted capitalization components, and they are expected to gradually become less relevant as this transition is completed. Second, both countries have major non-contributory components, equivalent to about 1% of GDP for each country. Finally, one characteristic that is shared by Chile and Uruguay and explains a significant portion of their deficits is that both have special schemes for military and police officers that run significant deficits.

In Ecuador, Panama, Paraguay, and Peru, relatively small deficits are associated with expenditure below 3% of GDP. Depending on the country, this is due to limited coverage, to relatively small pension payouts, or to the prevalence of relatively young populations. Colombia's deficit of 2.4% of GDP is associated with relatively high pension payouts in the pay-as-you-go component, as well as with relatively low revenue due to labor market informality. Mexico's deficit is due not to particularly high expenditure but to limited revenue, associated both with high informality and with a very low pension contribution rate, at just 6.3% of worker wages including both employee and employer contributions.

The financial situation of healthcare systems is much more homogeneous among different countries, compared to the huge differences apparent in pension systems. Healthcare system deficits go from Mexico's 1.2% to Paraguay's 3.1% of GDP. In terms of the reasons behind healthcare system deficits, average public health expenditure stands at 4.2% of GDP in Latin American countries, compared to 6.3% in OECD countries. Latin American countries partly make up for this difference with higher private spending relative to the OECD, which leaves the total health expenditure gap between the two regions at just 1.5 percentage points and also reflects the higher incidence of out-of-pocket expenses that was mentioned above.

## **How much would necessary improvements in pension and healthcare systems cost?**

While pension and healthcare system accounts pose major financial challenges in all countries, the problem is usually not that expenditure is already sufficient to cover all social protection needs in these areas. As shown in the assessment of the coverage and sufficiency of healthcare services and pensions, most countries need increased expenditure to improve the protection these systems provide.

In the case of pensions, the main challenge is to universalize coverage, which—given high levels of labor market informality—in practice implies expanding non-contributory pensions. As we have seen, Latin America has made incredible progress in this respect over the past two decades, and almost all countries in the region already have non-contributory pensions. The challenge is therefore not to create new non-contributory pension programs, but rather to expand their coverage and, in some cases, to increase payouts.

Two exercises were conducted to find out the fiscal cost of attaining 100% pension coverage by expanding non-contributory pensions (Table 2). In the first exercise, adults who currently do not receive a pension would receive a payout equivalent to the main non-contributory pension that exists in each country. In the second exercise, these adults would receive a pension of USD 4 per day, adjusted for PPP.

The cost of universalizing pension coverage would amount on average to 0.24% of GDP in the first exercise and 0.18% of GDP in the second. In both cases, there are significant differences between countries. The cost is minimal in Bolivia, Mexico, and Panama, because these countries already have high coverage levels and also have relatively young populations. At the other extreme, Brazil, Paraguay, and Uruguay face higher costs in the first exercise and the same can be said of Colombia and Peru

in the second exercise. In Brazil, this is mainly due to high minimum payouts. In Paraguay, while the population is relatively young, the cost for the first exercise is high because there is limited coverage and because the country has relatively high payouts compared to its GDP per capita. In Uruguay, the higher cost in the first exercise is mainly due to the significant degree of aging of its population, combined with generous minimum payouts. In Colombia and Peru, the second scenario would be more costly because payouts in existing non-contributory pensions (in the first column) are the lowest in Latin America. Argentina and Chile are somewhere in between, because they start out from relatively high levels of coverage.

**Table 2.**  
Estimated cost of attaining universal pension coverage

Country	Non-contributory pension as a percentage of GDP per capita	Estimated cost of universalizing coverage (percentage of GDP)				Estimated cost of eradicating poverty (USD 4, at PPP) in 2018
		Non-contributory pension		USD 4 per day, at PPP		
		2018	2065	2018	2065	
Argentina	27.2%	0.23%	0.43%	0.05%	0.10%	0.00%
Bolivia	14.7%	0.02%	0.05%	0.02%	0.05%	0.18%
Brazil	35.1%	0.41%	1.33%	0.11%	0.37%	0.01%
Chile	12.6%	0.19%	0.50%	0.09%	0.23%	0.00%
Colombia	4.6%	0.21%	0.69%	0.45%	1.50%	0.09%
Ecuador	9.5%	0.17%	0.50%	0.22%	0.66%	0.06%
Mexico	8.2%	0.11%	0.34%	0.10%	0.30%	0.05%
Panama	9.2%	0.16%	0.43%	0.08%	0.21%	0.01%
Peru	6.6%	0.27%	0.81%	0.46%	1.37%	0.09%
Paraguay	19.0%	0.51%	1.50%	0.30%	0.87%	0.04%
Uruguay	22.9%	0.41%	0.72%	0.12%	0.21%	0.00%
<b>Average</b>	<b>15.4%</b>	<b>0.24%</b>	<b>0.66%</b>	<b>0.18%</b>	<b>0.53%</b>	<b>0.05%</b>

Notes: The second column measures the cost of expanding coverage to 100% of all individuals over the age of 65, by paying them the country's main non-contributory pension. The third column takes a similar approach but considers the demographic structure projected for 2065. The following two columns do the same, but instead of paying beneficiaries the main non-contributory pension they expand coverage by paying them a non-contributory pension equivalent to USD 4 per day, adjusted for PPP. The last column estimates the cost of transferring USD 4 per day, adjusted for PPP, only to adults over the age of 65 who live below that poverty line.

Source: Compiled by the authors, based on data from national records, from CEDLAS (2020), and from World Bank (2020).

In the case of expanding healthcare coverage, all countries (as noted above) potentially provide access for their whole populations through their various subsystems, but most countries evidence major deficits in terms of the effective coverage and the financial protection they provide. We have also said above that most Latin American countries have significant efficiency gaps in public health expenditure, which implies that, in principle, there is room to attain higher levels of coverage without higher expenditure.



Indeed, as shown in Table 3, most Latin American countries could attain the OECD's average coverage levels without extra expenditure if they could maximize the efficiency of their current health expenditure. This situation hides important differences based on each country's initial coverage and efficiency levels. At one extreme, Argentina and Uruguay—who already have high effective coverage but face efficiency problems—could reach OECD coverage levels reducing expenditure by 1.3 percentage points of their GDPs, on the condition that they maximize efficiency. At the other extreme, Mexico, Paraguay, and the Dominican Republic currently have lower coverage levels and higher efficiency levels, which means that they would each need to incur in extra spending worth more than 1 percentage point of their GDPs to attain OECD coverage levels.

Table 3 also illustrates the huge challenges in terms of extra expenditure faced by most countries to increase the coverage of their healthcare systems, unless they improve efficiency. For a small group of countries, this exercise further estimates the additional expenditure required to prevent out-of-pocket spending from topping 10% of household income. In this case, fewer additional public funds would be needed, at an average of 0.06% of GDP for each of these countries.

**Table 3.**  
Estimated cost of improving healthcare coverage

	Attaining OECD coverage levels		Preventing excessive out-of-pocket spending (percentage points of GDP)
	Without increasing efficiency (percentage points of GDP)	With maximum efficiency (percentage points of GDP)	
Argentina	2.95	-1.3	0.07
Bolivia	5.38	-0.39	0.02
Brazil	1.4	-0.26	N/A
Chile	0.33	-0.41	0.16
Colombia	3.34	-0.55	0.06
Costa Rica	3.15	-0.73	N/A
Dominican Republic	2.24	1.59	N/A
Ecuador	2.69	-0.37	N/A
Mexico	1.52	1.52	0
Panama	2.24	-0.38	N/A
Paraguay	3.32	1.27	N/A
Peru	2.22	1.04	0.04
Trinidad and Tobago	2.62	-0.08	N/A
Uruguay	1.25	-1.28	N/A

Notes: N/A means the data are not available.

**Source:** Compiled by the authors, based on data from World Bank (2020) and WHO (2019d) for calculations to reach OECD coverage levels, and on household income and expenditure surveys and data from World Bank (2020) for calculations to prevent excessive out-of-pocket spending.

One last challenge that might imply an increase in social protection expenditure for older persons is the development of public long-term care policies. Most Latin American countries do not yet have public long-term care systems in place, and only Chile and Uruguay are taking early steps in this respect, so there are

no available estimates of how much this expenditure could amount to in the future. The data available for 17 OECD countries show that, in eight of them, per capita expenditure per user amounts to at least 50% of GDP per capita, and in two cases (the Netherlands and Norway) it is as high as 100% of GDP per capita. Behind these figures, there are differences in intensity of use, as well as in the quality and price of services. However, the figures do illustrate the high level of potential per capita expenditure involved in long-term formal care services.

## Financial impact of aging

To assess the incidence of aging on financial results, we conducted an exercise to simulate the revenue and expenditure of healthcare and pension systems in 2065. The results of this exercise are presented in Table 4. This exercise assumes that contributions and benefits remain constant at the current level relative to each country's GDP per capita, and that the age composition of each country's population follows the projections of the United Nations.<sup>19</sup>

**Table 4.**

Rising expenditure and falling revenue: Fiscal balance for pension and healthcare systems in terms of GDP, 2015 and 2065

	Pensions				Health				Deficit	
	Expenditure		Income		Expenditure		Income		2015	2065
	2015	2065	2015	2065	2015	2065	2015	2065		
Argentina	6.7	12.1	5.9	6.1	6.9	8.1	3.8	4.0	-3.8	-10.0
Bolivia	3.1	2.6	n/a	n/a	4.4	6.0	1.7	1.8	-5.8	-6.8
Chile	3.6	4.4	0.2	0.2	4.0	5.4	1.3	1.0	-6.1	-8.5
Colombia	4.0	9.6	1.6	1.2	3.7	6.2	1.8	2.0	-4.3	-12.6
Ecuador	3.0	6.6	2.1	1.8	4.3	6.0	1.8	1.5	-3.3	-9.3
Mexico	3.2	0.8	0.9	0.7	2.5	3.6	1.3	1.1	-3.5	-2.7
Panama	3.0	2.5	2.5	2.4	4.3	5.8	1.7	2.7	-3.1	-3.2
Paraguay	2.8	6.2	2.3	1.9	4.2	5.9	1.1	1.0	-3.6	-9.2
Peru	1.9	4.0	0.5	0.5	3.2	4.8	1.6	1.4	-3.0	-6.9
Uruguay	9.6	11.0	6.0	5.3	6.0	7.3	3.3	3.2	-6.2	-9.9

Notes: n/a means the data do not apply.

Source: Compiled by the authors, based on data from IERAL (2020) and Crosta *et al.* (2019).

An examination of the cases of Chile and Uruguay, on the one hand, and Ecuador and Paraguay, on the other, clearly illustrates the incidence of aging, which increases the financial deficits of pension and healthcare systems. As shown above, all Latin American countries had negative financial balances in 2015. Ecuador

19. This exercise further considers the financial effects of transitions between different pension schemes in the relevant countries. See Daude and Pena (2020) for more details of this simulation exercise.

and Paraguay, two of the countries with the youngest populations in the region, have two of the smallest deficits, while Chile and Uruguay, the two countries with the oldest populations in Latin America, have the largest deficits. Projections for 2065 suggest that today's youngest countries—Ecuador and Paraguay—are the ones expected to experience the most significant demographic shocks and therefore to experience the largest deficit increases, estimated at around 6 percentage points of their GDPs. Chile and Uruguay, on the other hand, have already processed a portion of that shock and are expected to have smaller deficit increases, estimated at around 3 percentage points of their GDPs for 2065.

The separate examination of changes expected by 2065 in the finances of pension and healthcare systems shows greater heterogeneity among countries in the financial balance of pension systems than in healthcare systems. While health expenditure is expected to increase 1–2.5 percentage points in the various countries, expenditure on pensions is expected to decrease in Bolivia, Mexico, and Panama, to increase moderately in Chile and Uruguay, and to increase substantially in Argentina, Colombia, Ecuador, and Paraguay. In the first group of countries, this reduction is associated with the expectation that—as a consequence of past reforms—the transition from pay-as-you-go systems to systems with larger capitalization components is to be completed, which will reduce public expenditure on pensions. In the case of the intermediate group of countries, the moderate increase in expenditure is due to the fact that—as shown above—aging is already to some extent underway there, and its effects by 2065 are therefore expected to be less significant. In the third group of countries, the explosion of the deficit is due to a combination of fast-paced aging and pension systems with large pay-as-you-go components.

## **How can revenue be increased to address these challenges?**

### **Increasing contribution rates**

The revenues of contributory pension and healthcare systems can be increased by raising contribution rates or the number of contributors. Latin America's contribution rates do not significantly differ from those of OECD countries if we consider total social security contributions (OECD, IDB, and CIAT, 2016).<sup>20</sup> Using this comparison for reference, only a small group of Latin American and Caribbean countries have contribution rates below those of OECD countries and could therefore increase them to meet the challenges of funding their social protection programs. Ecuador, Peru, and Trinidad and Tobago are some of these countries.

Disaggregating total social security contributions into their different components shows that some countries may have room to change the composition of contributions, to help them balance their pension and healthcare systems. This applies, for instance, to contribution rates to Chile's and Mexico's pension systems, which only stand at 10% and 6.5%, respectively.<sup>21</sup>

### **Increasing the number of contributors by increasing labor market participation among older persons and women**

The second way to increase revenue from social security contributions is to increase the proportion of the population of working age who make contributions. This in turn can be done in two ways—by increasing the proportion of individuals who work, and by increasing the proportion of workers who make social security contributions.

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20. These contributions include all mandatory contributions made by employers and employees to pension and healthcare programs, unemployment insurance, occupational accident insurance, and coverage against other risks.

21. By the time this report was finalized, the Mexican government had presented a proposal to increase the contribution rate from 6.5% to 15% over eight years.

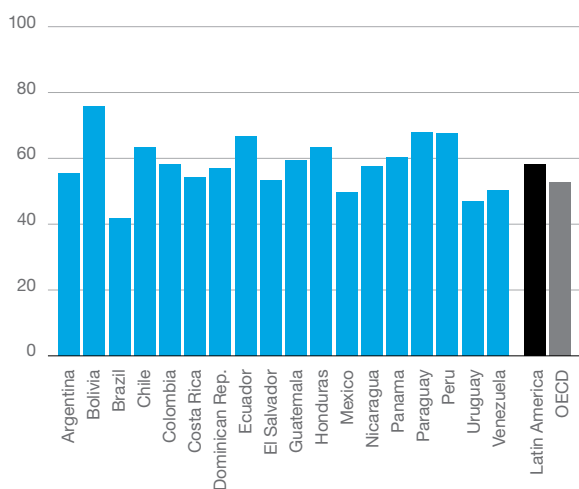
Concerning ways to increase the proportion of individuals who work, the report explores two paths—increased labor market participation among older persons and among women. In the case of older persons aged 60–64, the participation rate is higher in Latin America than in the OECD, at 58.3% compared to 52.7%.<sup>22</sup> The gap is even wider among older persons over the age of 65, with a participation rate of 29.6% in Latin America and 11.3% in OECD countries (Figure 18). Participation rates around the retirement age observed in Latin America are also high compared to those of other countries with similar levels of income. This suggests that, in general, Latin America has little room to increase labor market participation rates among older workers, particularly those over the age of 65.

**Figure 18.**

High labor market participation among individuals over the age of 60

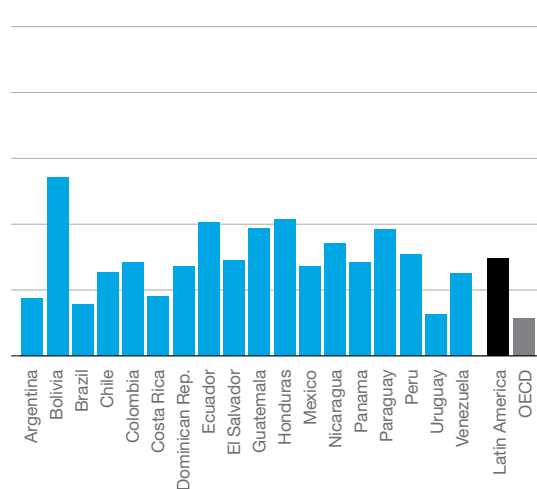
**Panel A. Proportion of the population aged 60–64**

Participation percentage



**Panel B. Proportion of the population aged 65 or older**

Participation percentage



Notes: The Latin American average has been calculated using the countries from the region that are shown in the figure, while the OECD average excludes Chile, Colombia, and Mexico. All data are for 2019, except for Bolivia, El Salvador, Honduras, Panama, and the Dominican Republic (2018); Guatemala (2017); Nicaragua (2014); and Venezuela (2012).

Source: Calculated by the authors, based on data from ILO (2020).

Concerning women's participation in the labor market, Latin America evidences a large gender gap. Among individuals of working age (from 15 years of age), this gap is on average almost 26 percentage points in Latin America, compared to approximately 12 percentage points in the OECD. Closing the gap in the participation of women is important for many reasons. For the purposes of this report, we focus on the extent to which reducing this gender gap would increase contributions to pension and healthcare systems.

22. The case of Brazil, with a labor market participation rate of around 40% among 60–64-year-olds, shows the impact of not having a minimum age of retirement, as was the case before the 2019 reform. We might expect this situation to change in the future, as a consequence of this reform that introduced a minimum retirement age of 62 for women and 65 for men.

To estimate these potential increases, the report conducts a counterfactual exercise where, for each group defined by a combination of age and education level, women's participation is increased to match OECD levels (except in cases where the observed participation rate is not below the OECD rate). In this scenario, participation rates increase by a maximum of 8.8 percentage points in Argentina, while Ecuador and Mexico also experience relatively significant increases at 5.9 and 4.6 percentage points, respectively. All other countries show relatively small increases, from 1.3 percentage points in Uruguay to 2.8 percentage points in Brazil.<sup>23</sup>

Table 5 shows the average increase in contributions to social security systems in each country as a consequence of changes in women's labor market participation. The increase in total contributions goes from 0.4% of GDP in Argentina to almost zero in Uruguay. On average, contributions increase by approximately 0.1% of GDP. In general, the impact on social security contributions is small, not only because women's labor market participation increases relatively little in most cases, but also because a significant proportion of the women who enter the labor market do so through informal employment. Informality rates among women in these eight countries go from 27% in Uruguay to 74% in Peru, with the average at 54%. This means that approximately only half of all the women who enter the labor market in fact make social security contributions. By contrast, reducing informality has a greater impact on contributions to social security systems.

**Table 5.**

Increasing formal employment and labor market participation among women to increase revenue

	Gender dividend		Formality dividend			
	Increase in women's activity rate (percentage points)	Increase in revenue (percentage points of GDP)	Increase in women's formality rate (percentage points)		Increase in revenue (percentage points of GDP)	
			Exercise 1	Exercise 2	Exercise 1	Exercise 2
Argentina	8.8	0.4	7	17.4	1	2.4
Colombia	1.6	0.01	21.1	30.1	0.9	1.3
Ecuador	5.9	0.09	14.8	29.9	1	2.1
Mexico	4.6	0.07	31.6	30.9	1.1	1.1
Paraguay	2.5	0.03	25.9	35.4	1	1.4
Peru	2.5	0.04	27.1	34.3	0.7	0.9
Uruguay	1.3	0	2.2	13.9	0.2	1.2
Average	3.9	0.09	18.5	27.4	0.9	1.5

Source: Calculated by the authors, based on data from IERAL (2020) and Crosta *et al.* (2019).

23. The overall impact on the gender gap is modest, because the low participation of women in Latin American labor markets is not so much due to a low participation for each individual level of age and education. Rather, it is caused by the higher proportion of women at lower educational levels who tend to have low rates of labor market participation or who work in informal jobs. For example, taking the average for the eight countries examined here, almost 40% of all women aged 15–64 have a basic education level, whereas the OECD average stands at 13%. At the other extreme, 26% of all women in these eight Latin American countries have high education levels, while the OECD average stands at 45%. This bias toward lower educational levels and informal employment means that total female participation remains relatively low even in the scenario that was described above, where each group's participation rates are at least as high as they are in the OECD.

## Increasing the number of contributors by reducing informality

The other major way to increase the revenue of social protection systems is to increase the proportion of workers who make contributions. Estimates suggest that there are on average 5.8 active workers per older person in Latin America, far above the OECD average of 2.7. Latin America is expected to reach the latter figure in about 40 years' time. If we focus on formal workers, however, there are 2.4 formal workers per older person in Latin America, a level that is similar to the OECD's. To some extent, informality worsens the contributor base by margins that are comparable to those expected to result from aging over the next 40 years.

Informality has a direct impact on the funding of social protection systems, since these systems rely on the contributions made by formal workers. How much would the revenues of social protection systems increase if there was less informality? In this report, this increase is known as the formality dividend and it is estimated using two counterfactual scenarios. In the first scenario, each country's formality rate increases until it reaches its "expected" value, based on the country's GDP per capita (see Figure 2 on page 7). In the second scenario, the informality rate is reduced by half.<sup>24</sup> Table 5 shows that there are significant revenue gains to be obtained even in the conservative exercise (scenario 1). In Ecuador, Mexico, and Paraguay, contributions grow by more than 1% of GDP, equivalent to a 28–56% increase relative to initial revenues. Colombia and Peru—despite not achieving the same level of improvement relative to their GDPs as the first three countries—experience significant increases in contributions relative to their initial positions, and their revenues increase by 26% and 36%, respectively. Uruguay, where the formality rate rises by 2.2 percentage points (the smallest increase among all the countries that are examined), only sees social security contributions rise by 0.2% of GDP. On average, countries gain additional contributions to their pension and healthcare systems worth around 0.85% of GDP, equivalent to a 27.1% revenue increase relative to their initial situation. In the more optimistic exercise, the social protection systems of the countries that were assessed receive on average 39% more contributions, equivalent to 1.5% of GDP.

## Funding social protection for older persons through higher taxes

A further alternative to fund deficits in the social protection of older persons—whether pensions or healthcare—involves increasing overall tax revenue. Different Latin American and Caribbean countries face very different situations in terms of room to increase their tax revenue. Figure 19 shows current tax revenue as a proportion of GDP in different countries, and how much it could be increased (positive numbers) or decreased (negative numbers) if we compare each country's current revenue to the average tax revenue for similar countries.<sup>25</sup> In Argentina, Barbados, Brazil, Bolivia, Ecuador, Jamaica, Trinidad and Tobago, and Uruguay, there seems to be little room to significantly increase tax revenue. In Chile, Colombia, Costa Rica, Paraguay, and Peru, on the other hand, there could be room to raise an additional 4–6 percentage points of GDP. Finally, the Dominican Republic, Mexico, and Panama have in principle considerable room to increase the tax burden.

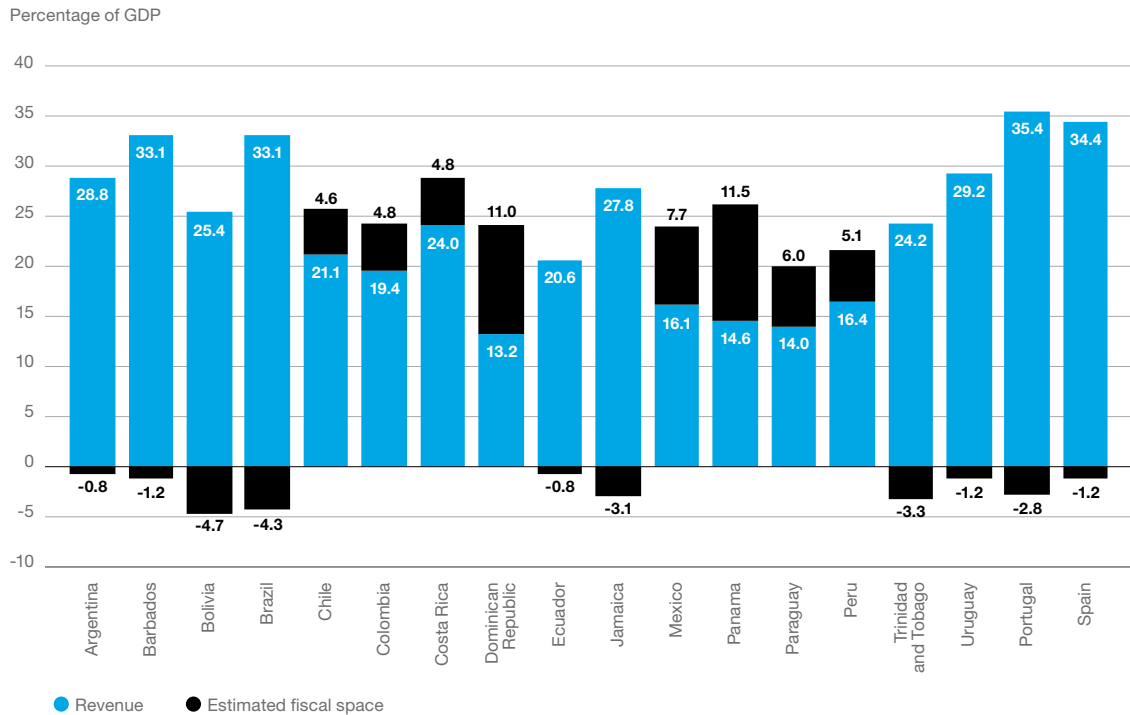
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24. Scenario 1 entails minor increases in formality, except for Mexico.

25. Countries are compared with others with a similar GDP per capita, degree of openness, and relevance of the primary sector in their economy.

**Figure 19.**

Heterogeneous opportunities to fund social protection through increased tax revenue: Fiscal space as a percentage of GDP, 2018

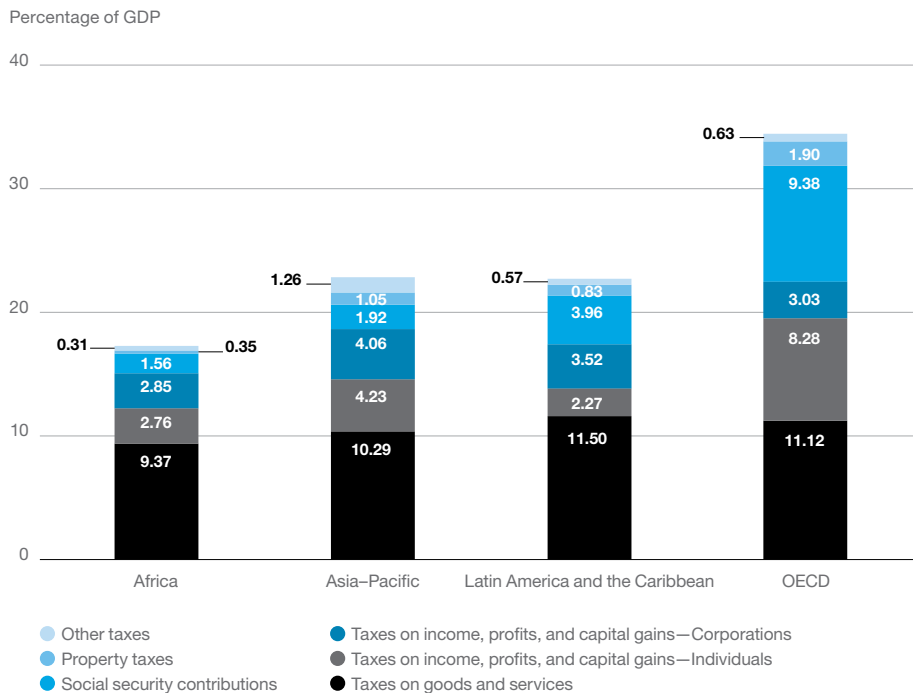


Source: Compiled by the authors, based on data from OECD (2020a).

Comparing the components of tax revenue in Latin America and other regions is useful to examine potential areas where revenue could be increased. Figure 20 shows the main tax groups (as a percentage of GDP) in Africa, Latin America, Asia, and OECD countries. As we can see, differences between regions are very small for indirect taxes on goods and services (such as value-added taxes and sales taxes). The main difference lies in social security contributions. In OECD countries, these amount on average to 9.4% of GDP, while they stand at barely 4% in Latin America. As noted in the previous section, this generally does not happen because contribution taxes are low, but rather because there is high labor market informality. It is therefore necessary to implement policies that enable countries to make the most of the formality dividend.

**Figure 20.**

Revenue from income tax and social security contributions is lower in Latin America than it is in the OECD, 2018



Source: Compiled by the authors, based on data from OECD (2020a).

Personal income taxes are the second source of tax revenue with major differences. This partially reflects differences in households' contribution capacity, but also other relevant factors like informality (mentioned above), tax exemption thresholds that are relatively high, the fact that higher marginal tax rates only apply to very high incomes, and major tax evasion rates.

## Putting together the pieces of financial sustainability

The analysis above shows that all countries face challenges to fund social protection, but the relevance of each of the different tools available to address these challenges varies greatly between different countries. We can distinguish three groups of countries based on the types of challenges they face.

Colombia, Paraguay, and Peru share a joint pension and healthcare financial deficit that is already significant now and is expected to grow considerably by 2065 as a result of aging, major needs to expand expenditure to improve systems, potentially available fiscal space, and important formality dividends. These countries therefore face challenges on all possible fronts. They need to implement policies to increase formality, raise tax revenue, expand pension and healthcare coverage, and at the same time adopt parametric reforms in their contributory pensions (which, as we saw above, are very unbalanced in actuarial terms, with benefits that are significantly greater than contributions).



Argentina, Bolivia, Ecuador, and Uruguay also have relatively high deficits now, and these deficits are expected to increase by 2065. Unlike the first group of countries, however, they do not have enough fiscal space to significantly increase tax revenue. The first three countries do have considerable formality dividends—and gender dividends, in the case of Argentina—and therefore share the challenge of implementing policies that enable them to make the most of these dividends. The lack of sufficient fiscal space means that these countries will need to adopt reforms that necessarily contain expenditure. In the case of pensions, Bolivia will reduce its expenditure in terms of GDP because it is set to complete its transition toward a capitalization system. Argentina, Ecuador, and Uruguay, however, face the challenge of containing expenditure on pensions. These four countries share the challenge of improving efficiency in their health expenditure.

Finally, Chile, Mexico, and Panama have relatively balanced pension systems in financial terms, because individual capitalization components are dominant in those systems. They also have significant fiscal space to cover the need to expand contributory and non-contributory benefits and to face the financial impact of aging. The challenges in these three countries involve adopting reforms that improve benefits in line with each country's needs, and processing tax increases that enable these countries to make the most of the available fiscal space. In Mexico and Panama, low formality rates also provide opportunities in terms of increasing revenue for their contributory social protection schemes.

## **Final reflections: Challenges and general principles to design and implement reforms in social protection**

Reforms to address demographic changes or to close certain gaps in social protection systems face various challenges. One central problem is that they may trigger resistance or prove financially unworkable, since benefits tend to become apparent gradually and in the long run while costs are incurred in the short run. To address these problems, it is crucial to adopt a gradual approach that assists any potential losers, as well as a solid communication strategy.

Informality is a further obstacle that requires paying attention to tensions between insurance provision and incentives for formal employment. Low state capacities affect the implementation of social protection programs for older persons, as well as the quality of regulations for private agents providing these services.

One key for success is to adopt a comprehensive approach to the problem. This requires understanding social protection as a set of programs that interact with each other and incorporating in their design factors that condition the process, including labor market informality and demographic trends.

### **Gradualism, loser compensation, and combined instruments**

Adopting gradual change mechanisms and compensating losers promotes the successful implementation of all reforms, whether based on economic feasibility and fiscal space or based on political feasibility.

The reforms that were adopted in the 1990s in particular, with the introduction of capitalization pillars in pension systems, are a clear example of the need for gradualism. Going from a pay-as-you-go system to a capitalization system implies that contributions made by active workers no longer fund the pensions of retirees and instead go to pension funds, which causes transitory financial imbalances. This is why, in general, all countries have set transition periods where the new scheme is applied to a portion of younger individuals while older workers remain with the previous scheme.

Various examples from the fields of healthcare and broader care follow a similar logic. In 2006, for instance, Uruguay adopted a structural reform of its healthcare system that implied a substantial increase in coverage, by including the dependent children and spouses of formal dependent workers as well as retired workers and pensioners. To be able to accommodate the increase in spending required by this reform—which did not come with an equivalent increase in contributions—the country resorted to the progressive integration of various groups into the program over a 10-year period, going from 750,000 beneficiaries in 2007 to 2.5 million beneficiaries in 2018. In the case of Chile, the Universal Access Plan with Explicit Guarantees (the AUGE Plan, by its Spanish acronym) focused the expansion of healthcare coverage mainly on broadening the set of pathologies that were being covered. A total of 40 pathologies were included in the scheme in early 2006 and were gradually expanded to cover 85 illnesses by 2019.

From a political point of view, one way to reduce resistance to pension system reform involves excluding from new rules individuals who have already retired or are relatively close to retirement. These individuals can hardly make short-term decisions to prevent the negative impact of reform on their income. For this reason, to ensure fairness and not change the rules of an ongoing game, it is usually appropriate to introduce reforms of this type gradually (Jousten, 2007). A failure to compensate potential losers may trigger pressure against reform. In fact, even if reform is adopted, tensions may persist that threaten the sustainability of change over time.

Combining different instruments can also promote feasibility. According to ECAF 2019, more than 45% of all individuals prefer reforms that combine changes in the retirement age, in the level of service, and in contribution rates, rather than any exclusive options. Further, preferences in terms of these instruments differ by level of income, so a combination of instruments would probably convince more people than a single option emphasizing specific interests.

A usual formula in this context involves combining elements that expand benefits with aspects that improve financial sustainability. For example, one might create a minimum non-contributory benefit that increases protection from poverty in old age while at the same time reducing generosity in other aspects of the system, by for instance marginally raising the retirement age.

## **Quantifying, measuring, and communicating**

Another ingredient to prepare the ground for quality reforms involves the management of information concerning projections and future costs associated with aging. This would further enable the relevant authorities to identify a suitable pace of implementation and any costs for potential losers. International social protection experience shows that reforms based on sound technical work that quantifies the challenges and the cost of inaction are more likely to succeed (OECD, 2010c).

However, technical work on its own may prove ineffective to facilitate change. It is important to clearly communicate the need for reform, and the government needs to provide a clear mandate and a political leadership that evidences its will and its commitment to act.

Communication is vital—a country’s citizens may be unaware of some factors that justify reform, and this may affect their support for its adoption. In the context of this report, an exercise was conducted to assess the effect of information on people’s predisposition to changes in social protection systems. Two groups were selected at random among interviewed households in 10 Latin American cities. The first group was informed of changes and projections concerning life expectancy in their country, while the second group was not given this information. Both groups were then asked whether they were willing to raise the retirement age, reduce benefit amounts, increase contribution rates, or support a combination of these policies to ensure fiscal balance.

The results of this exercise show that access to information influences people’s views on how to address the consequences of aging in the pension system. This partly confirmed that many people are not aware of aging patterns and their impact on pension system sustainability. It is worth noting that these changes in preferences vary between different countries, and between different socioeconomic levels within single countries. This suggests a further reason for the relevance of political economy—preferences are heterogeneous within society.

Information interacts with the prevailing level of financial literacy, which determines families’ ability to understand economic and financial aspects. Unfortunately, people in Latin American countries—particularly the poorest—show low levels of understanding of financial instruments. This is a challenge for efforts to communicate the need for reform.

## **Balance between incentives, insurance, and informality**

Social protection systems can improve economic efficiency and citizen well-being by providing insurance from risks for which pure market mechanisms generally fail to provide adequate solutions. However, individuals’ response to the existence of these programs can hamper productivity and growth, and therefore reduce well-being. This conflict is intensified in economies with high levels of informality.

In particular, non-contributory systems—which tend to have a positive impact on social welfare, particularly for informal and vulnerable workers—can provide incentives for these workers to remain in the informal sector, which in turn leads to lower levels of productivity and output within the economy.

There is ample evidence of this phenomenon. Brazil’s Family Health Program (*Programa Saúde da Família*) increased well-being by almost 5%, but it also led to an increase of approximately 9% in informality, particularly among households with low levels of education (Conti, Ginja, and Narita, 2019). Similarly, Mexico’s *Seguro Popular* health insurance scheme led to an 84% reduction in the child mortality gap between poor and wealthy municipalities (Conti and Ginja, 2017), but it also had adverse effects on formality (Campos-Vázquez, 2014).

Something similar happens with pensions. The evidence from several Latin American countries shows that non-contributory pensions are effective to reduce poverty among older persons (Bosch, Melguizo, and Pagés, 2013). However, recent research conducted by the Economic Commission for Latin America and the Caribbean (ECLAC) reviewing the empirical literature on the region concludes that almost 70% of all impact assessment studies on different non-contributory pension schemes observe a significant negative impact on the supply of labor by older persons, particularly women (Abramo, Cecchini, and Morales, 2019).

So a key first principle is that labor market incentives need to be taken into consideration when designing specific programs to expand coverage. Good social protection system design is crucial to achieve greater coverage and to improve benefit sufficiency while minimizing concessions in terms of productivity.

In the case of the pension system, solving this tension tends to require that contributory pension payouts be more generous than non-contributory pension payouts, which is not incompatible with goals to reduce poverty in old age. The idea of a minimum pension that respects proportionality in contributions and benefits and balances poverty goals and incentives enjoys support in the preferences of Latin American citizens, according to ECAF 2019. On average, more than 50% of respondents “strongly agree” that the state needs to grant a minimum income to all older persons, regardless of how much they have contributed to the social security system.

This conflict becomes weaker as the productivity of formal employment increases. So, for example, in countries where the income gap between the formal and informal sectors is significant, non-contributory social protection schemes can be more generous. With such differences, granting a certain level of access to universal or non-contributory social protection services would not create too many incentives to remain in informal employment or enter informality.

## **State capacity**

State capacity in the field of social protection is critical to make social protection policies more effective. Regulatory capacity is the first aspect. The healthcare market features major asymmetries in information between service providers, regulators, and users. The pension fund market features significant fixed costs and economies of scale. Healthcare providers, insurance companies, and pension funds can leverage their market power, which distorts prices and the quantities supplied of given services. All this requires that the state play a major regulatory role in the private provision of these services.

Beyond strong regulatory capacity, designing and implementing these programs crucially require government access to good-quality information, as well as government capacity to effectively process this information. The ability to audit the labor market can also have implications in terms of formality, and therefore in terms of the system’s contributor base.

The available evidence suggests that state capacity poses challenges for Latin America. For example, the World Bank’s Regulatory Quality Index (2019b) shows that the region is far removed from best practices in this field and is in fact closer to half-way down the rankings.

In short, implementing reforms that make it possible to provide good-quality benefits to older persons while preserving the financial balance of pension and healthcare systems requires increased investment in state capacity-building. The state must be more flexible, transparent, and capable to issue and process the information that would enable it to formulate and implement social protection policies.



**Report on Economic Development 2020**

**Pension and healthcare systems in Latin America:**

**Challenges posed by aging, technological change, and informality**

This report has been drafted under the guidance of the CAF's Vice Presidency of Knowledge, led by Pablo Sanguinetti. Fernando Álvarez and Guillermo Alves edited the 2020 Report, with Álvaro Forteza and Marcos Vera-Hernández as academic consultants.

The following researchers led work on each chapter:

**Chapter 1** Social protection for older persons and the demographic challenge - Fernando Álvarez

**Chapter 2** Labor market informality and technological change: Old and new challenges for social protection - Pablo Brassiolo and Manuel Toledo

**Chapter 3** Pension systems in Latin America - Lian Allub and Guillermo Alves

**Chapter 4** Healthcare and care services in the face of aging - Dolores de la Mata and Ricardo Estrada

**Chapter 5** Putting together the pieces - Christian Daude



Twenty-first century social protection in Latin American countries will be strongly affected by labor market informality, by the automatization and digitization of productive processes, and above all by the fast-paced aging of the region's population. Indeed, over the next 30 years, the proportion of Latin Americans aged 65 or older is set to double, to reach 18% of the region's total population.

This report examines the nature of the challenges faced by social protection systems and the public policies required to address these challenges. It focuses mainly on pensions and on the provision of healthcare and other care services for older persons. The report aims to present a comprehensive, profound analysis of both systems, taking into consideration the interactions between demographic structures, the labor market, and the factors that influence their financial balance and their sustainability. The report further presents some key elements to develop social protection schemes for older persons that are both of good quality and financially sustainable.