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Funding options for long-term care services in Latin America and the Caribbean☆[2]

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ABSTRACT

Demographic and social changes Latin America and the Caribbean (LAC) have called the traditional system of long-term care service provision into question, prompting many countries to prioritize long-term care reform on their social policy and fiscal agendas. A central policy issue under consideration involves assessing the demand and the costs of various long-term care options while evaluating its financial sustainability. To date, estimating the demand for care in Latin American countries is limited due to the underdeveloped and fragmented systems in place. This paper estimates the potential cost of various long-term care service packages that differ in the extent and type of government funding. Second, we investigate the financing sustainability of different coverage scenarios across seventeen countries in the LAC region. Finally, we assess the feasibility of alternative funding mechanisms and discuss the main benefits and drawbacks considering each country's unique institutional constraints. Our estimates indicate that, while all seventeen LAC countries have the potential to implement a system funded through general taxation, a social insurance system is only feasible in a handful set of LAC countries.

Introduction

As societies age, they exhibit an increased share of the population experiencing some form of of morbidity. This includes ill health and disability which limit the capacity of individuals to live an independent life, such as performing activities of daily living or instrumental activities of daily living requiring personal care or long-term care (LTC). Long-term care policies have become increasingly important on social policy agendas around the Western world. In 2018 already 1.5 % of Gross Domestic Product (GDP) was spent on all LTC services, and in most countries about 80 % of the costs are paid either by governments, through tax revenues, or through compulsory insurance contributions. However, LTC services tend to exibit larger cost-sharing than other similar social services such as health care, even though demand has grown beyond that of health care (OECD, 2020).

The rise in the demand for LTC is particularly accute in countries of the Latin America and the Caribbean (LAC) region where 12 % of people over age 60 and nearly 27 % of people over age 80 . Existing projections indicate that the demand for LTC services will more than triple in the next 30 years, as people over the age of 80 currently 14.5 % of the elderly, will make up an estimated 22 % of the same group by 2050 (Aranco et al., 2018). However, access to and affordability of long-term care remain limited, with approximately one in four severely care-dependent older adults currently receiving no care at all (González-González et al., 2019).

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The proliferation of individuals facing unmet needs calls for some forms of government intervention. Several countries have already introduced legislation[2], though there continue to be major obstacles in place that question the financial sustainability of current arrangements. In other words, it is unclear how much they can invest on their long-term care systems, an especially which funding mechanism should be put in place to ensure its feasibility and sustainability over time. The rest of this paper will focus on examining different policy alternatives in place, drawing on a methodology to account for limited data availability.

This paper examines the feasibility of different long-term care funding options in the LAC region. More specifically, we estimate the potential cost of providing four different packages of services, in difference scenarios including low, medium, high and full coverage for 17 countries. Next, we then examine the feasibility of different public funding designs, with a particular focus on social insurance and general taxation discussing the advantages and disadvantages of each mechanism.

Our focus is on adult care that supports individuals with basic activities of daily living, which provides a conservative estimate of the funding needs. Although the country data on current spending on LTC services are incomplete, some previous estimates are discussed in Section 2. We start with the premise that funding LTC services typically requires an agreement, whether implicit or explicit, among the State, the market, and families (Costa-Font and Zigante, 2020). This agreement determines the level of fiscal involvement in each country and should determine the financial and non-financial contribution of families. Accordingly, it is possible to envisage two distinct approaches (Costa-Font et al, 2015): one emphasizes cost-sharing by promoting the expansion of formal care services (e.g., home help), while the other lies in supporting the supply of informal care provision through financial subsidies. The latter, although potentially has lesser budgetary consequences for the government , tends to perpetuate gender-based divisions in unpaid labour and does not ensure the quality of care (Cafagna et al., 2019; Costa-Font et al., 2018). Moreover, it can lead to significant inefficiencies if the publicly subsidised care support is not entirely used for long-term care services (Costa-Font and Vilaplana-Prieto, 2017). Therefore, our focus is on publicly funded formal care services, either directly or indirectly (such as through vouchers or targeted transfers allowing individuals to buy care in the market).

This rest of the paper is organized as follows. The next section discusses the available data on current LTC pending in LAC compared to that of OECD countries. Section 3, reports the methodology used in estimating the cost of LTC systems in the LAC region and the projections under different funding scenarios for 17 countries, including a projection of their care needs through 2050. Then section 4 discusses the feasibility of various public funding options in each country, and section 5 considers other potential options, including the role of private sector alternatives. Next, section 6 explores the role of cost-control and co-funding mechanisms as well as strategies to reduce the overall costs to the public budgets. A final section discusses the implications of our findings, the limitations of our estimates, and concludes with relevant policy recommendations.

Current spending on long-term care in Latin American and Caribbean (LAC) region

The aggregate long term care costs in the LAC region

Our focus is on adult care supporting individuals with basic activities of daily living. Our definition of care needs is a conservative estimate of funding needs, as unlike in most European countries, we mainly consider social care needs, and exclude health care needs. Indeed, although the country data on current spending on LTC services are incomplete, we can rely on estimates for some countries. According to OECD data from 2018, Chile and Mexico allocated approximately 0.1 % of their GDP to LTC services. These figures account for contributions from both the public sector and households (OECD, 2020b). In Uruguay, public spending on services for individuals experiencing care needs was even lower, representing about 0.04% of GDP in 2017. Such figure includes supports not only for older adults requiring care but also for individuals under the age of 30 with disabilities and young children (Cafagna et al., 2019). In general, these spending levels correspond to low levels of coverage and quality (Aranco et al., 2022a). However, these figures are significantly lower than those reported by several OECD countries, which spent an average of 1.5% of GDP on long-term care funding in 2018. In absolute terms, LTC spending in the LAC region is about 750 US $ per user (OECD, 2020) which compared to the OECD average, although countries with LTC insurance systems had the highest per capita expenditure of about 1050 US$ at the time (OECD, 2020).

In examining long-term care (LTC) spending data in OECD countries, a critical distinction should be made between expenditures dedicated strictly to social care and those that include health care components, as the latter are partially convered by the health care system. OECD estimates indicate that health-related spending constitutes approximately 70 % of total LTC expenditures. However, these average estimates often mask significant heterogeneity across countries. For instance, spending ranges from 3.9 % of GDP in the Netherlands to 2.1 % in Germany, 0.9 % in Italy and Portugal, and it can be as low as 0.01 % in Bulgaria (EC, 2021). However, given that these estimates hide the costs of informal care (Costa-Font and Vilaplana-Prieto, 2025), the primary variation lies in the degree of formality in care services and the level of public investment allocated to them. Indeed, in Scandinavian countries and the Netherlands, for example, a substantial proportion of LTC services are formalized, with a significant share of costs covered by public budgets. Similarly, northern European countries rely heavily on formal home care services, funded through comprehensive taxation, ensuring both access and quality.

In contrast, in countries where families bear the cost of LTC services either informally or through market-based solutions, public spending tends to be much lower. In such settings, public contributions are typically provided as cash benefits, which may not directly ensure access to formal care services nor high standards of quality (Rodrigues et al., 2013), and might increase peoples savings instead (Costa-Font and Vilaplana-Prieto, 2017) Such reliance on informal care underscores significant inequities in LTC systems, as families in lower-spending countries often face a greater financial and caregiving burden compared to those in higher-spending, formalized systems.

Estimates of the projected LTC funding needs in LAC counties

There are a number of studies that have estimated the costs of LTC services in the LAC region. In Chile, Matus-López and Cid Pedraza (2014) estimate that the annual cost of a home care model covers 20 % of people over age 65 with moderate and severe care needs. These estimates include different combinations of hours and types of care, and suggest an overall relative cost to GDP of 0.45 % in 2012. Projecting such estimate using evidence from linear population ageing trends, yields a 30 % higher cost in 2020, reaching 0.58 % of GDP in Chile. Similarly, in Mexico, González-González et al. (2019) estimate that in 2013, long-term care costs ranged between 0.13 % and 0.34 % of GDP, depending on the level of coverage individuals were exposed to. Similarly, in Uruguay, Matus-López (2017) predicts that the cost of an LTC system covering 60% of the population with severe care needs would amount to 0.19% of GDP (at 2017 values).

A similar projection for Costa Rica, can be found in Matus-López (2018) who draws on a model that delivers the following services: (i) home care (80 hours per month with coverage for 80 % of people with

[2] Although several countries also include children and even adolescents who require support for daily living, in this publication we refer mainly to older people experiencing care dependence.

severe care needs); (ii) day centres (covering 10 % of people with moderate and severe care needs); (iii) telecare (for 50 % of people with moderate care needs); and (iv) residential care (assuming everyone currently served by residential care facilities is formally incorporated into the system). Under these assumptions, the author estimates a system cost of 0.35 % of GDP in 2018 (with estimates ranging between 0.28 % and 0.43 %). However, the estimated cost of the system, which includes home care, residential care, day centres, and telecare, is estimated at 0.48 % of GDP in 2018 (IMAS, 2021).[3] Finally, in seven countries in the region (Argentina, Chile, Costa Rica, El Salvador, Mexico, Paraguay and Uruguay), Medellín (2020) estimates that a full-coverage, namely a long-term care system for people over age 60 experiencing adult care need would cost between 0.5 and 1.0 % of GDP.

Methodology to estimating the costs of Long-Term care (LTC)

Existing methods to estimate the costs of LTC

There are two main approaches to estimating the cost of an LTC system. The first is a top-down, or macro method, which calculates cost estimates for the care system using national accounts data from OECD countries (de la Maisonneuve and Oliveira Martins, 2013, 2015). This method aggregates costs at a national level, providing a high-level perspective on expenditures but often lacking granularity regarding specific services or program-level details.

The second methodology is a so-called bottom-up, or micro-based approach (Matus-López and Cid Pedraza, 2014; Matus-López, 2017, 2018; González-González et al., 2019). This approach estimates LTC costs by examining the actual cost of individual services and applying these observed values to projected levels of coverage, ultimately aggregating these figures to produce a comprehensive cost estimate. A key advantage of this method is its reliance on program-level data, which is generally available in most countries, allowing for a more detailed and service-specific analysis. Additionally, some countries already have cost estimates that are readily available, which can be used as benchmarks or starting points for analysis.

In this study, we adopt a micro-based approach, leveraging its capacity to provide detailed, service-level cost estimates and its applicability to program data. This method allows us to account for variations in service delivery and coverage across countries and systems, offering a more nuanced and precise understanding of the LTC system's financial requirements.

Our approach

This section outlines the assumptions used to estimate the cost of various LTC system designs for 17 countries in LAC. The analysis relies on estimates of the prevalence of care needs within the target population. The focus is on adult individuals aged 65 and older who face difficulties in performing at least one basic activity of daily living (ADL) or require assistance with care, as estimated by Aranco et al. (2022b).

In designing LTC systems, we acknowledge that governments can set limits on the scope of publicly funded subsidies and supports. To capture this source of cross-country variability, we consider four coverage scenarios: low (35 %), medium (50 %), high (70 %), and full (100 %) coverage. These scenarios reflect differing levels of public investment and inclusion within the LTC system. The range of services considered in these designs includes residential care facilities, home care, day centres, and telecare. Each coverage scenario represents a combination of these services, tailored to meet the needs of the target population. The specific combinations for each scenario are detailed in Table I.1 in Appendix I, providing a framework for understanding the resource requirements and service configurations under varying levels of coverage. We believe this approach enables a comprehensive analysis of LTC system costs, balancing the breath and depth of coverage with the scope and diversity of care services provided.

Given the existing limitations in access to data in the region, we rely on the cost estimates of residential care facilities and day centres provided by Matus-López (2018) for Costa Rica. Such estimates are our starting point which is adjusted for each country based on differences in labour costs. For example, the cost of day centres in Argentina is calculated as the cost of day centres in Costa Rica multiplied by the ratio of the average monthly wage in Argentina relative to the monthly wage in Costa Rica. This methodology relies on the reaonsable assumption that human resources are the main component of the cost of these services, as opposed to infrastructure or other operating costs.[4] In contrast, when estimating home care use, we assume that care beneficiaries receive 8 hours of supports per day. The cost of care is therefore estimated to be equivalent to the average monthly salary of home caregivers in each country.[5] Hence, the total cost of the LTC system is the sum of the total cost of residential care facilities, home care, day centres and telecare, based on the different service packages and coverage in each scenario. To such cost we add 20 % for other administrative and operating costs.[6] Appendix I reports the detailed methodology used to calculate the costs of each service and the total funding needs for each country.

Accordingly, we estimate that the average expenditure needed to implement a low-coverage system is approximately 0.27 % of GDP (Table 1). However,Table 1 reports evidence of a high heterogeneity among countries. *In the low-coverage scenario, spending varies from 0.11 % of GDP in Paraguay to 0.56 % of GDP in Bolivia.* This variability is due to differences in the prevalence of functional dependence and how it is measured (which determines the number of service users), labour costs (the main component of the unit cost of services), and GDP. In Bolivia, for example, the combination of high labour costs relative to GDP, high rates of care dependence, and a relatively lower overall GDP means care services are comparatively more expensive than in other countries.

Assumptions about LTC need and sustainability

When evaluating funding options for LTC services, it is important to ensure cost sustainability over time, given that total care spending is projected to rise due to both demographic and non-demographic factors (de la Maisonneuve and Oliveira Martins, 2015, Costa-Font et al, 2008). A key demographic assumption in estimating and projecting LTC costs is the growing number of individuals requiring care in each population, namely the demand for care. More specifically, we assume that the demand for care is driven by the expected gains in longevity—especially for individuals aged 75 and older—as well as by whether these additional years of life are spent in good health. The latter is closely tied to national health spending, which affects the quality of health outcomes and care needs among older adults.

At the same time, non-demographic factors also play a significant role in shaping costs. These include:

- Income growth, which may increase demand for higher-quality or more comprehensive care services.

[3] The National Long-Term Care Policy 2021–2031 of Costa Rica considers the implementation of a basic care model with a coverage of 55.9% of the total number of people with dependency and 88.7% of people with severe and moderate dependency.

[4] Alternatively, labor costs also represent a useful adjustment factor for infrastructure and operating costs.

[5] Unfortunately, we do not have data on caregiver labor costs by country, so we used the average wage in the economy. For the cost of telecare, we use the values provided by Benedetti et al. (2022).

[6] This percentage represents the cost of administrative personnel and supplies, information technology, and other general expenses.

Table 1
Cost of a long-term care system in Latin American and Caribbean Countries (% GDP), 2019.

Country	Low coverage (35 %)	Medium coverage (50 %)	High coverage (70 %)	Full coverage (100 %)
Argentina	0.16	0.29	0.46	0.71
Bolivia	0.56	1.02	1.63	2.54
Brazil	0.21	0.38	0.61	0.95
Chile (2017)	0.25	0.45	0.71	1.11
Colombia	0.30	0.54	0.87	1.35
Costa Rica	0.33	0.61	0.97	1.51
Ecuador	0.34	0.62	0.99	1.55
El Salvador	0.14	0.25	0.40	0.62
Guatemala	0.32	0.58	0.92	1.44
Guyana	0.19	0.34	0.55	0.85
Honduras	0.45	0.80	1.28	1.99
Mexico (2018)	0.30	0.54	0.86	1.34
Panama	0.25	0.46	0.73	1.14
Paraguay	0.11	0.21	0.33	0.52
Peru	0.29	0.52	0.83	1.30
Dominican Republic	0.13	0.23	0.37	0.57
Uruguay	0.22	0.40	0.64	1.01
Unweighted average	0.27	0.48	0.77	1.21

Source: Authors' compilation.
Note: Estimates are for 2019, except in the cases of Mexico (2018) and Chile (2017), due to the lack of updated data on the number of employed persons contributing to social security, a variable required for the calculation. The data used to generate the estimates come from the IDB (2022) and the World Bank (2022).

- Caregiver labour costs, particularly relative to wages in other sectors, which may affect the affordability of formal care.
- Informal care supply, which is influenced by societal trends such as rising female labour force participation. As more women enter the workforce, the availability of unpaid family caregivers may decline, increasing reliance on formal care systems (Costa-Font and Vilaplana-Prieto, 2022).

In this study, we adopt a simplified approach to estimating care costs. Specifically, we focus solely on the effects of demographic changes, including the growth of the older population and the prevalence of functional dependence within this group. These projections are based on data from Aranco et al. (2022a). To provide a clearer analysis, we assume the unit cost of care remain constant in real terms, and we exclude potential changes due to inflation, income growth, or labour market shifts. This approach allows us to isolate the impact of demographic trends on care spending while maintaining a straightforward framework for cost projections.

Table 2
Long-term projections of system cost (% GDP), 2050.

Country	Low coverage (35 %)	Medium coverage (50 %)	High coverage (70 %)	Full coverage (100 %)
Argentina	0.32	0.58	0.92	1.44
Bolivia	1.37	2.48	3.96	6.17
Brazil	0.63	1.15	1.83	2.85
Chile (2017)	0.67	1.22	1.94	3.04
Colombia	0.96	1.72	2.75	4.29
Costa Rica	1.00	1.81	2.90	4.52
Ecuador	1.07	1.93	3.08	4.81
El Salvador	0.32	0.58	0.93	1.45
Guatemala	1.07	1.93	3.07	4.79
Guyana	0.48	0.87	1.38	2.15
Honduras	1.64	2.96	4.72	7.35
Mexico (2018)	0.88	1.59	2.54	3.96
Panama	0.78	1.42	2.26	3.54
Paraguay	0.30	0.54	0.86	1.34
Peru	0.85	1.54	2.46	3.84
Dominican Republic	0.37	0.66	1.05	1.64
Uruguay	0.34	0.62	1.00	1.55
Unweighted average	0.77	1.39	2.21	3.45

Source: Authors' compilation.

Table 2 displays the LTC cost projections in different countries in LAC region up to 2050 under the different coverage scenarios. On average, we estimate that a system covering 70 % of the population over age 65 who are experiencing care needs will cost 2.2 % of GDP in 2050. Such a figure entails an increase of over 1.5 percentage points of GDP from the 2020 estimate. To compare this figure to other regions, we show that in the European Union, LTC spending is projected to be about 3 % of GDP in 2070 (EC, 2018).

The limitation of the study design

Our estimates are based on a uniformly defined set of care services aimed at supporting older adults with care needs, without explicitly differentiating the intensity of those needs.[7] Furthermore, we assume beneficiaries receive only one of the four types of care considered or a combination of them (e.g., day care and telecare). As mentioned, given the significant data limitations in the region, our cost estimates of residential care facilities and day centres are adjusted from the values provided by Matus-López (2018) for Costa Rica.[8] This method rests on two underlying assumptions. The first is that LTC is typically labour intensive. Second, the difference between the costs of different LTC services in each country replicates the situation observed in Costa Rica, a country for which we have data.[9]

In examining the feasibility of funding through social insurance we rely on the existing evidence of the social security contribution revenues collected by the public sector in each country.[10] Such an analysis assumes social security contributions are based on a pay-as-you-go system.[11]

In estimating the revenue increases to rollout the LTC funding systems over time we estimate that if rates of general taxation or social security contributions are fixed (non-progressive) and there are no deductions, such revenue change is equivalent to the increase in care needs.[12]Similarly, long-term projections of the system's cost in 2050 only consider the demographic changes resulting from the increase in

[7] When designing policies, governments can implement various levels of coverage and define distinct types of services for different populations, based on criteria such as level of dependence, age, or level of socioeconomic vulnerability. In other words, each country should tailor its services to its population and, ideally, provide a personalized, person-centered care plan.

[8] The methodology assumes that the cost of human resources in the sector — for residential care facilities, day centers and home care — is the average wage of all formal workers in the country. It would be preferable to use the average salary for the care sector, or of a similar sector in terms of functions and training (e.g., nursing). However, we could not recover this information for our analysis.

[9] Our estimates are reliable if rent, infrastructure maintenance, medical and cleaning supplies, food and electricity, and other similar items represent a small part of the total cost of services, or if the change in these costs between countries mirrors the differences in the cost of labor.

[10] For countries that have privately managed or defined-contribution pension systems (like Chile or the Dominican Republic), it is possible to raise personal contribution rates and have the increase go directly to workers' accounts to finance future care needs.

[11] Needless to say, this assumption is a simplification, because today's employees are not yet care-dependent and are likely to need services in the future.

[12] A more exhaustive analysis could consider the tax, production and labor structure of each country, as well as people's behavioral responses to higher rates. In addition, the 5% threshold comes from the experience of Korea, but the analysis could be replicated using different and/or country-specific values.

the population share of older people and the prevalence of functional dependence. Finally, its worth noting that although other funding mechanisms could play a role too, to date there is no data is available for them the LAC region. This is especially the case for investment needs to ensure the quality of services, particularly in the area of human resources.[13]

Traditional funding options

Funding models

Although there are various funding models, they can be broadly categorized into two types. First, we can distinguish a system where funding is collected before the *need for care arises* (*ex-ante*). This is the case for insurance, savings and systems that rely on preventing care needs in the first place. Alternatively, a second type of funding. Model refers to system where care is funded *after the need for care arises* (*ex-post*). This is typically the case of systems funded by general taxation (Costa-Font et al., 2015). In countries with *ex-ante* funding models, insurance models cover only part of the population, both under social insurance models (as in Germany, Japan or Korea) and under private insurance models (Singapore or the United States). In fomer case, only those who pay social security contributions (i.e., formal workers) are covered, so these systems tend to be supplemented with some type of *ex-post* funding for the non-covered population (Costa-Font et al, 2015). In contrast, in the latter case, models based on private insurance tend to be supplemented with tax funded schemes for those who cannot afford private insurance (such as Medicaid in the United States). In contrast, systems centered on savings and self-financing via private pensions and reverse mortgages are a specific case of *ex-ante* model of care funding.

Among general taxation models (*ex-post financing*), a distinction can be made between models designed to be universal or solely needs-based (Netherlands, Spain, Scotland, Scandinavian countries) and models with some type of cost-containment mechanism, such as means as well as needs testing (Italy or the United Kingdom), and those offering partial benefits or co-payments (France), or even models designed to exclusively cover catastrophic risks (such as the Dilnot report proposal in the United Kingdom (Dilnot, 2011)).[14] Below, we examine the feasibility of funding care in Latin American and Caribbean countries through different coverage scenarios under the world's three most common funding models: social insurance (*ex-ante*), taxation (*ex-post*), and a combination of both. Finally, we explore alternative approaches that, while less established globally, merit consideration for the region. In Section 5, we expand the analysis by reviewing the most widely used cost-containment mechanisms worldwide.

Social insurance

In this section we briefly discuss the feasibility of implementing a system financed through specific social security contributions. In such a system, funding will come from the social security contributions of formally employed individuals. Accordingly, the social security contribution rates are expected to change over time to ensure access to care in case of need. In other words, we expect that a system with full coverage would be created for this population (see last column in Table 3). Unlike a tax based system, a social security system, gives rise to an *individual entitlement*, namely a right for users experiencing care needs who have contributed to social insurance during their working life.

Assuming that the need of care is independent from an individual's employment (both formal and informal) status, the additional cost of a system that funds care only to people with formal employment is reported as a percentage of GDP presented in the second column of Table 3. Column 1 reports the the percentage of the working age population that is formally employed used to compute such an estimate after computing the cost of such a system for the entire population.[15] For example, assuming a pay-as-you-go system and taking the figure that 30 % of the adult population in Argentina is formally employed[16] and a system costs 0.71 % of GDP, then one would need to collect an additional 0.22 % of GDP through social insurance to fund LTC needs. The feasibility of such a design largely depends on the *size of social insurance contributions*, which determines, the percentage of the population covered under this funding scheme and, as well as the *revenue base increase* to finance the system. Indeed, if the system ends up covering only a small share of the population, it will have limited relevance. The same is true for the funding, as any shortfall must be supplemented through other sources (e.g., general taxation, as we will discuss in the section on the mixed approach).

An important limitation in designing a social insurance system is that if the required revenue increase is significant, it may be politically difficult to implement the funding model in practice. Hence, in our analysis we assume that a funding model is *politically viable only if the required revenue increase remains under 5 %* (relative to current social security revenue in each country). Assuming fixed (non-progressive) contribution rates and no deductions, such percentage corresponds to the necessary increase in existing contribution rates. In other words, increasing contribution rates by 5 % is equivalent to an increase in total revenue of 5 %. The analysis could easily be replicated using different and/or country-specific thresholds.[17]

Table 3 reports the estimated costs of a social insurance funded scheme for several countries in the region as well as the resources needed to finance a system using this mechanism. Given the characteristics of social insurance, everyone who contributes to the system is entitled to use LTC, so the coverage scenario used is 100 % of the formally employed population. Based on the above example, we document that the funding collected to pay for LTC under a social security system in Argentina is currently equivalent to 5.7 % of GDP. Accordingly, we estimate that an increse in 0.22 % of GDP increase would be required to finance such a system namely 3.8 % of current funds collected, which is below the hypothetical political viability threshold of

[13] Regional evidence indicates that very few countries (Argentina, Chile, and Uruguay) establish mandatory training requirements for personnel working in the sector and that when such requirements do exist, compliance is low (Aranco et al., 2022). To have quality services, countries must invest in training. Among other things, this entails developing curricula, training trainers, and providing the infrastructure needed to deliver the courses. In future studies, these costs should be estimated and added to the total funding needs.

[14] System designs could also be sorted according to whether they are funded by national, regional or local taxes, although we assume for simplicity that jurisdictional differences are not relevant in aggregate terms.

[15] We assume funding to be based on a pay-as-you-go system and not on individual capitalization, and therefore population aging (and the consequent increase in the number of care-dependent people) could give ridse to financial sustainability issues, which should be considered in future projections. Similarly, coverage refer to each worker, without extensions to spouses or other dependents. Extension to household members, such as spouses, would result in higher coverage but also higher costs. Our assumption helps us to think about the gender and social implications of tying the social insurance of certain individuals to their family or marital status. The equity of these arrangements is questioned, especially in contexts where gender gaps in labor participation are still significant, and formal and stable marital unions are becoming less common.

[16] This figure was calculated using the number of employed persons contributing to social security (as a % of the employed population) and the employment rate, defined as the percentage between the total number of employed persons and the working age population (IDB, 2022).

[17] We chose this value because it is in line with estimates from Korea, where the recent creation of a LTC system gave rise to an increase in the social insurance contributions that corresponds to 7.38 % of the total social security revenue in 2018 (Kim and Kwon, 2021).

Table 3
Feasibility of funding through social insurance.

Countries	Formally employed people of working age (%)	System cost for formal employees (%GDP)	Social security tax revenues(% GDP) (a)	% Increase in social security revenue needed to fund the system
Argentina	30.35	0.22	5.7	3.79
Bolivia	15.29	0.39	6.2	6.27
Brazil	40.11	0.38	8.5	4.46
Chile (2017)	43.62	0.49	1.5	32.37
Colombia	26.10	0.35	1.9	18.59
Costa Rica	42.47	0.64	8.1	7.92
Ecuador	26.29	0.41	5.5	7.39
El Salvador	16.97	0.11	2.7	3.91
Guatemala	11.55	0.17	2.2	7.56
Guyana	20.12	0.17	2.2	7.79
Honduras	11.46	0.23	3.4	6.72
Mexico (2018)	21.59	0.29	2.2	13.18
Panama	34.51	0.40	5.8	6.81
Paraguay	17.98	0.09	3.7	2.51
Peru	16.23	0.21	2.0	10.55
Dominican Republic	29.40	0.17	0.1	168.00
Uruguay	51.92	0.52	7.7	6.79
Unweighted average	26.82	0.31	4.1	18.51

Source: Authors' compilation based on data from IDB (2022), OECD et al. (2021); OECD et al. (2019).
Note: Cells are highlighted in green when the mechanism is viable in that country. (a) This includes "compulsory payments to public administrations that grant a right to receive a future social benefit (contingent)", such as unemployment and accident insurance, retirement, disability, and survivors' pensions, or health coverage. Contributions to private insurance plans, or other types of plans that do not involve general government contributions, are not included (OECD et al. 2019, p. 318).

Table 4
Formal employment for men and women (% of employees), 2019.

Countries	Women	Men	Difference (percentage points)
Argentina	26.19	34.73	8.54
Bolivia	11.49	19.33	7.84
Brazil	34.76	45.86	11.09
Chile (2017)	35.68	52.43	16.75
Colombia	21.29	31.10	9.81
Costa Rica	30.88	54.89	24.01
Ecuador	21.72	31.03	9.30
El Salvador	11.30	23.62	12.33
Guatemala	7.51	16.15	8.64
Guyana	19.16	21.18	2.02
Honduras	9.60	13.61	4.01
Mexico (2018)	16.20	27.49	11.28
Panama	28.84	40.54	11.70
Paraguay	14.74	21.28	6.54
Peru	12.46	20.32	7.86
Dominican Republic	26.82	32.14	5.32
Uruguay	47.46	56.49	9.03
Unweighted average	21.61	30.82	9.77

Source: Authors' compilation based on IDB data (2022).

5 %. Based on this threshold, only four of the 17 countries considered—Argentina, Brazil, El Salvador and Paraguay—can adopt a mechanism financed via social insurance.

Nonetheless, the revenues collected from social security contributions vary widely throughout the region (from 0.1 % in the Dominican Republic to 8.5 % in Brazil). Such a scenario, *a priori*, could be due to differences in contribution rates or differences in the percentage of the population that contributes (formal employees), or a combination of both. However, if the contributor base is smaller (due to a rise in informal employment rates), the proportion of people covered by this mechanism will also be lower. Again, social insurance only covers those who contribute to social security fund, so it is more suitable in countries with a high percentage of formally employed people. For example, in Honduras or Guatemala, a system based on social insurance would cover only 11 % of the population, while in Uruguay coverage would reach 52 % (Table 3, column 2).

Finally, its worth noting that given the low levels of labour market participation and employment formality among women, *a system based on social insurance creates significant gender differences in access*. For example, in Guatemala, this type of system would cover half as many women than men (Table 4). Although gender gaps in access to formal social protection have decreased in recent years (ILO, 2018), they remain a particularly significant problem in countries such as Chile, Costa Rica and El Salvador, as illustrated in Table 4.[18] Hence, governments need to bear in mind other complementary funding mechanisms to cover those who have not worked in the formal sector, as well as the gender gaps that a social insurance system might give rise in the LAC region. Alternatively, a social insurance system should be implemented toguether with policies that encourage female employment, as well as formal employment.

General taxation

As an alternative to a social insurance approach, countries may finance a LTC system by allocating part of their budget from general tax revenue to LTC. Assuming that efficiency savings do not result from such a design, it would require raising general taxation to yield the additional revenue that ensure a financially sustainable LTC system. As in the previous section, we regard a system to be politically viable if it does not require a tax increase that exceeds 5 % of the status quo.[19] Unlike in social insurance systems, the use of general taxation can potentially finance services for the entire population, including those working in the informal sector (although some countries set eligibility restrictions based on age, level of care dependence, or income level of the care-dependent person to contain costs). Furthermore, this type of mechanism can limit the previously documented gender bias of systems financed through social insurance.

Table 5 displays the estimated tax revenues net of social security contributions for 2019 for a number of countries.[20] As with revenues from social security contributions, there is a high degree of variability among countries in the region, ranging from a 8.3 % of GDP in Panama to a maximum of 24.6 % of GDP in Brazil. In countries such as Panama or Paraguay, where total tax revenues are lower, it might be politically easier to raise taxes. However, we estimate that the percentage increase in revenues needed to finance a LTC system will be higher in those same countries, which will make reform politically more challenging.

Nonetheless, tax revenues in the LAC region are primarily collected at the central or federal level- unlike in most European governments where LTC is partially a decentralised responsibility, accounting for more than two-thirds of total public-sector revenues.[21] Hence, to estimate how much the tax burden should increase to raise the tax revenues

[18] These data were calculated based on information from the Inter-American Development Bank's Labor Markets and Social Security Information System (https://www.iadb.org/en/sector/social-investment/sims/home) on employed men and women contributing to social security (as a % of the employed population) and the employment rate for men and women.

[19] Again, assuming fixed (non-progressive) tax rates and no deductions, this is equivalent to a revenue increase of up to 5% of current levels.

[20] Total revenue net of social security was calculated by adding up tax revenues from the main tax items, which include income and profits, payroll, property, goods and services, and others, excluding revenues received from social security contributions (OECD et al., 2021; OECD et al., 2019).

[21] Our estimates are only slightly higher than OECD country figures, where such revenues account for 60% of the total (OECD et al., 2021).

Table 5
Tax revenues net of social security, by category (% GDP), 2019.

Countries	Tax revenues on main items					Total income (net of social security)
	Income and profits	Payroll	Property	Goods and services	Others	
Argentina	5.1	0.0	2.6	15.0	0.2	22.9
Bolivia	4.0	0.0	0.2	12.1	2.2	18.5
Brazil	7.4	0.6	1.5	14.2	0.9	24.6
Chile (2017)	7.0	0.0	1.1	11.0	−0.4	18.7
Colombia	6.4	0.3	1.8	8.5	0.9	17.9
Costa Rica	4.9	1.4	0.4	8.2	0.5	15.4
Ecuador	4.3	0.0	0.3	10.0	0.0	14.6
El Salvador	7.0	0.1	0.2	10.5	0.3	18.1
Guatemala	3.7	0.2	0.2	6.8	0.0	10.9
Guyana	8.8	0.0	0.5	11.6	0.2	21.1
Honduras	5.6	0.2	0.6	11.3	0.8	18.5
Mexico (2018)	7.1	0.4	0.3	5.8	0.2	13.8
Panama	3.7	0.2	0.3	4.1	0.0	8.3
Paraguay	2.5	0.0	0.2	7.4	0.1	10.2
Peru	6.1	0.0	0.4	7.8	0.3	14.6
Dominican Republic	4.3	0.1	0.6	8.5	0.0	13.5
Uruguay	7.6	0.0	2.2	11.4	0.2	21.4
Unweighted average						
LAC	5.6	0.2	0.8	9.7	0.4	16.6
OECD	11.3	0.5	1.8	10.8	0.2	24.6

Source: OECD et al. (2021); OECD et al. (2019).
Note: LAC = Latin America and the Caribbean.

Table 6
Feasibility of funding through general taxation – Low coverage (35%).

Countries	Cost of system (% GDP)	Tax revenues on main items (net of social security) (%GDP)	% Increase in tax revenues (net of social security)
Argentina	0.16	22.90	0.69
Bolivia	0.56	18.50	3.05
Brazil	0.21	24.60	0.85
Chile (2017)	0.25	18.70	1.32
Colombia	0.30	17.90	1.68
Costa Rica	0.33	15.40	2.17
Ecuador	0.34	14.60	2.35
El Salvador	0.14	18.10	0.77
Guatemala	0.32	10.90	2.94
Guyana	0.19	21.10	0.90
Honduras	0.45	18.50	2.41
Mexico (2018)	0.30	13.80	2.17
Panama	0.25	8.30	3.05
Paraguay	0.11	10.20	1.13
Peru	0.29	14.60	1.98
Dominican Republic	0.13	13.50	0.95
Uruguay	0.22	21.40	1.04
Unweighted average			
LAC	0.27	16.65	1.73
OECD	1.5	24.6	6.10

Source: Authors' compilation based on data from IDB (2022), OECD et al. (2021); OECD et al. (2019).
Note: LAC = Latin America and the Caribbean.
Cells are highlighted in green when the mechanism is viable in that country.

needed to finance the system, we use the information on costs reported in Table 1 and the tax revenues net of social security displayed in Table 5. For example, if the estimated cost of the system is 0.16 % of GDP in Argentina, and we draw on the evidence from Table 1 assuming a low-coverage scenario as reported in Table 6, we then estimate an increase in tax revenues of 0.69 %.[22] Assuming a low-coverage scenario (35 %), the last column of Table 6 reveals that funding a system through a general tax increase is viable in virtually all countries considered as in such a scenario tax revenues would increase by less than 5 %. However, in a high-coverage scenario (that of 70 % of the population) such a funding option is only feasible in nine countries (Argentina, Brazil, Chile, Colombia, Dominican Republic, El Salvador, Guyana, Paraguay and Uruguay). In contrast, if the goal is a more moderate target, namely a medium-coverage scenario (50 % of the population), such a funding mechanism is viable in five additional countries (Costa Rica, Ecuador, Honduras, Mexico and Peru). Appendix II reports the estimates of the medium- and high-coverage scenarios.

Mixed funding: Combination of social insurance and general taxation

An alternative design for governments in the region may be to adopt a mixed funding system that includes social insurance and general taxation. In this case, the formally employed population would be covered by a social insurance system, while the rest of the population would be covered by general taxation.

Table 7 displays our estimates of the feasibility, costs and coverage of a mixed system. We estimate that the LTC costs subsidized through general taxation refer to a realistic low coverage (35 %) scenario. For example, in Colombia, the component funded through social insurance represents 0.35 % of GDP, offering full coverage to the 26.1 % of the population that is formally employed (Table 3). In contrast, the component subsidized through general taxation would entail a cost increase of 0.22 % of GDP, providing coverage to another 35 % of the total population of care-dependent people, namely those whio are not in formal employment (Table 6). The system would cost 0.58 % of GDP, with a coverage of 51.96 % of older people experiencing care needs (Table 7).

Assuming the same political feasibility criteria as before, only four out of the 17 countries examined would be in a position to implement a mixed funding approach for long-term care. These countries are Argentina, Brazil, El Salvador, and Paraguay.[23] That is, our estimates mirror those presented earlier in the social insurance model. That is, the mixed funding approach is only feasible in countries where social insurance is a viable option. A key concern with this approach is that it has the potential to exacerbate inequality, as coverage and benefits can vary significantly based on employment status. Individuals in formal employment are more likely to contribute to and benefit from social insurance systems, while those in informal labour markets, who may not have access to such schemes, can face limited or no coverage. Such disparity highlights the need for careful consideration of the structural challenges posed by informal labour when designing equitable long-term care systems.[24]

To summarize our estimates so far, Table 8 outlines the financial and political feasibility of various long-term care funding alternatives across different countries in the LAC region. The first alternative, which offers full coverage to people in formal employment through social insurance, would be feasible in only four countries—Argentina, Brazil, El Salvador,

[22] This figure corresponds to 0.16% divided by 22.9%, namely the total tax revenues net of social security.

[23] This results from the economic and political contexts of each country, where factors such as public revenue generation, political stability, and the capacity to administer a hybrid funding model play a critical role in determining feasibility.

[24] Although countries can set restrictions to limit coverage in the part of the system funded through social insurance (for example, by establishing an age limit or a higher level of care dependence for accessing benefits), social insurance systems by their very nature tend to establish higher levels of coverage when this funding method is applied.

Table 7
Feasibility of mixed funding.

Countries	Cost of social insurance component (% GDP)	Social security contribution(% GDP) (a)	% increase in social security revenue	Cost of component subsidized through general taxation, with low coverage (% GDP)	Tax revenues on main items (net of social security) (% GDP)	% increase in tax revenues (net of social security)	Total system cost (% GDP)	Coverage for care-dependent older people (%)
Argentina	0.22	5.7	3.79	0.11	22.90	0.48	0.33	54.73
Bolivia	0.39	6.2	6.27	0.48	18.50	2.59	0.87	44.94
Brazil	0.38	8.5	4.46	0.13	24.60	0.51	0.50	61.07
Chile (2017)	0.49	1.5	32.37	0.14	18.70	0.74	0.62	63.35
Colombia	0.35	1.9	18.59	0.22	17.90	1.25	0.58	51.96
Costa Rica	0.64	8.1	7.92	0.19	15.40	1.25	0.83	62.61
Ecuador	0.41	5.5	7.39	0.25	14.60	1.73	0.66	52.09
El Salvador	0.11	2.7	3.91	0.12	18.10	0.64	0.22	46.03
Guatemala	0.17	2.2	7.56	0.28	10.90	2.60	0.45	42.50
Guyana	0.17	2.2	7.79	0.15	21.10	0.72	0.32	48.08
Honduras	0.23	3.4	6.72	0.39	18.50	2.13	0.62	42.45
Mexico (2018)	0.29	2.2	13.18	0.23	13.80	1.70	0.53	49.03
Panama	0.40	5.8	6.81	0.17	8.30	2.00	0.56	57.43
Paraguay	0.09	3.7	2.51	0.09	10.20	0.92	0.19	46.68
Peru	0.21	2.0	10.55	0.24	14.60	1.66	0.45	45.55
Dominican Republic	0.17	0.1	168.00	0.09	13.50	0.67	0.26	54.11
Uruguay	0.52	7.7	6.79	0.11	21.40	0.50	0.63	68.75
Unweighted average	0.31	4.08	18.51	0.20	16.65	1.30	0.51	52.43

Source: Authors' compilation based on data from IDB (2022), OECD et al. (2021); OECD et al. (2019).
Note: Cells are highlighted in green when the mechanism is viable in that country. (a) This includes "compulsory payments to public administrations that grant a right to receive a future social benefit (contingent)", such as unemployment and accident insurance, retirement, disability, and survivors' pensions; or health coverage. Contributions to private insurance plans, or other types of plans that do not involve general government contributions, are not included (OECD et al. 2019, p. 318).

and Paraguay—according to our analysis. The second funding option, based on general taxation, creates a system for the entire population, with the cost varying depending on the chosen level of coverage. In a low-coverage scenario (35 %), this funding option is feasible in all 17 countries. However, in a high-coverage scenario (70 %), only 9 countries can implement the system without exceeding a 5 % increase in general taxation. Finally, the third option is a mixed funding model, which provides full coverage to those in formal employment through social insurance, while offering low coverage for the rest of the population funded through general taxation. However, given that this approach depends primarily on the implementation of a social insurance mechanism, it is only feasible in the same four countries listed in the social insurance alternative—Argentina, Brazil, El Salvador, and Paraguay.

Other funding options

The financial instruments presented above reveal that governments can choose between a set of different funding sources when designing their long-term care systems. However, not all of these options are feasible for all countries and, often, even when they are available, they do not necessarily cover the entire population with care needs at their expected quality of care. This section presents other options countries can consider to either supplement or complement public funding models.

Private insurance

Private insurance is another option for funding long-term care. However, insurance has limited market penetration in Latin American and Caribbean compared to OECD countries. As shown in Fig. 1, in the United States, insurance spending was 11 % of GDP in 2019 and is 9 % in OECD countries. In contrast, average insurance spending in Latin America and the Caribbean was only 2.2 % of GDP (OECD 2021). This lower development suggests that private insurance would play a more secondary role in the short run, as a supplement to a different general system.

Table 8
Summary of the feasibility of funding approaches.

Funding approach	Coverage level	Countries where it is feasible
Social insurance	Full coverage for people with formal employment (100 %)	Argentina, Brazil, El Salvador, Paraguay
General taxation	Low coverage (35 %)	Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Guyana, Honduras, Mexico, Panama, Paraguay, Peru, Uruguay
	Medium coverage (50 %)	Argentina, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guyana, Honduras, Mexico, Paraguay, Peru, Uruguay
	High coverage (70 %)	Argentina, Brazil, Chile, Colombia, Dominican Republic, El Salvador, Guyana, Paraguay, Uruguay
Mixed funding	Full coverage for people with formal employment (100 %) + Coverage of 35 % of the rest of the population	Argentina, Brazil, El Salvador, Paraguay

Source: Authors' compilation.

Other factors intrinsic to long-term care services hinder the development of the private insurance market in this sector. The availability of insurance contracts to part of the population is limited by adverse selection and the moral hazard associated with asymmetric information (Akaichi et al., 2020). On one hand, adverse selection means potential users may have an incentive to conceal relevant information from insurers about their personal, health, or family characteristics that affect their need for care (Barr, 2010). Similarly, moral hazard occurs when insured individuals change their behaviour once they are covered and decide not to adopt preventive behaviour because they will not bear the

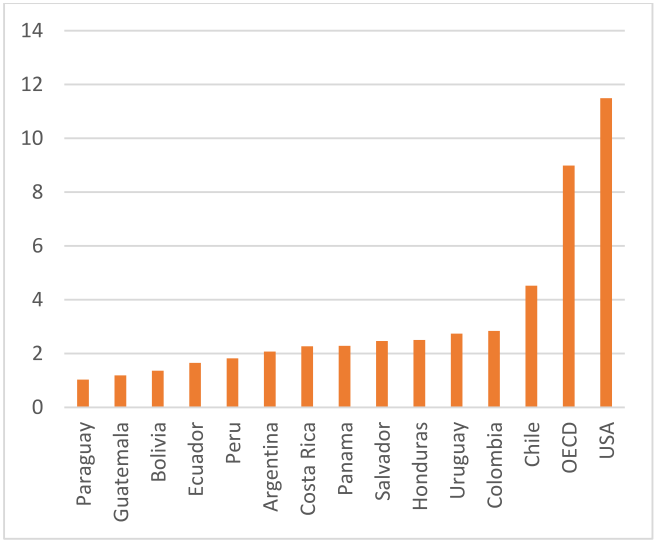

Fig. 1. Insurance spending (% GDP), 2019.
Source: OECD (2021)

related costs. In addition, it is difficult to estimate the future costs that the insurer will have to face, since increased life expectancy may prolong the number of years a person is functionally dependent. This would significantly increase costs for insurers if the event that triggers the insurance occurs (Bloeck et al., 2017).

On the demand side, evidence shows that purchasing private insurance for LTC is positively associated with income level, as well as with risk visibility and other cognitive biases (Bonsang and Costa-Font, 2020). For example, the amount of attention care receives in societal debate may affect insurance purchases. Lower- and middle-income families are unlikely to be able to access this market.

In the United States, where the insurance market in general is more developed, about 5 % of the population over age 40 was covered by private long-term care insurance in 2011 (Colombo et al., 2011). Hence, private insurance covers only 11.6 % of total long-term care costs, and the public sector, through Medicaid, pays for 62.2 % of care spending (O'Shaughnessy, 2014). However, the scarce development of the private insurance market in Latin America and the Caribbean, as well as the limited relevance of private insurance in countries with more developed insurance markets, underscore the limitations to using this mechanism to solve the problem of long-term care funding. It can play a role complementing publicly funded schemes, such as allowing individuals to prefund cost-sharing, or covering services typically excluded from care subsidies by mainstream public insurance.

Reverse mortgages

Reverse mortgages[25] are another alternative that has yet to be fully developed both globally and regionally. This option uses people's homes—which are older people's main asset and source of wealth—to finance long-term care expenses. This financial product began to be used in the 1960 s in countries such as the United States, the United Kingdom, Sweden, France, Ireland and Spain. Among Latin American and Caribbean countries, reverse mortgages are regulated in Mexico and Colombia.

Some authors argue that these instruments conflict with bequest motives, as housing is often the main bequest from parents to children. Costa-Font et al. (2010), for example, examine evidence from Spain and find that reverse mortgages interfere with bequest motives and demand for them is primarily influenced by homeowner education and income levels, rather than the value of the house.

The role of education is consistent with the evidence provided in Hanewald et al. (2020), which shows that the main reason for these instruments' lack of popularity is that people do not understand how they work. In a pilot study done in China, the authors show that if the product is made more comprehensible, demand for it increases markedly, whether people use it to finance greater liquidity in retirement or to pay potential health and care expenses. An alternative design if for the government to set up an equity release scheme following the format of reverse mortgages. Martinez-Lacoba et al (2021) estimates that this can increase the supply of available housing at subsidized prices However, using evidence from Spain they estimate it would entail an additional cost of 0.8 % of the GDP.

Pension insurance

Another potential approach to further funding LTC needs is to extend pension models to include LTC coverage. This design involves providing retirees with a cash payment or compensation in addition to their regular pension, based on their level of care needs. The intent is for these payments to help cover the costs of necessary care, often supplementing family resources and private insurance (Vidal-Melia et al., 2020). Alternative designs include allowing retirees to defer a portion of their pension income to save for future care needs (Chen, 2003). For instance, Tanaka (2016) proposed a redesign of Japan's social security system, suggesting an increase in pension benefits based on the level of care required by the individual. However, while these systems are generally structured as cash transfers, they are not typically designed to fund a comprehensive long-term care system. Instead, they focus on providing financial support to individuals in need of care, which can then be used to cover personal care expenses, family assistance, or private insurance options.

Cost-sharing mechanisms

In tax-funded LTC systems, the financial burden of covering the entire population with functional dependence can be substantial. To address this challenge, as well as potential moral hazard, various instruments have been developed to limit demand and manage costs. In addition to changes in eligibility criteria, such as needs tests based on beneficiaries' level of care dependence or age thresholds, many countries implement cost-sharing strategies to pass some of the costs to the user and avoid overutilisation. However, these mechanisms can be complex to implement and monitor effectively and reflect tight a balance between the goal of ensuring access to care and maintaining the financial sustainability of the system. However, they require careful design and ongoing evaluation to mitigate potential inequities and inefficiencies. Below we examine a number of specific policy instruments considered.

Co-payments or Co-insurance

Many systems require beneficiaries to contribute either a fixed amount or a portion of the cost of services, typically based on their income or assets. Co-payments are one of the most commonly used cost-sharing mechanisms in LTC systems. Under a co-insurance model, beneficiaries are required to contribute a portion of the cost of the services they receive, while the State covers the remainder. Co-payments are designed to alleviate the financial burden on public funds and promote the efficient use of care services by discouraging unnecessary or excessive demand. Under this financing instrument, people receiving services contribute to their cost via direct (out-of-pocket) payments. If co-payment levels are defined based on the income of people or families,

[25] A reverse mortgage is a home equity loan for older people that provides liquidity while still allowing the owner to use his or her home until the time of death.

this approach can be used to help achieve equity in access to services.

The use of co-payments to fund LTC is a prevalent practice worldwide, especially in Scandinavian countries, where this model is widely adopted. In these countries, co-payments are seen as a way to balance public funding with individual contributions to the cost of care. A study by del Pozo-Rubio et al. (2017) on Spain reveals that beneficiaries of long-term care services contribute to more than half of the total cost of their care through out-of-pocket expenses.[26] This is suggestive of the significant financial burden that falls on individuals and families when care needs arise in the household, even in publicly funded systems. However, co-payments for LTC typically vary based on the type of service provided.[27] Additionally, the amount of the co-payment may be influenced by factors such as the level of care required, and the specific care needs of the individual.

In Latin America, Costa Rica and Uruguay employ a hybrid funding model for long-term care. In Costa Rica, funding stems primarily from general taxation administered by central and regional governments, supplemented by co-payments adjusted according to income, wealth, and the type of service provided (Chaverri and Matus-López, 2021). This approach resembles Spain's System for Autonomy and Long-Term Care. Meanwhile, Uruguay predominantly finances long-term care through central government taxation, accompanied by co-payments that vary based on the average household income of the care recipient. Co-payments range from 100 % for the highest-income households to 0 % for the most economically vulnerable. Notably, only 14 % of service users in Uruguay actually contribute through co-payments (Aranco et al., 2018).

Caps on public spending and exclusive coverage for catastrophic expenses

Some countries set limits on the amount or type of care that the State subsidizes, such as restricting the number of hours of home care or types of services covered, and ore specifically only providing converge for catastrophic expenses. This approach helps control overall expenditures but can leave gaps in coverage that families or individuals must fill, often through informal caregiving or out-of-pocket expenses.

Catastrophic spending thresholds can serve as a tool to limit public expenditures, but they often come at a significant cost to household financial stability. While mechanisms like the one proposed in the UK aim to balance public and private contributions (Dilnot, 2011), they must be carefully designed to avoid pushing families into poverty or deepening economic inequities. Spending is defined as catastrophic when a household must reduce its basic spending for a period of time to cover the costs of benefits (Xu et al., 2003). The literature proposes different spending thresholds, ranging from 5 % to 20 % of total household income (Wyszewianski, 1986; Berki, 1986), up to 30 % (Knaul et al., 2006) or 40 % (Xu et al., 2003). The risk of incurring catastrophic expenses is usually higher for low-income families with uninsured older people, those with limited insurance coverage with high co-payments, or families with members who have chronic diseases or who have been hospitalized (ECLAC, 2008).

del Pozo-Rubio et al. (2019) estimate that in Spain out-of-pocket expenses to finance care services increase the probability of falling into poverty by 18.9 %. Data for the United States show that almost one-sixth of people with long-term care needs incur catastrophic expenses to meet them (Stevenson et al., 2010).[28] In practice, this means that state coverage is triggered only when expenses reach a catastrophic level. This mechanism reduces the fiscal responsibility of the public sector and leaves the primary responsibility for paying for long-term care to families. It could be used with *different thresholds for various levels of household income to make the system more equitable.*

Means testing and eligibility criteria

A common method for restricting system coverage to lower-income families is means testing. This process helps determine eligibility for public benefits, establishes co-payment levels for services (e.g., different co-payment amounts based on income), or sets a coverage threshold for catastrophic expenses. It is widely used worldwide, including in the United Kingdom (excluding Scotland) and the United States, and specifically Medicaid targets low-income individuals. Additionally, many countries in the LAC region offer long-term care services aimed at socio-economically vulnerable populations, with eligibility determined through means testing (Bloeck et al., 2017; Aranco et al., 2022b).

Similarly, to means tests, governments can moderate the demand by tightening the eligibility criteria. Eligibility requirements, such as higher thresholds for functional dependence or stricter needs assessments, can reduce the pool of beneficiaries, thereby containing costs. However, this approach risks excluding individuals who may still require significant care but fall short of the criteria.

Estate recovery systems

In some parts of the United States and in France, there are mechanisms for the State to recover the costs of care for a specific person after the time of their death of an enrollee. Such estate recovery mechanism works by transferring the deceased person's estate (usually their home) to the State. However, the experience of the United States with Medicaid suggests that the current estate recovery programs only succeed in recovering a small proportion of the expense incurred, while the administrative cost is very high (Wiener, 1996). Further they may deter eligible people from applying for Medicaid.

Discussion

This paper has examined the government funding options for long-term care in the Latin American and Caribbean (LAC) region, along with alternative mechanisms that could be employed to finance an LTC system. To the best of our knowledge, this is the first study to study this question in the LAC region, providing valuable insights into potential funding models.

Our findings suggest that the cost of funding an LTC system represents, on average, 0.27 % of GDP in a low-coverage scenario, with projections rising to 0.77 % of GDP by 2050. Several demographic and non-demographic factors explain the projected future increase in costs, primarily driven by the growing share of older age population and higher rates prevalence of care needs. However, its worth mentioning that our estimates are based solely on demographic factors, and the potential costs of long-term care could be influenced by additional variables such as policy choices and economic conditions.

Our analysis suggests that all countries in the region have the capacity to implement a system based on general taxation. However, the feasibility of social insurance models is more limited and relevant only

[26] In Spain, there is considerable variability in how co-payments are applied, reflecting the diversity of the country's long-term care system. The structure of co-payments often differs by region, as different autonomous communities have varying policies and financial capacities. Furthermore, the extent of the co-payment may be tailored to the individual's needs, meaning that those with higher care requirements may face different financial obligations compared to those with lower needs. This variability in co-payment schemes can create disparities in access to care and in the financial burden placed on different individuals, depending on where they live and their specific care needs.

[27] For instance, residential care facilities often have higher co-payment requirements compared to community-based services such as home care or telecare. This is due to the more intensive and specialized nature of care provided in institutional settings, which incurs greater costs.

[28] In the United Kingdom, the recent reform in 2022 establishes that families must spend GBP 86,000 before they are entitled to public coverage See this press article: https://www.bbc.co.uk/news/articles/c3g9m7p199no.

to a few countries with specific socio-economic conditions. Additionally, we outline and discuss other funding strategies, including pension insurance or cost-sharing mechanisms such as co-payments, exclusive coverage for catastrophic expenses, or means testing among other

Despite the robustness of our estimates, it is important to acknowledge certain limitations. Notably, our analysis does not account for the potential positive externalities that could arise from the development of an LTC system. Long-term care funding could give rise to two key externalities: a macroeconomic impact on labour markets and a shift in public spending patterns (Villalobos Dintrans, 2018). These effects could significantly reduce the net cost of implementing such a system. For example, creating a care system could stimulate new job opportunities, especially for women, by reducing the burden of unpaid family caregiving and offering paid employment opportunities (Costa-Font and Vilaplana-Prieto, 2022). This shift is of particular significance given the high value of unpaid family care in many OECD countries (Costa-Font and Vilaplana-Prieto, 2025).

Furthermore, its worth noting that LTC services are a potential key driver of economic growth through the "silver economy," which refers to the economic potential of an aging population. Developing LTC infrastructure could spur job creation, attract investment, and contribute to broader economic development (Okumura et al., 2020; Jiménez et al., 2021). This study encompasses some policy implications: First, while most countries in the LAC region can feasibly adopt a general taxation model, policymakers should assess the feasibility and sustainability of social insurance models, especially in wealthier countries with more developed welfare systems. It is important to carefully balance equity and sustainability in designing funding mechanisms. Second, LTC reform requires considering the wider the positive macroeconomic effects of LTC systems, particularly in terms of labour market dynamics and gender equality (see Costa-Font and Vilaplana-Prieto, 2022). Supporting the transition from unpaid family caregiving to formal employment can have far-reaching societal benefits.

Third, there are potential gains from the "silver economy" by investing in long-term care services as a catalyst for economic growth. This sector could not only create jobs but also stimulate innovation and attract investment, ultimately improving the socio-economic prospects of the entire population. Finally, **co**untries should remain open to exploring a variety of funding mechanisms, including cost-sharing options and pension insurance, to ensure that the LTC system remains financially viable without overburdening any single group. That is, while the funding of long-term care presents challenges, it also offers significant opportunities for economic and social development, particularly through job creation and labour market participation. Policymakers should consider these broader implications when designing LTC financing models.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.jeoa.2025.100550.

References

Akaichi, F., Costa-Font, J., Frank, R., 2020. Uninsured by Choice? a choice experiment on long term care insurance. *J. Econ. Behav. Organiz.* 173, 422–434.

Aranco, N., Bosch, M., Stampini, M., Azuara, O., Goyeneche. L., Ibarrarán, P., Oiveira, D., Reyes Retana, M., Savedoff, W., Torres, E. (2022). *Aging in Latin America and the Caribbean: social protection and quality of life of older persons.* Inter-American Development Bank. http://dx.doi.org/10.18235/0004287.

Aranco, N., Ibarrarán, P., Stampini, M., 2022. *Prevalence of care dependence among older persons in 26 Latin American and the Caribbean countries*. Technical Note IDB-TN-2470. Inter-American Development Bank. http://dx.doi.org/10.18235/0004250.

Aranco, N., Stampini, M., Ibarrarán, P., & Medellin, N. (2018). *Panorama de envejecimiento y dependencia en América Latina y el Caribevita* (Policy Brief IDB-PB-273. Inter-American Development Bank http://dx.doi.org/10.18235/0000984.

Barr, N., 2010. Long-term care: a suitable case for social insurance. *Soc. Policy Administr.* 44 (4), 359–374.

Benedetti, F., Acuña, J., & Fabiani, B. (2022). *Teleasistencia: Innovaciones tecnológicas para el cuidado de personas con dependencia*. Technical Note IDB-TN-2475. Inter-American Development Bank, *forthcoming*.

Berki, S.E., 1986. A look at catastrophic medical expenses and the poor. *Health Affairs* 5, 139–145.

Bloeck, M.C., Galiani, S. & Ibarrán, P. (2017). *Long-term care in Latin America and the Caribbean? Theory and Policy Considerations*, *IDB Working Paper Series 834*. https://publications.iadb.org/publications/english/document/Long-Term-Care-in-Latin-America-and-the-Caribbean-Theory-and-Policy-Considerations.pdf.

Bonsang, E., Costa-Font, J., 2020. Behavioral regularities in old age planning. *J. Econ. Behav. Organiz.* 173, 297–300.

Cafagna, G., Aranco, N., Ibarrarán, P., Medellín, N., Oliveri, M.L., & Stampini, M. (2019). *Age with Care: Long-term care in Latin American and the Caribbean*. Inter-American Development Bank. http://dx.doi.org/10.18235/0001972.

Chaverri, A., & Matus-López, M. (2021). Cuidados de Larga Duración en Costa Rica: Enseñanzas para América Latina desde la Evidencia Internacional, *Revista Panamericana de Salud Pública*, 45(146): e146. 10.26633/RPSP.2021.146.

Chen, Y.P., 2003. Applications of the trade-off principle in both public and private sectors. *J. Aging Health* 15 (1), 1544.

Colombo, F., Llena-Nozal, A., Mercier, J., Tjadens, 2011. *Help Wanted? Providing and Paying for Long-Term Care,* OCDE Health Policy Studies. Organisation for Economic Co-operation and Development Publishing, Paris, France.

Costa-Font, J., Jimenez-Martin, S., Vilaplana, C., 2018. Does long-term care subsidization reduce hospital admissions and utilization? J. Health Econ. 58, 43–66.

Costa-Font, J., Vilaplana-Prieto, C., 2025. The hidden value of adult informal care in Europe. Health Economics. in press. https://onlinelibrary.wiley.com/doi/10.1002/hec.4928.

Costa-Font, J., Wittenberg, R., Patxot, C., Comas-Herrera, A., Gori, C., Di Maio, A., Rothgang, H., 2008. Projecting long-term care expenditure in four European Union member states: the influence of demographic scenarios. *Social Indic. Res.* 86, 303–321.

Costa-Font, J., Gil, J., Mascarilla, O., 2010. Housing wealth and housing decisions in old age: sale and reversion. *Hous. Stud.* 25 (3), 375–395.

Costa-Font, J., Courbage, C., Swartz, K., 2015. Financing long-term care: ex ante, ex post or both? *Health Econ.* 24, 45–57.

Costa-Font, J., Vilaplana-Prieto, C., 2017. Does the expansion of public long-term care funding affect saving behaviour? Fiscal Studies 38 (3), 417–443.

Costa-Font, J., Zigante, V., 2020. Building 'implicit partnerships'? Financial long-term care entitlements in Europe. *Policy Sci.* 53, 697–712.

Costa-Font, J., Vilaplana-Prieto, C., 2022. 'Investing'in care for old age? an examination of long-term care expenditure dynamics and its spillovers. *Empirical Econ.* 1–30.

de la Maisonneuve, C., & Oliveira Martins, J. (2013*). A projection method for public health and long-term care expenditures*. OCDE Economics Department Working Papers, No. 1048. Paris: OECD Publishing.

de la Maisonneuve, C., & Oliveira Martins, J. (2015). The future of health and long-term care spending, *OCDE J. Econ. Stud.*, 2014/1 https://doi.org/10.1787/eco_studies-2014-5jz0v44s66nw.

del Pozo-Rubio, R., Mínguez-Salido, R., Pardo-García, I., & Escribano-Sotos, F. (2019). Catastrophic long-term care expenditure: associated socio-demographic and economic factors, *Eur. J. Health Econ.*, 20 (5): 691-701. 10.1007/s10198-019-01031-8.

del Pozo-Rubio, R., Pardo-Garcia, I., Escribano-Sotos, F., 2017. El copago de dependencia en España a partir de la reforma estructural de 2012. *Gaceta Sanitaria* 31 (1), 23–29.

Dilnot, A., 2011. Fairer care funding: The report of the Commission on Funding of Care and Support, Vol. 1. The Stationery Office.

Economic Commission for Latin America and the Caribbean (ECLAC) (2008). *Incidencia de los gastos de bolsillo en salud en siete países latinoamericanos.* Social Development Division, Social Policy Series 141. http://hdl.handle.net/11362/6146.

European Commission (EC) (2018). *The 2018 Ageing Report: Economic and Budgetary Projections for the EU Member States (2016-2070)*. Institutional Paper 079.

European Commission (EC) (2021). *Long-term Care Report. Trends, challenges and opportunities in an ageing society,* Vol. I, Social Protection Committee (SPC) and the European Commission (DG EMPL). https://ec.europa.eu/social/main.jsp?catId=738&langId=en&pubId=8396.

González-González, C. A., Stampini, M. Cafagna, G., Hernández Ruiz, M. C., & Ibarrarán, P. (2019). *Simulaciones del costo de un sistema de apoyo para los adultos mayores en situación de dependencia en México*, IDB Working Paper Series, No. IDB-WP-1033, Inter-American Development Bank (IDB), Washington, DC. https://doi.org/10.18235/0002091.

Hanewald, K., Bateman, H., Fang, H., Wu, S., 2020. Is there a demand for reverse mortgages in China? Evidence from two online surveys. *J. Econ. Behav. Organiz.* 169, 19–37.

IMAS (Instituto Mixto de Ayuda Social) (2021). Política Nacional de Cuidados 2021-2031. Hacia la implementación progresiva de un sistema de apoyo a los cuidados y atención a la dependencia.

Inter-American Developemnt Bank (IDB) (2022). Sistema de Información de Mercados Laborales y de Seguridad Social (SIMS).

International Labour Organization (ILO) (2018). *Presente y futuro de la protección social en América Latina y el Caribe*. Lima: ILO / Regional Office for Latin America and the Caribbean, 2018. 224 p. (Thematic Labour Overview 4).

Jiménez, C., Requejo, J., Foces, M., Okumura, M., Stampini, M., & Castillo, A. (2021). *The Silver Economy: Mapping actors and trends in Latin America and the Caribbean*. Inter-American Development Bank Monography. http://dx.doi.org/10.18235/0003237.

Knaul, F.M., Arreola-Ornelas, H., Méndez-Carniado, O., et al., 2006. Evidence is good for your health system: policy reform to remedy catastrophic and impoverishing health spending in Mexico. *Lancet*. https://doi.org/10.1016/S0140-6736(06)69565-.

Kim, H., Kwon, S., 2021. A decade of public long-term care insurance in South Korea: policy lessons for aging countries. *Health Policy* 125 (1), 22–26. https://doi.org/10.1016/j.healthpol.2020.11.003.

Martinez-Lacoba, R., Pardo-Garcia, I., Escribano-Sotos, F., 2021. The reverse mortgage: A tool for funding long-term care and increasing public housing supply in Spain. *J. Housing Built Environ.* 36, 367–391.

Matus-López, M., Cid Pedraza, C., 2014. Costo de un Sistema de Atención de Adultos Mayores Dependientes en Chile, 2012-2020. *Pan Am. J. Public Health* 36 (1), 31–36.

Matus-López, M. (2017). *Análisis prospectivo de los servicios de cuidado a la dependencia en Uruguay*. Unpublished Inter-American Development Bank report.

Matus-López, M. (2018). *Prospección de Costos de un Sistema para la Atención a la Dependencia en Costa Rica 2018-2050*, Preview of Final Report.

Medellín, N., 2020. *Cost Simulation Tool for Long-Term Care Systems: An Application to Latin America and the Caribbean* (IDB Technical note No. IDB-TN-1998). Inter-American Development Bank, Washington, DC.

OECD (2020). Focus on Spending on Long Term Care. https://www.oecd.org/health/health-systems/Spending-on-long-term-care-Brief-November-2020.pdf.

O'Shaughnessy, C. (2014). *The Basics: National Spending for Long-Term Services and Supports (LTSS), 2012.* https://hsrc.himmelfarb.gwu.edu/sphhs_centers_nhpf/284.

Okumura, M., Stampini, M., Buenadicha Sánchez, C., Castillo, A., Vivanco, F., Sánchez, M., Ibarrarán, P., & Castillo Martínez, P. (2020). *La economía plateada en América Latina y el Caribe: El envejecimiento como oportunidad para la innovación, el emprendimiento y la inclusión*. IDB. http://dx.doi.org/10.18235/0002598.

Organisation for Economic Co-operation and Development (OECD) (2020a). *Spending on long-term care.* https://www.oecd.org/health/health-systems/Spending-on-long-term-care-Brief-November-2020.pdf.

Organisation for Economic Co-operation and Development (OECD) (2020b). *Assessing the comparability of Long-Term Care spending estimates under the Joint Health Accounts Questionnaire.* https://www.oecd.org/health/health-systems/LTC-Spending-Estimates-under-the-Joint-Health-Accounts-Questionnaire.pdf.

Organisation for Economic Co-operation and Development (OECD) (2021). Insurance spending. https://data.oecd.org/insurance/insurance-spending.htm.

Organisation for Economic Co-operation and Development (OECD) et al. (2019). *Estadísticas tributarias en América Latina y el Caribe 2019,* Paris, OECD Publishing. https://doi.org/10.1787/25666b8d-en-es.

Organisation for Economic Co-operation and Development (OECD) et al. (2020b). *Estadísticas tributarias en América Latina y el Caribe 2020,* Paris, OECD Publishing. https://doi.org/10.1787/68739b9b-en-es.

Organisation for Economic Co-operation and Development (OECD) et al. (2021). *Estadísticas tributarias en América Latina y el Caribe 2021,* Paris, OECD Publishing. https://doi.org/10.1787/96ce5287-en-es.

Rodrigues, R., Schulmann, K., Schmidt, A., Kalavrezou, N., Matsaganis, M., 2013. *The indirect costs of long-term care*. Research Note 8/2013. European Commission.

Stevenson, D.A., Cohen, M.A., Tell, E.J., Burwell, B., 2010. The complementarity of public and private long-term care coverage. *Health Affairs* 29 (1), 96–101.

Tanaka, S., 2016. A proposal for redesigning social security: long-term care pension. *The Geneva Papers on Risk and Insurance Issues and Practice* 41 (1), 98117.

Vidal-Melia, C., Ventura-Marco, M., Pla-Porcel, J., 2020. An NDC approach to helping pensioners cope with the cost of long-term care. *Journal of Pension Economics & Finance* 19 (1), 80–108.

Villalobos Dintrans, P. (2018). Long-term care systems as social security: the case of Chile, Health Policy and Planning, Vol. 33, Issue 9, November, 1018–1025. https://doi.org/10.1093/heapol/czy083.

Wiener, J.M., 1996. Can Medicaid long-term care expenditures for the elderly be reduced? *The Gerontologist* 36 (6), 800–811.

World Bank (WB) (2022). Banco de Datos del Banco Mundial. https://datos.bancomundial.org/.

Wyszewianski, L., 1986. Financially catastrophic and high-cost cases: definitions, distinctions, and their implication for policy formulation. *Inquiry* 23 (4), 382–394.

Xu, K., Evans, D.B., Kawabata, K., Zeramdini, R., Klavus, J., Murray, C.J.L., 2003. Household catastrophic health expenditure: a multi-country analysis. The *Lancet* 362 (9378), 111–117.