

The Argentine pension system, its successes and challenges

Ignacio Apella¹

Abstract:

The objectives of this paper are to identify the strengths and vulnerabilities of the Argentine pension system and to discuss some policy options aimed at promoting an informed public debate. Over the last two decades, the Argentine pension system has made extraordinary progress in extending coverage--now reaching to nearly one hundred percent of the elderly--by expanding its non-contributory scheme and establishing automatic benefit adjustment mechanisms and increasing the replacement rate. Nonetheless, important challenges remain which may require public policy interventions in the near future. Some challenges are relevant in the short term, relating to coverage and equity of the system, while others are important in the longer term associated with the financial sustainability of the system in the context of population aging. The non-contributory benefits to reduce the coverage gap did not consider the labor history of workers and their past partial contributions, generating a horizontal inequality problem. Additionally, the coexistence of different pension schemes is a source of inequity within the national system, where provincial schemes and special and differential regimes coexist, each with its own rules and different generosity of benefits. The achievements of the pension system in terms of coverage and adequacy have impacted costs. In 2020, public spending on pensions reached almost 12 percent of GDP, similar to that of developed countries where population aging is considerably higher. In this context, policy options presented in this paper seek to redefine the objectives of the system, seeking greater equity and sustainability. Based on this premise, the document explores the benefits of redesigning the system using a two-pillar model, i.e. a universal and basic benefit related to the protection against the risk of ending up in a situation of poverty plus a contributory scheme, proportional to the contribution made by workers during their employment history. Addressing the coverage issue by incorporating this dimension would not only improve equity of contributions and benefits, but also generate incentives to extend the working life of older adults. At the same time, a strategy that harmonizes rules across different schemes, eliminates inequities and management issues, and focuses on the beneficiary—and not on the benefit—as the center of the system, would bring the model closer to a more equitable and sustainable system.



Social Protection and Jobs

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JEL codes: H55, H75, J10

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1. Introduction

The pension system in Argentina is the main recipient of public resources. This explains spending values of around 12% of GDP, equivalent to 25% of consolidated public spending; that is, taking into account public spending by the national government, subnational jurisdictions, and municipalities.² The magnitude of such spending is a source of concern to different sectors of the political and academic circles, due to both its current level and its impact on fiscal accounts within a context of tough restrictions, as well as in terms of medium and long-term perspectives. This high level of spending relates to a much-extended coverage (it practically reaches out to cover the totality of adults over the age of 65 who receive pension benefits), while the average value of the benefits they receive is also significant.

Discussions on pension policy involve three dimensions: coverage (that is, the number of individuals receiving benefits), adequacy of benefits, and fiscal and economic sustainability. Given that it is impossible to optimize these three dimensions simultaneously, the policy challenge is to seek agreements in balancing these three dimensions, and once this balance is attained to ensure their sustainability over time.

Concerns about and interventions on some of these three dimensions were evident at different points in history. In the first place, during the late 80s the difficulty related to financial/actuarial sustainability. After implementing a structural reform in the early 90s, which implied the incorporation of a capitalization pillar and stricter conditions of access³, difficulties in financing --associated to transition costs-- became the main concern in the short to medium term. To cope with such transition costs, new taxes and a 15% of the co-participation revenues were incorporated on provincial jurisdictions. Secondly, stricter eligibility terms had an impact on system coverage. During the first decade of the 21st century, once the macroeconomy was more stable after the economic crisis that resulted in the failure of the convertibility plan in 2002 and following a growth period fostered by a boom in commodity prices, the focus of attention shifted to the system's gap in coverage. To tackle this issue, two semi-contributory benefits programs were introduced, the *moratorias previsionales* (social security moratorium): the first one was adopted in 2005 (Act N° 24476 and Executive Decree N°1454/05) and the second in 2014 (Act N°26970), further extended in 2019; later on, in 2016 the *Pensión Universal para el Adulto Mayor* – (PUAM [Universal Pension for the Elderly])⁴ was created and, finally, in 2021 a program recognizing contributions for care services was implemented.

After reaching out to cover almost one hundred percent of the passive population, financial sustainability becomes once again the eye of the storm and triggers reform-centered debates and discussions. As the system shifted to a scheme that combined contributory and non-contributory sources of funding and benefits, this implied a higher level of spending, exacting a heavy toll on the financial sustainability during the second decade of the 21st century.

The *Sistema Integrado Previsional Argentino* (SIPA [Argentine Integrated Social Security System]) is the main component in the Argentine pension system; it is a scheme resulting from a complex combination of rules and regulations that have accumulated over the years. Subsequent reforms throughout its history have led to a situation that sees the coexistence of beneficiaries retired from

² Ministry of Finance

(<https://www.argentina.gob.ar/hacienda/politicaeconomica/macroeconomica/gastopublicoconsolidado>)

³ The retirement age for women was increased by 5 years, going from 55 to 60, and for men from 60 to 65. Total years of contribution also increased by 5 years, going from 20 to 30 years.

⁴ For further details see Rofman and Apella (2014) and Bertín (2019)



different special pension regimes (*cajas previsionales*) that existed up until the 80s; the *Sistema Integrado de Jubilaciones y Pensiones* (SIJP [Integrated Retirement and Pensions System]), a multi-pillar system with individual capitalization created in 1994; the special social security moratorium regime adopted in 2005 and extended in 2014 and 2019; the SIPA, created in 2008 and the Universal Pension for the Elderly (PUAM), created in 2016. The complexity stemming from this multiplicity of reforms, together with non-compliance (or partial compliance) with the constitutional provisions that established the mobility of pensions (that is, they must be adjusted periodically), has resulted in a system that is highly involved in judicial proceedings, as most beneficiaries have, at some point, filed legal actions on the grounds that their pension benefits had been altered. Accordingly, a considerable degree of uncertainty was generated, which affected both beneficiaries and system managers.

Given the current configuration and future demographic trends, the Argentine pension system faces two major obstacles relative to equity and sustainability in the medium to long-terms. On the one hand, there are difficulties in terms of allocation efficiency and vertical equity that result in a pay-as-you-go system that is very generous and subsequently puts pressure on actuarial and fiscal balance. On the other hand, population aging calls for a declining trend of the pension support ratio—which measures the ratio between active contributors to the system and beneficiaries; this, inevitably, leads to reconsidering the Bismarckian spirit and the urgent need to design new Beveridge-like transfer schemes with complementary non-contributory pillars.⁵

The purpose of this study is to contribute to an informed debate on public policy relative to income protection schemes for the older adults in Argentina. In particular, this report analyzes and discusses some ideas that help reflect on short-term public policy tools to improve efficiency and equity, and also on the concept of a pension system in the context of population aging in the long term, by taking into consideration some reform options that typically come up in public debate.

2. Characterization and diagnosis of the pension system

Argentina has made extraordinary progress in extending coverage to the elderly by expanding its non-contributory programs and establishing automatic adjustment mechanisms. Halfway through the 2000s, a few measures were introduced to make the pension system universal. Though this allowed expanding coverage to almost one hundred percent of the elderly, some equity issues persist, and they need to be pointed out. In terms of adequacy, a pension indexation mechanism has been implemented that allows updating the value of benefits periodically, thus avoiding significant losses in actual value due to inflation. This generated benefits that exceeded the average of several other countries in the region.

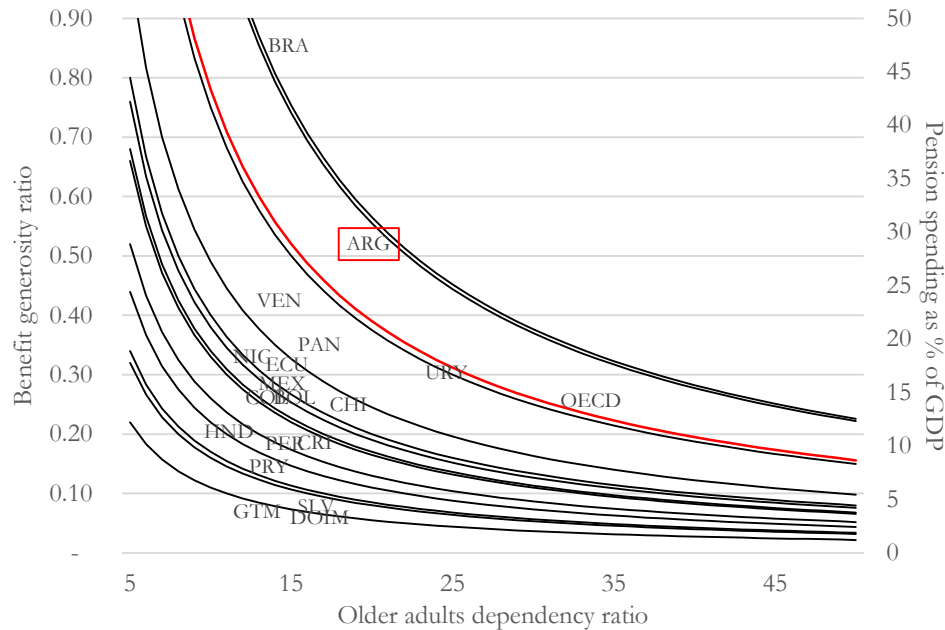
However, a serious long-term equity and sustainability issue prevails. On the one hand, this is connected to the intra-system heterogeneity where various differential regimes coexist, each featuring very different replacement rates and formulas to calculate benefits. On the other hand, the number of benefits granted to each older adult is, in many cases, more than one. This situation makes the pension system a very generous scheme and its main objective becomes blurred. Finally, in a population aging

⁵ A Bismarckian system refers to a contributory social security scheme that replaces the worker's labor income upon retirement, whereas a Beveridge system is connected to the provision of a flat transfer in old age that may (but not necessarily) incorporate funding from general revenues.



context, the sustainability of the system is threatened as the active-passive ratio will naturally tend to decrease, thus rendering the contributory nature of the system unfeasible.

Figure 1.1 - Pension indifference curves. Benefit generosity ratio, dependency ratio and pension spending as % of GDP (year 2015)



Source: Author's own elaboration based on Rofman and Apella (2020) and United Nations, Population Division.

Argentina, together with Brazil and Uruguay, with a less advanced degree of aging compared with developed countries, faces higher spending on pensions than the OECD average, in terms of GDP. Figure 1.1 features the three dimensions that characterize pension systems simultaneously for a group of countries in the region and the average for OECD member countries, through indifference curves (see Annex 1). That is, the total public spending on pensions, represented by the location of the level curve, resulting from the combination of benefit generosity, defined as the product of the replacement rate and coverage and the dependency ratio of the elderly. More precisely, pension level curves break down public spending into pensions in terms of the dependency ratio of the elderly and the benefit generosity rate for the 18 Latin-American counties and the OECD average.

On the one hand, Argentina is, after Uruguay, one of the countries facing the highest elderly dependency ratio. The x-axis shows the demographic dependency ratio for older adults, which is defined as the population over the age of 65 compared with the number of those of working age (15 to 64). But the degree of population aging of the country, as in the case of its peers in Latin America, is still below the average recorded in OECD countries. The demographic dependency ratio in Latin America was of only 12 adults of non-working age for every 100 adults of working age; while across OECD nations the value accounted for 30 adults of non-working age for every 100 adults of working age.

On the other hand, Argentina and Brazil have the most generous pension systems in the region. The y-axis represents the public policy decision: coverage and level of pension benefits. Both countries, though they face a dependency ratio that is more favorable than that of OECD countries, maintain a



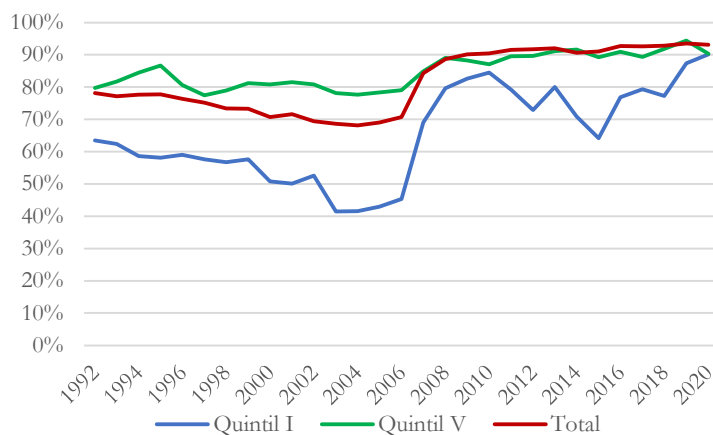
level of coverage and replacement rate that is much higher than the average for the other group of countries, and this places them on a level curve that is farther away from the origin, with pension spending being 3.4 percentage points above that of developed countries.

These dimensions will be analyzed in more depth in the next part of this section.

2.1 Coverage

Given the declining trend in coverage analyzed by different studies (Rofman et al., 2008; *Secretaría de Seguridad Social*, 2005; among others), in 2005 (with subsequent extensions in 2014, 2016 and 2019), a *Moratoria Previsional* (Social Security Moratorium) program was implemented, designed as a regime that granted easy payment terms to workers who owed contributions to the pension system. This initiative provided a possibility for any citizen that met minimum age eligibility requirements but not those relative to years of contributions, to declare having a debt corresponding to those years in the self-employed workers' scheme, and thus be included in a payment scheme that would be rolled out in parallel to the collection of benefits. Likewise, access to pension benefits was extended to the rightful claimants of deceased workers, so that they could receive a survivors' pension. The moratorium was originally approved by the end of 2005, in the case of periods of contribution prior to 1994. In 2014, a new law allowed for the inclusion of contributions corresponding to the period between 1994 and 2013 in the debt, setting a two-year limit to apply. In 2016, however, (and, once again, in 2019) this period was extended, though only in the case of women. Finally, in 2016 a universal benefit was established, the Universal Pension for the Elderly (PUAM). PUAM ensures older adults over the age of 65 who have no contributory coverage to receive a monthly income equivalent to 80% of the minimum pension received by SIPA beneficiaries. Thus, the income protection system for older adults reached an almost universal coverage, with this expansion targeting the lowest income quintiles (Figure 1.2).

Figure 1.2 - Percentage of adults over the age of 65 who receive a pension benefit (years 1992-2018)

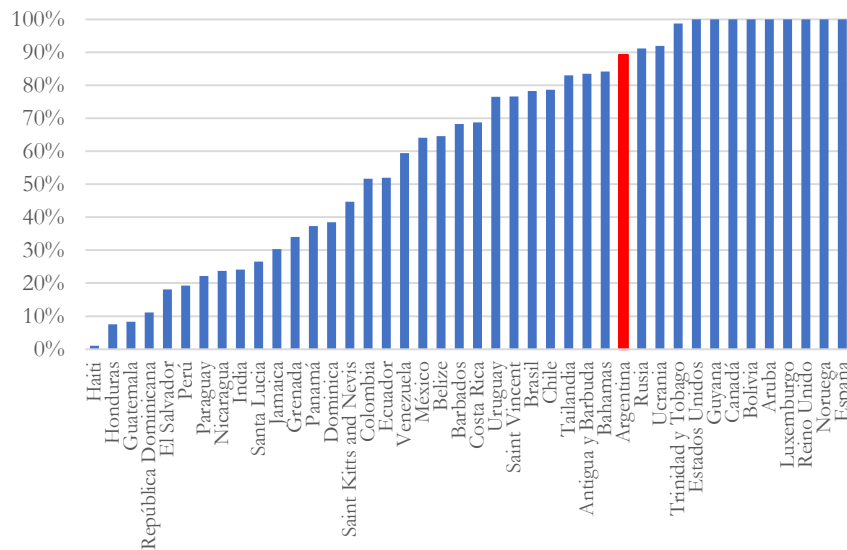


Source: Author's own elaboration based on household surveys EPH, INDEC.



Due to this coverage expansion, the country ranks among those with the highest coverage for people over 65 years old (Figure 1.3).

Figure 1.3 - Percentage of adults over the age of 65 receiving a pension benefit, by country (year 2018)



Source: World Social Protection Report 2017-2019 - International Labour Organization.

The expansion of non-contributory benefits led to the reduction of horizontal inequity issues that were generated in the past. In this sense, the contributory scheme was funded, not only with contributions from workers’ wages, but also with resources coming from general revenues, which generated a situation of inequality as people with no coverage were funding the benefits of those covered by the pension system. When coverage was expanded, many individuals who were funding the system through payment of their taxes became eligible to receive a pension benefit.

However, the attempts to correct the coverage issue did not take into account the labor record of workers and their past partial contributions. The low coverage of the contributory scheme originates in the setting of an eligibility condition based on a minimum number of years of contributions (in this case, thirty years). However, the labor history files of most workers include periods of informality, unemployment or lack of activity (sometimes for very long periods), so in many cases they are not eligible to receive benefits. A low average coverage may derive from a segmented population, with a group of workers that contribute frequently and another group that does not contribute, or due to the fact that many workers contribute only during a certain part of their labor history. In the first scenario, those workers that are contributing to the pension system are expected to receive a contributory pension, while the other group is excluded. Conversely, in the second case, there may be a considerable number of workers (more workers than those excluded in the first example) that do not meet the eligibility requirement and, therefore, do not have coverage despite having recorded some periods of contribution.

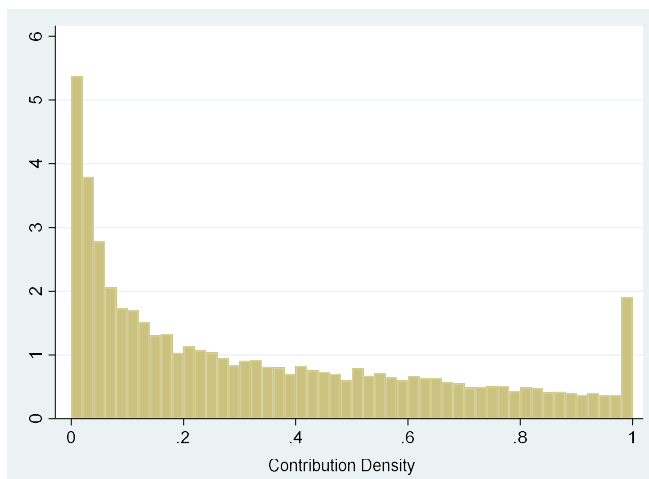
Accordingly, it is not only the average number of contributors to the system that matters, but the frequency of transitions between the contributory and non-contributory status of workers. This opens



the way not only to a pension assistance initiative -through a non-contributory pension funded by general revenues- but also to examine the level of rigidity that complying with a certain number of periods of contribution implies.

In fact, the density of workers' contributions in Argentina is not homogeneous and, far from showing a bimodal distribution, it shows quite a uniform distribution. Figure 1.4 shows an approximation to the problem described.⁶ This was based on information provided by the *Muestra Longitudinal del Empleo Registrado* (Registered Employment Longitudinal Sample) prepared by the Ministry of Labor and Social Security, that includes longitudinal information on a sample of wage earners from the private sector regarding their contributions to the social security system between January 1996 and December 2015.

Figure 1.4 - Distribution of total contribution density, men and women (years 1996-2015).



Source: Author's own elaboration based on Labor Histories Database, Ministry of Labor and Social Security.

Though, in average, workers only contribute to 34% of their total labor records, this average value hides a very significant heterogeneity. The left side of the distribution concentrates 50% of the total workers who have contributed less than 25% throughout the whole window considered. Additionally, on the right margin, 2.7% of the workers observed in the sample were able to reach 100% of contributions (Table 1.1). However, the distribution of the working population does not end with these two groups. On the contrary, the remaining 46.9% of workers show a contribution density ranging between 25 and 99%, and all of them receive equal treatment from the standards that regulate both the contributory and the non-contributory pension systems.

The problem is that a considerable number of workers have contributed different amounts throughout their labor history, yet they do not reach the minimum threshold required. Even though the universal pension benefit corrects the coverage gap by protecting those who do not meet the eligibility requirements, this evidence suggests a need to treat workers differently, according to the efforts made during labor life in order to improve coverage equity, as those individuals who were excluded because

⁶ These results must not be considered final but only approximate, as this database does not contemplate the totality of the working population. In particular, it excludes public sector wage earners and self-employed workers.



they did not meet minimum requirements have nevertheless funded—though partially—the system with their past partial contributions.

Table 1.1 - Contribution densities according to characteristics (years 1996-2015)

Characteristics	Average	% of workers with contribution density (d)				
		d<25%	25%<d<50%	25%<d<50%	75%<d<100%	d=100%
Total	33.6%	50.3%	20.5%	15.3%	11.1%	2.7%
Sex						
Men	36.2%	46.6%	21.0%	16.6%	12.6%	3.2%
Women	29.0%	56.5%	20.0%	13.2%	8.5%	1.8%
Income Quintiles						
I	15.5%	77.7%	14.9%	5.5%	1.7%	0.2%
II	30.7%	50.8%	25.0%	16.5%	7.0%	0.7%
III	44.0%	33.3%	23.8%	23.3%	17.1%	2.6%
IV	54.5%	24.2%	19.7%	22.6%	26.8%	6.8%
V	56.4%	26.2%	17.4%	16.6%	24.7%	15.1%
Cohorts						
1985-1995	28.3%	54.6%	23.7%	15.3%	6.2%	0.2%
1975-1985	31.4%	50.4%	22.1%	18.7%	8.6%	0.3%
1965-1975	37.7%	47.7%	18.2%	13.5%	15.9%	4.7%
1955-1965	40.4%	46.7%	16.4%	12.1%	16.4%	8.5%
Age						
20-30	32.4%	52.6%	18.5%	13.8%	10.3%	4.8%
30-40	40.8%	49.0%	11.1%	9.8%	13.2%	16.9%
40-50	41.0%	50.6%	9.6%	7.6%	10.2%	22.1%
50-60	41.1%	50.7%	9.2%	7.6%	9.8%	22.8%

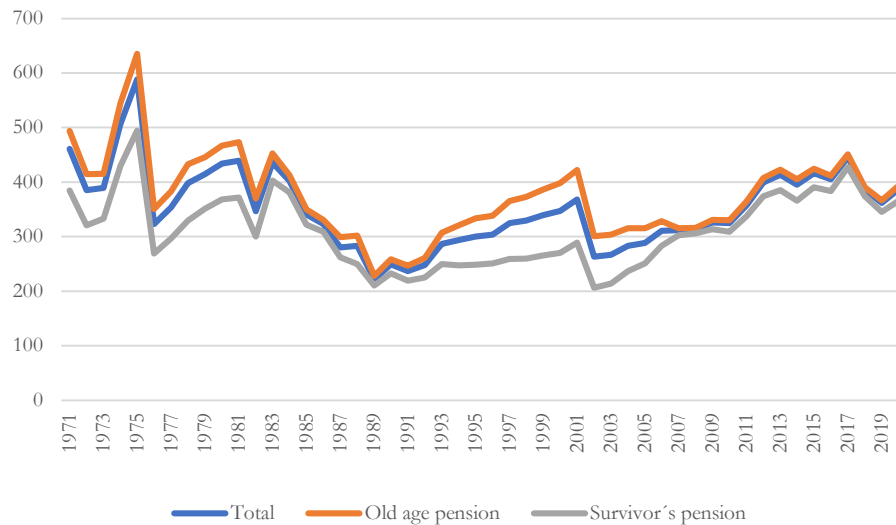
Source: Author's own elaboration based on Labor Histories Database, Ministry of Labor and Social Security

2.2 Adequacy

In Argentina, the combined effect of having different social security systems operating in parallel, plus the volatility in the value of the national currency make it difficult to present a time series that clearly reflects the trends in benefits. Figure 1.5 shows the value of average benefits of the national system, pointing the difference between retirement benefits and survivors' pensions. Notably, there are some dramatic peaks in the series resulting from monetary instability periods (especially in 1975 and 2002), but the trend seems to decline in the value of benefits between the early 70s and late 80s, with a recovery in the 90s; after the fall due to the 2001-2002 crisis there is a more stable situation between 2003 and 2008, and a sustained rebound up until 2013 when values became stable once again. Finally, the series ends with high volatility in recent years, as a result of inflation, change and counterchange of the value adjustment mechanism.



Figure 1.5 - Average pension benefit in the national system (years 1971-2020)
- constant in 1997 pesos -



Source: Author's own elaboration based on Social Security Report – ANSES and INDEC.

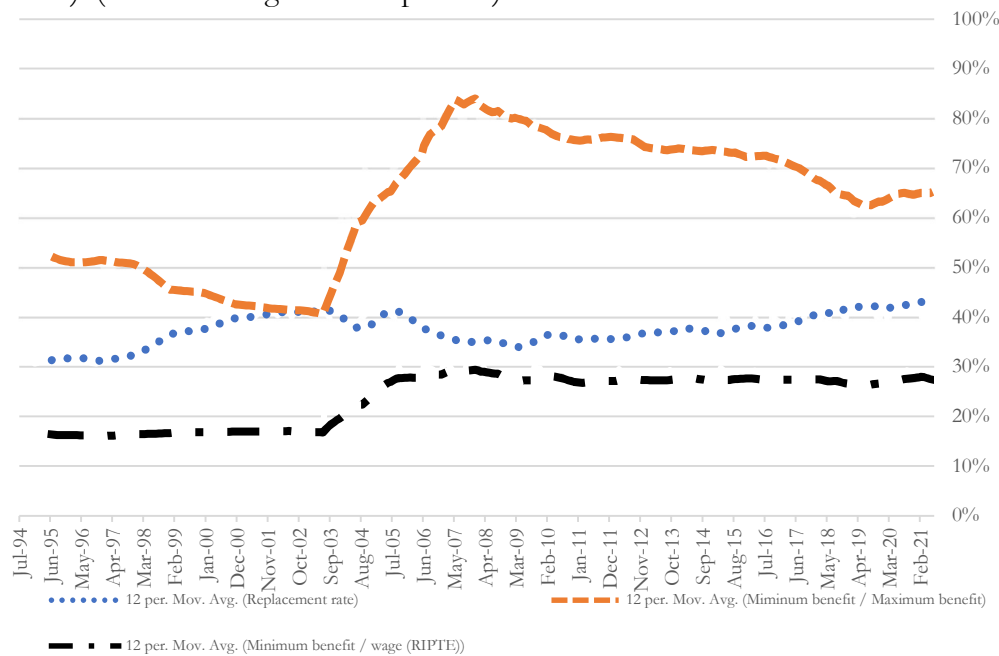
Changes in the trends observed are due to modifications in regulations over time. The rapid growth of pension amounts observed between 2008 and 2013 (when pensions increased by 43% in real terms) and their later stabilization, were caused by the application of automatic benefit adjustment mechanisms. This benefit indexation formula (*fórmula de movilidad*) combines the increase in salaries and the collection of revenues which, due to its design, generated a highly pro-cyclical mechanism. By the end of 2017, a reform was introduced whereby the benefit indexation started to take into consideration the weighted variability of inflation (70%) and the salaries of the formal economy (30%). Later on, in December 2019 the Social Solidarity and Productive Reactivation Act was passed; in its article 55, the law suspended the application of the pension indexation. During its suspension, the Executive Branch established, in a discretionary manner, a quarterly increase of the pension amounts corresponding to the general regime while a commission integrated by representatives from the Ministry of Economy, Ministry of Labor, Employment and Social Security and members of the different commissions of the National Congress, was appointed to propose a new pension indexation law. Finally, in December 2020 Act N°27609 was passed and a new benefit indexation formula was established. This mechanism adjusts benefits on a quarterly basis, taking into account a 50% variability of formal salaries and 50% in terms of ANSES revenues.

Inflation, fiscal deficit, and the relative burden of social security spending have pushed pension indexation towards the center of policy and macroeconomic debate, breaking away from its role within the group of parameters that govern the triad of coverage-adequacy-sustainability. The real value of the average pension amount has been increased, in real terms, by almost 25% between 1994 and 2020, with a dramatic fall in 2002. Despite the fact that the increased purchasing power of pensions was accompanied by higher salary levels of formal workers, this increased purchasing power was slightly lower and caused an increase in the replacement rate.



In the course of the last three decades, the replacement rate⁷ reached its historic high by mid-2020, when the average pension amount accounted for 46% of the average salaries in the formal sector (Figure 1.6). This historic high was reached in the course of the COVID-19 pandemic and social mobility restrictions. This phenomenon explains the fall of the purchasing power of formal salaries. The level reached by the replacement rate of the pension amount in 2020 is even higher than the levels for 2001 and 2005, when this indicator reached 42%, on both occasions. On the other hand, the historic minimum of this series is observed in the second half of the 90s when the pension amount merely exceeded 30% of the average salary.

Figure 1.6 - Replacement rate and salary versus minimum/average pension amounts ratios (years 1994-2021). (Mobile average over 12 periods)



Source: Author’s own elaboration based on Social Security Report – ANSES and INDEC.

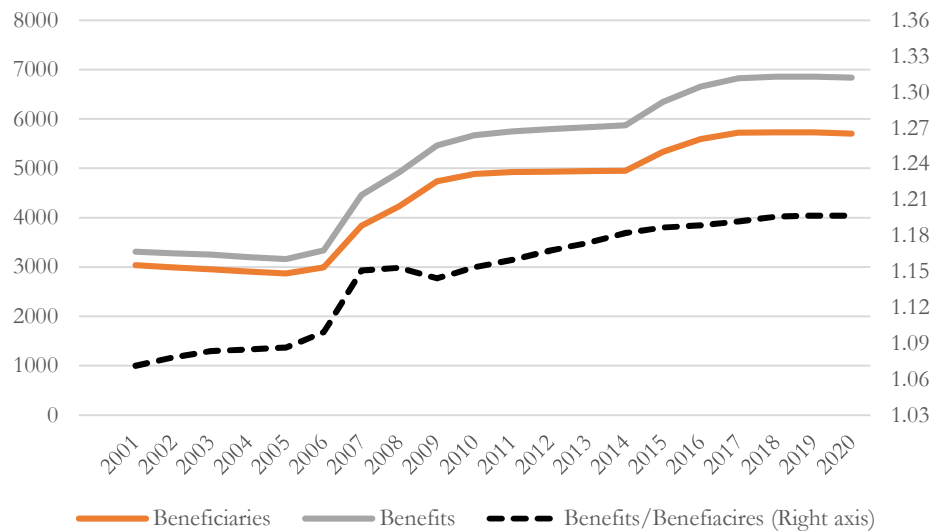
Not all benefits paid by the pension system in the country are adjusted according to the pension indexation mechanism in force and this limits the capacity to estimate the real adequacy of the system. On the one hand, benefits paid and adjusted automatically only represent one part of the total social security spending of the country, as multiple systems, regimes and benefits coexist which are not directly affected by these values. For example, a change in the value of benefits paid by the provinces to their retired civil servants will not be reflected in Figure 1.5; however, it will have an impact on the average income of retirees in Argentina. Similarly, different regulations allow one person to be entitled to more than one benefit (both in the case of two or more pensions if the individual generated entitlements under different systems, as could be the case when combining a retirement benefit plus

⁷ Estimated here as the quotient between the average pension amount of the general scheme and the average salary of formal employees. RIPTE is used as a proxy of the evolution of formal salaries. This indicator estimates the average salaries of workers registered (either in SIJP or SIPA, according to sworn statements by their employers, submitted monthly to the AFIP or Federal Tax Authority) during 12 consecutive months.



a survivors' pension). The necessary information to analyze these effects in more detail is scarce. In the case of SIPA, the number of benefits vis-à-vis the number of beneficiaries increased in around 10 percentage points between 2004 and 2020, pointing to the fact that the number of persons receiving more than one benefit might have increased in that same proportion (Figure 1.7).

Figure 1.7 - Benefits and beneficiaries of the national system (years 2001-2020)



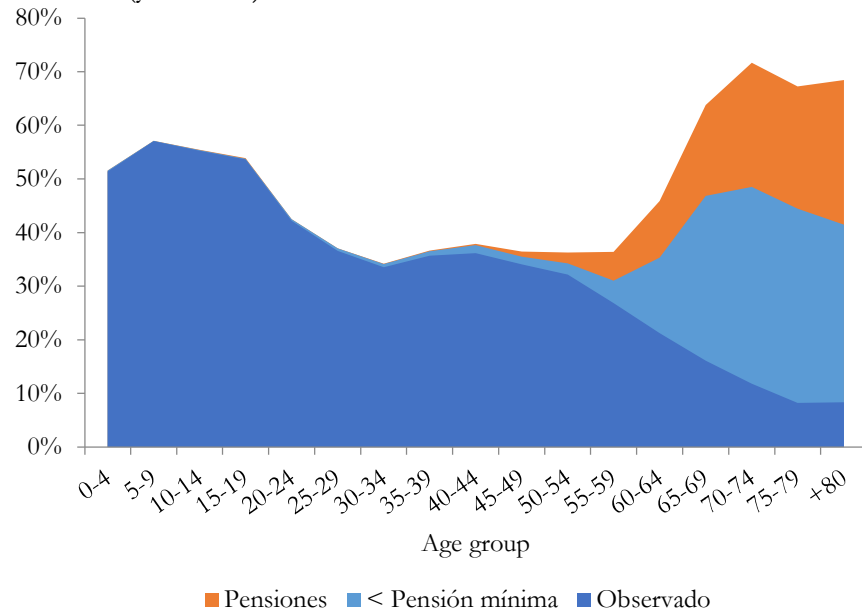
Source: Social Security Report – ANSES

The implementation of the Social Security Moratorium not only allowed many older adults to receive a benefit, but also helped many of them to access double benefits. This hike in the benefit/beneficiaries ratio that is observed between 2005 and 2007 is noteworthy. Up until 2005, the number of benefits granted (retirement and pensions) exceeded the number of beneficiaries only by 10%. From the moment the Social Security Moratorium was implemented, this ratio more than doubled and kept growing over the years. That is, the pace at which benefits grew was greater than the growth pace of beneficiaries. This phenomenon is explained by the fact that the moratorium granted a possibility to a large number of individuals to access their own pensions, even though they did not meet eligibility requirements but were already receiving a survivors' pension after the decease of their spouses.

With the expansion of coverage and the automatic updating of benefits, the Argentine pension system played a role of ever-growing importance as an instrument to alleviate poverty, particularly in the case of the elderly. Initiatives implemented over the past fifteen years have resulted in alleviating poverty incidence levels, among individuals aged 65 and over, that are well under the average values of the society (Figure 1.8).



Figure 1.8 - Percentage of persons in poor households, by age groups, before and after pension transfers (year 2020)



Source: Author's own elaboration based on household surveys EPH, INDEC.

In 2020 poverty affected 37% of the population; however, without transfers from the social security system it would have affected 46.8% of the population, with its hardest impact on older adults. In fact, the incidence of poverty among the older adults is of about 11% in average, while this percentage would rise to approximately 67.8% if there were no transfers from the pension system.

2.3 Sustainability

The achievements of the pension system in terms of coverage, adequacy and impact on poverty incidence brought about some effects on costs incurred. In 2020, Argentina allocated almost an 11.8% of its GDP to fund pension benefits in the different modalities and ranked among the countries with the highest spending worldwide.⁸ The evolution of spending can directly relate to the various policies implemented. In this regard, over the last 25 years we can observe six very clearly defined periods and changes in the trends (Figure 1.9):

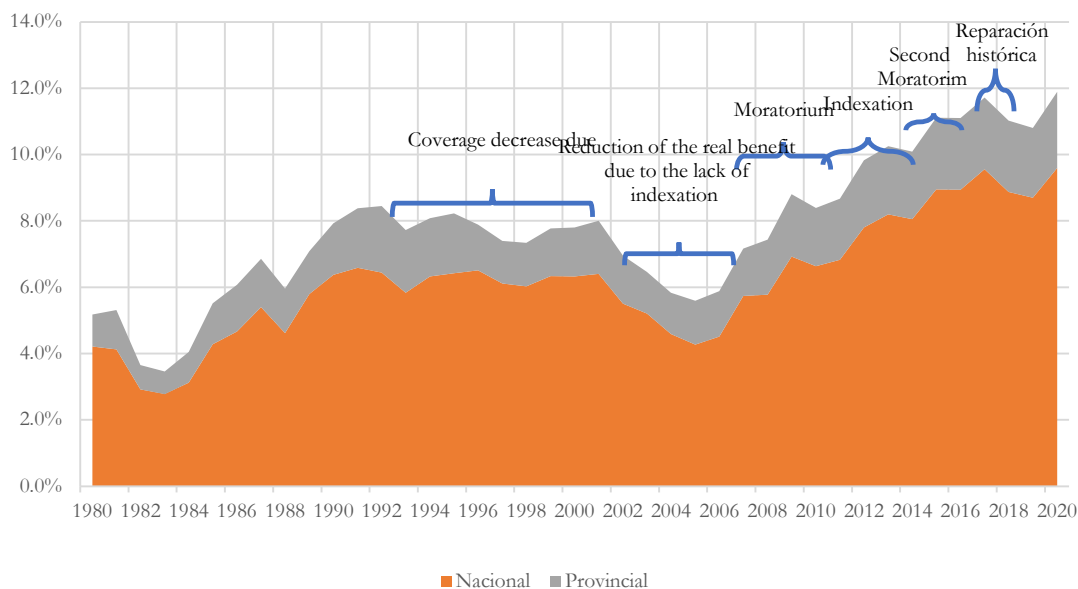
1. Between 1994 and 2000: a stable trend with a slight drop as a result of a reduction in coverage, as stricter eligibility requirements were implemented.
2. Between 2001 and 2004: a sharp fall of actual spending associated with the lack of indexation (except the minimum) in a context of inflation.
3. Between 2006 and 2009: rapid increase in costs due to a rise in the number of beneficiaries after the implementation of the Social Security Inclusion Program (Moratorium).

⁸ This number includes 1% of the GDP that goes to payment of non-contributory pensions (such as mothers with seven or more children, Falkland Islands (Malvinas) War veterans; disability pensions and other smaller groups).



4. Between 2008 and 2012: spending increases due to the application of the indexation scheme relative to Law N°26417, within a context of economic growth and further volatility following the economic cycle.
5. In 2017, the *Ley de Reparación Histórica* (Reconciliation Act) allows for an increase in pension benefits to compensate the lack of pension indexation until 2008.
6. In 2018 there is another fall in actual spending after the implementation of the new pension indexation scheme, in a context of accelerated inflation and drop of actual wages.

Figure 1.9 - Public spending in retirement and pension benefits, by level of government (years 1980-2020)
(in % of GDP)

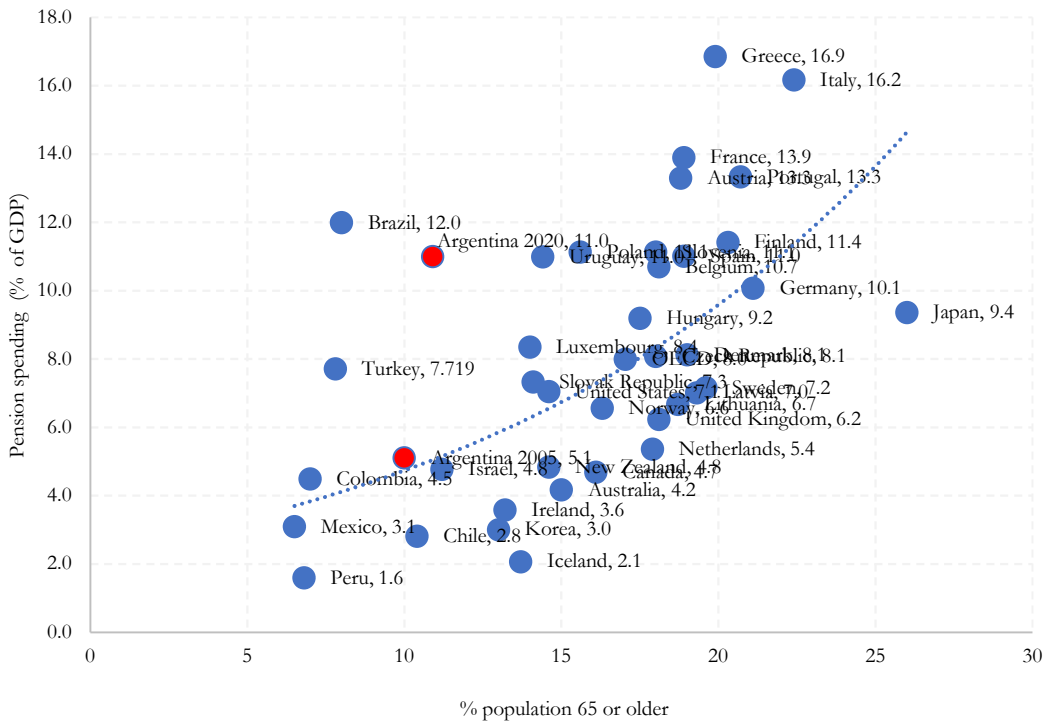


Source: Author's own elaboration based on data from the Ministry of Public Economy and Finance, Economic Policy Bureau; Savings-Investment account of ANSES; INDEC.

Worth noticing in this process is the fact that changes at the aggregate level of spending have almost no connection with the demographic trends, the effect of which is slower and somehow covered by the volatility of short-term regulations. In Argentina, public spending on pensions is similar to that of developed countries where population aging is considerably higher. In fact, with 12% of its population over the age of 65, Argentina's spending on pensions is similar to that of countries like Japan, Germany, or Finland, where the share of older adults' population almost doubles (26%, 21%, and 20%, respectively) (Figure 1.10).



Figure 1.10 - Public spending on pensions and percentage of population over the age of 65 (year 2020)



Source: Author’s own elaboration based on IMF GFS, Ministry of Economy ad INDEC.

At present, almost half of ANSES’ spending on pensions is covered by funding from general revenues. For many decades now, funding of the pension system complements its own contributory resources with the support of funds from general revenues. After transitioning a natural period of “initial surplus” between the 40s and 60s, the pension system arrived at a virtual equilibrium in the early 70s (Cetrángolo and Grushka, 2004). Already by the late 70s, the system started to reveal growing deficits, resulting not only from its own maturity, but also from the weakness of the contributions density. In the first place, the deterioration of the labor market itself, alongside the recurrent macroeconomic crises, affected the volume and stability of the formal labor market and, in addition, its capacity to contribute to the system. In the second place, the recurrent use (i.e., reduction) of the social security contribution rate as a tool to alleviate the loss of competitiveness (i.e., “fiscal devaluation”) generated by the subsequent overvaluation schemes, eroded the density of contributions. The sum of all these factors generated the need to supplement contributory financing with funding from general revenues of the Treasury.

One structural concern is the financial sustainability of the system in a context of population aging. On this topic, different authors have pointed to the potential rise of spending on pensions in a variety of scenarios due to the increase in the older adults dependency ratio (Grushka 2016; Rofman and Apella, 2014; inter alia). Pay-as-you-go systems seek to maintain the usual financial balance (Equation



3). Thus, contributions by active workers today are directed to pay benefits to the passive population. The first of these concepts depends on some variables that are exogenous to those responsible for social security policy, such as the number of workers registered in the economy ($L \times f$), where L and f represent the number of workers and the percentage of formal workers, respectively, the average wage (w), and the contribution rate (c) which is part of the system's design. In terms of disbursements, the latter depend not only on the number of beneficiaries (B), but also on the salary for which the initial pension amount is calculated (w) and the replacement rate or adequacy (r).

$$L \times f \times w \times c = r \times w \times B \quad (3)$$

Social security systems based on pay-as-you-go regimes in the long run suffer from deficit pressures when the contributor-beneficiary ratio falls (*ceteris paribus*). When systems are created and are young, the number of contributors is considerably higher than that of beneficiaries, as the latter are much fewer. As the social security scheme matures, the number of elderly beneficiaries grows and the contributor-beneficiary ratio, that is to say, the pension support ratio, starts to decrease. Finally, and due to an aging population, the pressure on the pension support ratio increases, and the system naturally falls into a higher deficit.

In order to better understand the scope of this challenge, some simulations on the flow of revenue from contributions, spending and financial results of SIPA are presented below. Long-term projections are necessary to assess the system's reaction if confronted to expected changes in the economic, political and demographic conditions. This is not a forecast to "predict the future" but rather a means to evaluate long-term outlooks for the system, given certain reasonable hypotheses on the evolution of determinant variables. Moreover, this exercise allows to evaluate the impact of alternative hypotheses and/or parametric changes that are often present in public debate.⁹

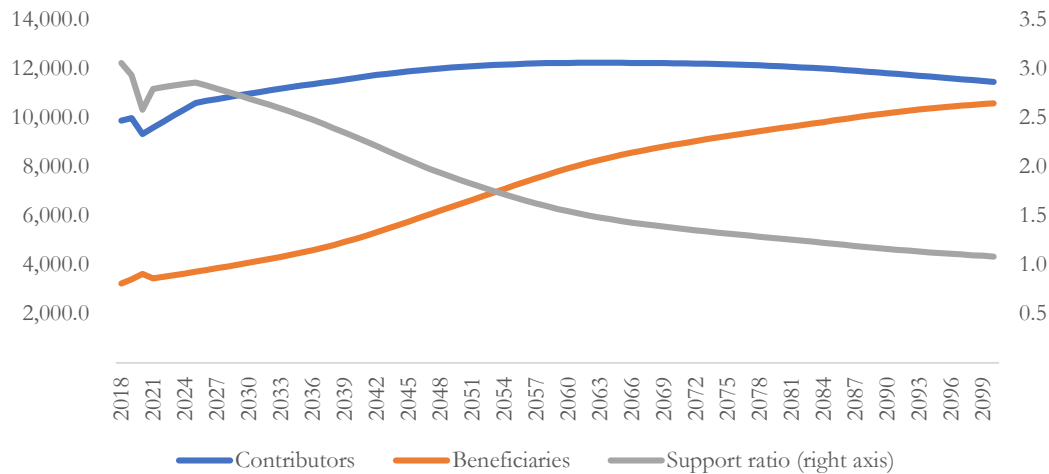
In the long run, the support ratio of the pension system would show a declining trend, going from 3 contributors for every beneficiary in 2020 to 1.8 in 2050 and to 1 in 2100. This result is typical of the population aging process the country is experiencing, and this process not only implies a much higher participation of the elderly population but also a lower percentage of active population. According to current parameters, the number of beneficiaries in the SIPA contributory scheme would go from 3.4 million in 2021 to 6.5 million in 2040 and 10.5 million in 2100 (Figure 1.11), whereas the number of

⁹ In this exercise we used the PROST (Pension Reform Options Simulation Toolkit) model developed by the World Bank that has been used in more than 90 countries and provides a unified exercise methodology and an integrated analysis, incorporating elements relative to coverage, sustainability and sufficiency of benefits. Data and demographic assumptions required by the PROST model —fertility and mortality rates— were taken from calculations by the United Nations Population Division. Demographic information required by the program includes: initial population, by age and sex; simulation of fertility and mortality rates, by age and sex. Regarding the future evolution of some relevant macroeconomic variables, slightly optimistic assumptions were held: a long-term per capita GDP growth rate of 1.5%, an increase in productivity rate of 1%. All values are expressed in real terms. Finally, information relative to contributors, beneficiaries, labor income, benefit amount and rules of the game, was obtained from information published by ANSES through the Social Security Report. Chapter 6 presents information in greater methodological detail.



contributors would also show a growing trend, though of a smaller magnitude, up until the 2050s, when it would become relatively constant around 12 million.

Figure 1.11 - SIPA: Number of contributory beneficiaries, contributors and pension support ratio (year 2018-2100)



Source: Author's own estimation based on ANSES

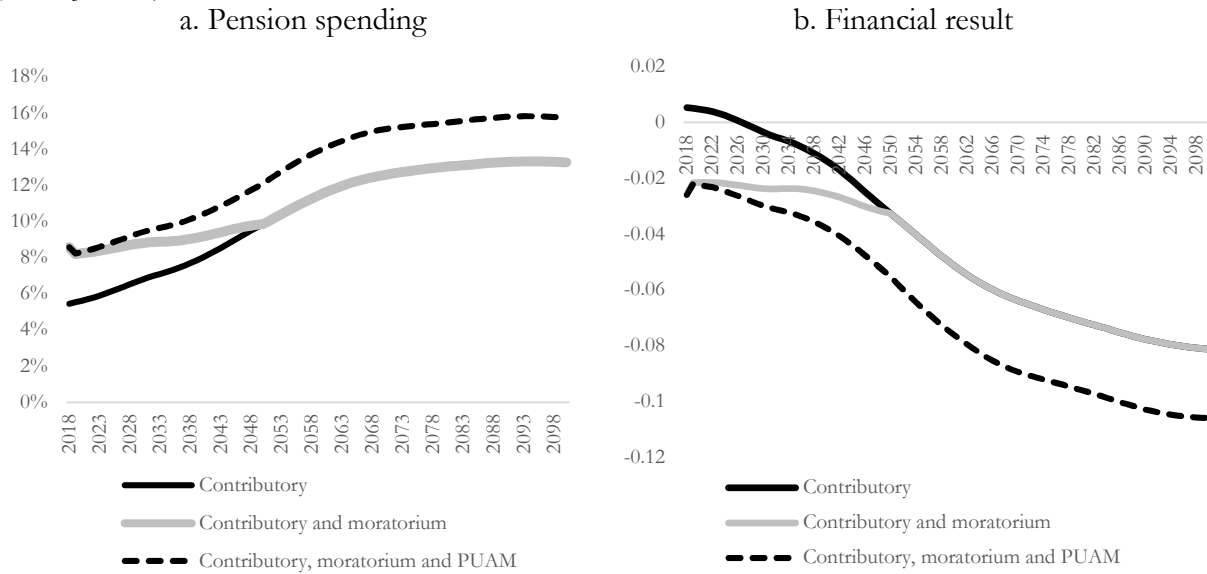
Consequently, the purely contributory social security spending managed by ANSES would show an upward trend, transitioning from 5.7% of GDP in 2021 to 10% in 2050 (Figure 1.12.a). If on top of these values we add payment corresponding to Moratorium benefits and those associated with the Universal Pensions for the Elderly, the social security spending would maintain the same trend, yet starting at a higher level: it would go from the current 8.5% to 12.1% in 2050 and could even soar to 15.7% by 2100.¹⁰

In this context, SIPA would maintain a balanced financial result until the end of the 2020s (Figure 1.12.b), however, from then on it would reveal a deficit. When looking at all the contributory and non-contributory programs (Moratorium and PUAM), SIPA experiences a deficit situation today and this deficit might increase as the country goes through its demographic transition.

¹⁰ It is worth remembering that, in addition, Argentina spends around 3% of its GDP in retirement and pension benefits through other programs that are not under the management of ANSES; therefore, the total projected spending should be increased in at least that value.



Figure 1.12 - SIPA – Spending on pensions and financial result (years 2018-2100) (as % of GDP)



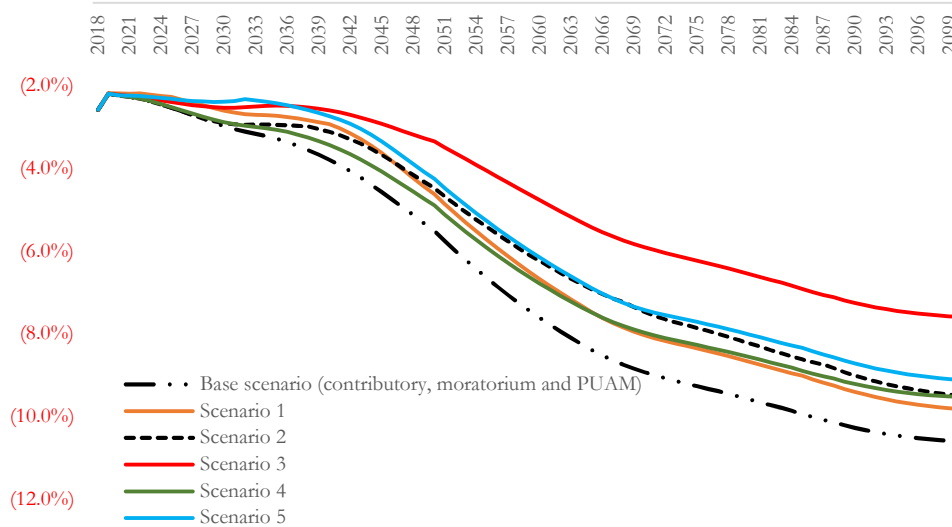
Source: Author’s own estimation based on ANSES

The need for resources from general revenues to finance the pension system that will keep growing in the future, poses specific challenges not only from the fiscal deficit point of view but also in terms of conflicting public policy preferences regarding the provision of funding to other public goods and services (education, health, infrastructure, etc.). As a consequence of future weaknesses in the sustainability of the pension system and a greater need to resort to funding from general revenues, some parametrical reform ideas that often appear around SIPA, which are directed to contain pension spending, are usually linked to some of the main rules in pension systems: demographic rules (like retirement age or the required periods of contribution to access the benefit, which affect the number of beneficiaries) and financial rules (the contribution rates in the case of resources and the expected benefits). The options that are typically considered include: i) setting an equal retirement age for both men and women; that is, 65 years of age; and ii) establishing an automatic mechanism to increase the age of retirement for both men and women, to accommodate increases in life expectancy.

Regarding the first policy option mentioned, scenario 1 in Figure 1.13, its potential impact on the level of financial deficit is not significant. In fact, the deficit might even be reduced by 1 percentage point annually.



Figure 1.13 - SIPA: SIPA financial result according to public policy scenario (years 2018-2100), as % of GDP



Source: Author's own estimation based on ANSES

Note: Scenario 1: retirement age being equal for both men and women in 2025

Scenario 2: increase of retirement age by 1 year every ten years up until 2068

Scenario 3: gradual elimination of survivors' pensions (2050 = 0)

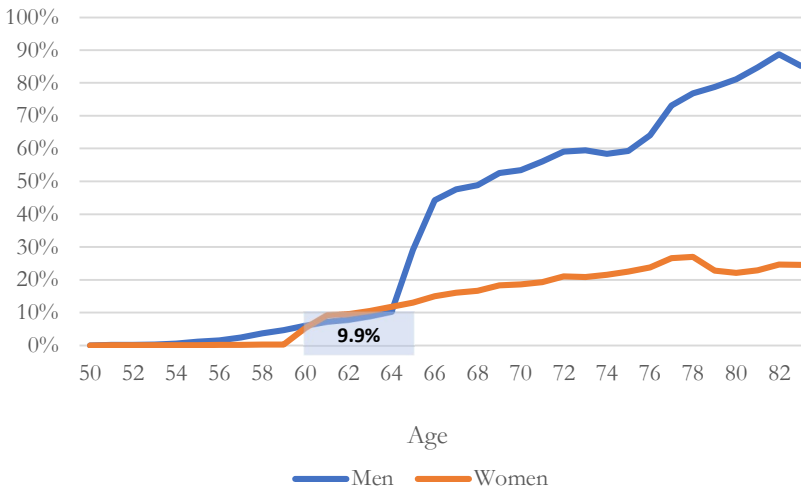
Scenario 4: all contributory salaries taken into account to calculate benefit

Scenario 5: scenario 4 + increase of retirement age

The very low impact that the increase in the statutory pensionable age of women until it equals that of men at the age of 65 would generate is associated to the low percentage of women between the ages of 60 and 64 that receive a contributory pension benefit from SIPA (Figure 1.14). In average, only 9.9% of women between 60 and 64 meet the eligibility requirements to access a contributory benefit. Therefore, any change in the parameters to modify the eligibility requirements in this population group would not produce a significant effect.



Figure 1.14 - Percentage of individuals receiving a contributory pension benefit from SIPA, by gender and age (year 2020)



Source: Author's own elaboration based on ANSES and INDEC.

Endogenizing life expectancy within the parameters of the system by increasing the statutory retirement age by one year every ten years would allow an annual reduction of the deficit of approximately 1.5 percentage points in terms of the GDP, as from the second half of this century. This scenario evaluates the impact of establishing a gradual increase in the retirement age of all workers, in line with the expected increases in life expectancy by the age of 65 (of approximately 1 year every 10 years). The idea underpinning this assumption is to endogenize post-retirement life expectancy into the pension system and keep it in the current levels so as to maintain the total benefits payment period relatively constant.

It would be interesting to evaluate a third scenario that entails certain political complexity and that is the gradual elimination of survivors' pensions. In labor markets where the distribution of household chores tends to be more equitable, the participation of women in the labor market grows incessantly and access to pension benefits is universal, the concept of survivors' pension somehow loses its original purpose. These benefits were created in a context where the distribution of household chores and the economic activity were clearly shaped according to the sex of the spouses. In case of death of the male spouse, the system granted a pension to the widow to compensate for the loss of income generated by the event. In a society where such duties are no longer so clearly differentiated, and in economies where the labor participation of women is growing, the risk would be covered by the entitlement to a retirement pension generated by each spouse.

The elimination of the pension benefit would have a significant impact on the total spending and, therefore, on the financial results of SIPA. The deficit may well be reduced up to 3 GDP percentage points when compared with the baseline scenario. Of course, this type of reform should take into



consideration some relevant exceptions (such as pension benefits received by surviving minors), and also the total income of the couple before the event,¹¹ yet the magnitude of the impact is quite clear.

In addition, two reform scenario simulations are presented that, apart from attempting to improve financial sustainability, seek to enhance access to the system: to take into account the average of all salaries throughout the labor history of the worker to calculate the benefit. Two alternative scenarios are simulated: scenario 4, which gradually includes all contributory salaries when calculating the pension benefit, and scenario 5, which results from combining scenario 4 and the increase in retirement age.

Combining these measures can help reduce the deficit, yet none of the scenarios described above make the system sustainable. The required rate of contribution to reach a balance must rapidly increase to 35%. Going beyond the issue of sustainability, it will be important to consider accessibility to the system (how many resources will be needed to cover the deficit under the different scenarios).

The system becomes fairer as the ratio between contributions and pensions increases. Scenario 4 is relevant, not only because it allows reducing the deficit, but also because it makes the system more accessible. As contributions are designed on the basis of all salaries, benefits could also be calculated on the basis of all annual salaries and not only on the basis of the last ten annual salaries, as is the case in the current system.

Calculating pensions according to a limited number of years might lead to unfair benefits, abuse or even perverse incentives in terms of economic behavior. For example, some individuals may declare higher salaries only during the last 10 years. Likewise, basing pensions on a limited number of years tends to be regressive, as workers whose last salaries are substantially over their average working life salaries are more likely to receive higher benefits. In consequence, this group of workers/beneficiaries obtains a very high internal rate of return from the system.

Many countries have reformed this measure, in particular OECD countries, where the majority calculate pensions according to all years of contribution. Improvements in administrative information systems have facilitated the change from taking into account the final salaries at the end of the working life to taking into account the average of all labor life salaries, in order to calculate pension benefits.

With the exception of specific measures to combat short-term inequity, the outcomes of any reform that implies changing the rules of the game will not materialize in the short term, but rather have an impact in subsequent decades. The steady expansion of spending on pensions without an adequate actuarial programming in the 2000s often considers the containment of pension spending as a key component in any type of medium-term fiscal program. However, reforming the system parameters would not only lack an immediate effect in the financial results but would, in addition, increase the level of spending by incentivizing the retirement of workers that would have otherwise wished to remain in the labor market. In any case, to initiate gradual and orderly processes in terms of feasible mid-term reforms may provide short term benefits by building investors' trust and improving access to financing.

¹¹ The scenario hereby described is extreme. A less drastic alternative that could also be taken into account is the partial elimination of the survivors' benefit by taking into account the total household income before the event, as the full elimination of the pension could leave the claimant spouse in a situation of poverty. For example, if the wife receives a pension of \$100 and the husband one that amounts to \$1000, being these benefits the result of their labor record, eliminating the survivors' pension upon the husband's death would imply a very sharp reduction in the household income and the surviving spouse.



The Argentine pension system is at a crossroads that requires redefinition, both in terms of its objective and funding, as well as in taking into consideration all difficulties in addition to financial sustainability. Funding pension benefits is the responsibility of the State and can be satisfied in the same way as with other public policy components (that is, through different types of taxes or debt). The challenge lies in considering, on the one hand, whether the necessary taxes or indebtedness to fund certain levels of spending are acceptable in terms of their impact on other sectors of the economy and, on the other, even when it is possible to generate such resources, there may be other public policies with similar or even higher urgencies or priorities. Of course, the answers to these questions are not merely technical but depend on policy preferences and should therefore be decided in that context.

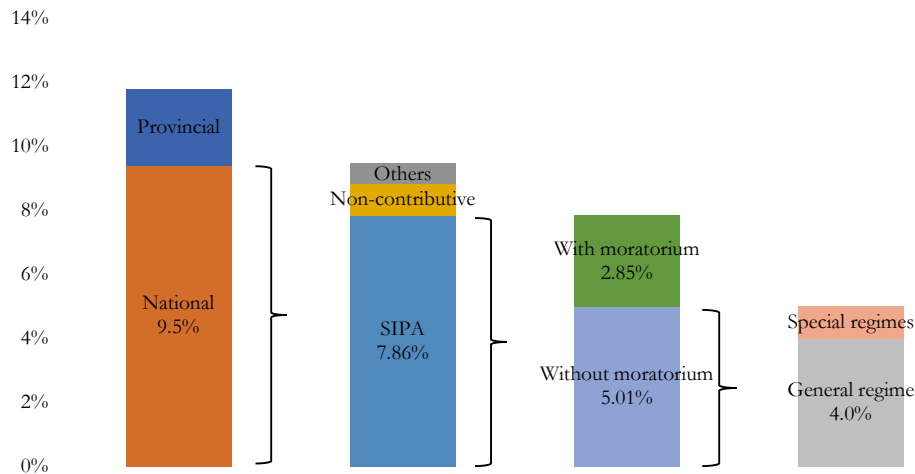
2.4 Explicit and implicit inequities

There is one characteristic that affects across the three dimensions we have analyzed, the resulting fragmentation and inequity. The expression “Argentine pension system” is mostly used when referring to the retirement and pension regime known as SIPA, managed by ANSES pursuant to Law 24241 and subsequent amendments. This association is justified due to historical reasons, as SIPA includes the main schemes created throughout the 20th century, and to the fact that it is responsible for the largest share of pension spending and coverage in the country. However, there are many other schemes and institutions that operate in parallel to SIPA, thus giving a high level of fragmentation to the system as a whole. In addition, the National Constitution grants the provinces the right to organize pension schemes for provincial and municipal civil servants. All the provinces created these schemes during the last century, and their funding and access regulations differ from the national ones and have varied fiscal impacts. Between 1994 and 1996 the national government accepted the transfer of provincial pension regimes from eleven jurisdictions: Catamarca, Jujuy, La Rioja, Mendoza, Salta, San Juan, San Luis, Santiago del Estero, Río Negro, Tucumán and the City of Buenos Aires. Nevertheless, there are still thirteen provinces that maintain their own pension schemes for provincial civil servants. On the other hand, at the national level there are several special retirement and pension schemes for the Army and law-enforcement forces, as well as special regimes for university faculty and teachers in general, scientific researchers, magistrates, foreign services staff, among others) that, despite operating within the SIPA framework, maintain different parameters when compared to the general regime.

Institutional fragmentation and current regulations, apart from creating equity issues, affect reforms that might have had a significant impact but are, in fact, highly limited. Figure 1.15 shows the composition of the total pension spending in Argentina in 2020. According to numbers published by the Ministry of Economy, the consolidated spending accounted for 11.8% of the GDP in 2020. This includes 2.3% of the GDP corresponding to the provincial regimes, 1% to non-contributory pensions and 0.6% to the Army and law-enforcement forces scheme, so SIPA’s spending was of approximately 7.9% of the GDP. Out of this figure, 3% was originated in moratorium benefits and 1% in special regimes (teachers, researchers, magistrates, etc.). Consequently, only 4% of the GDP was geared to pay retirement benefits in the general regime of SIPA in Argentina (this percentage includes ordinary retirements and disability pensions, and it is not possible to discriminate spending in each case).



Figure 1.15 - Public spending on pensions, by system and benefit types, as percentage of the GDP in 2020.

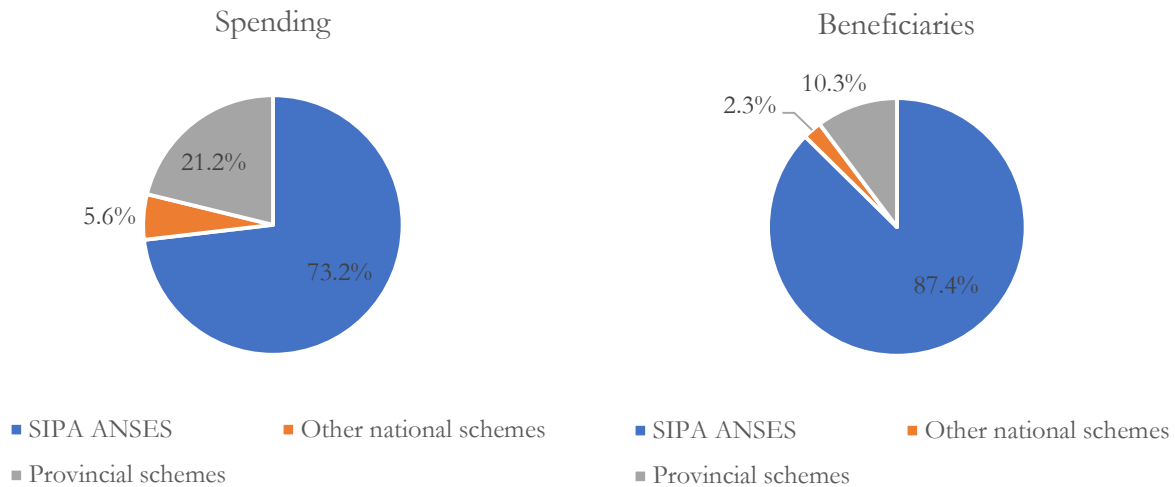


Source: Author's own elaboration based on data from the Ministry of Economy and ANSES.

In Argentina there are three large groups of pension regimes, according to the scope of their administration: SIPA, the special and differential schemes managed by the National Government and the provincial regimes. Each of them has a specific scope, level of benefits and, consequently, different levels of spending, all of which point to the degree of fragmentation of the system. Figure 1.16 shows a first source of fragmentation in the system. While the main pillar, SIPA, that covers the totality of workers employed by the private sector, self-employed workers, civil servants working for the national government and civil servants in the provinces that transferred their provincial schemes to the national system, accounts for 73% of the total spending of the system, its share in the total benefits granted is higher, equivalent to 87.4%. In turn, the share of provincial regimes in the total pension spending accounted for 21.2% (2.31% of GDP), while the total benefits granted by these provincial regimes only accounted for 10.3% of the total.



Figure 1.16 - Vertical distribution of spending and benefits granted according to administration (year 2020)



Source: Author's own elaboration based on ANSES

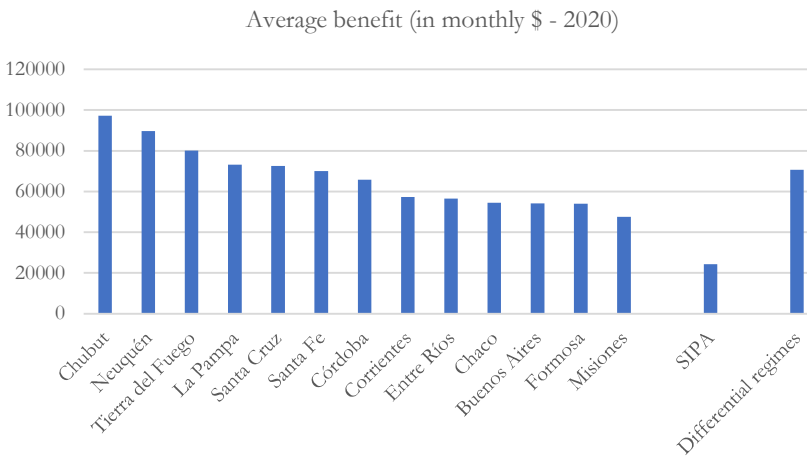
The rest of spending corresponds to other national schemes that account for 0.61% of the GDP, and implies a share of total spending of 5.6%, and with a population of beneficiaries reaching 2.3% of the universe. These schemes are traditionally called differential regimes and they provide insurance schemes for law-enforcement workers (Armed Forces, Federal Police, *Gendarmería* or Security Forces, and staff in correctional institutions). The creation of these regimes responded to the specificity of the tasks undertaken, which require very qualified skills in the different fields. Though there are many activities that require very specific skills that cannot be transferred, as is the case of professional sports, there are some sectors that could be granted certain types of differential treatment. This is the case of military activities and security forces, where age is a decisive factor for participation and where jobs available become scarce as individuals age. Accordingly, people who occupy these positions must retire when they grow older.¹²

The greater generosity of provincial, special and differential regimes explains their higher relative spending compared to their share in the number of beneficiaries. As the rules of the game in the provincial regimes (regarding retirement age and periods of contribution) have been gradually homogenized in the course of the last fifteen years, the promised replacement ratios are much higher than those of SIPA (Figure 1.17).

¹² The case of military staff is well known, but similar activities are performed by ballet dancers, professional football players or rock musicians (with very few exceptions like the Rolling Stones).



Figure 1.17 - Average monthly benefit according to province and national regime (year 2020)



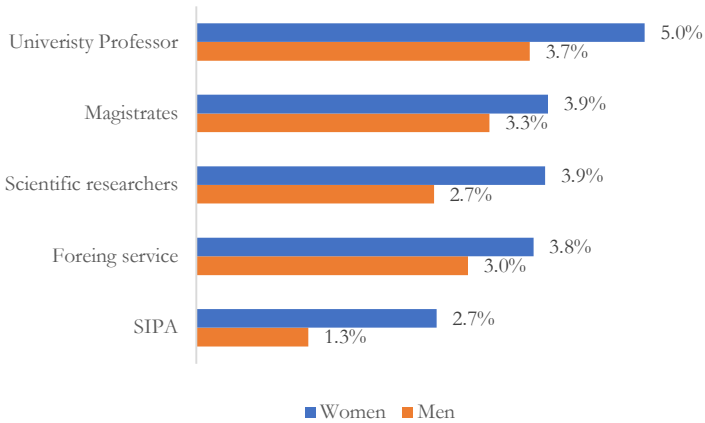
Source: Author's own elaboration based on ANSES

Fragmentation, however, does not occur only across systems but also within the main pillar itself. It is possible to observe different exception regimes within SIPA that are typically called “special” and that relate to university professors, non-university teachers, scientific researchers, magistrates, foreign service staff, among others. These exceptions are usually connected to particularly difficult or physically exacting conditions in certain jobs that would result in, for example, “premature aging” of the worker. Also included in this category are jobs which, due to some special “merit”, justify having different access to pension benefits under the form of award or compensation, as is the case with former presidents, judges, and Olympic medalists, among others.

This type of regime grants a generosity level that can be twice the one provided by the general regime. According to an estimate by Bertín (2019), the internal rate of return (IRR) generated by each scheme for its beneficiaries is very heterogeneous (Figure 1.18). University professors generate an IRR of 5% and 3.7% in the case of women and men, respectively, while this indicator accounts for 2.7% for women and 1.3% for men in the general scheme.



Figure 1.18 - Internal rate of return of the national special pension regimes and SIPA



Source: Bertín (2019).

Differences originate in the amounts of benefits granted. The special pension regimes have minimum retirement ages and contribution requirements similar to those of the general regime, but the amounts of the pension benefits can be much higher due to two factors. On the one hand, they establish higher initial replacement rates, as the basic salary on which they calculate the pension benefit tends to be the highest in the labor record. For example, the base salary used to calculate the retirement amounts for the staff in the Foreign Service of the Nation corresponds to the highest hierarchical position. In the case of university faculty, it is calculated on the basis of the salary at the time they stop working. On the other hand, indexation rules may also differ as there is an automatic adjustment when the salaries of active workers are raised.

In that context, it is necessary to follow a strategy aimed at harmonizing the rules across different schemes, eliminating inequities and management problems, so as to build a model where the core of the system is the beneficiary, and not his/her occupation. This would allow approaching a more equitable pension model and, at the same time, a more sustainable model. Having said so, there may be activities that still enjoy a differential retirement age and are not more dangerous than others that follow the general regime parameters. Therefore, the existence of special indexation regimes undermines the idea of harmonization. Going beyond calculation of pension indexation or the age to access pension benefits, the sole existence of special pension regimes poses multiple challenges from an equity perspective.

3. A reform proposal that is becoming less and less Bismarckian

Though the Argentine pension system has made some progress in terms of coverage and adequacy of benefits paid, it still confronts many difficulties. Some are relevant in the short term, relating to coverage and equity of the system, while other longer-term difficulties refer to financial and economic sustainability.



The issue of coverage should be analyzed, though not through the traditional lens that identifies whether a worker is eligible or not to access a contributory benefit, but rather through the observation of the number of contributions the worker has made during his/her working life. Addressing the coverage issue by incorporating this dimension would not only allow for improving equity in terms of contributions and benefits, but also to generate some appropriate incentives to extend the labor life of older adults, which has clear implications on the degree of difficulty in the long run, and on the financial and economic sustainability.

The coexistence of different pension schemes is a clear inequity generator within the national system, where provincial schemes and special and differential regimes coexist, each of them with its own rules and, in particular, with a benefit generosity ratio that is higher. Moving towards a strategy that aims to harmonize the rules across different schemes, eliminate inequities and management issues, and build a model that focuses on the beneficiary -and not on the benefit- as the center of the system, would not only bring the model closer to a more equitable system but at the same time, a more sustainable one.

Concern about the growing need for general revenues, both to fund SIPA and provincial regimes, is once again in the limelight of current debates. Expansion of coverage, together with the demographic transition towards an aging population structure, reveal the need of extraordinary resources to keep promises and honor commitments.

The following are some reform ideas aimed at contributing to an informed debate on an eventual pension reform. Far from modifying some parameters, the proposed approach seeks to redefine the objectives of the system and suggest instruments that help attain them.

3.1 Actions to minimize fragmentation and inequity

First, and in order to minimize inequities stemming from the coexistence of multiple regimes, it is possible to identify two areas where public policy can engage: actions directed to provincial schemes and actions relative to special and differential regimes.

1. From the viewpoint of provincial schemes, though some progress has been achieved in harmonizing the parameters that rule subnational pension systems, several differences persist and, therefore, provincial schemes grant more generous benefits than the national regime.

Full harmonization of parameters becomes a relevant dimension in the social security policy of the country, as workers in the provincial public sector risk the loss of income in old age, similar to those covered by SIPA and, therefore, from an equity perspective, differences are not justified in the actual value of retirement and pension amounts received in these two regimes. This becomes more relevant in a context where the national government grants resource transfers to the provinces in order to fund imbalances in the special schemes.

An alternative proposed since 2016 seemed to facilitate reaching a second-best balance: the national government funds the pension deficit of the special schemes that have not been transferred, but only the part that results after applying the SIPA parameters. Though under this process equity is achieved in the transfer of national public resources, this does not eliminate inequity in the generosity of benefits within the system.

A better alternative would be to implement the transfer of the provincial regimes that are still not transferred into the orbit of SIPA. In this case, the provinces would have to transfer both



their resources as well as their payment commitments to ANSES, and the latter would be in charge of dealing with any associated deficits.

2. Regarding special and differential regimes, their existence in multiple forms does not respond to a comprehensive strategy, built on the basis of a thorough analysis of the conditions of different groups of workers so as to identify those with more vulnerabilities or merits, but rather to the specific success of different stakeholders which have managed to have their respective regimes approved over the years.
3. To classify economic activities or occupations on the basis of their risk exposure and, above all, according to “merit”, is complex, and solving such problems from the pension system does not seem to be the more equitable mechanism. On the one hand, in order to classify occupations or activities according to health risks it is necessary to identify the risks workers are exposed to and define policies that protect workers. If such risks and/or merits could be identified during the active life of workers, using insurance schemes –such as health insurance or labor risk insurance, either for individuals or groups of workers– would provide much better protection to the workers.

In the case of special regimes, due to aging in the activities, another possibility would be to replace such regimes with a scheme that includes individually defined benefits, that evaluates workers’ health conditions and, on the basis of such evaluation, provide temporary benefits that allow workers to abandon the activity earlier than with the general regime, if affected by the tasks carried out. Thus, a worker whose labor capacity or life expectancy is in fact reduced by his/her specific activity, can request these benefits at any point in time, and granting such benefits would depend on the existence of confirmed effects on his/her health. These benefits could be for life, as is the case at present, or temporary, until the worker reaches the statutory retirement age of the general regime. The difference between using the disability retirement scheme and the labor risk scheme implies defining who will be responsible for the cost of financing the benefits: in the first case, it will be the society as a whole, through the social security system; while in the second case, it will be the employers, and incentives could be generated for them to reduce factors causing premature aging.

4. Regarding special regimes, those cases where the rationale is merely based on merit, as is the case with former authorities, researchers, university faculty and others, it is difficult to make a case for them when public policy seeks equity and efficiency. Within this framework, there seems to be no reason why certain groups of workers receive higher pension benefits or enjoy more generous pension indexation regimes compared with the rest of the system’s beneficiaries. Merits for serving society should not be acknowledged through promises of future monetary payments but rather through public demonstrations of appreciation and, when applicable, economic compensations during service.

3.2 Redesigning a multi-pillar system

Given the composition of the current social security system and its multiple objectives, and in order to consolidate all programs into one single scheme, redesigning the system on the basis of a two-pillar (or maybe a three-pillar) model is suggested. This multi-pillar scheme must respond to two very well-



defined objectives: one contributory objective associated with that of income substitution and a non-contributory one related to the protection against the risk of ending up in a situation of poverty.

Pay-as-you-go systems should maintain a current financial balance in terms of the parameters that define their revenues and spending. The “purely contributory” component of the Argentine pension system, that is to say, the one that does not include payment of benefits through a moratorium nor through PUAM, inevitably moves towards a deficit situation as –due to the reduction of the pension support ratio caused by population aging and the maturity of the system itself– disbursements to pay for contributory retirement and pension benefits will, in the medium term, exceed revenues from contributions.

Using revenues from the National Treasury to fund a contributory pension scheme creates a horizontal inequity problem. This happens because the population that is inactive, unemployed or in the informal labor market contributes –for example, when paying their taxes (i.e., VAT when conducting commercial transactions) – to funding the benefits of insured workers, without generating their own future pension entitlements. This rationale justifies the intervention of the State to grant pension benefits (semi- or non-contributory), to acknowledge the indirect contribution of both informal and unemployed workers, by awarding them a basic old age pension that gives them decent livelihoods and reduces the risk of poverty.

The current configuration of SIPA is similar to a two-pillar scheme. One pillar is contributory and based on a pay-as-you-go financial regime with defined benefits that provides coverage to formal workers that meet the total periods of contributions (though the benefits are not exactly proportional to the contributions). The second pillar is non-contributory (PUAM) and is directed to all the older adults who are not eligible for contributory benefits and is funded through contributions and general.

The natural trend of the system is toward a greater demand for resources from general revenues. The expected increase in the demand for resources from general revenues to fund a benefit directed to the elderly, both contributory and non-contributory, implies that the objective of preventing poverty situations will become more relevant in the future. In other words, if the largest share of funding for the system comes from general revenues, then the non-contributory benefits must become more important when defining priorities.

In view of this scenario, and in order to achieve higher horizontal equity and more clarity in the rules of the game, a two-pillar pension system is proposed (Diagram 1.1).¹³ This would imply a basic pillar, providing a universal benefit to all the older adults, regardless of their labor history, which ensures an income that will protect them against the risk of poverty. This also implies using some type of poverty indicator as reference when defining the benefit; for example, the value of the Total Basic Basket per adult equivalent.¹⁴

In addition, we suggest redesigning the second pillar, starting with a definition of a contributory benefit that is proportional to the density of contributions and salary of reference (based for example on a notional accounts regime); this mechanism could be an inclusive, as well as a sustainable, alternative from a fiscal standpoint. Given that labor records of the majority of workers include periods of

¹³ The question that comes up after this proposal relates to the cost that a system with these characteristics might imply. The level of spending brought about by this design would depend not only on the basic universal pension, but also on the replacement rate to be established according to the density of contributions.

¹⁴ The need to limit the target population of this non-contributory benefit could be discussed, and this could be done through some kind of focalization mechanism. However, the objective of this proposal is to present a rationale for a full reform scheme that could be used to inform debates.



informality and unemployment (often too long periods) so that in many cases they are not eligible to receive benefits, having duly paid their contributions to the system without receiving a benefit that corresponds to what they contributed.

Specifically, it is proposed to adopt a very simple benefit scheme, which defines a basic benefit of a universal nature, with values close to the current PUAM, and a variable benefit, proportional to the contributions made throughout the working life, updated and with an implicit interest rate, through an actuarial rule. The proposed mechanism seeks to adopt a more progressive scheme in the benefit calculation formula through three relevant modifications:

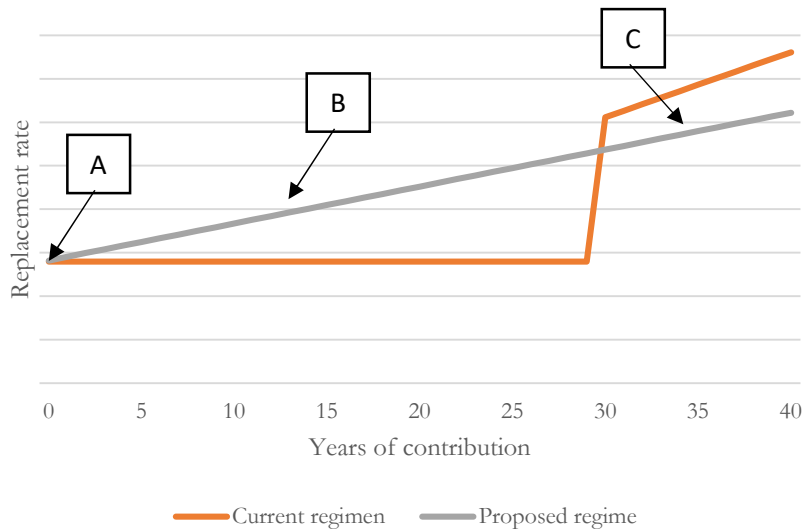
- The first is the adoption of the universal basic benefit, which implies generalizing the current access to PUAM for all older adults.
- The second is a modification in the calculation formula for defining proportional benefits. A proposed rule implies to consider all the contributions made throughout the work history, updating those contributions, assigning an implicit adjustment factor and an actuarial rule that allow determining a proportional benefit. The financial regime for the definition of such proportional benefits could be based on notional accounts similar to that used in countries such as Sweden or Latvia. Thus, a total amount of contributions made throughout life up to the time of retirement (updated) would be estimated, and an actuarial factor would be applied to that value (based on life expectancy at retirement age) to define the monthly benefit.
- The third modification involves enabling access to this proportional benefit for the entire population, with no minimum years of contribution requested.

The proposed reform of the current pension scheme is represented in Diagram 1.1:

- In the first place, the formalization of a zero pillar that grants treatment similar to the current one for those who do not have any year of contribution to the system. This group of workers would receive only the Basic Benefit equivalent to the current PUAM, indicated in Diagram 1 as point “A”;
- Additionally, an improvement of the expected assets is proposed for those who retire in the future with contributions, but without reaching the 30 year of contributions - who are currently only eligible for the PUAM and under this scheme would receive the Basic Benefit and the Proportional Benefit -, indicated in Diagram 1 as area “B”. In this way, this group of workers is recognized for the contributions made in the past; and
- Finally, under this new scheme and when considering the wages and contributions of the entire labor history and not only the last ten years, this design proposes a reduction (with a greater impact on the highest benefits) in the future benefits of those who retire with 30 or more years of contributions, since the combination of the basic and proportional benefit will generate a lower benefit than the one they would obtain under the current rules, indicated in Diagram 1 as area “C”.



Diagram 1.1. Beneficio universal más beneficio proporcional por contribuciones



Source: Author's own elaboration

With this type of rules and definition of benefits, enhanced horizontal equity could be achieved and incentives could be generated so that workers postpone their retirement from the labor market. This does not mean a statutory increase of their retirement age but rather to design a structure of incentives that provides flexibility to workers either to delay their retirement from the labor market or to facilitate the retirement of those who find it difficult to stay, in this case by considering the contribution density in the definition of the benefit.

However, discussions relative to potential changes or reforms to the pension system take place within a framework of high political tension, where stakeholders with opposing interests are confronted. This institutional challenge usually requires a long period of discussions until consensus is reached and then implementation takes place. The longer a reform is postponed, the higher the need to have it; therefore, creating opportunities for dialogue and agreement across the political sector, the private sector, trade unions and civil society is of utmost importance to consolidate a pension system that ensures the protection of the elderly in the medium and long terms, with reasonable levels of coverage, adequacy and financial sustainability. Creating a commission that involves all the above-mentioned stakeholders in the analysis and proposal of solutions is instrumental to promote dialogue and reach the required consensus.



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Annex 1. Indifference curves in the pension system

The total spending of a pay-as-you-go system is the result between the average benefit received by each individual and the number of individuals who are beneficiaries. From this, the share of GDP allocated to fund spending on pensions can be divided into two multiplicative components, as shown in equation (1).

$$\frac{PS_t}{GDP_t} = \frac{\frac{PS_t}{N_{+65,t}}}{\frac{GDP}{N_{15-64,t}}} * \frac{N_{+65,t}}{N_{15-64,t}} \tag{1}$$

Where:

PS_t represents the total pension spending at moment t

GDP_t is the gross domestic product in t

$N_{+65,t}$ identifies the number of individuals over the age of 65 in t

The total public spending on pensions expressed as a percentage of GDP is the product of two factors: one is economic and the other is demographic. The first one is represented by the average spending on each individual at retirement age (over 65). The second is the ratio between the size of the population at retirement age and the working age population.

In equation (1) the economic factor is represented by the first scalar unit. According to Miller *et al.* (2011), such factor is usually known as the pension benefit generosity ratio (BGR in the diagram), which expresses the generosity of average pension benefits in relation to GDP per adult individuals of working age. Standardization of GDP per adult person of working age is useful for international benchmarking of benefits. The second scalar unit $\frac{N_{+65,t}}{N_{15-64,t}}$ represents the older adults dependency ratio.

A higher benefit generosity does not necessarily imply a higher transfer per beneficiary. This variable reflects spending on pensions both in terms of the level of benefits and in terms of the system coverage, that is, the actual number of eligible individuals that have effective access to the program. For example, a higher BGR could be associated either to a higher benefit or a broader coverage, or both. Equation (2) illustrates this breakdown. In this equation, C_t represents the actual number of beneficiaries. As clearly shown in (2), BGR is equal to the average benefit per eligible person when coverage is universal, that is to say, equal to one.

$$\frac{PS_t}{GDP_t} = \frac{\frac{PS_t}{N_{+65,t}}}{\frac{GDP}{N_{15-64,t}}} * \frac{N_{+65,t}}{N_{15-64,t}} = \frac{\frac{PS_t}{C_t}}{\frac{GDP_t}{N_{15-64,t}}} * \frac{C_t}{N_{+65,t}} * \frac{N_{+65,t}}{N_{15-64,t}} \tag{2}$$



After demonstrating that BGR is the product of the average benefit expressed in terms of the average product per worker (approximation to the concept of replacement rate) and the level of pension coverage, for simplicity's sake it is convenient to go back to equation (1). Defining a level of pension spending as constant, it is possible to transfer terms in 1 and represent the relation between benefit generosity and the dependency ratio through a level curve (Diagram A.1.1). This curve indicates the level of spending as percentage of the GDP, which is assumed by the combination of BGR and the dependency ratio. While the demographic dependency ratio is a given exogenous variable, BGR is the public policy variable that can be defined on the basis of the former and the desired level of spending.

Diagram A.1.1. Indifference curves in the pension system

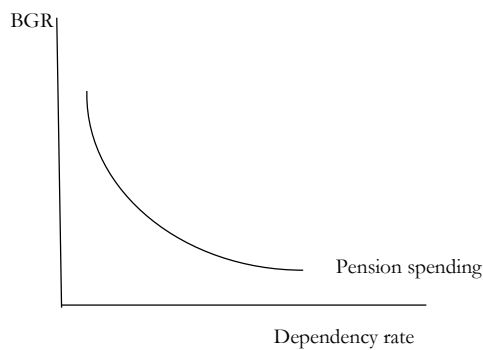


Diagram 1 shows that if the level of spending remains the same, as the country advances with respect to its demographic transition, the BGR should go down (movement on the curve). Conversely, if the policy decision were to maintain the generosity of the system, the population aging would necessarily imply confronting a higher level of spending and the system would have to jump toward a level curve that moves farther away from origin.