

# The Impact of the COVID-19 Pandemic on Future Pensions in Peru

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The first case of COVID-19 in Peru was detected on March 5, 2020. On March 15, the Peruvian government declared a state of emergency, which implied the suspension of non-essential work activities in the public and private sectors, mandatory social distancing, and border closures. In the following days, temporary measures to contain the spread of the coronavirus were extended due to the increase in the number of infections. The extension of restrictive measures posed a dilemma for the government in terms of prioritizing between the economy and health.

In order to smooth the economic shock caused by the pandemic, which forced the closure of companies and the confinement of workers, the government implemented various measures to protect the employment relationship and avoid job losses. New regulations allowed remote work and paid leave, and a temporary scheme of special government-sponsored paid leave was established.<sup>1</sup> The government also implemented a series of cash and in-kind social transfers responding to widespread demand to use social protection tools to strengthen the resilience of poor and vulnerable households to shocks resulting from COVID-19 (Bowen et al. 2020).

The government's response was divided into (i) measures to mitigate the adverse consequences of the pandemic, and (ii) policies to stimulate

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<sup>1</sup> This scheme, *Suspensión Perfecta de Labores*, involves the suspension of obligations of both the employer and the worker (remuneration and compliance with the working day) without breaking the employment relationship.

the economy (Olivera 2021). The government's main response to mitigating the economic impact on living standards was the implementation of lump-sum cash and in-kind transfers for various groups of recipients. The transfers included the *Bono Yo Me Quedo en Casa*, *Bono Independiente*, *Bono Rural*, *Bono Familiar Universal*, *Bono Electricidad*, *Bono Yanapay*, *Bono 210 Soles*, and food baskets (Olivera 2021). Among the policies aimed at reactivating the economy, the government set up *Reactiva Peru*, *Arranca Peru*, and payroll subsidies.

Beyond the potential negative effects of the pandemic via an economic downturn and job losses on the evolution of pension contributions, the Peruvian government and Congress implemented certain measures that could jeopardize the old-age security of participants in the Private Pension Scheme (*Sistema Privado de Pensiones - SPP*). These measures allowed individuals to make early withdrawals of pension funds. In 2020, three withdrawal policies were established in April (two by the government, and one by the Congress), and a fourth policy was established in November by the Congress, implying a total drain of 33,723 million soles from the pension funds (equivalent to 4.5 percent of GDP in 2020). Drifting towards a dangerous trend, a fifth withdrawal policy was implemented by the Congress in May 2021, implying an amount of funds much larger than the previous measures (32,219 million soles, equivalent to 3.7 percent of GDP in 2021).<sup>2</sup>

The main reason given by the authorities for implementing the withdrawal policies was to provide liquidity to families due to the job losses and economic crisis generated by the pandemic. Olivera (2021) provides at least two reasons why this policy may be problematic and ill-designed. First, the pension funds are severely reduced or even depleted, particularly for affiliates with small pension balances, which will reduce resources to finance an adequate standard of living during old age. Unlike many other countries, Peru does not have a universal social pension that could attenuate the risk of falling into poverty in old age. Second, the withdrawal policies are not targeted at families suffering more adverse conditions, even though the arguments in favor of the measures suggested this would be the case. The eligibility conditions are so loose that practically

<sup>2</sup> There was a sixth withdrawal policy set up between June and September 2022, but it has not been considered in the analysis for this chapter. That measure has allowed additional withdrawals equivalent to 21,994 million soles (about 2.5 percent of GDP).

all affiliates can cash out funds, regardless of the size of their pension balance or income levels.

Some could argue that the funds were important to help families cope with income losses, but the SPP affiliates are mostly salaried workers in the formal market with higher educational attainment and job quality better than that of the average worker in the Peruvian labor market. SPP affiliates (particularly those contributing regularly) correspond to the higher level of the distribution of income, so they suffered less economic consequences from the pandemic or had other resources to cope with the shocks. Thus, allowing pension fund withdrawals may not have been a policy that was strictly needed in the Peruvian context. As noted by Bosch et al. (2020), social and labor policies should be prioritized to protect employment and assist families in need, but instruments with other objectives, such as pension savings, should be used as last-resort measures. As this chapter will show, the five pension fund withdrawal policies severely compromised the old-age security of SPP affiliates. On average, the expected pension funds accumulated at retirement age will fall by about 40 percent, although there are significant heterogeneous effects.

Congress also attempted to establish a policy to allow the affiliates in the National Pension Scheme (*Sistema Nacional de Pensiones* - SNP) to cash out past contributions. However, after months of political turmoil, this policy was deemed unconstitutional by the Constitutional Court of Peru. However, this conflict, in a way, caused the government to relax the benefit rules for the SNP in order to facilitate claiming and accessing a pension. As will be explained in this chapter, the new rules will increase access to pensions to about 10 percent of affiliates, which would not have been possible without the relaxation of the eligibility conditions triggered by the decision of Peru's Constitutional Court.

## 5.1. The Peruvian Pension System

The Peruvian pension system has two main schemes representing two alternative options for individuals. The SPP is a defined contribution scheme based on individual retirement accounts, established in 1992 and implemented in the following year. Pension Fund Managers (*Administradoras de Fondos de Pensiones* - AFPs) receive the contributions and invest individual savings in supervised and regulated investments. There

are currently four AFPs managing the pension funds: Prima, Integra, Pro-futuro, and Habitat. The SNP is a defined benefit, which operates as a pay-as-you-go pension scheme with contributions and additional government transfers sustaining the payment of pensions.

A person must choose one of two schemes when entering the labor market for the first time. If there is no choice during the first 10 days, the default option is the SPP. Furthermore, people can shift from the SNP to the SPP at any time, but the opposite is not possible. Even though the system is set up in a way to favor affiliation with the SPP, there is still a considerable number of workers currently affiliated with (and opting for) the SNP.<sup>3</sup>

One of the main differences shaping the preferences for one scheme over the other is the computation and provision of pension benefits. In the SPP, there is no minimum pension guarantee, except for a specific cohort group of affiliates (born before 1945) who shifted schemes in the past. That is, during retirement, the pension savings accumulated by the individual are not topped up with government transfers, as usually occurs with low pension amounts in other pension systems. Moreover, since the reform was implemented in June 2016, affiliates have been able to withdraw up to 95.5 percent of their pension pots (which are untaxed) at retirement, while the remaining 4.5 percent is transferred to the health insurance system (*Seguro Social de Salud del Perú - EsSalud*), providing health insurance to the retiree. The individual can still buy an annuity in the insurance market and withdraw part of the funds, but the evidence shows an overwhelming preference for withdrawing all the funds.<sup>4</sup> Clearly, this regulation is harmful to the annuities market and has reduced the ability of individuals to insure against the risk of old age. In addition, according to Olivera (2020), the policy of massive withdrawals implies that individuals, when withdrawing all their funds, can no longer see exactly what their pension amounts would have been. Those amounts are very likely to be low for most members reaching retirement age. In some ways, this feature unintentionally

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<sup>3</sup> As of December 2021, there were 8.25 million affiliates in the SPP and 4.72 million affiliates in the SNP.

<sup>4</sup> As of December 2016, 241,200 persons aged 62 or older were enrolled in the SPP. However, from then until December 2019, there were 4,036 new retirement pensions. This means that only 1.7 percent of the individuals eligible for retirement received a pension once the reform allowed large pension savings withdrawals.

made it difficult for individuals to learn how low their pensions actually are, which would reduce the likelihood of social protests such as the *No más AFP* movement in Chile.

In the SNP, benefits are computed following pension rules, including minimum and maximum pension amounts. Until October 2021, the vesting period to obtain a pension at the legal retirement age in the SNP was 20 years of contributions, meaning that any personal contribution period just short of these 240 months would not generate a pension. There was no reimbursement of contributions to individuals who did not complete this minimum period of contributions, which could imply perverse regressive transfers from low-income earners (who are more likely to record fewer contributions) to higher-income earners. However, since November 2021, it has been possible to request new “proportional” retirement pensions by showing at least 10 years of contributions. The maximum and minimum retirement pensions in the SNP are 893 and 500 soles per month (equivalent to 96 percent and 54 percent of the minimum wage, respectively) when the person proves at least 20 years of contributions. The pension is 350 soles if the person contributes at least 15 years and less than 20 years, and the amount is 250 soles if the person contributes at least 10 years and less than 15 years. This policy eases the problem of regressive contributions and the low number of pensioners, which was a long-standing criticism of the SNP.

Under both schemes, the retirement age is 65 and the contributions are computed based on labor earnings that are at least equal to the minimum wage.<sup>5</sup> The contribution rates and fees are different in these schemes, yet they both consider 12 payments per year, meaning that the two salary bonuses (included in the labor legislation) are excluded from the income base to compute pension contributions. The total contribution rate under the SNP is 13 percent. Under the SPP, the contribution rate feeding into the individual pension accounts is 10 percent of the total salary, plus an insurance premium fee that is 1.74 percent of the salary (up to a cap on the salary equivalent to 10,535 soles). In addition, the average management fee by the AFPs in the SPP is 1.58 percent of the salary for affiliates who are in the load factor fee scheme, and is 1.12 percent of the balance for affili-

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<sup>5</sup> The minimum was 930 soles between April 2018 and April 2022, and 1,025 soles since May 2022.

ates who are in the balance fee scheme.<sup>6</sup> Taking into account all contributions and fees on wages, the affiliates of both schemes contribute roughly similar percentages, that is, 13 percent under the SNP and 11.9 to 13.3 percent under the SPP. The employer contributes to neither of the two schemes.

Employees from the formal sector who are on a payroll are obligated to contribute to pensions, while the contribution is voluntary for self-employed and other workers. Given the considerable size of Peru's informal labor market, it is not surprising that there is low coverage and low contribution frequency in the pension system. According to 2021 figures, about 47 percent and 27 percent of the labor force were enrolled in the SPP and SNP, respectively. However, when only considering regular contributors, the respective shares are 20 percent and 8 percent. A key difference between the two pension schemes is their financial sustainability. By definition, SPP pensions do not require government support, but this does not mean that the scheme's implementation in 1993 and the transition to that scheme had no costs. The primary public expenditures come in the form of Recognition Bonds (*Bonos de Reconocimiento*), which imply a promised public transfer to the individuals who shifted from the public to the private pension scheme. This bond is awarded around the date of the pension scheme shift and recognizes part of the contributions made to the public scheme. According to computations for this chapter, the accumulated fiscal cost of the Recognition Bonds was about 3.1 percent of accumulated GDP between 1995 and 2020.

Contrary to the SPP, the SNP needs the contributions of current affiliates to pay current pensions. To this end, the government also transfers resources to help finance these payments. In addition, this scheme has a reserve fund (*Fondo Consolidado de Reserva - FCR*) that also supplies resources to cover pension expenditures. In 2020, 64 percent of the pension payroll was financed with contributions, 34 percent with the FCR, and the remaining 2 percent with Treasury transfers.

The SPP and SNP are the largest pension schemes in Peru, but there are two other schemes worth mentioning. One is the Law 20530 pension scheme, which cannot receive new affiliates but is still being financed by the government. This scheme was seriously unbalanced due to low

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<sup>6</sup> In addition to the balance fee, the affiliates who are in this scheme have to pay a decreasing load factor fee from 2013 until 2023. On average, this additional fee is 0.17 percent of the salary as of December 2021.

contribution rates and the automatic update of pensions mirroring the salary increases in occupations equivalent to the last one held by the retiree. The other is the pension scheme for military and police forces (*Caja de Pensiones Militar Policial* - CPMP). According to recent figures, the pension payments under the Law 20530 scheme amounted to 4,466 million soles in 2021, while the revenues from the affiliates totaled 11 million soles, evidencing a severe degree of underfunding.<sup>7</sup> In addition, the actuarial liability is about 37,133 million soles (4.3 percent of GDP).<sup>8</sup> The CPMP is also problematic, as pension payments largely exceed contributions. Although reform in 2012 established new rules seeking to improve the financial sustainability of the CPMP, there remains a significant gap between contributions and pension payments (Table 5.1).<sup>9</sup>

Finally, Peru has a non-contributory pension scheme, which is targeted at individuals aged 65 and over with no other pensions and living in households classified as extremely poor by the official household targeting system (*Sistema de Focalización de Hogares* - SISFOH). The program, called *Pension 65*, was introduced in October 2011 and is administered by the Ministry of Development and Social Inclusion. With around 570,000 beneficiaries in 2021 (19 percent of persons aged 65 and over), and at a cost of 0.10 percent of GDP, this is the second-largest social program in Peru, behind the conditional cash transfer program *Juntos*. In monthly terms, the transfer amounts to 125 soles (about US\$32), which is equivalent to 62 percent of the extreme poverty line in Peru in 2021. Beneficiaries receive the payments every two months.

Table 5.1 summarizes the main indicators of the different pension schemes in Peru.

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<sup>7</sup> These figures are estimated from administrative records of pensioners and affiliates as of December 2021. There are 216,717 pensioners with an average monthly pension of 1,362 soles and 1,993 affiliates with an average monthly salary of 3,530 soles.

<sup>8</sup> The actuarial pension reserve is estimated at 36,063 million soles and the non-pension reserve at 1,050 million soles.

<sup>9</sup> The CPMP includes the old DL 19846 scheme (closed to new entrants) and the new DL 1133 scheme, implemented in 2012. In 2021, the first tier had 101,331 contributors, 83,979 pensioners, 389 million soles in revenues, and 2,838 million soles in pension expenditures. The low level of assets with respect to actuarial reserves, which is only 1.2 percent, captures the severe underfunding of this scheme. The actuarial reserves are equal to 12.4 percent of GDP in 2021. In the DL 1133 scheme, there are 84,784 contributors totaling 304 million soles in revenues, but there are not yet pensioners. For this tier, assets represent 31.2 percent of the actuarial reserve.

**Table 5.1** Main Statistics of Pension Schemes in Peru, 2021

Variable	SPP	SNP	Pension 65	CPMP	Law 20530
Millions of soles:					
Contributions revenues	13,914	3,560		692	11
Pension payroll		5,575	838	2,709	4,466
Government transfers		115		2,306	
Reserves fund		136,354			37,133
SPP pension fund	131,918				
As percent of GDP:					
Contributions revenues	1.60	0.41		0.08	0
Pension payroll		0.64	0.10	0.31	0.51
Government transfers		0.01		0.27	
Reserves fund		15.67			4.27
SPP pension fund	15.13				
Population:					
Pensioners	84,652	590,968	568,599	78,727	216,717
Affiliates	8,251,977	4,716,085		191,492	
Contributors	3,601,430	1,437,799		191,492	1,993
Contributors (percent of affiliates)	44.00	30.00		100.00	
Affiliates (percent of labor force)	51.00	29.00		1.00	
Contributors (percent of labor force)	22.00	9.00		1.00	0.00

Source: Prepared by the authors based on statistics from the official sites of the Peruvian pension schemes.

Note: CPMP: Caja de Pensiones Militar Policial; SNP Sistema Nacional de Pensiones; SPP: Sistema Privado de Pensiones.

## 5.2. Review of Effects of the COVID-19 Outbreak on the Labor and Pension Sectors

### 5.2.1. Labor Markets

The outbreak of COVID-19 in 2020 affected various dimensions of society in Peru and compromised the social progress of its citizens. In economic terms, the effects are generally considered as a sequence consisting of an initial supply shock and a subsequent demand shock (OECD 2020a). The



supply shock is related to the interruption of international supply chains (i.e., by closures of input-producer firms), prompting the reduction or closure of many downstream firms, despite unprecedented policy responses by governments. The shock is also related to the social distancing measures imposed on households. The purchasing power of households was compromised, as they suffered from public health restrictions to contain the advance of the pandemic, illness, and loss of employment. The supply shock subsequently provoked a demand shock as consumption and investment streams collapsed, since household incomes plummeted and there was an increase in the general feeling of uncertainty due to social isolation policies. These events led economies and labor markets astray, resulting in a loss of about 8.8 percent in global working hours relative to the fourth quarter of 2019 (ILO 2020).

Before the onset of COVID-19, Peru experienced moderate employment growth. The pre-pandemic context in 2019 showed the following employment distribution among sectors: high-productivity sectors (mining, financial services, electricity, gas, and water) accounted for 2.4 percent of national employment; medium-productivity sectors (manufacturing sector, construction, and transportation and storage) accounted for 22.6 percent; and the other 75 percent was clustered in low-productivity sectors (services, commerce, and agriculture) (Gamero and Perez 2020). The main types of work categories in the labor force were employees (46.3 percent) and self-employed (37.9 percent) (ILO 2021).

Peru was one of the economies most affected by the pandemic in Latin America. Evidence reported in ILO (2021) and Gamero and Perez (2020) shows that there were 6 million jobs lost due to the pandemic in April 2020. According to the latter study, there are two important factors explaining such an economic crisis: marked productivity heterogeneity and scarce diversity. The former refers to the unequal distribution of employment absorption by sector mentioned above.

As an initial result of the pandemic impact, employment in the manufacturing and construction industries of Metropolitan Lima was hit harder than commerce and services. By occupational category, self-employment jobs suffered a greater contraction. The reduction of self-employment shows how, due to sanitary restrictions during the COVID-19 crisis, the informal sector was unable to absorb displaced workers from the formal sector, as typically occurred during other economic crises (Weller 2020).

Both formal and informal employment declined due to the impact of the pandemic and the health restrictions imposed by the government. However, this reduction in both labor markets lasted only for the first few months of the pandemic, as economies then began to relax public health measures. The second most affected category was domestic work, which reflects the decline in family budgets, as families were no longer able to hire these services (Weller 2020). Furthermore, the major increases in unemployment were among men between ages 25 and 44 and among people with non-university higher education.

By the end of the first half of 2020, several labor-market-related variables were affected. First, the unemployment rate increased. For example, in Metropolitan Lima during the quarter from June to August it increased to 15.6 percent, that is, 9.7 percent more than in the previous year's equivalent quarter. Moreover, about 245,000 people lost their full salaries due to the paid leave policy promoted by the government. Second, the real income of employed individuals dropped due to the reduction of economic activities (by about 10.5 percent). According to Gamero and Perez (2020), real income during June-August dropped to levels similar to those of nine years earlier. However, despite sharp negative effects on the activity of sectors such as restaurants and hotel services, transport and storage, commerce, manufacturing, and mining and hydrocarbons, some other sectors started to recover, namely the fishing industry, public administration, telecommunications, and the financial and insurance sectors (Gamero and Perez 2020).

Regarding the most recent available information for the Peruvian labor market (INEI 2022), the working-age population in 2021 was composed of 25.3 million people, of whom 18.2 million (71.9 percent) were part of the labor force, while 7.1 million (28.1 percent) were the non-active population. These figures show that the Peruvian labor market is recovering from the pandemic shock, as the labor force increased by 12.8 percent compared to 2020 and 1.8 percent compared to 2019. Yet, by 2021, the informal employment rate was 76.8 percent, 1.5 percentage points higher than in 2020, and 4.1 percentage points higher than in 2019. Also, the urban informal employment rate rose 3 percentage points during the last year and is 5 percentage points higher than in 2019. This means that, although the labor market is recovering, employees are working mostly in the informal labor market, particularly in the urban informal market.

### 5.2.2. Pension Systems

COVID-19 prompted a reduction in people's income and generated high demand for access to savings, including pension funds. Unlike other savings schemes, pension funds are part of a system designed to provide economic security in old age (Alves, Berniell, and De La Matta 2021; Mesa 2020). Individuals tend to accumulate liquid savings at the beginning of their working life until a certain time (e.g., between 35 and 40 years old), and thereafter they favor non-liquid forms of savings, mainly for retirement.<sup>10</sup> Restrictions on accessing pension funds before retirement are helpful for people showing some behavioral biases such as present bias, procrastination, and overconfidence (OECD 2018). Potential negative impacts of fund withdrawals are reported in Bosch et al. (2020) and Lorca (2021).

Impacts on labor markets, such as job destruction, rising unemployment rates, low wages, and the growth of the informal economy, result in lower contributions and revenues to pension systems, regardless of the type of system (Cabrita 2020; Mesa 2020). OECD (2020b) and Sutcliffe (2020) identified a variety of impacts on retirement savings:

- A fall in the value of assets in retirement savings accounts.
- An increase in liabilities from falling interest rates in retirement savings arrangements with retirement income promises.
- Less ability of individuals to contribute to pension plans as they face lower wages or job loss, and less ability of employers to pay for contributions due to financial distress.
- Operational disruptions as a result of working remotely.
- Cyber-attacks, fraud, and scams directed at individuals, regulators, supervisors, and providers of retirement savings schemes.
- A tendency for people to prioritize their present needs over their long-term interests.

Additionally, in the case of a defined-benefit scheme, the death of many pensioners could, on the one hand, imply a reduction in pension liabilities, but on the other hand, imply an increase in new survivor pensions

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<sup>10</sup> For further economic theoretical arguments, see Gourinchas and Parker (2002) and Barr and Diamond (2006).

given to the beneficiaries of the deceased pensioners (Sutcliffe 2020). It is still unclear which effect would dominate.

Latin American countries implemented various policies to contain the effects of the pandemic on the labor market and pension systems, such as unemployment insurance programs, advance payment of future transfers, additional payments (e.g., cash transfers programs, grants programs, and increase of minimum wage), financing companies, tax reductions, and extraordinary withdrawals of funds. It seems reasonable that instruments designed to protect employment and sources of income should be prioritized for deployment and that instruments designed for other objectives, such as mandatory retirement savings, should be used as a last resort in the absence of alternatives (Bosch et al. 2020).

Nevertheless, as highlighted by Cavallo and Serebrisky (2016), few households in Latin America have savings to smooth their consumption to face an income shock. People have few sources of savings, yet some could have retirement savings in pension funds or in other forms. A withdrawal policy directly undermines pension adequacy, and only those who have a formal job will be able to access these retirements.<sup>11</sup>

Lorca (2021) quantifies the effects of Chile's withdrawal policy on self-funded pension benefits and government supplements. The policy resulted in an average withdrawal of 22.9 percent from individual pension balances, which represented a drop of 8 percent in the country's entire pension fund. Furthermore, Madeira (2022) uses counterfactual simulations to show that pension withdrawals could decrease the future savings rate by 1.7 percent in Chile. Bosch et al. (2020) simulate with stylized scenarios the expected changes in replacement rates caused by the withdrawal policies in Peru. For example, an individual withdrawing 25 percent of his or her pension balances at age 40 (and assuming a real interest rate of 3.5) could experience a reduction in the replacement rate by about 13.1 percent. It is also worth mentioning that many people who withdrew pension funds in the first half of 2020 realized temporary losses due to the stock market downturn that occurred at the onset of the pandemic (Grimm and Holzhausen 2022).

The negative effects of the pandemic on the labor market and pension systems will endure in the long run, especially in countries that

<sup>11</sup> The Peruvian experience of Law 29426, *Regimen Especial de Jubilación Anticipada para Desempleados*, showed that there is a high probability that most people withdraw their pension savings even if they do not need them (Altamirano et al. 2019).

allowed multiple fund withdrawals. Thus, the sustainability of pension systems (adequate coverage, benefit adequacy, and financial sustainability) will be one of the main social and fiscal challenges in Latin America going forward (Mesa 2020). As highlighted by OECD (2020b), pension policies should have a better balance between short-term and long-term needs without compromising the sustainability of pension arrangements.

### 5.3. Effects of Private Pension Fund Withdrawals

#### 5.3.1. Description of Withdrawal Policies

Between 2020 and 2021, the Peruvian government and Congress authorized five pension fund withdrawal policies for affiliates, arguing that they were needed to mitigate the economic effects of the COVID-19 pandemic and boost the Peruvian economy. On April 1, 2020, Emergency Decree DU 034-2020 authorized withdrawals from pension funds of up to 2,000 soles for affiliates who did not contribute between September 2019 and February 2020.<sup>12</sup> A second Emergency Decree (DU 038-2020) was enacted on April 13 to allow the withdrawal of up to 2,000 soles for affiliates who were placed under a new paid-leave scheme sponsored by the government (*Suspensión Perfecta de Labores*). Other affiliates could cash out funds if they did not contribute in February or March 2020, and those whose wages were lower than 2,400 soles and contributed in February or March. In none of the cases could individuals accumulate benefits simultaneously from the two Emergency Decrees.

The Peruvian Congress continued with these policies by passing three other withdrawal schemes. On April 6, 2020, Congress enacted Law 31017 authorizing withdrawals equivalent to 25 percent of individual pension funds, setting minimum and maximum amounts of 4,300 and 12,900 soles for the total withdrawal. All affiliates were eligible for this third policy, regardless of other governmental policies. The fourth policy, passed on November 4, 2020 (Law 31068), authorized withdrawals of up to 17,200 soles for affiliates with no contributions made between October 2019 and September 2020. That law also allowed withdrawals of up to 4,300 soles for affiliates who did not contribute in October 2020. Finally, the fifth

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<sup>12</sup> 2,000 soles were equivalent to about US\$526, which is about 2.2 minimum wages.

policy, (Law 31192) passed by the Congress on May 6, 2021, allowed withdrawals of up to 17,600 soles for all affiliates, with no distinction.

A recent report by Peru's Superintendent of Banking, Insurance, and Pension Funds (*Superintendencia de Banca, Seguros y AFP* - SBS) details the main characteristics of the withdrawal policies (SBS 2022). In total, these policies represented withdrawals totaling 65,942 million soles, with 5,691,478 affiliates partially or totally withdrawing their funds (39 percent were women and 61 percent were men). The total amount withdrawn as of December 2021 represented 7.6 percent of estimated GDP for that year.

Table 5.2 shows the withdrawal amounts for each policy. Emergency Decree DU 034-2020 involved 2,966 million soles, representing 4.5 percent of total withdrawals, while DU 038-2020 allowed withdrawals of 2,094 million soles, representing 3.2 percent of the total. The other three

**Table 5.2** Peru: Distribution of Pension Fund Withdrawals by Policy

Policies:	Affiliates		Millions of Soles		Average Soles
	Number	Percent	Amount	Percent	
(1) DU 34-2020	1,935,164	34	2,966	4.5	
(2) DU 38-2020	1,305,719	22.9	2,094	3.2	
(3) Law 31017	3,775,066	66.3	19,647	29.8	
(4) Law 31068	1,256,676	22.1	9,016	13.7	
(5) Law 31192	3,218,211	56.5	32,219	48.9	
Total	5,691,478	100	65,942	100	
Withdrawals:	Number	Percent	Amount	Percent	Average Soles
Less than 2,000 soles	1,500,484	26.4	1,277	1.9	851
2,000–5,000	1,091,777	19.2	3,647	5.5	3,341
5,000–10,000	725,244	12.7	5,254	8	7,245
10,000–20,000	942,435	16.6	14,061	21.3	14,920
20,000–30,000	768,813	13.5	19,187	29.1	24,956
More than 30,000	662,725	11.6	22,516	34.1	33,975
Total	5,691,478	100	65,942	100	11,586

Source: SBS (2022).

Note: Data as of December 2021. The number of affiliates for each policy in the top panel considers the individuals who benefited from at least one policy. An affiliate could have benefited from multiple policies, so the percentages may total more than 100 percent. The withdrawal categories of the bottom panel indicate the accumulated withdrawals for each individual.

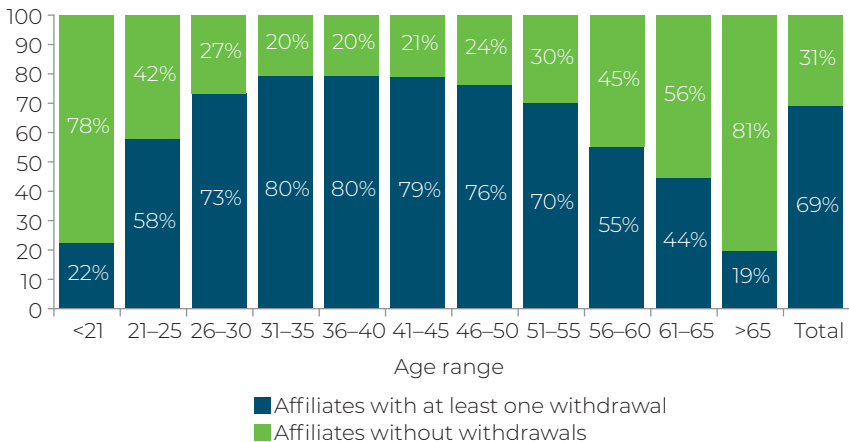
decreases involved much larger amounts of resources. Law 31017 triggered the withdrawal of 19,647 million soles (30 percent of total withdrawals), Law 31068, 9,016 million soles (14 percent), and Law 31192, 32,200 million soles, the largest amount of withdrawals, representing 49 percent of total withdrawals.

The withdrawals were concentrated in small amounts. For example, 46 percent of individual withdrawals (accumulated across the five policies) were less than 5,000 soles, representing 7.5 percent of the total amount of withdrawn funds (see bottom panel of Table 5.2). Likewise, 25 percent of withdrawals were larger than 20,000 soles, representing 63 percent of the total.

Moreover, 69 percent of affiliates withdrew savings from their accounts at least once, while 31 percent did not make a withdrawal (Figure 5.1). Of the affiliates who withdrew, 35 percent made one withdrawal, 37 percent made two, 19 percent made three, and 9 percent made four. The withdrawn funds of older affiliates are over-represented in the distribution of withdrawal amounts, which is explained by the fact that older affiliates contributed and capitalized more resources in their pension funds.

Not only the actions of the government and Congress have effects on pension funds. The economic crisis and recession triggered by the pandemic and social distancing measures also impacted the ability of affiliates

**Figure 5.1** Peru: Pension Fund Affiliates by Withdrawal Status and Age Group (Percent)



Source: SBS (2022).

Note: The figure plots data as of December 2021.

to keep up their pension contributions. The drop in contribution density was sharp around the period of the pandemic outbreak (between the first and second quarters of 2020). That decline was around 30 to 40 percentage points and affected all age groups and genders. It is worth noting that even if a drop in contributions reduces pension wealth, its magnitude is perhaps much lower than the impact of withdrawals. For example, four months of no contributions at the average wage in the SPP implies a drop of 915 soles, but the average total amount withdrawn across all withdrawal policies is 11,586 soles, which is 13 times higher.

### 5.3.2. Simulation of the Effects of Withdrawals

The potential effects of the withdrawal policies on the level of expected pension balances are assessed here by means of simulations. Expected pensions are not used as the main outcome because the SPP has practically ceased to provide pensions since 2016 due to a regulation abolishing the obligation to buy an annuity. Instead, individuals can cash out up to 95.5 percent of their pension funds at retirement age. However, by construction, the final pension balance is a measure directly linked to the level of a pension (which is equal to the pension balance divided by the annuity price).

The simulations use a sample of the non-retired SPP population drawn from SBS administrative records as of December 2019. This is a random sample, stratified and representative of the following strata: five-year age groups, sex, and year of enrollment in the SPP. This unique dataset includes information about individuals' pension balances, management fees, income, and various demographic variables. The sample represents 2 percent of the total non-retired SPP population.<sup>13</sup> The initial sample size is composed of 138,020 observations, including individuals older than 18 and younger than 65. Individuals older than 65 are not considered, as this is the legal retirement age. In addition, the observations on the following categories of individuals are dropped: those with no information on residence region or living abroad (178), those enrolled in the SPP before 18 years old (160), and those allocated in the lowest pension risk fund (31) (this

<sup>13</sup> At a confidence level of 99 percent, the sample size has a margin of error of 0.34 percent.



type of fund is allocated to people in the process of retiring). The final sample size is 137,651 individuals.

The data include information on age, gender, employment condition, and income at the individual level. The data also include information about the pension account, such as enrollment date in the SPP, AFP, last contribution date, pension balance, balance affected and unaffected by the management fee reform, type of fee, type of pension risk fund, contribution density, and information about recognition bonds. This bond is an amount of money, based on past contributions, guaranteed by the government to those previously affiliated with the SNP. Olivera (2016, 2020) used this type of micro data to study the ex-ante effects of multi-pillar pension reforms, while Bernal and Olivera (2020) studied the effects of the 2013 management pension fee reform.

The accumulation of pension funds for each individual in the sample is simulated from January 2020 until retirement. The sample was taken just before the onset of the pandemic (December 2019), so it does not include information on whether the individual withdrew funds or on the size of each withdrawal. However, the available evidence (SBS 2022) and press releases from SBS during 2020–2021 point out that most individuals decided to withdraw the maximum permitted amounts, even fully depleting their pension balance. Thus, the simulations assume that the selected and eligible individuals withdrew the maximum possible and feasible amount permitted by the policy. The complete set of parameters and procedures involved in the simulations are detailed in Olivera and Valderrama (2022).

As it is not known exactly which individuals decided to make withdrawals, people from the universe of affiliates fulfilling the eligibility conditions of a given policy were randomly selected. The available information about the number of affiliates withdrawing per age group and policy (SBS 2022) is used to randomly select individuals within each age group in the sample to obtain a proportion of affiliates withdrawing within each age group that is similar to the actual one. For the selected individuals, a withdrawal value is computed that is the maximum allowed by the policy and the individual's own pension fund circumstances.

Monthly periods are set for the simulation from  $t=1$  to  $t=564$ , with  $t=1$  equivalent to January 2020. The five withdrawal policies occurred between  $t=4$  and  $t=20$ , with varying time windows to effectively claim and cash out

the pension funds. In order to facilitate the simulations of pension fund accumulation and amounts withdrawn, a unique period to compute the withdrawal for each policy is assumed. These periods are  $t=4$  for policy 1;  $t=5$  for policy 2;  $t=6$  for policy 3;  $t=12$  for policy 4; and  $t=20$  for policy 5.

When pension balances at each period for each individual are simulated, the following are taken into account: real monthly salary, real monthly return rate of pension funds, contribution rate from the salary, and probability of making pension contributions (captured by contribution density). A baseline final pension balance assuming that no withdrawals take place ( $S_b$ ) is first simulated. A final pension balance taking into account the withdrawal policies ( $S_p$ ) is also simulated; that is, the pension balance is reduced by the amount of the corresponding withdrawal for each selected affiliate. It is also allowed that the same individual could apply to different withdrawal policies. The procedure of computing  $S_p$  is replicated 100 times and averages are taken of the results for each individual. The final effect of the policies is estimated as the percentage change in pension balances due to the policies:

$$D = 100 \times (S_b - S_p) / S_b \quad (1)$$

Table 5.3 reports the overall simulations. In general, the results on the total amount of withdrawals and the number of individuals cashing out funds are very close to the actual ones. For policies 1–4, the difference between the simulated and actual values of the withdrawn funds is about 4.1 to 5.4 percent, yet for policy 5, this difference is 16.1 percent. Overall, the difference between the simulated and actual values of the total amount of funds implied by the five policies is 7.4 percent, and the difference is 2.7 percent for the number of affiliates cashing out funds.

The estimations indicate that the withdrawal policies will reduce the expected pension balances at retirement by 40 percent (40.25 percent on average, with 95 percent confidence intervals of 40.09 and 40.42). Different variations of  $D$  for each policy can also be obtained. Policy 1 reduces pension savings by 10.5 percent, and policy 2 adds 5 percent of loss. Thus, those two policies designed by the government account for 15.5 percent of the loss in future pension funds. Policy 3 adds 11.3 percent of loss, policy 4 adds 4.6 percent, and policy 5 adds 8.8 percent. This implies that the withdrawal policies passed by Congress increased the losses from

**Table 5.3** Peru: Overall Results of Simulations

Policy	Total Amount of Withdrawals (Millions of Soles)		Number of Affiliates with at Least One Withdrawal	
	Actual	Simulation	Actual	Simulation
(1) DU 34-2020	2,966	2,806	1,910,843	1,898,050
(2) DU 38-2020	2,094	2,140	1,296,323	1,296,050
(3) Law 31017	19,647	19,712	3,746,482	3,746,350
(4) Law 31068	9,016	9,389	1,250,250	1,250,050
(5) Law 31192	32,219	27,029	3,206,818	3,206,550
Total	65,942	61,076	5,636,965	5,787,726

Source: Prepared by the authors.

Note: The actual amounts and number of affiliates correspond to individuals younger than 65.

15.5 percent to 40.3 percent (i.e., 24.7 percentage points). The next section deals with the assessment of these effects across various groups of individuals.

A byproduct of the simulations is that the number of affiliates who could have ended with a pension balance equal to zero after each withdrawal policy can be retrieved. The results indicate that the number of pension pots exhausted is considerable. For example, about 2 million affiliates could have a zero pension balance after the last policy (policy 5), which represents 30 percent of the total number of affiliates.<sup>14</sup> Note that these pension accounts will still grow due to future contributions and capital returns, in particular for younger individuals. However, there is capital that will never be recovered, so the levels of pension wealth will be lower in the future. A possible danger in the long run is a stronger demand for social pensions, but it is difficult to determine how strong this demand will be and how much these social pensions could cost. Considering the current level of Peru's *Pension 65* social pension program (125 soles a month targeted to extremely poor people with no pensions), it is calculated here that 62.5 percent of SPP affiliates could have saved for a pension of at least the level of the social pension if no withdrawal policies would have been

<sup>14</sup> The estimated percentages of affiliates who exhausted their pension pots were 11.1 percent, 5.6 percent, 20.1 percent, 12.9 percent, and 30.4 percent for policies 1, 2, 3, 4, and 5, respectively.

in place. However, this percentage drops to 53.3 percent after the withdrawal policies.<sup>15</sup>

### 5.3.3. Heterogeneous Effects

This chapter aims to assess the effects of the policy withdrawals across different groups and characteristics of the affiliates. An overall reduction of 40 percent in the expected pension balance is already large enough to compromise old-age security, but this statistic could be larger or smaller for some groups. Table 5.4 and Figure 5.2 report the expected heterogeneous effects of the withdrawal policies.

Table 5.4 shows that the policies reduce the pension balances of men more than women, though only slightly. The pension fund amounts of men drop by 41.1 percent, while those of women drop by 38.9 percent. When men and women are compared across ages, there are larger differences in fund losses (with men losing more than women) at older ages. For example, women lose 0.5 percent more than men in the 20–29 age group, but men lose 3.4 percent more than women in the 50–59 age group (results not reported).

Figure 5.2, Panel A shows the impact of the withdrawals by age group. The loss of future funds is larger for older individuals and lower for younger individuals. The loss could be as high as 54.1 percent for persons between ages 46 and 55, but for the 21–25 age group, the loss is 16.5 percent. The reason for these results is that older people have, on average, larger pension pots from which they can cash out more funds. At the same time, they have less time to contribute, capitalize, and rebuild their pension funds. The results also indicate that people close to retirement will experience a large drop in their expected funds. People between ages 60 and 64 will face a loss of 51.5 percent in their pension balances. Of course, it is still possible that individuals withdrawing funds could make meaningful and well-informed investments and at least match the returns of the SPP. However, anecdotal evidence suggests that the withdrawals increased conspicuous consumption (Olivera 2021). Furthermore, the hypothesis that most people

<sup>15</sup> The SPP's official life tables and an interest rate of 3 percent are used to compute annuity prices for women and men at age 65. The annuity price is multiplied by the social pension amount, which results in the value of capital needed to finance a social pension. Then, we compare this amount with the final balance accrued by the individual.

**Table 5.4** Peru: Loss in Final Pension Balance Due to Withdrawal Policies

	Mean (Percent)	Standard Error	95 Percent Confidence Interval	
Overall	40.25	0.08	40.09	40.42
Men	41.12	0.11	40.91	41.33
Women	38.91	0.13	38.66	39.17
Lima	37.99	0.12	37.75	38.23
Other regions	42.12	0.11	41.9	42.34
AFP Habitat	28.58	0.18	28.23	28.93
AFP Integra	44.9	0.15	44.6	45.19
AFP Prima	32.51	0.14	32.23	32.78
AFP Profuturo	53.03	0.17	52.71	53.35
Load factor fee	32.43	0.11	32.22	32.64
Balance fee ("Mixed")	43.14	0.1	42.93	43.34

Source: Prepared by the authors.

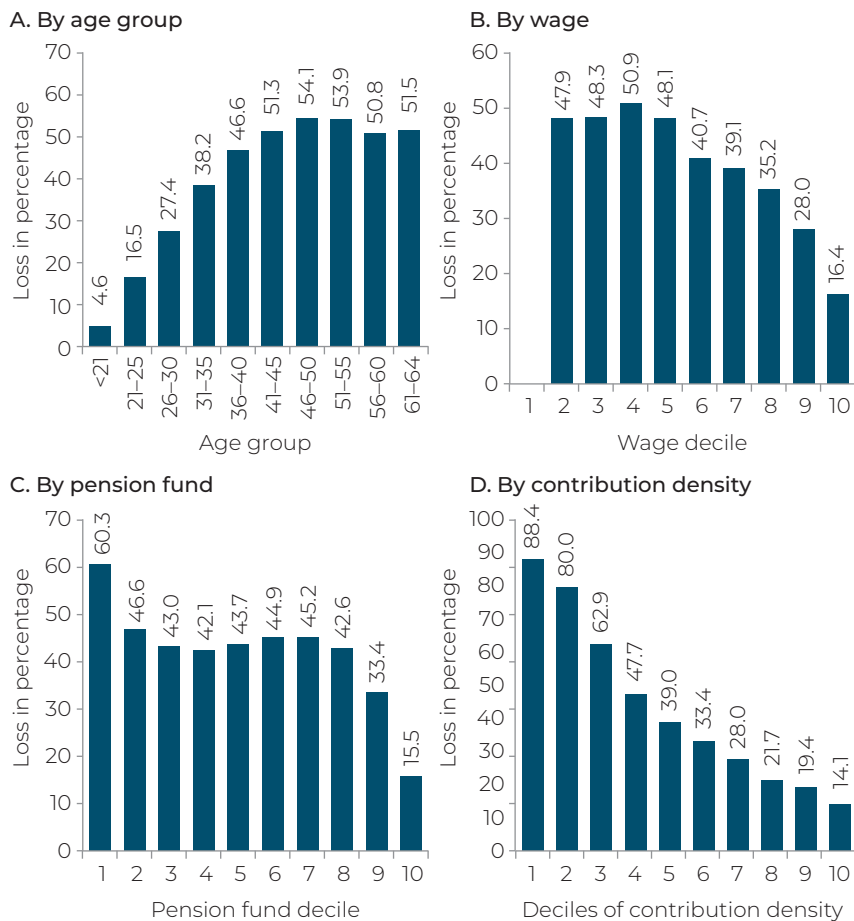
Note: AFP: Asociación de Administradoras de Fondos de Pensiones.

made savvy investments with the withdrawn funds is difficult to accept in a country where only 28 percent of the adult population has the correct knowledge of simple financial questions about the interest rate, inflation, and risk diversification (Klapper, Lusardi, and van Oudheusden 2015).

Figure 5.2, Panel B shows the losses in expected pension balances across the distribution of wages observed at the sample (December 2019). The lower deciles (poorer affiliates) experience, in general, larger losses than the higher deciles (richer affiliates), which indicates a clear socioeconomic gradient in the effects of the withdrawals. For example, while persons in the poorest decile lose 47.9 percent of their funds, those in the richest decile lose 16.4 percent.<sup>16</sup> This implies a disadvantage for the poorer affiliates, who are more likely to face difficulties building enough resources to obtain economic security in old age. The reasons for these results are related to the fact that the policies include maximum limits for withdrawals, so the withdrawn funds tend to represent lower shares of the pension pots of richer

<sup>16</sup> The two first percentiles are merged, as there are a large number of individuals earning the minimum wage at the bottom of the wage distribution.

**Figure 5.2** Peru: Loss in Final Pension Balance in Distinctive Variables Due to Withdrawal Policies (Percent)



Source: Prepared by the authors.

Note: The age groups correspond to the distribution as of December 2019. The deciles of wages, pension funds, and contribution density correspond to the distribution as of December 2019.

individuals and larger shares of the pension pots of poorer individuals. In addition, it is likely that poorer affiliates were eager to cash out more frequently and at the maximum possible amounts from their available funds because they were more liquidity-constrained than richer affiliates.

Figure 5.2, Panel C shows a socioeconomic gradient in the loss of expected pension funds across the initial distribution of pension funds. The poorest decile of the distribution of pension funds experiences an average loss of about 60.3 percent, while the richest decile experiences a

loss of about 15.5 percent. In between, there are not many differences in the losses of individuals distributed between the third and eighth deciles, with their average loss being about 43.6 percent. Therefore, if the distribution of pension savings or wages is used, the impact of the withdrawal policies is stronger on the poorest groups.

The frequency of contributions made by the person (captured by the individual contribution density indicator) is also a key factor in determining the final value of the pension balance. There are sharp differences in this indicator among the affiliates, also implying a socioeconomic gradient. Persons with more stable jobs and higher wages tend to have higher levels of contribution density. In contrast, persons with various and longer spells of unemployment and/or who transit more frequently between the formal and informal sectors are more likely to show low levels of contribution density. Figure 5.2, Panel D shows the losses of expected pension savings according to the distribution of individual contribution densities. The persons in the first and second decile of contribution densities will suffer losses in pension funds of about 88 percent and 80 percent, respectively. The reason is that the affiliates with low contribution density will not be able to rebuild their pension savings over their labor lifespan, and therefore the withdrawals will have a sharper impact on their future pension savings. This situation is markedly different from that of persons who contribute regularly. Persons in the highest decile of contribution density will lose about 14 percent of their pension funds, which is much lower than the losses of persons in the first three deciles.

Other results are reported in Table 5.4. People residing in regions other than Lima tend to experience higher losses (42.1 percent against 38 percent). There are also important differences across AFPs. Affiliates of Profuturo face the largest losses at 53.4 percent on average, while affiliates of Habitat experience the smallest losses at 28.6 percent on average. The reason is that Profuturo's affiliates tend to be the oldest in the sample, earning lower incomes and showing the lowest levels of contribution density. In contrast, Habitat's affiliates are the youngest in the sample. Thus, the withdrawal policies will hit this AFP harder because it has a relatively more vulnerable population.

Finally, a potential unintended effect of the early withdrawals could be that the SNP affiliates may shift to the SPP in order to benefit from the withdrawal policies. However, note that this change does not entail

monetary recognition for the contributions made to the SNP, and hence the individual shifting to the SPP will lose all previous contributions and start with a pension balance equal to zero. Thus, the incentive to transit to the SPP is low. No statistical evidence was found of individuals shifting pension schemes since the onset of the pandemic. To the contrary, a decrease in this flow was observed during 2020.

#### 5.4. Effects of the COVID-19 Pandemic on Public Pensions

The economic effects of the COVID-19 pandemic on the public pension scheme (SNP)—and subsequent policy responses—are markedly different from the effects and policies observed in the SPP. The adverse labor market effects triggered by the pandemic affected the frequency of pension contributions by SNP and SPP affiliates, but the public policy responses were very different. Congress passed a law to allow SNP affiliates to cash out past contributions, as was the case with withdrawal policies applied to the SPP. However, after lengthy political struggles between the government and Congress, the Constitutional Court of Peru ruled the law regarding SNP unconstitutional at the end of 2020. Nevertheless, this conflict led to a rethinking of the SNP benefits scheme. In this context, the government set up a series of new regulations (e.g., reducing the amount of contributions to pensions) to change the stringent eligibility rules to receive a pension, and then facilitate the allocation of more pensions.

These policies will improve the old-age security of SNP affiliates and simultaneously attenuate the adverse effects of the drop in contributions experienced during the COVID-19 pandemic. This section first assesses the potential impact of the pandemic on SNP contributions, then evaluates the possible effects of the new pension rules on access to future benefits. Finally, the section focuses on the number of contributions, as this is a crucial determinant of the value and eligibility assessment of the benefits of a defined-benefit scheme such as the SNP.

##### 5.4.1. Effects on Contributions

The effects of the pandemic on SNP contributions are assessed by exploiting a sample of affiliates from SNP records as of December 2021. The



sample includes longitudinal data on 78,152 individuals randomly selected from a universe of 4.7 million affiliates. The data allow for comparing the contributions made by the individuals in 2018–2019 with their contributions made in 2020–2021. In this way a possible effect of the pandemic on the frequency of contributions could be obtained.

The comparison of contribution behavior before and after the pandemic is summarized using a transition matrix reported in Table 5.5. Three groups of individuals making transitions are considered: (i) individuals with zero contributions, (ii) individuals always contributing, and (iii) individuals between both categories, meaning that they sometimes contributed during the period analyzed. This categorization is based on the fact that the distribution of contributions is bimodal, with high concentrations of individuals with zero or little contribution or with many contributions.

Table 5.5 shows the transitions between states. Among the main results, there is a certain persistence because in most cases people maintain their level of contributions, especially persons with zero contributions. Thus, of the total number of people who did not make any contributions

**Table 5.5** Peru: Transitions According to Contribution Density Level (Percent)

Overall		Observed in 2020–2021		
Observed in 2018–2019	Density = 0	Between 0 and 1	Density = 1	Total
Density = 0	88.58	11.23	0.19	100
Density between 0 and 1	36.25	45.95	17.81	100
Density = 1	0.62	28.2	71.18	100
Age in 2021: 30 to 35		Observed in 2020–2021		
Observed in 2018–2019	Density = 0	Between 0 and 1	Density = 1	Total
Density = 0	84.88	14.97	0.14	100
Density between 0 and 1	36.21	49.21	14.58	100
Density = 1	1.01	39.43	59.56	100
Age in 2021: 36 to 45		Observed in 2020–2021		
Observed in 2018–2019	Density = 0	Between 0 and 1	Density = 1	Total
Density = 0	87.64	12.16	0.2	100
Density between 0 and 1	34.64	47.02	18.34	100
Density = 1	0.54	31.03	68.43	100

(continued on next page)

**Table 5.5** Peru: Transitions According to Contribution Density Level (Percent) *(continued)*

Age in 2021: 46 to 55		Observed in 2020–2021		
Observed in 2018–2019	Density = 0	Between 0 and 1	Density = 1	Total
Density = 0	90.19	9.6	0.21	100
Density between 0 and 1	37.27	43.74	18.99	100
Density = 1	0.72	25.79	73.5	100
Age in 2021: 56 to 65		Observed in 2020–2021		
Observed in 2018–2019	Density = 0	Between 0 and 1	Density = 1	Total
Density = 0	93.47	6.34	0.19	100
Density between 0 and 1	39.5	37.62	22.88	100
Density = 1	0.43	20.11	79.46	100

Source: Prepared by the authors using a sample of Sistema Nacional de Pensiones records from December 2021 provided by the Oficina de Normalización Previsional.

Note: Only the population between 30 and 65 years of age is considered.

between 2018 and 2019, 86.5 percent maintain this condition, while 75.7 percent of those who always contributed continued to do so. This persistence increases with age. For example, among individuals aged 56–65, 92 percent of those who did not make contributions before the pandemic continued to not make contributions during the pandemic, while 82 percent of those who always contributed continued to do so.<sup>17</sup>

Another result from Table 5.5 is that the most important transition occurred in the group of people who, having made some contributions during 2018 and 2019, did not contribute during the pandemic. Thus, 39 percent of affiliates contributing in the first period analyzed stopped doing so in the second period.

It can be assumed that the contribution behavior in 2018–2019 is the level that each individual would have had in 2020–2021 if the pandemic had not occurred. Thus, the 2018–2019 contribution density values (i.e., the counterfactual) can be compared with the actual values observed in 2020–2021 to determine the potential impact of the pandemic on the probability of contributing. Table 5.6 reports these impacts. Using this

<sup>17</sup> A similar result is obtained when we model the probability of contributing. That is, younger people are more likely to change status, and there is more inertia when the pre-pandemic contribution density is zero.

approach, it is estimated that affiliates who always contributed before the pandemic suffered an average drop of 2.2 months of contributions, while those who contributed less regularly experienced a drop of 1.4 months of contributions. Furthermore, older affiliates tended to experience larger reductions in months of contributions than younger ones. There were no significant differences between men and women.

### 5.4.2. Effects of the New Pension Policies

In October 2021, the government established a series of new rules to facilitate the eligibility conditions to receive an SNP pension. Before this change, the only way to obtain a retirement pension was 20 years of contributions, which also ensured the right to receive a guaranteed minimum

**Table 5.6** Peru: Impact of COVID-19 on Number of Monthly Contributions

	Observed in 2020– 2021	Simulated in 2020– 2021	Gap	Standard Error	95 percent Confidence Interval	
Overall	7.63	8.13	-0.51	0.01	-0.51	-0.48
Men	8.27	8.73	-0.46	0.02	-0.46	-0.42
Women	7.15	7.69	-0.54	0.02	-0.54	-0.51
Observed in 2018–2019						
Density = 0	0.8	0.05	0.75	0.01	0.75	0.77
Density between 0 and 1	9.61	11.02	-1.41	0.03	-1.41	-1.35
Density = 1	21.61	23.91	-2.3	0.03	-2.3	-2.24
Age in 2021:						
30 to 34	6.59	7.04	-0.45	0.03	-0.45	-0.39
35 to 40	7.42	7.87	-0.45	0.03	-0.45	-0.4
41 to 45	7.74	8.17	-0.43	0.03	-0.43	-0.36
46 to 50	7.58	8.12	-0.54	0.04	-0.54	-0.47
51 to 55	7.82	8.45	-0.63	0.04	-0.64	-0.56
56 to 60	8.71	9.31	-0.59	0.04	-0.6	-0.52
61 to 65	9.42	10.1	-0.67	0.04	-0.67	-0.59

Source: Authors' calculations using a sample of Sistema Nacional de Pensiones records from December 2021 provided by the Oficina de Normalización Previsional.

Note: Only the population between 30 and 65 years of age is considered.

pension. The affiliates without this number of contributions would not receive any pension or any return of contributions. However, in pension systems in other countries, members who do not qualify for a pension receive some form of refund of contributions. The government launched what are called proportional pensions, which feature the following characteristics: (i) a pension equivalent to 50 percent of the minimum pension for persons contributing between 10 and 15 years (pension of 250 soles); and (ii) a pension equivalent to 70 percent for persons contributing more than 15 years and less than 20 years (pension of 350 soles). The government also implemented a type of pension loan scheme with the goal of enabling affiliates contributing more than 17 years and less than 20 (this is Law 31301) to obtain at least a minimum pension. The mechanism embedded in this policy is that the “pension loans” can finance the missing contributions and be repaid from future pensions, provided the repayment does not exceed 30 percent of the pension value.<sup>18</sup>

One way to determine the effects of the new policies is to estimate the contributions accumulated at age 65. The available data allow for knowing up to 22 years of historical contributions, starting in 2000 and ending in 2021. Since employment histories are incomplete, the number of unobserved contributions made before 2000 and after 2021 need to be computed accordingly. To facilitate the estimates, it is assumed that the contribution density for the periods before 2020 and after 2021 is the same as the contribution density observed five years before the pandemic. The choice of five years guarantees the same time horizon of contributions for a wide range of ages. Thus, the impact of the SNP pension policies on affiliates aged 30–65 years (as of December 2021) can be estimated. Furthermore, it is assumed that the first contribution to the SNP occurs at age 20.

The first panel of Table 5.7 reports the results of the estimations. About 10 percent of the sample could benefit from the new policies, with no significant differences between men and women. Specifically, 5.3 percent could receive a pension equivalent to 50 percent of the minimum pension, 1.8 percent could receive a pension equal to 70 percent of the minimum pension, and the remaining 2.5 percent could receive a pension

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<sup>18</sup> In December 2021, the government enacted Law 31365 to give a transfer equivalent to 350 soles to SNP pensioners, with the exception of affiliates receiving other COVID-19-related social transfers (the Yanapay Bonus and the 210 Soles Bonus).

thanks to the pension loan. Furthermore, the results practically do not change regardless of whether the simulated contributions for 2020–2021 estimated in the previous section exercise are used. The bottom panel of Table 5.7 quantifies the actuarial cost of the new policies. The impact is estimated to be almost 5,900 million soles, which represents just over 4 percent of the net actuarial reserve for 2020.<sup>19</sup>

### 5.4.3. Effects of Pandemic Deaths on Pension Liability

This section studies the actuarial impact of the excess number of deaths observed among SNP affiliates and pensioners during the pandemic. The first column of Figure 5.3 plots the evolution of deaths among the non-retired SNP affiliates for both men and women, while the second column plots the evolution among SNP pensioners both for men and women. All sub-figures show a sharp increase in the number of deaths during the pandemic that becomes more acute among pensioners due to their age

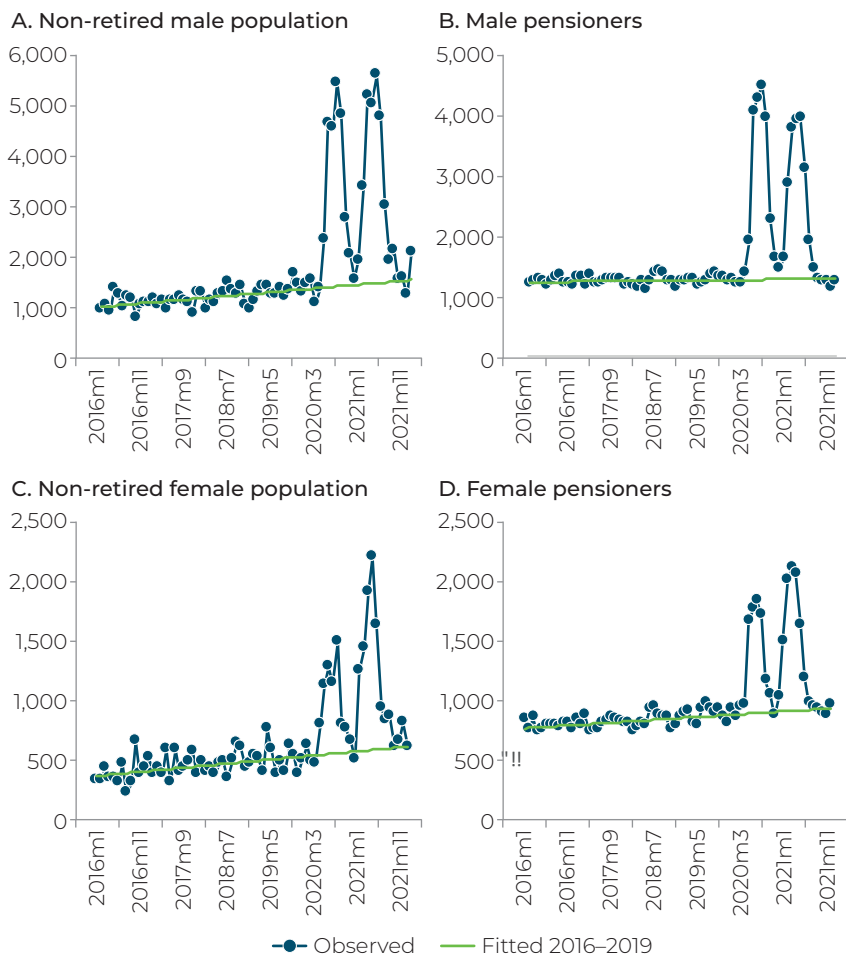
**Table 5.7** Peru: New Benefits under the Sistema Nacional de Pensiones

Benefit Type	Female	Male	Total
Distribution of Benefits by Contributions Accrued at Retirement (Percent)			
No pension (< 10 years)	56.25	60.38	58.64
50 percent minimum pension (10–15 years)	5.22	5.32	5.28
70 percent minimum pension (15–17 years)	1.8	1.73	1.76
70 to 100 percent minimum pension (17–20 years and loan)	2.51	2.45	2.47
≥ 100 percent minimum pension (≥ 20 years)	34.22	30.11	31.85
Total	100	100	100
Actuarial Cost of New Pension Benefits (Millions of soles)			
50 percent minimum pension (10–15 years)	1,156	1,638	2,794
70 percent minimum pension (15–17 years)	547	728	1,275
70 to 100 percent minimum pension (17–20 years and loan)	785	1,044	1,829
Total	2,488	3,410	5,899

Source: Authors' calculations using a sample of Sistema Nacional de Pensiones records from December 2021 provided by the Oficina de Normalización Previsional.

Note: Only the population between 30 and 65 years of age is considered.

<sup>19</sup> The official net actuarial liability was 134,616 million soles in 2020.

**Figure 5.3** Monthly Deaths of Affiliates and Pensioners in the Sistema Nacional de Pensiones, 2016–2021

Source: Authors' calculations using a sample of Sistema Nacional de Pensiones records from December 2021 provided by the Oficina de Normalización Previsional.

Note: Deaths include all causes.

composition. During 2016–2019, the estimated number of monthly deaths of SNP affiliates was on average 1,521 people (18,260 annually), but this average rose to 3,884 people monthly (46,618 annually) during 2020–2021. This implies a monthly excess of deaths estimated at 2,363 (28,359 annually). Thus, about 56,717 deaths among SNP affiliates were due to the pandemic.

The effect of pandemic deaths on SNP financial flows can be computed by estimating the contributions that will not be collected and the

retirement pensions to which people will not be entitled. The increase in survival pensions (for the widow or widower) due to the death of married affiliates also needs to be considered. Average observed numbers are used due to the unavailability of comprehensive micro data on SNP mortality, as well as the official parameters for computing actuarial liabilities in the SNP (i.e., official life tables and discount rates). The estimations are summarized in Table 5.8, which shows that pandemic deaths may imply

**Table 5.8** Peru: Effects of Pandemic Deaths on Actuarial Net Liability (Millions of soles)

	Pensioner	Widow(er)	Contributions	Net Result
<i>Non-Retired Affiliates</i>				
<i>Counterfactual (A)</i>	1,600	304	87	1,818
Male	1,355	304	74	1,585
Female	245	0	12	233
<i>Observed (B)</i>	0	615	0	615
Male	0	615	0	615
Female	0	0	0	0
<i>Effect (A)-(B)</i>	1,600	-311	87	1,203
Male	1,355	-311	74	970
Female	245	0	12	233
<i>Pensioners</i>				
<i>Counterfactual (A)</i>	2,702	913		3,615
Male	2,092	913		3,005
Female	610	0		610
<i>Observed (B)</i>	0	1,660		1,660
Male	0	1,660		1,660
Female	0	0		0
<i>Effect (A)-(B)</i>	2,702	-747		1,955
Male	2,092	-747		1,345
Female	610	0		610
<i>Overall effect</i>	4,302	-1,058	87	3,158

Source: Authors' calculations using a sample of Sistema Nacional de Pensiones records from December 2021 provided by the Oficina de Normalización Previsional.

Note: The table shows the observed actuarial net liability and the counterfactual estimates in the absence of the COVID-19 pandemic. The estimations distinguish between the groups of non-retired affiliates and Sistema Nacional de Pensiones pensioners.

an improvement in the net actuarial liability driven by a fall in the amount of future retirement pensions (4,302 million soles). Yet, the amount of widow pensions would increase by 1,058 million soles, while the flow of contributions would drop by 87 million soles. All in all, there is an estimated reduction of 3,158 million soles in the net actuarial liability, which is equivalent to 2.4 percent of the net actuarial reserve of 2020. It is worth noting that this reduction could finance around half of the net actuarial cost of the new SNP pension benefits examined in the previous section.

## 5.5. Conclusions

This chapter is one of the first analyses to exhaustively document and assess the potential effects of the COVID-19 pandemic on pension systems in Latin America, in this case the private and public pension schemes of Peru. Beyond the negative impacts of the pandemic on variables such as frequency of contributions transmitted via labor market effects, the analysis shows that the pension policy responses could have much more important and lasting effects. This is due to the freedom given to affiliates to withdraw from private pension pots before retirement. In a perverse tandem between the government and the Congress of Peru, five withdrawal policies were set up between 2020 and 2021.

The main reason given for these withdrawal policies was to provide liquidity to families because of the job losses and economic crisis generated by the pandemic. However, the policies are problematic and ill-designed. The pension funds were severely reduced or even depleted, particularly for affiliates with small pension balances. As Peru does not have a universal social pension that could attenuate the risk of falling into poverty in old age, the withdrawals will compromise the economic security of the elderly. Moreover, the withdrawal policies are not targeted to families facing more adverse conditions, which was cited as a reason to implement the measures in the first place. The eligibility conditions are very loose, meaning that any affiliates can cash out funds, regardless of their socioeconomic status.

The analysis in this chapter simulates that individuals will experience, on average, an expected fall of about 40 percent in their pension funds accumulated at retirement age. However, there are important heterogeneous effects: the losses are larger for poorer affiliates in terms of income



and pension wealth, and older people experience larger losses than younger people.

As for the public pension scheme, there were significant attempts to use the same rationale of cashing-in pension savings and allowing past contributions to be withdrawn from the public scheme, but after months of political turmoil between political actors, that policy was dismissed on constitutional legal grounds. However, this conflict led the government to reassess the benefit rules in the SNP and establish new regulations to facilitate the allocation of more pensions in the public scheme. The analysis in this chapter shows that almost 10 percent of SNP affiliates will benefit from the new policies. A small temporal drop in pension contributions due to the pandemic is also estimated, but its effects on pension access are largely attenuated by the new SNP pension rules. Moreover, it is estimated that the excess mortality among SNP affiliates due to the pandemic may lead to a reduction in the actuarial net liability of the public pension scheme in the long run.

Overall, the analysis is a tale of two interventions. On the one hand, the withdrawal policies jeopardize security in old age, leaving SPP affiliates with reduced or no pension savings to secure an income later in life. On the other, the SNP's new pension rules improve pension coverage among its affiliates. This lack of consistency, along with the implementation of harmful policies, is a clear example of how *not* to design pension policies. Pension policies should rely on sound technical expertise and be less influenced by short-term political gains for the authorities.



# References

- Altamirano, A., S. Berstein, M. Bosch, G. Caballero, M. Garcia-Huitron, L. Keller, and M.T. Silva Porto. 2019. Diagnóstico del sistema de pensiones peruano y avenidas de reforma. IDB Technical Note No. 1776. Inter-American Development Bank, Washington, CC.
- Alves, G., L. Berniell, and D. De La Mata. 2021. Retos de los sistemas de protección social y salud en el marco de la crisis del COVID-19 y a futuro. Technical report. Development Bank of Latin America (CAF).
- Apedo-Amah, M., B. Avdiu, X. Cirera, M. Cruz, E. Davies, A. Grover, L. Iacovone, U. Kilinc, D. Medvedev, F.O. Maduko, S. Poupakis, J. Torres, and T. Tran. 2020. Unmasking the Impact of COVID-19 on Businesses Firm Level Evidence from Across the World. Policy Research Working Paper No. 9434. World Bank, Washington, DC.
- Arenas de Mesa, A. 2020. Los Sistemas de Pensiones en América Latina: Institucionalidad, Gasto Público y Sostenibilidad Financiera en tiempos del COVID-19. Serie Macroeconomía del Desarrollo No. 212 Economic Commission on Latin America and the Caribbean, Santiago
- Argueta, N., F. Bolaños, and M. Rivera. 2015. Una nueva mirada a los desafíos de cobertura del Sistema de Pensiones en El Salvador: la densidad individual de las cotizaciones. Estudio s sobre Políticas Públicas No. 4. FUNDAUNGO, San Salvador.
- Ayala, C. 2022. Intention to Migrate Due to COVID-19: A Study for El Salvador. *Journal of International Migration and Integration* 24: 349–68. Available at <https://link.springer.com/article/10.1007/s12134-022-00952-3>.
- Barr, N., and P. Diamond. 2006. The Economics of Pensions. *Oxford Review of Economic Policy* 22(1): 15–39.
- Bernal, N., and J. Olivera. 2020. Choice of Pension Management Fees and Effects on Pension Wealth. *Journal of Economic Behavior Organization* 176: 539–68.

- Bertín, P. 2022. *La Previsión Social en Argentina: Pasado, Presente y Futuro*. Rosario, Argentina: Editorial Juris.
- Bosch, M., C. Felix, M. Garcia-Huitrón, and M.T. Silva-Porto. 2020. Acceso al ahorro obligatorio para el retiro en tiempos de COVID-19: Consideraciones de política pública. Technical Report. Inter-American Development Bank, Washington, DC.
- Bowen, T., C. Del Ninno, C. Andrews, S. Coll-Black, U. Gentilini, K. Johnson, Y. Kawasoe, A. Kryeziu, B. Maher, and A. Williams. 2020. *Adaptive Social Protection: Building Resilience to Shocks*. Washington, DC: World Bank.
- Cabrita, C.C. 2020. Los sistemas de pensiones en América Latina y el Caribe. *Gestión y Tendencias* 5(1): 4–6.
- Carranza, E., T. Farole, U. Gentilini, M. Morgandi, T. Packard, I. Santos, and M. Weber. 2020. Gestión de los Impactos de la Crisis del COVID-19 en el Empleo: Opciones de Política para el Alivio y la Reestructuración. Jobs Working Paper No. 49. World Bank, Washington, DC.
- Cavallo, E., and T. Serebrisky (editors). 2016. *Development in the Americas Report: Saving for Development: How Latin America and the Caribbean Can Save More and Better*. Washington, DC: Inter-American Development Bank/Palgrave Macmillan.
- De Vito, A., and J. Gómez. 2020. Estimating the COVID-19 Cash Crunch: Global Evidence and Policy. *Journal of Accounting and Public Policy* 39: 1–14.
- Gamero, J., and J. Perez. 2020. Impacto de la covid-19 en el empleo y los ingresos laborales. Technical Report. International Labour Organization, Geneva.
- Gil, L., and M. Delgado. 2021. El Sistema de Pensiones Salvadoreño y el Impacto del COVID- 19. Aportes al Debate sobre las Políticas Públicas No. 9. FUNDAUNGO, San Salvador.
- Gourinchas, P.-O., and J.A. Parker. 2002. Consumption Over the Life Cycle. *Econometrica* 70(1): 47–89.
- Grimm, M., and A. Holzhausen. 2022. Allianz Pension Report LATAM Special 2022. Technical Report. Allianz Research.
- Instituto Nacional de Estadística e Informática (INEI). 2022. Comportamiento de los indicadores del mercado laboral a nivel nacional. Technical Report.
- Inter-American Development Bank (IDB). 2022. IDB Model: Methodology Report (May). IDB, Washington, DC.

- International Labour Organization (ILO). 2020. World Employment Social Outlook: Trends 2020. Technical Report. ILO, Geneva.
- International Labour Organization (ILO). 2021. World Employment and Social Outlook: Trends 2021. Technical report. ILO, Geneva.
- International Labour Organization (ILO). 2021. *World Social Protection Report 2020–22: Social Protection at the Crossroads – In Pursuit of a Better Future*. Geneva: ILO.
- Klapper, L., A. Lusardi, and P. van Oudheusden. 2015. Financial Literacy around the World: Insights from the S&P global Financial Literacy Survey. Technical Report. The Global Financial Literacy Excellence Center.
- Langou, G.D., C. della Paolera, and J. Echandi. 2021. El Sistema de Protección Social Argentino frente a la Pandemia: Viejos Desafíos y Nuevas Oportunidades. *Ciudadanías. Revista de Políticas Sociales Urbanas* No. 8.
- Linden, A. 2015. Conducting Interrupted Time-Series Analysis for Single- and Multiple-Group Comparisons. *Stata Journal* 15: 480–500.
- Lorca, M. 2021. Effects of COVID 19 Early Release of Pension Funds: The Case of Chile. *Journal of Risk and Insurance* 88(4): 903–96.
- Madeira, C. 2022. The Impact of the Chilean Pension Withdrawals during the COVID Pandemic on the Future Savings Rate. *Journal of International Money and Finance* 126: 102650.
- Mera, M., M. Karczmarczyk, and L. Petrone. 2021. El Mercado Laboral en Argentina: Estructura, Impacto del COVID-19 y Lecciones para el Futuro. Documento de Trabajo No. 198. Centro de Implementación de Políticas Públicas para la Equidad y el Crecimiento, Buenos Aires.
- Mesa, A.A.D. 2020. Los sistemas de pensiones en América Latina: institucionalidad, gasto público y sostenibilidad financiera en tiempos del COVID-19. Economic Commission on Latin America and the Caribbean, Santiago.
- Olivera, J. 2016. An Assessment of a Proposed Pension Reform in Peru. *Apuntes* 43(78): 9–40.
- Olivera, J. 2020. Reformando el sistema de pensiones en Perú: costo fiscal, nivel de pensiones, brecha de género y desigualdad. Documento de Trabajo No. 496. Departamento de Economía, Pontificia Universidad Católica del Perú.
- Olivera, J. 2021. Peru Social Policy Response to COVID-19: Jeopardizing Old-Age Security. University of Bremen. CRC 1342 COVID-19 Social Policy Response Series No. 11.

- Olivera, J., and J. Valderrama. 2022. The Impact of the COVID-19 Pandemic on the Future Pensions of the Peruvian Pension System. IDB Working Paper No. 1392. Inter-American Development Bank, Washington, DC.
- Organisation for Economic Co-operation and Development (OECD). 2018. *OECD Pensions Outlook 2018*. Paris: OECD Publishing.
- Organisation for Economic Co-operation and Development (OECD). 2020a. *OECD Employment Outlook 2020. Worker Security and the COVID-19 Crisis*. Paris: OECD Publishing.
- Organisation for Economic Co-operation and Development (OECD). 2020b. *OECD Pensions Outlook 2020*. Paris: OECD Publishing.
- Organisation for Economic Co-operation and Development (OECD). 2021a. Pensions at a Glance 2021: OECD and G20 Indicators. OECD Publishing, Paris. <https://doi.org/10.1787/ca401ebd-en>.
- Organisation for Economic Co-operation and Development (OECD). 2021b. *OECD Pensions Outlook 2020*. Paris: OECD Publishing. Available at <https://www.oecd.org/pensions/oecd-pensions-outlook-23137649.htm>.
- Petrone, L., and J. Baliña. 2022. La Cuestión de Género en el Sistema Previsional Argentino. Documento de Política Pública No. 241. Centro de Implementación de Políticas Públicas para la Equidad y el Crecimiento, Buenos Aires.
- Pontificia Universidad Católica de Chile. 2022. Se recupera la totalidad de empleos perdidos por la pandemia y tasa de ocupación sube con fuerza. Press Release (April 19). Available at <https://www.uc.cl/noticias/se-recupera-la-totalidad-de-empleos-perdidos-por-la-pandemia-y-tasa-de-ocupacion-sube-con-fuerza/>.
- Rofman, R., and M.L. Oliveri. 2012. Pension Coverage in Latin America: Trends and Determinants. Social Protection and Labor Discussion Paper No. 1217. World Bank, Washington, DC. Available at <https://openknowledge.worldbank.org/handle/10986/13561>.
- Rofman, R., and C. della Paolera. 2021. Conquistas de Género y un Camino para Aprovechar los Cambios Demográficos. *Diario Clarín* (10 July).
- Schivardi, F., and G. Romano. 2020. A Simple Method to Estimate Firms' Liquidity Needs during the Covid-19 Crisis with an Application to Italy. *COVID Economics* 35: 51–69.
- Superintendencia de Banca, Seguros y AFP (SBS). 2022. Información sobre los procesos de retiro del ahorro previsional durante la pandemia al 31 de diciembre de 2021. Technical Report.

- Superintendencia de Pensiones. 2021a. Statistical Note on the First Withdrawal of Pension Funds: Note 27 (July).
- Superintendencia de Pensiones. 2021b. Statistical Note on the Second Withdrawal of Pension Funds: Note 25 (December).
- Superintendencia de Pensiones. 2022. Statistical Note on the Third Withdrawal of Pension Funds: Note 13 (January).
- Superintendencia del Sistema Financiero (SSF). 2015. Sistema Previsional de El Salvador: Diagnóstico y Evaluación de Escenarios. Joint Working Group of the Ministerio de Hacienda (MH), Banco Central de Reserva (BCR), and SSF.
- Superintendencia del Sistema Financiero (SSF). 2021. Informe sobre la Valuación Actuarial del Sistema de Ahorro para Pensiones con Proyecciones a partir de enero de 2022. Unpublished.
- Superintendencia del Sistema Financiero (SSF). Various years. Informes Estadísticos Previsionales. Available at <https://ssf.gob.sv/informe-estadistico-previsional/>.
- Sutcliffe, C. 2020. The Implications of the COVID-19 Pandemic for Pensions In *A New World Post COVID-19: Lessons for Business, the Finance Industry and Policy Makers*, edited by Monica Billio and Simone Varotto. Ca'Foscari University Press.
- Tiramonti, G., V. Volman, and F. Braga. 2021. *¿Cuáles son las consecuencias de la interrupción de clases presenciales? Observatorio Argentino por la educación.*
- UNICEF. 2021. Impacto de la Pandemia en la Educación de Niñas, Niños y Adolescentes. Informe sectorial de educación. UNICEF, New York.
- Weller, J. 2020. La pandemia del covid-19 y su efecto en las tendencias de los mercados laborales. Technical Report. Economic Commission on Latin America and the Caribbean, Santiago.
- Weller, J., M. Gómez-Contreras, M. Caballero, A. Martín-Caballero, and J. Ravest Tropa. 2020. El Impacto de la Crisis Sanitaria del COVID-19 en los Mercados Laborales Latinoamericanos. Project Document No. LC/TS.2020/90. Economic Commission on Latin America and the Caribbean, Santiago
- Wilkinson, A. 2020. Local Response in Health Emergencies: Key Considerations for Addressing the COVID-19 Pandemic in Informal Urban Settlements. *Environment and Urbanization* 32(2): 503–22.

