

Simulations of policy responses and interventions to promote inclusive adaptation to and recovery from the COVID-19 crisis in Argentina*

[This version: February 2021]

Abstract

This research report analyzes the impact of COVID-19 crisis on households' incomes, unemployment, poverty, and inequality in Argentina. For this purpose, simulates impacts on welfare using household survey data, administrative data on employment and wages by economic sectors. The study also includes a gender analysis. Simulations account for public assistance (i.e., policy response), implemented by the government to mitigate the crisis, to get a sense of how effective how effective the policy response was.

Results indicates that during COVID-19 crisis households would have experimented a reduction of about 10 percent on their incomes. This reduction was nonlinear along the income distribution, being the lowest income earners who suffer the most in relative terms. This is strongly related with relatively higher informality at the bottom of income distribution. Policy response cushioned by more than half what the average drop in household income would have been and ameliorated the situation of workers from more exposed (to COVID-19) activities. This prevented major increases in poverty and inequality. The gradual withdrawal of public assistance, as the economy reduced its rate of contraction, is consistent with its lower intensity to reduce indigence and poverty, and to improve income distribution.

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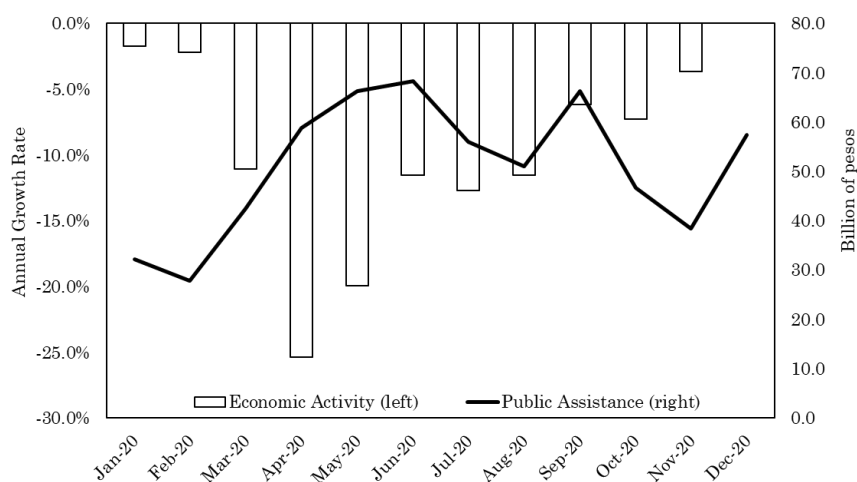
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1. Introduction and background

As in most countries, COVID-19 pandemic has disengaged a severe crisis in Argentina. The preventive and compulsory social isolation (ASPO, in Spanish), established by the National Government on March 20th, had the primary objective of immobilizing the population to prevent the virus circulation, and gain time to prepare the health system for the sanitary consequences. ASPO had been extended for more than 200 days, being one of the longest isolations in the world. Consequently, economic activity has suffered strongly. As shown in Figure 1, according to the National Institute of Statistics and Census (INDEC) of Argentina, economic activity fell 25 percent in April, and 20 percent in May (compared to the same months of 2019).

Figure 1. Economic activity and transfers to private sector (including COVID-19 package funds assistance). Evolution during 2020. In annual growth rates and billion of real pesos.



Source: Own elaboration based on Ministry of Economy, and EPH-INDEC.

While many productive and considered essential activities continued normally (e.g., food production, health services), others less essential were significantly reduced (e.g., transportation). Those that require physical presence in the workplace (e.g., manufacturing, construction) were also restricted, and others directly suspended (e.g., tourism, recreation). Finally, some activities were adapted and carried out remotely (e.g., many professional services, education). This reduction in economy activity has put job stability of many people at risk, affecting their income levels, and deteriorating social indicators.

In this context, the Argentine Government has implemented a series of economic policy responses to face the crisis. To guarantee access to food and sustaining income of

less well-off sectors, an Emergency Family Income (IFE, in Spanish) was established. This was an exceptional payment of \$ 10,000 pesos (around US\$120, an about 60 percent of the minimum wage) during the months of April, June, and August, to unemployed people, informal workers, low-income self-employed, and domestic workers. The social protection system was also reinforced. Beneficiaries of cash transfer programs (e.g., retirees, pensioners, holders of the Universal Child Allowance (AUH) and Universal Allowance for Pregnancy (AUE)) received a bonus payment.¹ This package of measures has been in place from the beginning of the crisis until the end of 2020 for those activities that were affected by the crisis.² The intensity of this public assistance has been shrinking as the economy reduced its rate of contraction (see Figure 1).

Given the crisis and the public policy responses it becomes very relevant to inquire about how effective these policies have been in mitigating the crisis. The underlying hypothesis is that the COVID-19 crisis strongly deteriorated the Argentine economy and households' welfare, but the implemented public policies collaborated to counteract (at least partially) these negative effects. To inquire on this hypothesis, in this research report we analyze the impact of COVID-19 crisis on households' incomes, unemployment, poverty, and inequality. The study also includes a gender analysis. For this purpose, we simulate impacts on welfare at the household level using household survey data, administrative data on employment and wages by economic sectors, and government cash transfers. We consider different scenarios. First, we start by characterizing the pre-COVID-19 scenario in terms of socioeconomic indicators using microdata from Argentina's household survey corresponding to the first quarter of 2020 (Initial Scenario). Second, using last available administrative records on the evolution of registered employment and wages by sector, we simulate the effects on unemployment and household's income for three quarters after the pandemic.³ All Scenarios also include public assistance (i.e., policy response), implemented by the government to mitigate the crisis, to get a sense of how effective these policy measures were in counteracting those effects.

¹ Additionally, with the objective of containing the decline in productive activity the Assistance Program for Emergency to Work and Production (ATP, in Spanish) was created. This program benefits both employers and workers and includes a complementary wage for private sector workers (50 percent paid by the National Government).

² According to Argentina's Ministry of Economy, during 2020 current transfers registered a year-on-year increase of \$ 153 billion pesos of which \$ 114 billion were received by the private sector. Payments for the Emergency Family Income (IFE) and the Emergency Work and Production Assistance Program (ATP) amounted to \$ 11 billion. For their part, family allowances increased by \$ 22 billion by virtue of the increases granted through Decrees N ° 163/20, N ° 495/20 and N ° 692/20 and the mobility applied during 2019.

³ These are the periods between June - March 2020 (1st quarter ahead Scenario), July - September 2020 (2nd quarter ahead Scenario), and October - December 2020 (and 3rd quarter ahead Scenario).

Results indicate that during COVID-19 crisis households would have experienced a reduction of about 10 percent on their incomes. This reduction was nonlinear along the income distribution, being the lowest income earners who suffer the most in relative terms. This is strongly related with relatively higher informality at the bottom of income distribution. The greater negative effects of the pandemic in less well-off part of the income distribution is in line with results from Bonavida and Gasparini (2020). Policy response cushioned by more than half what the average drop in household income would have been and ameliorated the situation of workers from more exposed (to COVID-19) activities. This prevented major increases in poverty and inequality. The policy response was equally important in alleviating poverty in both female-headed and male-headed households. A key aspect of the satisfactory policy response was that public assistance was targeted at informal workers. This policy response large offsetting effect is in line with previous findings such as Lustig et al. (2020).⁴ The gradual withdrawal of public assistance, as the economy reduced its rate of contraction, is consistent with its lower intensity to reduce indigence and poverty, and to improve income distribution.

The research makes three contributions. First, it provides estimates of the effectiveness of the government's response to the pandemic with respect to its impact on household welfare. Second, it contributes to the literature that studies the effects of COVID-19 on socioeconomic variables such as unemployment, poverty, and inequality. To some extent contributes to fill the lack of evidence on the immediate effects of the COVID-19 crisis at the household-level for most low-and middle-income countries, as remarked by Janssens et al. (2020).⁵ Since it focuses on Argentina, a Latin American developing country, is closely related with some previous studies for the region on this topic. Lustig et al. (2020) micro simulate the distributional consequences of COVID-19 in Latin American countries, considering the expanded social assistance that governments introduced in response to the crisis. Their findings suggest that: i) worst effects are not on the poorest, but those (roughly) in the middle of the income distribution; ii) policy response presented large offsetting effect, but with different intensity across countries; and iii) the increase in poverty induced by the lockdown was similar for male- and female-headed households. Bonavida and Gasparini (2020) analyze the effects of COVID-19 on remote employment evaluating to what extent this type of employment is feasible for Argentine workers. They suggest that about a quarter could do it remotely, and the degree

⁴ For an application to the San Francisco Bay Area , Amory et al. (2020) find also that government benefits decrease the amplitude of the crisis.

⁵ As remarked by Janssens et al. (2020) most evidence is from developed countries. See, for example, Coibion, Gorodnichenko and Weber (2020), Forsythe et al. (2020), Montenegro et al. (2020).

of applicability of this modality is very heterogeneous, by occupation and industry. Less compatible occupations are characterized by a higher share of informal and self-employed workers, with lower levels of education, skills, and wages. Thus, short-term negative effects of the pandemic would be greater in the lower-income sectors, implying a significant increase in poverty and income inequality.⁶ Brum and de Rosa (2021) micro simulate the short-run effect of the crisis on the poverty rate for Uruguay. They estimate the effect of the crisis on formal, informal, and self-employed workers, finding that during the first full month of the lock-down, the poverty rate reaches 11.8%, an increase of over 38%. Cash transfers implemented by the government would have had a positive but very limited effect in mitigating this poverty spike. Third, it provides a timely and accurate measurement on the effects of the adopted policies for policy makers, highlighting pros and cons to assist the design of the new round of measures to be adopted at the end of the pandemic.

The remainder of this report is structured as follows. Section 2 details data and the methodological approach. Section 3 presents the simulation, distinguishing between scenarios before COVID-19 and after it. Section 4 summarizes the key findings and offers recommendations for public policy discussions.

2. Data and Methodology

The main source of information for this report is the Permanent Household Survey (EPH), carried out by INDEC. The survey covers urban areas that represent around 62 percent of the total population. It contains information on whether the household member is (labor) active and in which economic sector he/she works. It also reports information on earned income, both labor and non-labor incomes. The latter includes cash transfers, including those from government.⁷

As remarked by Araar, Cruces and Tiberti (2020) COVID-19 can generate a set of multiple shocks on welfare. These include the reduction in labor supply and labor incomes, the increase in prices, and the decrease in remittances. This report will focus on the effects on labor incomes and will also consider the government policy response.⁸ To measure households' welfare we mainly use the monthly gross income per capita (*gipc*).

⁶ Similarly, and for the United States, Montenegro et al. (2020) show that job loss was larger in occupations that cannot be performed remotely.

⁷ We do not impute the rental value of owner-occupied housing.

⁸ We do not consider the effect of price changes given that in Argentina home production is negligible, so net producer/consumer models are not relevant for this country. In addition, we also do not consider the

The methodology to simulate the COVID-19 impact in different scenarios involves several steps. First, we characterize the pre-COVID-19 situation using the most recent available EPH (corresponding to the first quarter of 2020). We denote this situation as **Initial Scenario**, providing an accurate representation on how the Argentine situation -in terms of incomes, poverty, and inequality- was before the pandemic. To measure poverty, we use the same methodology as INDEC. That is, the current household's total income is compared to the household's poverty line, based on the market value of a food-basket, a non-food basket, and the number of members.⁹ We rely on the Gini coefficient and Atkinson indicators to measure the impact on inequality. In this scenario, as in the reminders, we explore heterogeneity on results regarding household head's gender and sector of activity.

Second, we simulate the post-COVID-19 situation for three quarters after the pandemic, considering effects on employment and on labor incomes. We assume that labor incomes variation affects only households with active members and non-zero labor income. To simulate this impact, we first simulate the impact on employment and then on wages for those who remain active. Since the COVID-19 shock presented differential effects depending on productive sectors characteristics, for the employment simulation we use data on employment variations disaggregated by 14 sectors provided by the Argentine Ministry of Production and Labor. This data provides monthly information on the number of formal workers by sector of activity. We compute -for each quarter- the growth rate of this variable by sector.¹⁰ With these figures and by classifying each active member according to these sectors, we impute which workers lose their job using a random selection process.^{11,12} In addition, we simulate the variation on labor incomes for those who continue working -as in the **Initial Scenario**- using data on wages from INDEC. In

remittances given that are not a relevant component of households' income. In 2019, remittances only accounted for 0.11 of GDP.

⁹ For INDEC's poverty measure we need to modify the *gipcf* by dividing total household income by the household's number of equivalent-adult members (i.e., a 30 to 60 years old male according to caloric needs), instead of simply the number of members. In addition, poverty lines depend on the household's geographical location (i.e., region) because of price level variation.

¹⁰ Note that quarters correspond to the 2nd, 3rd, and 4th quarter of 2020. The election of this period is strictly based on comparison purposes, in order to validate our simulations with official data when published.

¹¹ Future versions will include a selection based on individual probabilities of working in sectors ("job queuing" approach).

¹² Based on administrative data, we impute on informal workers a variation (by sector) higher than formal ones. An implicit assumption that we are making is that there are no formal-informal transitions, but both go to unemployment / inactivity. Following INDEC, the employment rate for formal wage earners (with social security discounts) went from 19.9 percent to 19.6 percent, between the 1st and the 2nd quarter of 2020. In the 3rd quarter was 19.0 percent. For informal wage earners these figures were went from 11.1 percent, 6.1 percent, and 7.7 percent, respectively.

this case we consider income variation for public employees, private employees, and informal workers (non-registered salaried employees and self-employed).^{13,14}

Formally, we define $Y_{i,h,0}$ as the pre-COVID-19 (2020, 1st quarter) total income for individual i in household h , and $L_{i,h}$ as the labor income variation for individual i .¹⁵ Then, in equation (1), $Y_{i,h,1}$ constitutes the simulated total income in the post-COVID-19 situations,

$$Y_{i,h,1} = Y_{i,h,0} - L_{i,h} \quad (1)$$

Since inflation in Argentina is very high, we further deflate total incomes by the price level variation of the total basic basket between 1st and the three subsequent quarters that cover the post COVID-19 situation.¹⁶ With these real final incomes, we re-estimate total household's income and the *gipcf* to compute poverty and inequality indicators. We denote these situations as **1st, 2nd, and 3rd quarter ahead Scenarios without policy response**.

Third, we simulate government policy responses. Specifically, we consider the most relevant ones in terms of household's welfare (see Box 1).¹⁷ First, the Emergency Family Income (IFE). This consisted of three exceptional payments during the months of April, June, and August of \$ 10,000 pesos -each- to less well-off families. Note that this policy will affect only the 1st and 2nd quarter after COVID-19 simulations. Second, the extra payment to holders of the AUH, AUE, and retirees. This was an exceptional payment of \$ 3,000 pesos for the 1st and 2nd quarter after COVID-19. For the 3rd quarter after COVID-19 the payment of AUH was increased up to \$6.000 (corresponding to a 5% increase plus 20% of the cash transfer that is withheld every month and received at the end of the year). In terms of the simulation, we identify in the EPH all potential beneficiaries of these programs according with eligibility criteria and we then simulate the cash transfer ($T_{i,h}$).¹⁸ Thus, the after-policy response individual incomes $Y_{i,h,1}^p$ are,

¹³ Table A.2, in the Appendix, presents the figures used for employment and wage variations.

¹⁴ We exclude business-owners, non-salaried family workers and public sector employees for simulating employment losses.

¹⁵ Labor income are collapsed to zero for those individuals who are selected to lose their job, and variation in wages is imputed for those who remain employed.

¹⁶ According to INDEC the annual rate of inflation for 2020 was 36.1 percent.

¹⁷ As in Lustig et al. (2020) It should be noted that our simulations do not include all the mitigation measures that have been implemented by governments. However, it covers the most important ones.

¹⁸ In other words, we follow the *benefit-incidence* analysis, one of the most widely used methodologies for policy response simulation (Van De Walle and Nead, 1995; Bourguignon and Pereira da Silva, 2003; Gasparini, Cicowicz and Sosa Escudero, 2014; Lustig, 2018).

$$Y_{i,h,1}^p = Y_{i,h,0} - L_{i,h} + T_{i,h} \quad (2)$$

Again, we compute the poverty and inequality indicators for these situations, denoted as **1st, 2nd, and 3rd quarter ahead Scenario with policy response**.¹⁹

A critical point regarding the evolution of labor incomes must be taken into account to compare the post COVID-19 quarters with the **Initial Scenario**. Workers in Argentina benefit from a wage bonus that is paid twice a year. This bonus is known as *aguinaldos* and is paid bi-annually during June and December. So, they are registered and included in the 1st and the 3rd quarters of our simulations but not in the 2nd and the 4th ones. Thus, in order to provide an accurate comparison, the **Initial Scenario** should be compared with the **2nd quarter ahead Scenario**. This is valid for both the situation with and without policy response. Finally, leaving aside the **Initial Scenario**, each quarter can be compared between the situation with and without policy response, respectively. This comparison will provide a good approximation for the effects of policy response after the pandemic.

¹⁹ Table A.1, in the Appendix, presents a simple illustration of scenarios and involved data sources.

Box 1. Simulated policy response to mitigate COVID-19 crisis.²⁰

At the beginning of the COVID-19 crisis, on March 23rd, through Decree 310/2020, the National Social Security Administration (ANSES) created a benefit called Emergency Family Income (IFE) aimed at the most vulnerable sectors of the population. The IFE consists of an exceptional non-contributory monetary benefit, intended to compensate the loss or serious decrease in income of people affected by the health emergency situation (declared by Decree No. 260/2020). In order to mitigate the increase in poverty and indigence, this measure was aimed at households made up of informal workers, unemployed and low-income self-employed workers. The latter are those with monthly average gross income less than \$ 17,394 (around US\$220). That is, those sectors of the population with the highest degree of vulnerability in socioeconomic terms. The amount of the IFE was \$ 10,000 (around US\$120, which represents 60 percent of the minimum wage) and can be collected by a member of the family group who is under conditions of exclusion or job insecurity and in conditions of socioeconomic vulnerability. The IFE presents two exclusive definitions regarding the delimitation of the beneficiary population. On the one hand, the program provides assistance to workers affected by precarious job placement (low-income self-employed workers, domestic workers, informal employees and unemployed). On the other hand, the program limits this coverage to the employment and economic situation of the family group to which the beneficiary belongs, in the sense that all its members must meet the conditions to access the IFE, and only one of them may receive the benefit. The IFE was compatible with the receipt of other social programs like the Universal Child Allowance (AUH) or Universal Pregnancy Allowance (AUE).

Simultaneously with the IFE, a bonus of up to \$ 3,000 (around US\$40) was granted to more than 4.6 million retirees and pensioners who received a single pension until reaching \$ 18,892 (around US\$240). In addition, the amount of the AUH and the AUE was also doubled, benefiting more than 4.3 million children and adolescents who received a supplementary income of \$ 3,103.

²⁰ For further details see [here](#).

3. Results

3.1. Initial Scenario

Average per capita income for pre-COVID-19 situation is presented in Table 1, Column [1]. For the first quarter of 2020 it was \$ 19,916, being slightly higher for households with male's household head. The richest decile shows an income approximately 22 times higher than the poorest. In Table 2, Column [1], the same information is provided but distinguishing between economic sectors instead of income deciles. A wide heterogeneity across sectors can be appreciated. Higher incomes are related to sectors like mining or financial services. Construction, hotel and restaurants, and community, social and personal services are among sectors with lowest incomes. Average incomes are higher for those households with males' head in most sectors, with the exception of financial services, mining, and transportations.

These figures on per capita income results in a Gini coefficient of 0.441 (Table 3, Panel A, Column [1]). Income inequality was more pronounced among households with females' head (0.458, see Table 3, Panel B, Column [1]). In terms of indigency and poverty, 8.59 percent of the population was indigent. Poverty rate was around 34.5 percent, which represents around 9.8 million of people (Table 3, Panel C, Column [1]). Again, poverty incidence is higher for households with females' head (38.5 vs 31.8 in Table 3, Panel B, Column [1]).

3.2. Scenarios after COVID-19 without policy response.

In -simulated- post-COVID-19 scenarios without policy responses, average per capita income experimented a reduction of about 9.9 percent (Table 1, Column [5]).²¹ However, this reduction was nonlinear along the income distribution. While the richest decile showed an income reduction of approximately 4.9 percent, the reduction among the poorest was around 23.4 percent.²² The justification of this is that we are assuming - according with administrative data- different variations on employment (by sector) for formal and informal workers, and informal ones are located at the bottom of the income distribution (see Table A.3, Panel A, in the Appendix).²³ Following INDEC, the

²¹ Here, it should be remembered that given the inclusion of *aguinaldos* an accurate comparison with the Initial Situation (1st quarter of 2020) must be done with the 2nd quarter ahead of the post COVID-19 Scenario.

²² For the case of Kenya, Janssens et al. (2020) find a similar reduction of around one-third in poorest households' incomes. Amory et al. (2020) perform simulation for the San Francisco Bay Area, and also document that the lowest income earners suffer the most in relative terms.

²³ See footnote 12. Table A.3, in the Appendix, presents the informality rate by income deciles and by economic sectors.

employment rate for informal (formal) wage earners went from 11.1 (19.9) percent to 6.1 (19.6) percent, between the 1st and the 2nd quarter of 2020. Focusing on the analysis by economic sectors, as was well established by previous papers (Lustig et al., 2020), income reduction were more pronounced in more exposed (to COVID-19) activities. Those were the cases of construction and hotels and restaurants that present income reductions of around 30 percent (Table 2, Column [5]). Results for this scenario in terms of poverty and income distribution were as expected (Table 3, Panel A, Columns [4] and [5]). Indigency sharply rose up to 16.4 percent, 90 percent higher when comparing to initial situation. Poverty incidence rose up to 43.10 (24.7 percent higher, when comparing with initial situation). Interestingly, poverty rose relatively more among those households with males' head. This change represented an additional of 2.4 million people under the poverty line (Table 3, Panel C, Column [4]). Income inequality also worsen substantially. The Gini coefficient for this scenario was 0.475, 7.6 percent higher than the corresponding to the initial situation. This could be related with the fact that lowest deciles experimented higher income reductions, relative to highest decile.

Continuing with the post-COVID-19 scenarios without policy response, an interesting exercise is to compare the 3rd quarter ahead with the 1st quarter ahead (i.e., a comparison with the probable worst moment of the pandemic). This will provide a sense of the evolution of incomes and employment net from public assistance. That is, changes that can be associated with economic activity only. It can be appreciated that household income on average increased by 1.5 percent (Table 1, Column [7]). However, the differential effect on income distribution remains. The income of the richest decile fell by 2.5 percent, while the income of the poorest decile increased by 14.8 percent. This, consistent with administrative data, may be due to a faster recovery of informal employment -which has a greater relative weight in the lower part of the income distribution- than formal employment. Following INDEC, the employment rate for informal (formal) wage earners went from 6.1 (19.6) percent to 7.7 (19.0) percent, between the 2nd and the 3rd quarter of 2020. This recovery of income occurs precisely in sectors that have a -relatively- higher percentage of informality such as construction, and community, social and personal services (Table 2, Column [7]).²⁴ Consistently with this evolution of incomes, poverty and income distribution responded as expected (Table 3, Panel A, Column [7]). Indigency was reduced by 18 percent, and poverty incidence fell by 3.2 percent. This change represented around 0.5 million people jumping the poverty line

²⁴ See Table A.3, Panel B, in the Appendix.

(Table 3, Panel C, Column [6]). Income inequality also improved substantially. The Gini coefficient for the 3rd quarter ahead scenario was 0.465, 4.1 percent lower than the corresponding to the 1st quarter ahead situation after COVID-19 appearance (0.485).

3.3. Scenarios after COVID-19 with policy response.

When considering government policy response, the situation seems to have ameliorated. A comparison with the initial situation represents a contrast where economic activity and policy responses will be -jointly- the main drivers behind changes. In this situation (Table 1, Column [11]), average per capita income experimented a reduction of about 4.3 percent when comparing with initial situation. Thus, public assistance cushioned by more than half what the average drop in household income would have been (Table 1, -4.3 in Column [11] vs -9.9 in Column [5]). For decile 2 the household per capita income was increased by 7.4 percent with policy response, while it would have been reduced by 23.9 percent without public assistance.²⁵ This implies that public assistance more than compensated for the reduction in household's income. This buffering effect occurred, although with decreasing intensity, also among deciles 3 to 7. As expected, policy response seems not to have impacted substantially in the top 20 percent of the income distribution. When analyzing by economic sector the findings are similar. It is worth noting that public assistance ameliorated the situation of more exposed (to COVID-19) activities. Worker of construction sector experimented a reduction of incomes of 21.4 percent (Table 2, Column [11]). This reduction would have been 33.7 percent in the absence of public policy (Table 2, Column [5]). Similar conclusions can be found for other sectors such as hotels and restaurants.

Public assistance also ameliorated the situation in terms of poverty and income distribution (Table 3, Panel A, Columns [10] and [11])). Indigency was reduced up to 7.1 percent, 16.8 percent lower when comparing to initial situation. It is worth remembering that this 7.1 would have been 16.4 in the absence of policy response (Table 3, Panel A, Columns [5]). Poverty incidence rose up to 38.72 (4.14 percentage points or 12.0 percent higher, when comparing with initial situation). This implied a reduction 9.25 (4.38) percentage points in indigence (poverty) rate when comparing with the situation without policy response (Table 3, Panel A, 7.1 (38.7) in Column [10] vs 16.4 (43.1) in Column [5]).

²⁵ Even more interesting is the fact that the lowest decile increased by more than 50 percent its income. Perhaps this change may be overestimated because we work with potential beneficiaries and not beneficial owners. It is one of the risks of working with the eligibility criteria and potential identification.

This effect preserved more than a million people from falling into poverty (Table 3, Panel C, Column [10]). A very relevant finding here is that the policy response was equally important in alleviating poverty in both female-headed and male-headed households. Among the first one's poverty rose from 38.5 up to 42.1 (Table 3, Panel B, Column [1] and [10]), while it would have rose 47.0 rate in the situation without policy response (Column [4]). This represents a cushion of 4.8 percentage points (42.1 - 47.0) or 12.7 percent (4.8/38.5). In the case of male-headed households, the cushion was percentage 4.0 points (36.3 – 40.3) or 12.7 percent (4.0/31.8). Income inequality also ameliorated substantially. The Gini coefficient for this scenario is 0.422, pretty similar to the corresponding to the initial situation one (Table 3, Panel A, Column [10]).

Finally, a comparison of the same quarters between scenarios with and without policy response could provide additional relevant insights regarding policy effects. Note that here policy responses will be -uniquely- the main driver behind the changes since economic activity driver is the same in both situations. For this purpose, in Column [9] of each Table we compare the percentage change of income levels, and poverty and inequality indicators at the 1st quarter after the pandemic but with and without policy response. In Column [13] we do the same for the 3rd quarter. Results indicate that average per capita family income was consistently higher -on average- in all quarters compared to what it would have been in the absence of public assistance. This holds, naturally with different intensity, for both the lower and upper sides of the income distribution. As presented in Figure 1, the intensity of public assistance has been shrinking as the economy reduced its rate of contraction. This seem to have its correlation with the fact that in the 1st quarter after the pandemic, household's incomes were -on average- 7.5 higher compared to what they would have been without public assistance (Table 1, Column [9]). During the 3rd quarter, this difference was reduced up to 4.7 percent (Table 1, Column [13]). This phenomenon can also be appreciated when analyzing the dynamics of income by economic sectors (Table 2, Columns [9] and [13]). The gradual withdrawal of public assistance is also consistent with its lower intensity to reduce indigence and poverty, and to improve income distribution. In terms of indigency reduction, during the 1st quarter post-COVID-19, public assistance reduced the indigence rate by 53.6 percent (Table 3, Panel A, Column [9]). Naturally as the economy stopped falling so hard, incomes slowly recovered, lower public assistance reduced indigence by 39.1 percent in the 3rd quarter (Table 3, Panel A, Column [13]). In terms of poverty, it is interesting to look at the absolute values of individuals. During the 1st quarter, public assistance contributed to preventing nearly 1 million people from falling into poverty (938,900 in Table 3, Panel

C, Column [9]). Yet in the 3rd quarter, and with a lower number of poor people, public assistance helped another 400 thousand people avoid being poor (394,278 in Table 3, Panel C, Column [13]).

Table 1. Average per capita income by deciles and by gender. Pre and post COVID-19 Scenarios with and without policy response. In pesos and percentage change.

Decil	Group	Pre-COVID19	Post-COVID19 Scenario (without policy response)						Post-COVID19 Scenario (with policy response)					
		Initial	1 quarter ahead		2 quarters ahead		3 quarters ahead		1 quarter ahead		2 quarters ahead		3 quarters ahead	
		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]
		Level	Level	Level	Change [4] - [1] (in %)	Level	Change [6] - [2] (in %)	Level	Change [8] - [2] (in %)	Level	Change [10] - [1] (in %)	Level	Change [12] - [6] (in %)	
1	Male	2,978	1,925		2,147	-27.9%	2,304	19.7%	4,353	126.2%	4,453	49.5%	4,013	74.1%
	Female	3,055	2,202		2,454	-19.7%	2,451	11.3%	4,970	125.7%	5,065	65.8%	4,588	87.2%
	Decil	3,020	2,076		2,315	-23.4%	2,384	14.8%	4,690	125.9%	4,787	58.5%	4,327	81.5%
2	Male	5,863	3,768		4,306	-26.6%	4,277	13.5%	5,538	47.0%	5,986	2.1%	5,555	29.9%
	Female	5,763	3,965		4,582	-20.5%	4,547	14.7%	6,093	53.7%	6,579	14.1%	6,161	35.5%
	Decil	5,819	3,856		4,429	-23.9%	4,397	14.0%	5,785	50.0%	6,250	7.4%	5,825	32.5%
3	Male	8,196	5,302		6,305	-23.1%	6,074	14.6%	6,715	26.6%	7,624	-7.0%	6,998	15.2%
	Female	8,195	5,509		6,453	-21.3%	6,460	17.3%	7,158	29.9%	8,003	-2.3%	7,612	17.8%
	Decil	8,196	5,388		6,366	-22.3%	6,233	15.7%	6,898	28.0%	7,780	-5.1%	7,252	16.3%
4	Male	10,361	7,028		8,273	-20.2%	7,839	11.5%	8,193	16.6%	9,350	-9.8%	8,491	8.3%
	Female	10,338	7,680		8,486	-17.9%	8,159	6.2%	9,045	17.8%	9,785	-5.4%	9,033	10.7%
	Decil	10,352	7,292		8,359	-19.2%	7,969	9.3%	8,538	17.1%	9,526	-8.0%	8,710	9.3%
5	Male	12,927	9,557		10,842	-16.1%	10,101	5.7%	10,509	10.0%	11,740	-9.2%	10,673	5.7%
	Female	12,997	9,962		11,122	-14.4%	10,619	6.6%	11,132	11.7%	12,230	-5.9%	11,328	6.7%
	Decil	12,954	9,714		10,950	-15.5%	10,301	6.0%	10,750	10.7%	11,930	-7.9%	10,926	6.1%
6	Male	15,996	12,248		14,007	-12.4%	12,856	5.0%	13,098	6.9%	14,810	-7.4%	13,331	3.7%
	Female	16,024	12,483		13,902	-13.2%	12,982	4.0%	13,568	8.7%	14,919	-6.9%	13,597	4.7%
	Decil	16,007	12,338		13,967	-12.7%	12,904	4.6%	13,278	7.6%	14,852	-7.2%	13,433	4.1%
7	Male	19,812	16,821		18,327	-7.5%	16,737	-0.5%	17,478	3.9%	18,955	-4.3%	17,160	2.5%
	Female	19,863	16,949		18,275	-8.0%	16,837	-0.7%	17,696	4.4%	18,989	-4.4%	17,295	2.7%
	Decil	19,833	16,873		18,306	-7.7%	16,778	-0.6%	17,567	4.1%	18,969	-4.4%	17,215	2.6%
8	Male	24,913	21,358		23,379	-6.2%	20,851	-2.4%	21,936	2.7%	23,922	-4.0%	21,240	1.9%
	Female	25,141	21,929		23,646	-5.9%	21,858	-0.3%	22,648	3.3%	24,324	-3.2%	22,280	1.9%
	Decil	24,999	21,574		23,480	-6.1%	21,231	-1.6%	22,205	2.9%	24,073	-3.7%	21,632	1.9%
9	Male	33,387	27,993		31,334	-6.1%	27,335	-2.4%	28,384	1.4%	31,716	-5.0%	27,555	0.8%
	Female	33,360	28,625		31,544	-5.4%	28,191	-1.5%	29,025	1.4%	31,909	-4.4%	28,411	0.8%
	Decil	33,377	28,233		31,414	-5.9%	27,661	-2.0%	28,628	1.4%	31,789	-4.8%	27,881	0.8%
10	Male	68,126	58,491		64,621	-5.1%	57,001	-2.5%	58,780	0.5%	64,906	-4.7%	57,146	0.3%
	Female	63,150	55,125		60,248	-4.6%	53,773	-2.5%	55,448	0.6%	60,539	-4.1%	53,899	0.2%
	Decil	66,246	57,219		62,969	-4.9%	55,781	-2.5%	57,521	0.5%	63,256	-4.5%	55,919	0.2%
Population	Male	20,717	16,405		18,670	-9.9%	16,637	1.4%	17,452	6.4%	19,658	-5.1%	17,285	3.9%
	Female	18,753	15,028		16,905	-9.9%	15,263	1.6%	16,406	9.2%	18,202	-2.9%	16,164	5.9%
	Population	19,916	15,844		17,950	-9.9%	16,077	1.5%	17,025	7.5%	19,064	-4.3%	16,828	4.7%

Source: Own elaboration based on Ministry of Production and Labor, and EPH-INDEC.

Table 2. Average per capita income by economic sector and by gender. Pre and post COVID-19 Scenarios with and without policy response. In pesos and percentage change.

Sector	Group	Pre-COVID19	Post-COVID19 Scenario (without policy response)						Post-COVID19 Scenario (with policy response)					
		Initial	1 quarter ahead		2 quarters ahead		3 quarters ahead		1 quarter ahead		2 quarters ahead		3 quarters ahead	
		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]
		Level	Level	Level	Level	Change [4] - [1] (n %)	Level	Change [6] - [2] (n %)	Level	Change [8] - [2] (n %)	Level	Change [10] - [1] (n %)	Level	Change [12] - [6] (n %)
1. Agriculture, livestock, hunting and forestry	Male	24,273	20,466		20,602	-15.1%	19,354	-5.4%	21,732	6.2%	21,797	-10.2%	20,058	3.6%
	Female	19,156	12,047		13,964	-27.1%	12,490	3.7%	13,599	12.9%	15,429	-19.5%	13,549	8.5%
	Sector	22,784	18,017		18,671	-18.1%	17,357	-3.7%	19,366	7.5%	19,944	-12.5%	18,165	4.7%
2. Fishing	Male	32,143	26,441		30,142	-6.2%	25,720	-2.7%	27,121	2.6%	30,783	-4.2%	25,720	0.0%
	Female	30,438	26,875		28,848	-5.2%	21,999	-18.1%	26,875	0.0%	28,848	-5.2%	21,999	0.0%
	Sector	31,523	26,599		29,672	-5.9%	24,367	-8.4%	27,031	1.6%	30,080	-4.6%	24,367	0.0%
3. Mining and quarrying	Male	45,939	35,973		41,052	-10.6%	33,276	-7.5%	36,181	0.6%	41,249	-10.2%	33,422	0.4%
	Female	46,948	39,027		43,360	-7.6%	37,687	-3.4%	39,380	0.9%	43,693	-6.9%	37,911	0.6%
	Sector	46,109	36,489		44,443	-10.1%	34,022	-6.8%	36,722	0.6%	41,662	-9.6%	34,181	0.5%
4. Manufacturing	Male	19,975	15,753		18,448	-7.6%	16,280	3.3%	16,788	6.6%	19,429	-2.7%	16,751	2.9%
	Female	17,141	13,277		15,613	-8.9%	14,625	10.2%	14,755	11.1%	16,999	-0.8%	15,432	5.5%
	Sector	18,970	14,875		17,442	-8.1%	15,693	5.5%	16,067	8.0%	18,567	-2.1%	16,284	3.8%
5. Electricity, gas and water supply	Male	31,634	26,793		29,938	-5.4%	26,378	-1.5%	27,409	2.3%	30,480	-3.6%	26,568	0.7%
	Female	24,508	19,865		23,008	-6.1%	19,671	-1.0%	20,336	2.4%	23,453	-4.3%	19,959	1.5%
	Sector	29,654	24,869		28,013	-5.5%	24,515	-1.4%	25,444	2.3%	28,528	-3.8%	24,732	0.9%
6. Construction	Male	14,328	8,629		9,649	-32.7%	9,369	8.6%	10,595	22.8%	11,489	-19.8%	10,227	9.2%
	Female	13,251	7,918		8,466	-36.1%	8,705	9.9%	9,531	20.4%	9,964	-24.8%	9,714	11.6%
	Sector	13,976	8,397		9,262	-33.7%	9,152	9.0%	10,247	22.0%	10,990	-21.4%	10,059	9.9%
7. Trade and repairs	Male	18,762	13,953		16,224	-13.5%	14,640	4.9%	15,306	9.7%	17,509	-6.7%	15,294	4.5%
	Female	17,885	13,338		15,694	-12.2%	14,294	7.2%	14,907	11.8%	17,167	-4.0%	15,108	5.7%
	Sector	18,432	13,721		16,025	-13.1%	14,510	5.7%	15,156	10.5%	17,380	-5.7%	15,224	4.9%
8. Hotels and restaurants	Male	17,203	10,874		12,150	-29.4%	10,663	-1.9%	12,315	13.3%	13,546	-21.3%	11,187	4.9%
	Female	16,510	10,380		11,633	-29.5%	10,395	0.1%	11,840	14.1%	13,014	-21.2%	11,202	7.8%
	Sector	16,903	10,660		11,927	-29.4%	10,547	-1.1%	12,110	13.6%	13,316	-21.2%	11,193	6.1%
9. Transportation and communication	Male	24,223	19,087		21,645	-10.6%	18,629	-2.4%	20,044	5.0%	22,547	-6.9%	19,097	2.5%
	Female	24,918	19,509		22,024	-11.6%	19,103	-2.1%	20,327	4.2%	22,804	-8.5%	19,545	2.3%
	Sector	24,438	19,218		21,762	-11.0%	18,775	-2.3%	20,132	4.8%	22,627	-7.4%	19,236	2.5%
10. Financial services	Male	37,973	31,213		35,251	-7.2%	29,995	-3.9%	31,673	1.5%	35,685	-6.0%	30,199	0.7%
	Female	38,098	31,868		35,830	-6.0%	30,719	-3.6%	32,280	1.3%	36,220	-4.9%	30,910	0.6%
	Sector	38,014	31,426		35,440	-6.8%	30,231	-3.8%	31,871	1.4%	35,859	-5.7%	30,431	0.7%
11. Real estate, business and rental activities	Male	26,696	20,406		24,123	-9.6%	22,783	11.6%	21,368	4.7%	25,023	-6.3%	23,201	1.8%
	Female	24,197	18,061		21,637	-10.6%	20,256	12.2%	19,081	5.6%	22,589	-6.6%	20,698	2.2%
	Sector	25,784	19,551		23,216	-10.0%	21,860	11.8%	20,534	5.0%	24,135	-6.4%	22,287	2.0%
12. Education	Male	28,736	23,567		26,116	-9.1%	22,699	-3.7%	24,090	2.2%	26,610	-7.4%	22,873	0.8%
	Female	27,102	20,104		23,239	-14.3%	19,905	-1.0%	20,999	4.5%	24,075	-11.2%	20,195	1.5%
	Sector	27,102	22,037		24,845	-8.3%	21,465	-2.6%	22,725	3.1%	25,490	-5.9%	21,690	1.0%
13. Social and health services	Male	47,269	41,706		45,021	-4.8%	41,798	0.2%	42,246	1.3%	45,531	-3.7%	42,000	0.5%
	Female	27,777	22,693		26,356	-5.1%	22,970	1.2%	23,543	3.7%	27,158	-2.2%	23,311	1.5%
	Sector	38,249	32,907		36,384	-4.9%	33,085	0.5%	33,591	2.1%	37,029	-3.2%	33,351	0.8%
14. Community, social and personal services	Male	16,067	10,701		12,953	-19.4%	11,645	8.8%	12,164	13.7%	14,331	-10.8%	12,327	5.9%
	Female	13,410	8,412		10,084	-24.8%	9,660	14.8%	11,129	32.3%	12,648	-5.7%	10,721	11.0%
	Sector	14,668	9,495		11,442	-22.0%	10,600	11.6%	11,619	22.4%	13,445	-8.3%	11,481	8.3%
15. Unspecified	Male	25,303	20,873		20,472	-19.1%	17,228	-17.5%	21,423	2.6%	21,059	-16.8%	17,450	1.3%
	Female	41,818	38,626		26,769	-36.0%	24,247	-37.2%	38,977	0.9%	27,148	-35.1%	24,593	1.4%
	Sector	29,974	25,894		22,253	-25.8%	19,213	-25.8%	26,388	1.9%	22,781	-24.0%	19,471	1.3%
All Sectors	Male	23,504	17,404		20,447	-13.0%	18,059	3.8%	18,541	6.5%	21,524	-8.4%	18,566	2.8%
	Female	21,561	15,529		18,460	-14.4%	16,305	5.0%	17,043	9.7%	19,880	-7.8%	16,995	4.2%
	All Sectors	22,743	16,670		19,669	-13.5%	17,373	4.2%	17,954	7.7%	20,881	-8.2%	17,951	3.3%

Source: Own elaboration based on Ministry of Production and Labor, and EPH-INDEC.

Table 3. Poverty, inequality indicators, and number of poos by gender. Pre and post COVID-19 Scenarios with and without policy response. In pesos and percentage change.

Panel A. Indigence, poverty, and inequality indicators

Indicators	Pre-COVID19	Post-COVID19 Scenario (without policy response)						Post-COVID19 Scenario (with policy response)					
	Initial	1 quarter ahead		2 quarters ahead		3 quarters ahead		1 quarter ahead		2 quarters ahead		3 quarters ahead	
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]
	Level	Level	Change [4] - [1] (in %)	Level	Change [6] - [2] (in %)	Level	Change [8] - [2] (in %)	Level	Change [10] - [1] (in %)	Level	Change [12] - [6] (in %)		
Indigence													
FGT (0)	8.59	21.82	16.40	90.9%	17.89	-18.0%	10.12	-53.6%	7.14	-16.8%	10.89	-39.1%	
FGT (1)	3.20	12.59	9.04	182.5%	8.83	-29.8%	2.60	-79.4%	2.00	-37.4%	4.49	-49.2%	
FGT (2)	1.93	9.62	6.62	242.6%	6.31	-34.4%	1.15	-88.0%	0.92	-52.2%	3.09	-51.1%	
Poverty													
FGT (0)	34.57	48.90	43.10	24.7%	47.35	-3.2%	45.61	-6.7%	38.72	12.0%	44.22	-6.6%	
FGT (1)	13.64	26.31	21.11	54.7%	22.77	-13.5%	18.21	-30.8%	14.26	4.5%	17.90	-21.4%	
FGT (2)	7.58	18.56	14.18	87.0%	14.89	-19.7%	9.47	-49.0%	7.20	-5.1%	10.18	-31.6%	
Inequality													
Gini	0.441	0.485	0.475	7.6%	0.465	-4.1%	0.450	-7.2%	0.442	0.0%	0.438	-5.9%	
Theil	0.345	0.415	0.398	15.4%	0.382	-8.0%	0.357	-14.0%	0.344	-0.2%	0.339	-11.4%	
ATK (0)	0.000	0.000	0.000	0.0%	0.000	0.0%	0.000	0.0%	0.000	0.0%	0.000	0.0%	
ATK (0.5)	0.160	0.198	0.188	17.9%	0.180	-9.1%	0.162	-17.8%	0.157	-1.8%	0.155	-13.5%	
ATK (1)	0.300	0.380	0.361	20.5%	0.341	-10.1%	0.295	-22.3%	0.287	-4.4%	0.287	-15.8%	
ATK (2)	0.546	0.688	0.663	21.3%	0.622	-9.6%	0.487	-29.2%	0.481	-12.0%	0.505	-18.7%	

Panel B. Poverty and inequality indicators, by gender

Indicators	Group	Pre-COVID19	Post-COVID19 Scenario (without policy response)						Post-COVID19 Scenario (with policy response)					
		Initial	1 quarter ahead		2 quarters ahead		3 quarters ahead		1 quarter ahead		2 quarters ahead		3 quarters ahead	
		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]
		Level	Level	Change (in %)	Level	Change [4] - [1] (in %)	Level	Change [6] - [2] (in %)	Level	Change [8] - [2] (in %)	Level	Change [10] - [1] (in %)	Level	Change [12] - [6] (in %)
Poverty														
Poverty Incidence	Male	31.81	46.72	40.39	27.0%	45.87	-1.8%	44.18	-5.4%	36.35	14.3%	43.16	-2.3%	
	Female	38.58	52.06	47.04	21.9%	49.50	-4.9%	47.67	-8.4%	42.15	9.3%	45.77	-4.0%	
	Population	34.57	48.90	43.10	24.7%	47.35	-3.2%	45.61	-6.7%	38.72	12.0%	44.22	-3.0%	
Inequality														
Gini	Male	0.429	0.472	0.462	7.7%	0.453	-4.1%	0.446	-5.4%	0.437	1.8%	0.433	-3.1%	
	Female	0.458	0.503	0.492	7.3%	0.483	-3.9%	0.454	-9.7%	0.447	-2.5%	0.444	-2.2%	
	Population	0.441	0.485	0.475	7.6%	0.465	-4.1%	0.450	-7.2%	0.442	0.0%	0.438	-2.7%	

Panel C. Number of poors

Group	Pre-COVID19	Post-COVID19 Scenario (without policy response)						Post-COVID19 Scenario (with policy response)					
	Initial	1 quarter ahead		2 quarters ahead		3 quarters ahead		1 quarter ahead		2 quarters ahead		3 quarters ahead	
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]
	Level	Level	Change (in %)	Level	Change [4] - [1] (level)	Level	Change [6] - [2] (level)	Level	Change [8] - [2] (level)	Level	Change [10] - [1] (level)	Level	Change [12] - [6] (level)
Male	5,376,778	7,896,098	6,826,114	1,449,336	7,752,721	-143,377	7,467,289	-428,809	6,144,202	-681,912	7,295,126	-172,163	
Female	4,489,291	6,057,429	5,473,684	984,393	5,759,365	-298,064	5,547,338	-510,091	4,904,714	-568,970	5,325,223	-222,115	
Population	9,866,069	13,953,527	12,299,798	2,433,729	13,512,086	-441,441	13,014,627	-938,900	11,048,916	-1,250,882	12,620,349	-394,278	

Source: Own elaboration based on Ministry of Production and Labor, and EPH-INDEC.

4. Conclusions and recommendations for policy discussion

While the initial focus was on the health effects of the COVID-19 crisis, its socio-economic effects and accompanying policy responses are receiving increased attention, mainly in low and middle-income countries. In this context we analyze the impact of COVID-19 crisis on households' incomes, unemployment, poverty, and inequality in Argentina. For this purpose, we simulate impacts on welfare at the household level using household survey data, administrative data on employment and wages by economic sectors. Simulations also include public cash transfers (i.e., policy response), implemented by the government to mitigate the crisis, to get a sense of how effective these policy measures were in counteracting those effects.

Results indicates that during COVID-19 crisis households would have experimented a reduction of about 10 percent on their incomes. This reduction was nonlinear along the income distribution, being the lowest income earners who suffer the most in relative terms. This is strongly related with relatively higher informality at the bottom of income distribution. The greater negative effects of the pandemic in less well-off part of the income distribution is in line with Bonavida and Gasparini (2020). Policy response cushioned by more than half what the average drop in household income would have been and ameliorated the situation of workers from more exposed (to COVID-19) activities. This prevented major increases in poverty and inequality. Policy response was equally important in alleviating poverty in both female-headed and male-headed households. A key aspect of the satisfactory policy response was that public assistance was targeted at informal workers. This policy response large offsetting effect is in line with previous findings for Argentina, such as Lustig et al. (2020). The gradual withdrawal of public assistance, as the economy reduced its rate of contraction, is consistent with its lower intensity to reduce indigence and poverty, and to improve income distribution.

In the transition towards the end of the pandemic, policy discussion should include short-term and medium- term policies. Academic and policy debates on short-term policies should focus on how to achieve an accurate focalization of public assistance. An important obtained lesson from de Argentine case is that as most of poorest households are employed in the informal sector, relief measures -as those applied- considering informality becomes crucial. Thus, it becomes very relevant the discussion of developing policies aimed at reducing labor informality. Labor market policies play an important role in the formalization of employment. Given that most informal workers have low qualifications

and work in jobs that are difficult to identify for public policies, an integrated policy approach is necessary, which includes economic, social and labor policies (Bertranou et al., 2013). Along this lines, is also important to address how to adapt people to the transformation of the workplace in the post-Covid-19 era, since the crisis may catalyze wider adoption of teleworking practices also after the crisis.

An accurate identification of those who really need public assistance also becomes crucial. All information, contained in the administrative records of the different divisions of the public sector, about citizens must be used. Invest in resources and modern technologies to obtain a good handling of this information should also be considered in order to have it available at the right times. In turn, it is important to make efforts to get this information as updated as possible. All this aims to minimize the typical errors of inclusion and exclusion, that arise when targeting social policies. An adequate use of the administrative records of the Argentine social security, through its different contributory and non-contributory programs, despite its limitations, is a key aspect since it already covers the majority of the population (Giuliano et al., 2020).

Another important aspect, as emphasized by Gutierrez Romero and Ahamed (2020), is financial inclusion. As this study suggest, particularly financial outreach, is a key driver of poverty reduction in low-middle income countries. This effect is not direct, but indirect, by mitigating the detrimental effect that inequality has on poverty. Policies will be needed to help households receive government transfers and build financial buffers to spread resources over the likely prolonged crisis.

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Appendix

Table A.1. Simple illustration of simulated scenarios and involved data sources.

Year	2020											
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Quarter	Initial			1st Quarter			2nd Quarter			3rd Quarter		
	EPH + Administrative monthly data on employment and wages, by sector + Administrative data on policy response to COVID-19 crisis											
	Scenarios with and without policy response											

Source: Own elaboration

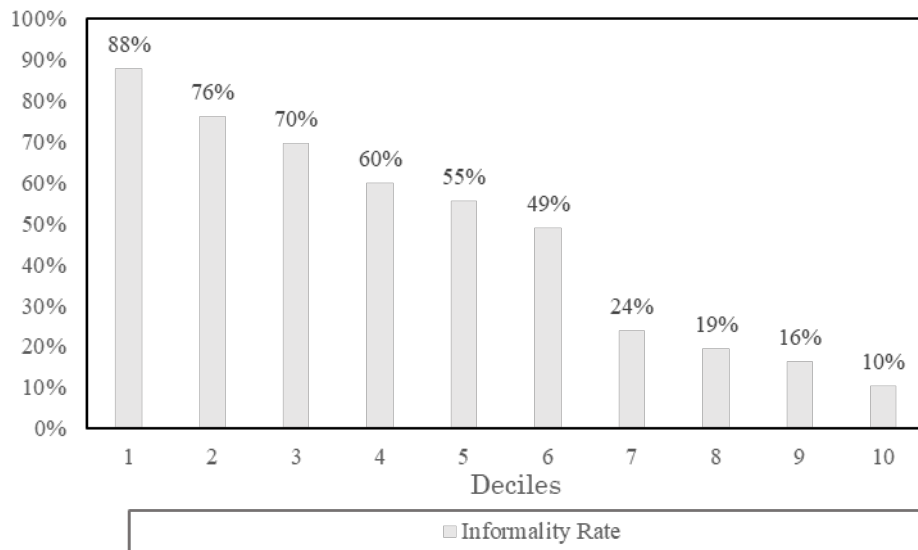
Table A.2. Employment and wage variations.

	1q ahead	2q ahead	3q ahead
A. Employment Variations			
1. Agriculture, livestock, hunting and forestry	-5,31%	-6,57%	-6,49%
2. Fishing	-0,11%	-0,75%	0,00%
3. Mining and quarrying	-3,54%	-5,88%	-8,87%
4. Manufacturing industries	-1,38%	-0,52%	0,00%
5. Electricity, gas and water supply	-0,27%	0,00%	0,00%
6. Construction	-13,23%	-11,82%	-5,54%
7. Trade and repairs	-2,35%	-2,42%	-2,37%
8. Hotels and restaurants	-12,94%	-17,08%	-20,21%
9. Transportation, storage and communication	-2,23%	-2,70%	-3,54%
10. Financial intermediation	-1,06%	-1,34%	-1,76%
11. Real estate, business and rental activities	-4,22%	-2,34%	0,00%
12. Education	-1,44%	-2,42%	-3,65%
13. Social and health services	-0,73%	0,00%	0,00%
14. Community, social and personal services	-4,22%	-4,75%	-4,12%
15. Unspecified	-10,58%	-17,16%	-23,57%
B. Wage Variations			
Public	1,95%	7,19%	15,22%
Private Formal	-0,34%	5,29%	15,66%
Private Informal	1,69%	12,54%	25,05%

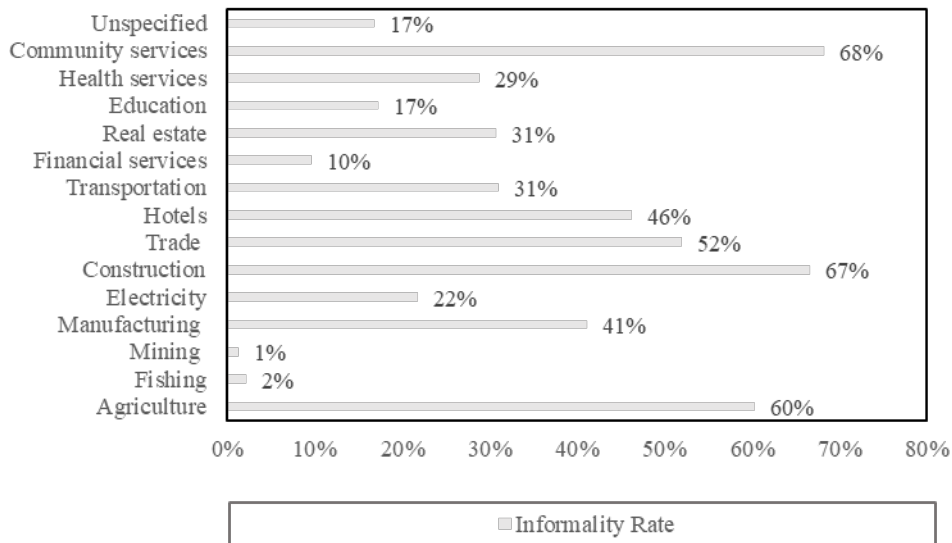
Source: Own elaboration based on Ministry of Production and Labor, and INDEC.

Table A.3. Informality rate by income deciles (Panel A) and main economic sectors (Panel B).

Panel A. By Income Deciles



Panel B. By Economic Sectors



Source: Own elaboration based on EPH- INDEC.