



Poverty and welfare impacts of COVID-19 and mitigation policies in Armenia¹

This note summarizes the results of simulations of the poverty and welfare impacts of the COVID-19 pandemic in Armenia. First, the poverty and distributional effects are estimated using a microsimulation model of household income shocks. Next, selected mitigation packages implemented by the Government of Armenia (GoA) are introduced and simulated to assess their effectiveness to improve household welfare and to prevent impoverishment from the economic impacts of COVID-19. Lastly, simulations based on short- and medium-term macroeconomic projections are reported.²

Key Takeaways

- The short-term impacts of COVID-19 on household labor and nonlabor incomes could substantially increase poverty rates in Armenia. The 2020 poverty rate could increase from a counterfactual 33.6% (without COVID-19) to 46.4% after accounting for the economic shocks of the pandemic, when measured by the upper middle-income class poverty line of \$5.5 (2011 PPP). The incidence of extreme poverty could increase from a relatively low 1% to 7% of the population.³
- The economic shocks from COVID-19 could impoverish 370 thousand Armenians. Over 720 thousand (one in four) Armenians could suffer downward mobility, shifting to a lower-welfare group in 2020.
- The GoA announced several policy packages directed to mitigate the economic shocks of COVID-19 on household incomes. Nonetheless, the magnitude of these measures is insufficient to offset the large impoverishment effects of COVID-19. Based on the information available, the combined mitigation measures could revert the effects of COVID-19 on poverty by around 1 percentage point (regardless of the poverty threshold).
- The mitigation measures identified and simulated fall short of a significant role as safety nets. Armenia's fiscal response to COVID-19 has been on the lower end, as compared to other Emerging Market and Developing Economies (EMDEs). Consistent with this, lessons from the available microsimulations suggest that the amount and duration of benefits (that determine the AMD received) may be too limited to significantly lift household incomes after the shocks from the pandemic. Supplemental transfers could enhance the overall response of the GoA.
- On the other hand, existing social protection and social assistance mechanisms (pensions and the Family Benefits Program) are essential buffers against negative economic shocks, including the pandemic.
- The analysis is based on available information and assumptions as of November 2020. Hence, results reflect trends in the impact of COVID-19 and mitigation policies observed between March and November 2020. Moreover, they do not reflect the effects of the armed conflict during September, October and November 2020.

Background

- After confirming the first case of COVID-19 on March 1st, 2020 the GoA declared state of emergency on March 16th, through September 12th, 2020. The lockdown imposed strict containment measures, closed schools, and banned travel from high-risk countries (IMF 2020). In October 2020, Armenia began facing a steeper increase in COVID-19 cases, with a high infection rate per capita (IMF 2020).

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² The aim of the note is to assess the impact of COVID-19 on welfare and to share good experiences on timely and evidence-based policy responses to rapidly changing circumstances. Analyses can be updated once additional information becomes available to the team.

³ The upper middle-income class poverty line of \$5.50 (2011 PPP) is the international poverty threshold corresponding to Armenia, after accelerated growth rates led the country to "graduate" from lower- to upper-middle income country (UMIC) in 2019. The analysis also applies alternative poverty thresholds for comparability and robustness. Extreme poverty refers to households living below the international poverty line of \$1.90 (2011 PPP).

- The initial forecast of 5% growth of GDP per capita for 2020—held before the COVID-19 outbreak, until February 2020—has been updated to -6.3% (Macro Poverty Outlook, October 2020).⁴ Surveys confirm the high economic costs of the pandemic across sectors of the economy, including large disruptions and financial distress faced by Armenian microenterprises in services and manufacturing (World Bank, Enterprise Survey Follow-up, June 2020).

Mitigation measures

- The GoA announced several policy packages to mitigate the socio-economic shocks derived from the pandemic. The announced mitigation measures were valued at \$300 million (2% of GDP), including direct spending, state-sponsored loans and increased investment. As of September 2020, the GoA had adopted 25 support packages and, together with bank, allocated AMD 144.5 billion AMD (\$295 million) in supports (IMF 2020 and MTI).
- A review of available sources was conducted to identify mitigation measures targeting household incomes directly. The identified measures are summarized in **Appendix 1**. Most packages operate through lump-sum transfers to vulnerable households, including those facing unemployment due to COVID-19, families with children, pregnant women, etc.
- Other measures excluded from this exercise are mainly targeted to private sector resilience: (i) subsidized loans to provide short-term support to affected businesses and SMEs; (ii) direct wage subsidies for SMEs and businesses; and (iii) grants to entrepreneurs and firms (IMF 2020). The GoA also subsidized household utility bills during 2 to 3 months.

Data and methodology

- The analysis is based on data from the 2018 Income and Living Conditions Survey (ILCS), the national household budget survey, collected annually by the Statistical Committee of the Republic of Armenia (SCRA).⁵ Additional macroeconomic parameters are retrieved from forecasts produced by the Macroeconomics Trade and Investment (MTI) Global Practice, the Global Knowledge Partnership on Migration and Development (KNOMAD), and the SCRA. Documents shared by the GoA or published by the World Bank’s Social Protection and Jobs (SPJ) team and the International Monetary Fund (IMF) were used to identify mitigation measures.⁶
- The identification strategy of the impact of COVID-19 relies on the comparison of a counterfactual scenario—*what would poverty and inequality be in 2020 in the absence of COVID-19?*—to a “shock” scenario—*what will poverty and inequality be in 2020 after the effects of COVID-19?*
- First, the **counterfactual scenario** is based on a nowcasting method to predict welfare in 2020, based on the macroeconomic forecasts held before the outbreak, as of February 2020 (hence, *excluding* the effects of COVID-19),
- Second, two complementing simulation methodologies are implemented to estimate the COVID-19 **shock scenarios**.
 - I. **Microsimulation**. Using a bottom-up approach to identify different impacts on households’ labor and nonlabor incomes. The estimated impacts include unemployment and labor income losses by subsector of employment; remittances inflows, and agricultural sales. The microsimulations incorporate heterogenous and distributional effects of COVID-19, as well as the mitigation effects of policy packages.
 - II. **Macrosimulation**. Based on macroeconomic projections for GDP growth for 2020 produced by MTI, as of October 2020 (hence, *including* the effects of COVID-19), and a growth-poverty elasticity. This method assumes a top-down neutral distribution of growth. Due to this neutral-distribution assumption, macrosimulations reflect poverty impacts but do not account for potential inequality or distributional effects of COVID-19. However, they can be informative of general-equilibrium effects in the short- to medium-term.
- Methodological details and assumptions used in the simulation models are summarized in **Appendix 2**.

⁴ Forecast does not account for the economic effects derived from the armed conflict, nor increased COVID-19 incidence observed since October 2020.

⁵ The ILCS is representative of the national population. It is used by the SCRA and the World Bank to measure annual poverty and inequality indicators. In 2018, the sample included 5,184 households.

⁶ Limited information was accessible on budgetary limits and execution, hence, preventing thorough fiscal incidence analyses.

Microsimulation results

- The microsimulation results suggest that the effect on poverty could be as high as 6, 10 or 13 percentage points (\$1.90, \$3.20 and \$5.5 poverty lines, 2011 PPP, respectively). The simulation results for each poverty threshold are presented in **Table 1** and illustrated in **Figure 1** (Appendix). The distributional effects incorporated in microsimulations also highlight sharp increases in inequality. The Gini coefficient could increase by more than 5 percentage points, up to 40.6.

Table 1. Main poverty and inequality results

	Counterfactual			COVID-19 Micro-simulation		
	Poverty Headcount	Poverty Gap	Gini	Poverty Headcount	Poverty Gap	Gini
\$1.90 (2011 PPP)	1.0	0.1	34.4	7.1	6.2	40.6
\$3.20 (2011 PPP)	6.7	1.4		16.9	8.3	
\$5.50 (2011 PPP)	33.6	8.5		46.4	17.8	

Source: World Bank calculations based on data from the ILCS 2018, macroeconomic projections from MTI, and inputs from the WDI and the SCRA.

Notes: International calculations based on the harmonized household welfare aggregate, per capita.

- The share of the population living in poverty or vulnerability in Armenia is expected to expand, while those considered middle class and higher-incomes⁷ would shrink by 10% (**Figure 2**).
- COVID-19 would have heterogeneous impacts across population groups (**Figure 3**). Almost half of the COVID-19-related cases of impoverishment would occur in Yerevan (\$3.2, 2011 PPP poverty line) (**Map 1**).
- While poverty rates do not reflect short-term gender disparities (**Figure 4**), research across countries suggests that gender inequalities may be perpetuated and deepened as a result of lockdowns, foregone human capital accumulation, spikes in gender-based violence (GBV), etc.
- Only a fraction of families facing impoverishment from the pandemic were recipients of government transfers before the pandemic outbreak:⁸ 33% of the new-poor live in a household that receives pension incomes, and less than 10% of the newly impoverished already received the Family Benefit Program (FBP).⁹
- Unemployment in retail, tourism, manufacturing and construction caused by the pandemic is the main driver of labor income shocks in the model (**Figure 5**).
- The COVID-19 shocks are highly regressive. Lower-income households face higher losses as a share of their incomes, though households across all income levels are negatively affected (**Figure 6**).
- Almost 370 thousand people could become impoverished due to income losses from the pandemic (\$5.50 2011 PPP poverty line). COVID-19 could also result in 722 thousand Armenians facing downward mobility (**Table 2**).

Table 2. Impoverishment and downward mobility effects of COVID-19

(Thousand people)		After COVID-19 impact					
		Extreme Poor (<\$1.90)	Poor (<\$3.20)	Moderate Poor (\$3.20 to \$5.50)	Vulnerable (\$5.50 to \$10.0)	Middle class (>\$10.00)	Total
Before COVID-19	Extreme Poor (<\$1.90)	28	0	0	0	0	28
	Poor (<\$3.20)	49	115	0	0	0	164
	Moderate Poor (\$3.20 to \$5.50)	68	128	581	0	0	776
	Vulnerable (\$5.50 to \$10.0)	51	37	255	925	0	1,268
	Middle class (>\$10.00)	8	3	13	111	505	639
	Total	203	283	849	1,035	505	2,874

Source: World Bank based on data from the ILCS 2018, macroeconomic projections from the MTI, and inputs from the WDI and the SCRA. Notes: Poverty lines expressed in USD, 2011 PPP. Shaded cells along the diagonal represent people who did not suffer mobility after COVID-19. Cells highlighted in red represent impoverishment: people who were nonpoor before but became poor after the pandemic (relative to \$5.5 poverty line, 2011 PPP).

⁷ Middle-class and higher incomes are defined as people living with >\$10 per capita per day (2011 PPP).

⁸ Excluding new mitigation measures introduced in response to the COVID-19 pandemic.

⁹ Most likely explained by relatively limited coverage of the FBP across the population, as well as its targeted efficiency to (already) poor households.

Introducing COVID-19 mitigation measures

- Several mitigation measures were evaluated, based on available public information on benefits and eligibility. The identifying assumptions in the microdata are summarized in **Appendix 1**.
- The fiscal budget allocated to most programs was not available. Whenever possible, eligibility to a program was restricted to comply with the size of the target population announced by the GoA.
- All mitigation measures reduce the (post-COVID-19) poverty rates, though by small magnitudes (**Table 3**). All combined measures analyzed reduce the poverty rates by around 1 percentage points, and they are least effective in mitigating new cases of moderate poverty.
- **Figure 8** illustrates how the short-term impacts of COVID-19 shift the welfare distribution to the left, increasing poverty. The mitigation measures improve household welfare after the pandemic shock, but their effect is only limited.

Table 3. Summary of mitigation effects

Marginal effect on headcount poverty rate (percentage points)

	Package 4	Package 6	Package 7	Package 8	Package 9	Extension of emergency benefits	Package 13	All combined mitigation measures
\$1.90 (2011 PPP)	-0.71	-0.19	0.00	-0.39	-0.14	0.00	-0.04	-1.27
\$3.20 (2011 PPP)	-0.56	-0.20	-0.01	-0.40	-0.18	-0.01	-0.11	-1.23
\$5.50 (2011 PPP)	-0.16	-0.15	0.00	-0.29	-0.06	-0.08	-0.13	-1.01

Source: World Bank calculations based on data from the ILCS 2018, MTI, WDI, SCRA, IMF and KNOMAD.

- The microsimulation model highlights some potential explanations for the limited incidence of mitigation efforts. Assuming that the mitigation policies benefit all the eligible populations (*i.e.* no budget constraints), almost 30% of Armenians could receive some mitigation benefit in their households.¹⁰ In contrast to this relatively high coverage, the size of the simulated benefits is very limited. Several of the identified measures were short-lived or one-time transfers.
- On average, combining all mitigation measures in the simulations, the per capita benefit is less than ARM 8,400 for 2020.¹¹ The magnitude of this identified transfer is only 10% of the average simulated loss on household incomes, due to COVID-19.
- In fact, aggregating all microsimulated income losses across the population is equivalent to a shock of 3.5% of GDP (value of GDP in 2019). The total identified transfers, however, account for only 0.37% of that value of GDP.¹²

Effects of social protection and social assistance

- Existing social protection and social assistance transfers—pensions and FBP—have been among the main drivers of poverty reductions in Armenia over the past years.
- In 2018, pensions contributed to reduce poverty for almost one fifth of Armenians (19 percentage points when applying the \$3.20 poverty line). Without pension incomes, extreme poverty could have increased from 1.4% to almost 13% of the population. The FBP also contributes to poverty reductions, though at smaller scale (**Figure 9**).
- Although the design of these policies is not targeted to revert the economic shocks of COVID-19, pensions and the FBP make up significant sources of household incomes, prevent impoverishment, and constitute relevant tools for public policy implementation in Armenia.

¹⁰ This assumption is adopted due to the lack of budgetary data. Revisions of the model can incorporate further information, when available.

¹¹ Population average. The conditional average (among people in beneficiary household) is close to ARM 28,500 per capita in 2020. Eligibility of each mitigation measure was calculated independently; every household was allowed—though not required—to receive several packages (rules allowing).

¹² Or one fifth of the total announced investments for mitigation and recovery from COVID-19, at 2% of GDP (IMF 2020).

Macrosimulations of medium-term trends

- The microsimulations capture the potential poverty and distributional effects of COVID-19 across different sectors and population groups in the short-term. However, they are based on static assumptions and they exclude behavioral responses and general-equilibrium effects.
- While it is difficult to foresee longer-term scenarios, **Figure 10** projects macro-poverty trends and potential recovery paths through 2022. The macrosimulations are based on the most recent macroeconomic forecasts (MTI, October 2020). Their main advantage is to allow for a general equilibrium-approach, including the effects of COVID-19, market responses and government interventions. Their main limitation is the potential underestimation of poverty shocks, as they dismiss any distributional effects from COVID-19.
- Considering the upper middle-income class poverty line, and assuming that all households are proportionally affected by the COVID-19 shock (neutral distribution assumption), poverty would increase from a counterfactual 33.6% to a shock scenario of 41.8% after COVID-19 (**Figure 1, Panel C**). The macrosimulation results also suggest that the incidence of extreme poverty would increase by 40%, while remaining low at 1.4% of the population in 2020 (**Figure 1, Panel A**).
- Under the macroeconomic recovery forecasts, it could take up to 2022 for Armenia to reach the poverty levels of 2019 (**Figure 10**).

Potential caveats and limitations

- As mentioned above, the microsimulations are limited to short-term static monetary effects of COVID-19. Behavioral responses and general-equilibrium effects are not incorporated. In contrast, macrosimulations are based on economic projections that incorporate a more general-equilibrium approach, including market responses and government interventions. However, they disregard the distributional effects of COVID-19 that affect both poverty and inequality indicators.
- The simulated models do not incorporate other effects that will likely result in longer-term economic impacts, including population health shocks, foregone human capital accumulation, or risks to gender equality in the context of lockdowns.
- On the other hand, only a subset of mitigation policies is identifiable in the available microdata. Additional and new policies implemented by the GoA could mitigate the shock to household incomes, directly or indirectly, and foster recovery.
- Poverty and inequality are calculated as annual indicators. These annualized measurements for 2020 would not capture temporary but relevant cases of impoverishment, that can affect Armenian households in the absence of mechanisms—such as social protection and financial markets—to smooth consumption and increase resilience to shocks ([SCD 2019](#)).
- Lastly, the economic shock and impoverishment faced by Armenia in 2020 could be considerably higher as a result of: (i) the armed conflict between September 27th and November 10th, 2020; and (ii) the changing circumstances due to increased incidence of COVID-19 cases in the country during the last quarter of 2020.

Appendix 1. Identified mitigation measures targeted to households

Category	Package	Policy name or target	Objective	Mechanism	Eligibility	Benefit	Budget or estimated population	Other details
Social assistance	Package #4	Families with young children	Provide social assistance for families losing their livelihoods.	One-time payment	Families with children (up to 14 years old), whose parents were laid off. Does not benefit public servants and those who had monthly salary >500 thousand AMD during the previous 2 months.	AMD 100,000 per child	Budget N/A.	Led by the Ministry of Labor and Social Affairs (MLSA).
	Package #7	Pregnant women	Provide social assistance to vulnerable populations	One-time payment	Registered pregnant women who: (i) do not have a job, or (ii) whose spouse was laid off after the outbreak and did not shift to another job.	AMD 100,000 per woman	Budget N/A. Expected to benefit 3,750 eligible women	Based on registry of pregnant women held by the Ministry of Health.
	Package #9	Families with children up to 18 years old	Provide social assistance for families, including formal and informal employment.	Lump sum transfer	Eligible: (i) Families with children up to 18 years old, whose parent(s) were not registered as employee(s); (ii) Households not registered in the Family Benefit Program or registered but do not receiving benefits. Excludes: Parent(s) in formal employment during January 1- March 1 st , 2020, with monthly salary >AMD 500,000 (one parent or both).	AMD 26,500 per child	Budget N/A.	Beneficiaries can apply online.
	Package #13	Increase in Family Benefit	Supplement income of poor families and cover basic public services	Cash transfer and utility payment	Families enrolled in the Family Benefit Program	50% of the amount of the social benefit or family benefit	Budget N/A.	70% of the assistance is delivered as cash payment, 30% is transferred to cover standing balances with utility operators.
			Expansion of emergency benefits	Expand social assistance to vulnerable households	3-month emergency benefit	Households registered in the Family Benefit Program but not receiving it	AMD 54,000 monthly per household	Budget USD 60 million. Expected to benefit 20,000 households.
Unemployment benefits	Package #6	Laid-off workers in private formal employment	Provide social assistance for families losing their livelihoods.	One-time benefit payment	Eligible individuals: (i) formally employed in private sector; (ii) employed at least from January 2020 through March 13, 2020; and (iii) laid-off in the period of March 13-30, 2020. Not eligible: (i) public servants; (ii) eligible families under package #4; (iii) those who shifted to another job.	AMD 68,000 AMD	Budget N/A.	Led by the Ministry of Labor and Social Affairs (MLSA). Payments based on the State Revenue Committee data. Individual applications also accepted.
	Package #8	Workers in tourism/hospitality and other services	Supplement income sources of workers in vulnerable sectors	One-time income transfer	Those currently employed in the tourism/hospitality sector (broader HORECA), hairdressers, retail stores (except those selling food, tobacco and alcohol) and pharmacies.	For employees, calculated from Jan-Feb average salary; with min AMD 68,000 and max AMD 136,000. For entrepreneurs, 10% of sales turnover in IV quarter FY2019, with min AMD 68,000 and max AMD 136,000.	Budget N/A. Expected to benefit over 100,000 employees.	

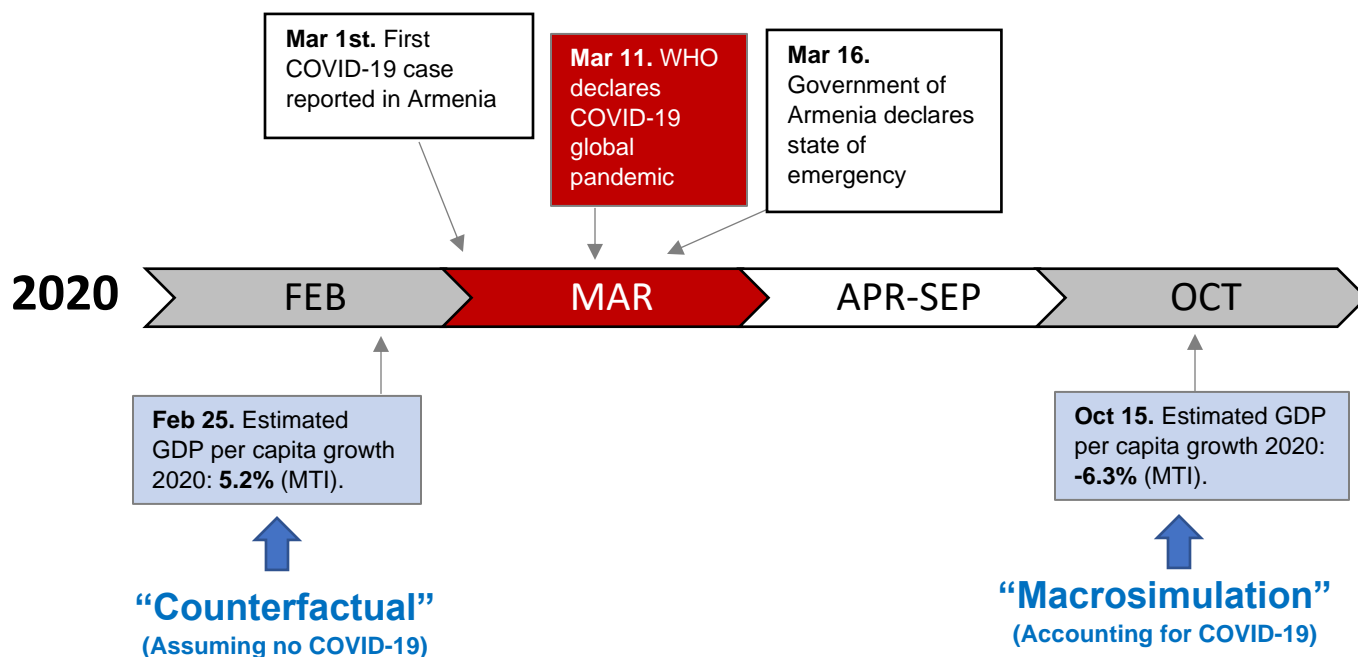
Appendix 2. Methodological details of macro- and micro-simulation models

Nowcasting methodology. The nowcasting methodology applies the real growth rate of GDP per capita between the survey year (2018) and the nowcasted year (2020) to household’s welfare aggregate. It assumes a neutral distribution of growth, and a 0.87 passthrough rate from GDP per capita growth to private consumption growth. This methodology is regularly used and published by the World Bank as part of the Macro-Poverty Outlook.

Counterfactual scenario. The counterfactual scenario is based on nowcasted poverty and inequality indicators using macroeconomic forecasts of GDP per capita growth, held by the MTI team until February 2020. Because COVID-19 was an unforeseen event in macroeconomic projections at the beginning of 2020, it is assumed that this scenario excludes any influence from the pandemic.

Macrosimulations. Macro-simulations are conducted to estimate actual poverty and inequality indicators in 2020, after the economic shocks derived from the pandemic. Computationally, the macro-simulations are also based on the nowcasting method, applying the most updated macroeconomic projections of GDP growth in 2020 (calculated by MTI as of early October 2020). Because the nowcasting method assumes a neutral distribution of growth, macro-simulations do not account for potential distributional effects or heterogeneous economic effects of COVID-19. To the extent that the most recent macroeconomic projections for 2020 already factor-in the effects of government responses, they already incorporate some mitigation effects.

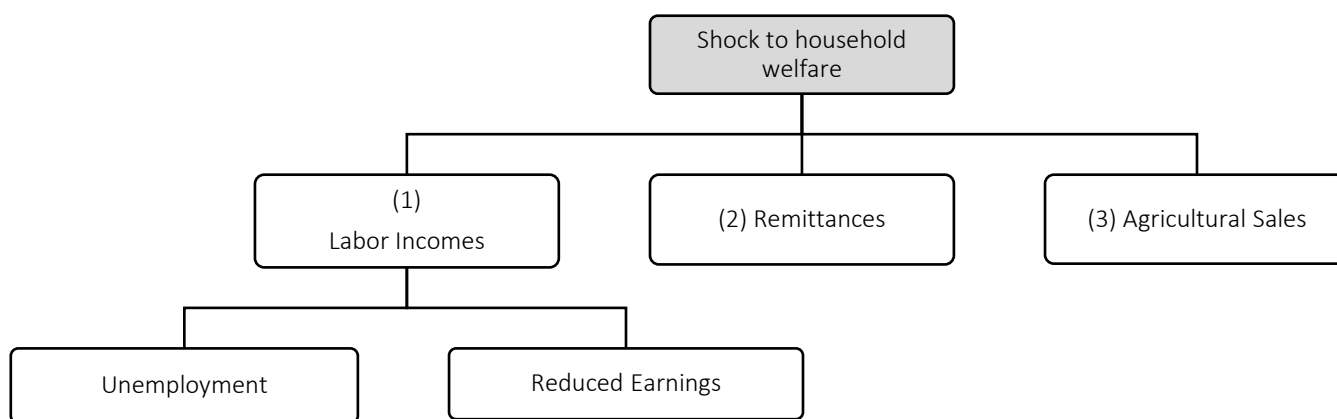
Box A.1. Timeline of counterfactual and macroeconomic forecast, 2020



Source: Based on information from WHO (2020) and the Government of Armenia.

Microsimulations. Microsimulations are based on a bottom-up approach. They leverage microdata on household and individual characteristics to capture both poverty and distributional effects of the pandemic. Building on the nowcasted (counterfactual) welfare aggregate for each household represented in the national household budget survey, this method simulates the effects of COVID-19 on households' labor and non-labor incomes. The estimated effects and assumptions are the following:

Box A.2. Economic shocks of COVID-19 in microsimulation model



Source: World Bank.

- Workers (either hired or self-employed) face a probability of unemployment based on their subsector of employment (Table A2.1). The assignment of unemployment is realized randomly within each subsector of employment. All workers who become unemployed lose 100% of their wage income. All workers who remain employed face a wage loss, depending on their subsector of employment, and defined as a share of their reported wage incomes. These labor income shocks are assumed to last for 6 months in 2020.
- Remittances incomes fall by 27.5% in 2020.
- Agricultural sales fall by 10%, during 6 months in 2020.

Table A2.1 Assumed shock to labor incomes by subsector of employment (Microsimulations)

Sector	Subsector of employment	Probability unemployment, %	Wage income loss in employment, %	Note
Agriculture	1 Agriculture, forestry, fishing	0	10	
Industry	2 Mining and Quarrying	20	20	
	3 Manufacturing	20	20	
	4 Electricity, gas, steam and conditioning	0	0	
	5 Water supply, sewerage, waste management	0	0	
	6 Construction	20	20	
	Services	7 Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods	50	50
8 Transportation and storage		20	20	
9 Accommodation and Food Service Activities		50	50	Considered entirely as tourism
10 Information and communication		10	10	
11 Financial and Insurance Activities		0	0	
12 Real Estate Activities		20	20	
13 Professional, scientific and technical		0	0	
14 Administrative and Support Service Activities		20	20	
15 Public Administration and defense, comp		0	0	
16 Education		0	0	
17 Human Health and Social Work Activities		0	0	
18 Arts, Entertainment and Recreation		50	50	
19 Other service activities		20	20	
20 Activities of households as employers;		50	50	
21 Activities of extraterritorial organizations	0	0		
99 Tourism	50	50		

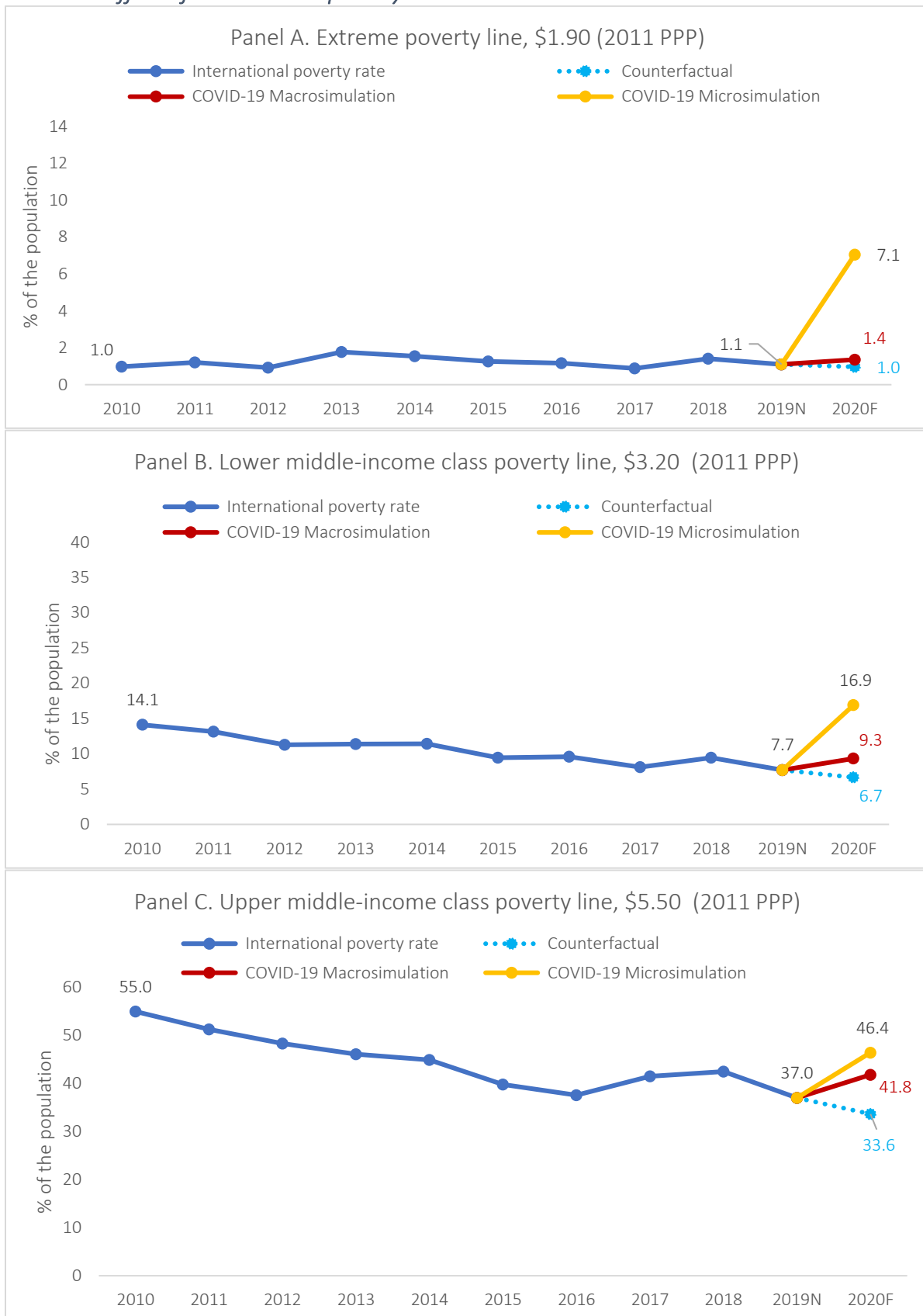
Source: Author's. Notes: The tourism subsector is constructed based on the 4-digit codes of the Statistical classification of economic activities in the European Community, NACE REV.2. Workers in tourism are defined as those with economic activities in accommodation and food services; select transport activities; activities; activities of travel agencies; and select recreational, cultural and sporting activities.

Table A2.2 Other parameters and assumptions

Assumptions/Parameters	Value	Period	Note
Shock on remittances incomes	-27.5%	Annual	Source: KNOMAD
Shock on agricultural sales	-10%	6 months	
GDP per capita growth 2018	5.1%	Annual	Source: MTI. Date: 15 October 2020
GDP per capita growth 2019	7.5%	Annual	Source: MTI. Date: 15 October 2020
GDP per capita growth 2020 (COVID-19)	-6.3%	Annual	Source: MTI. Date: 15 October 2020
GDP per capita growth 2020 (counterfactual)	5.2%	Annual	Source: MTI. Date: 25 February 2020
2011 PPP conversion rate	165.629	2011	Source: International Comparison Program

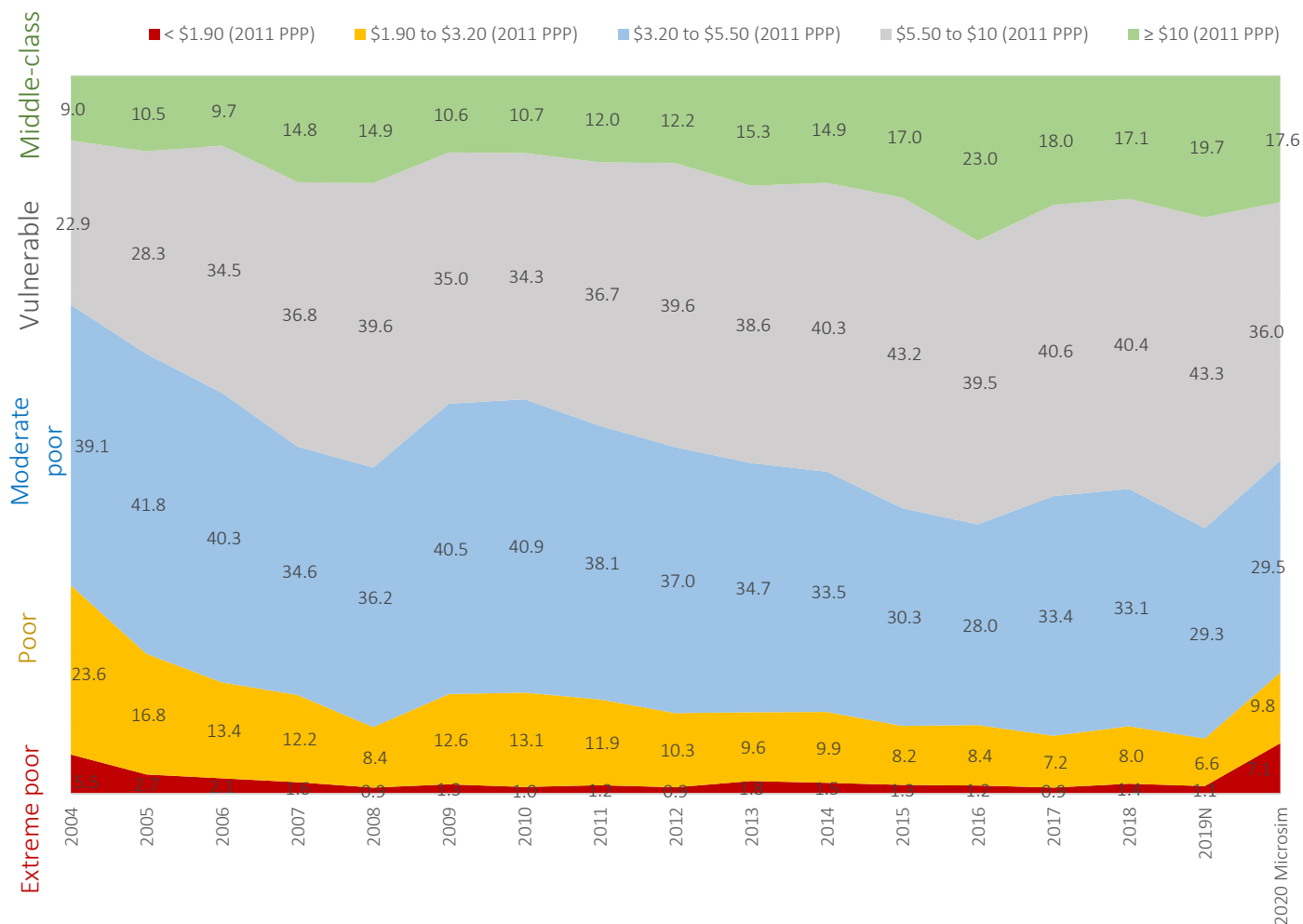
Source: World Bank.

Figure 1. Estimated effect of COVID-19 on poverty rates



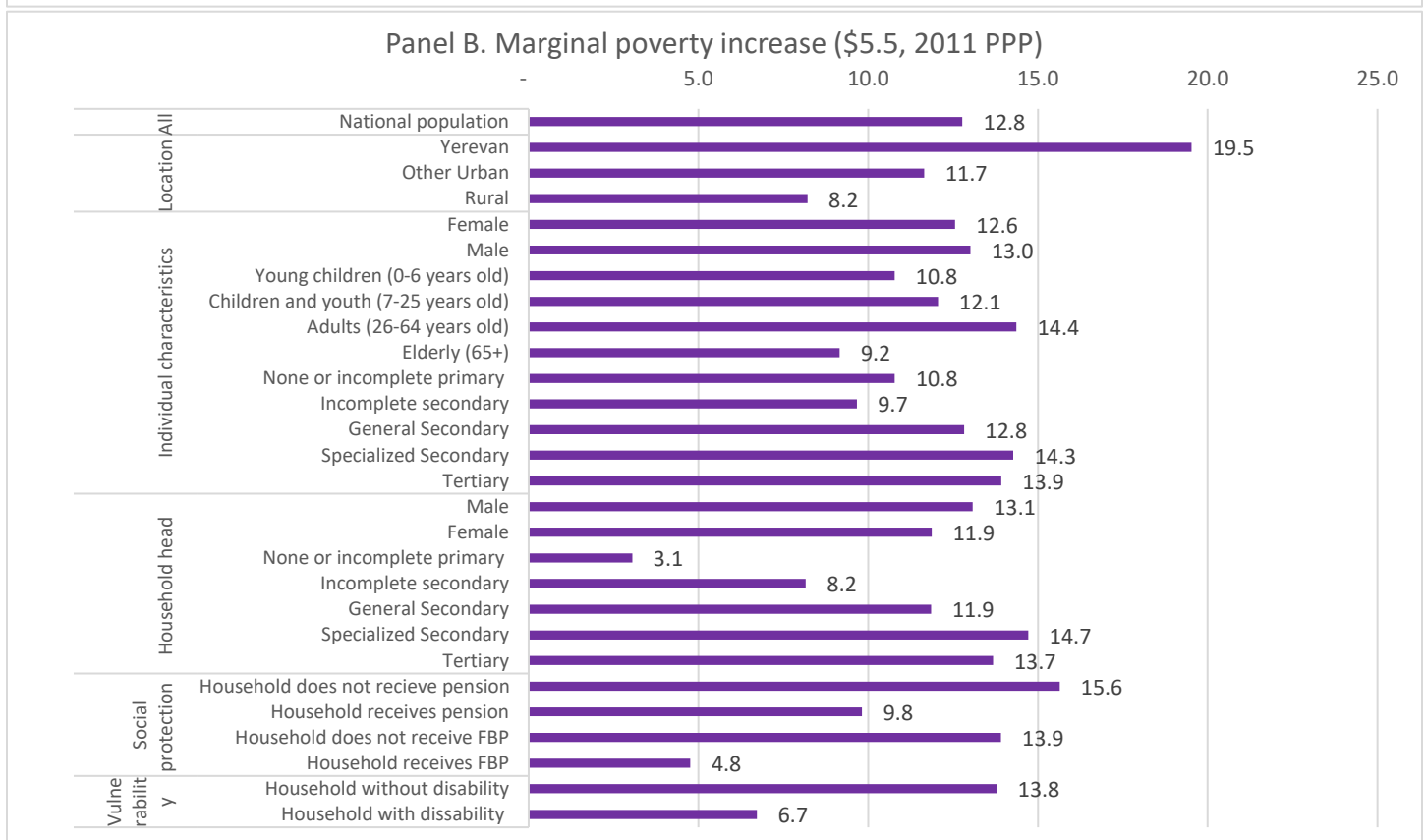
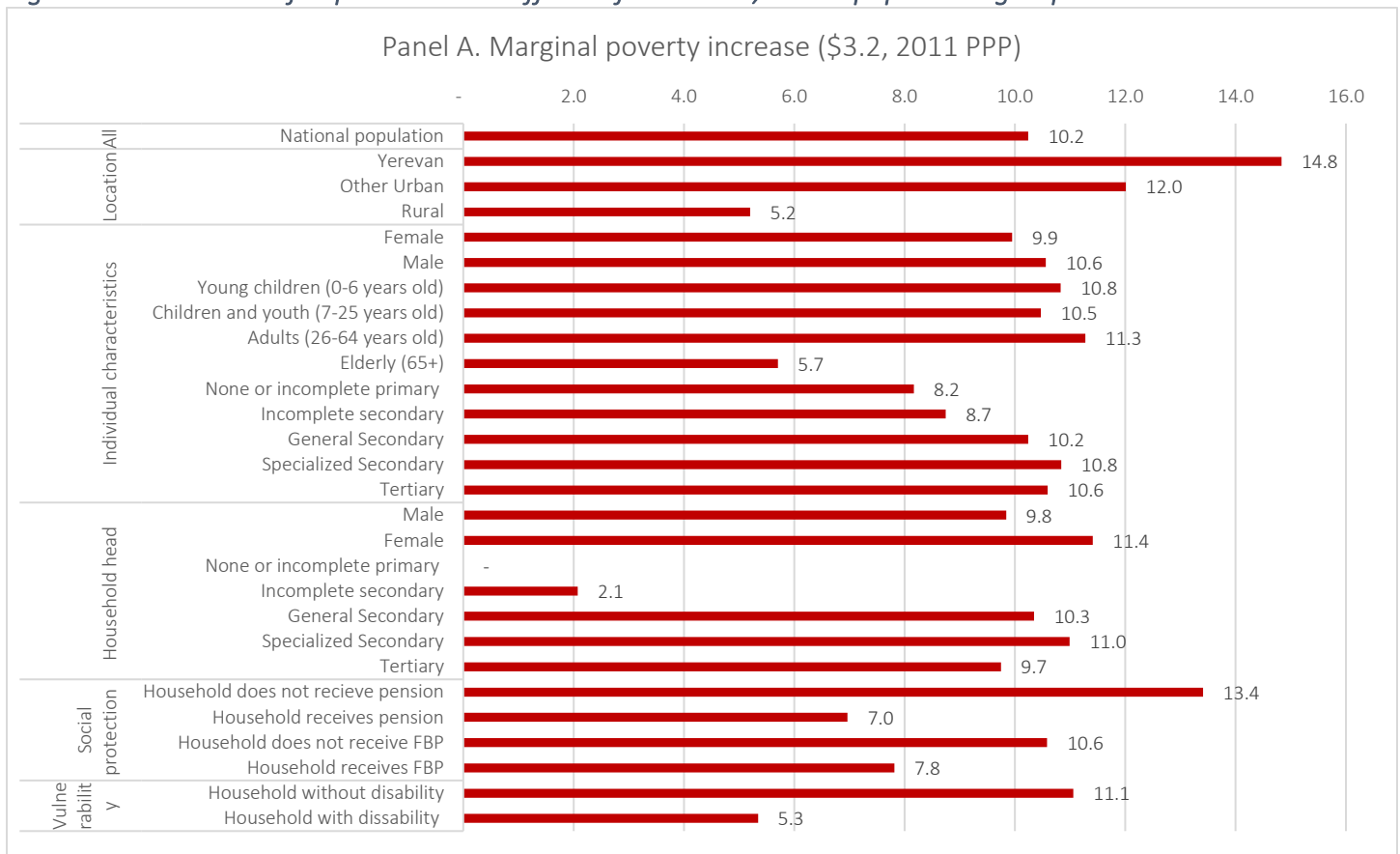
Source: World Bank calculations based on microdata from the ILCS 2018, macroeconomic projections from the MTI, and inputs from the WDI and SCRA. Notes: N= Nowcasted. F = Forecasted. All international poverty lines expressed in USD PPP 2011.

Figure 2. Distribution of the population across welfare and vulnerability groups



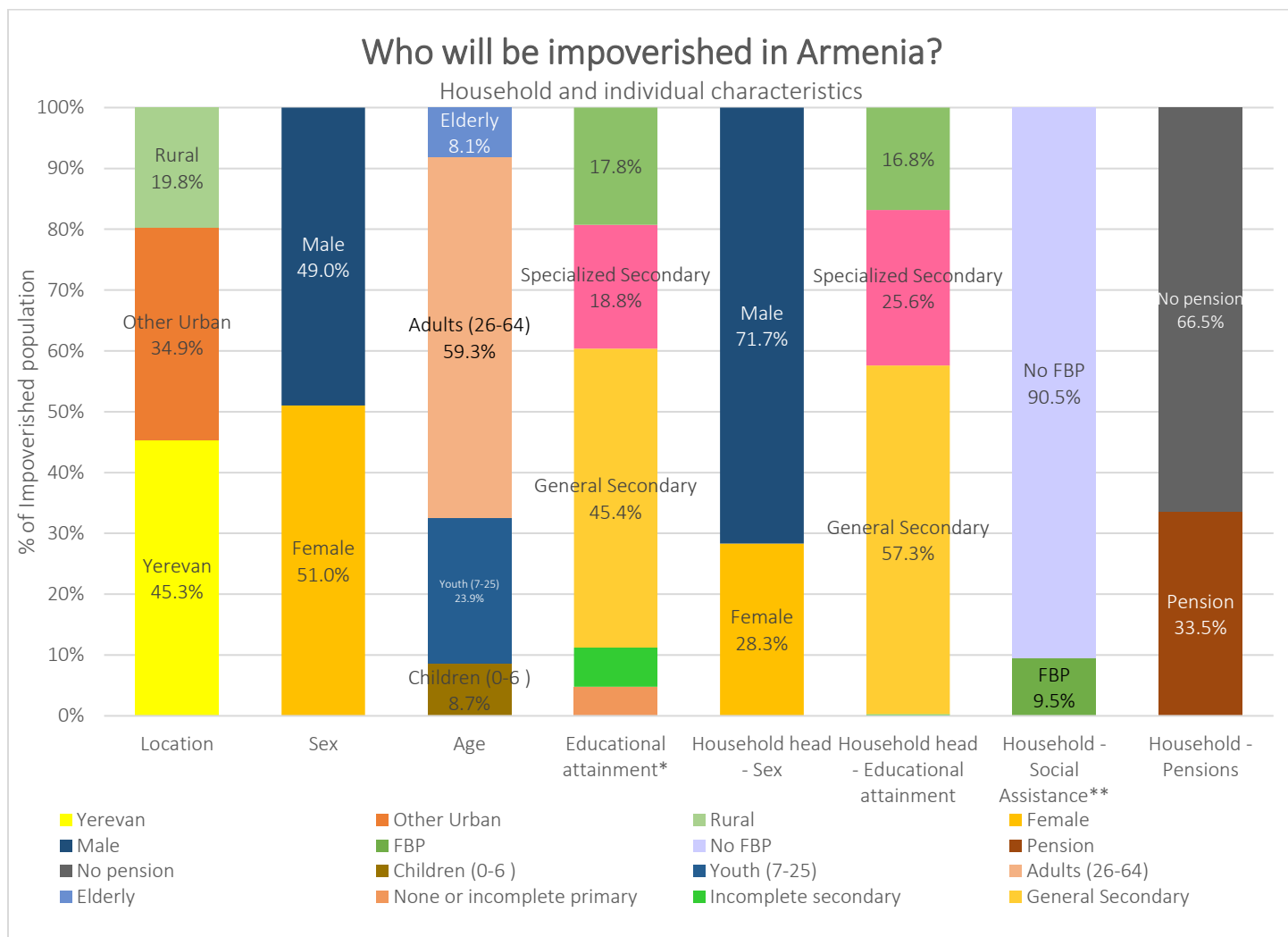
Source: World Bank calculations based on microdata from the ILCS 2018, macroeconomic projections from the MTI, and inputs from the WDI and SCRA. Notes: Based on preferred microsimulation results. N= Nowcasted. 2020 Microsim = Forecasted for 2020. No mitigation measures assumed.

Figure 3. Distribution of impoverishment effects of COVID-19, across population groups



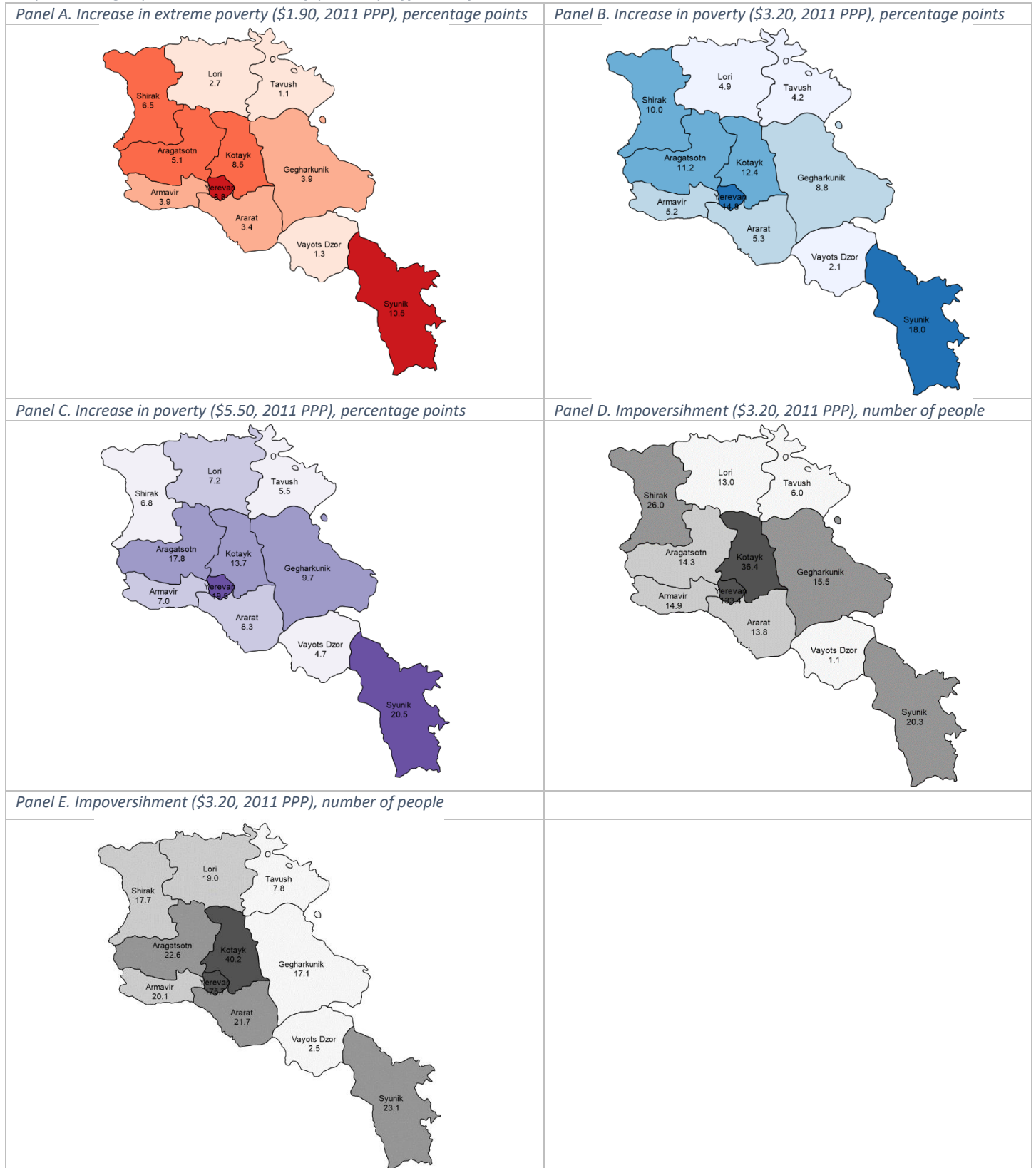
Source: World Bank based on data from the ILCS 2018, MTI, WDI and SCRA. Notes: Microsimulations before mitigation measures.

Figure 4. Profile of impoverished population due to COVID-19



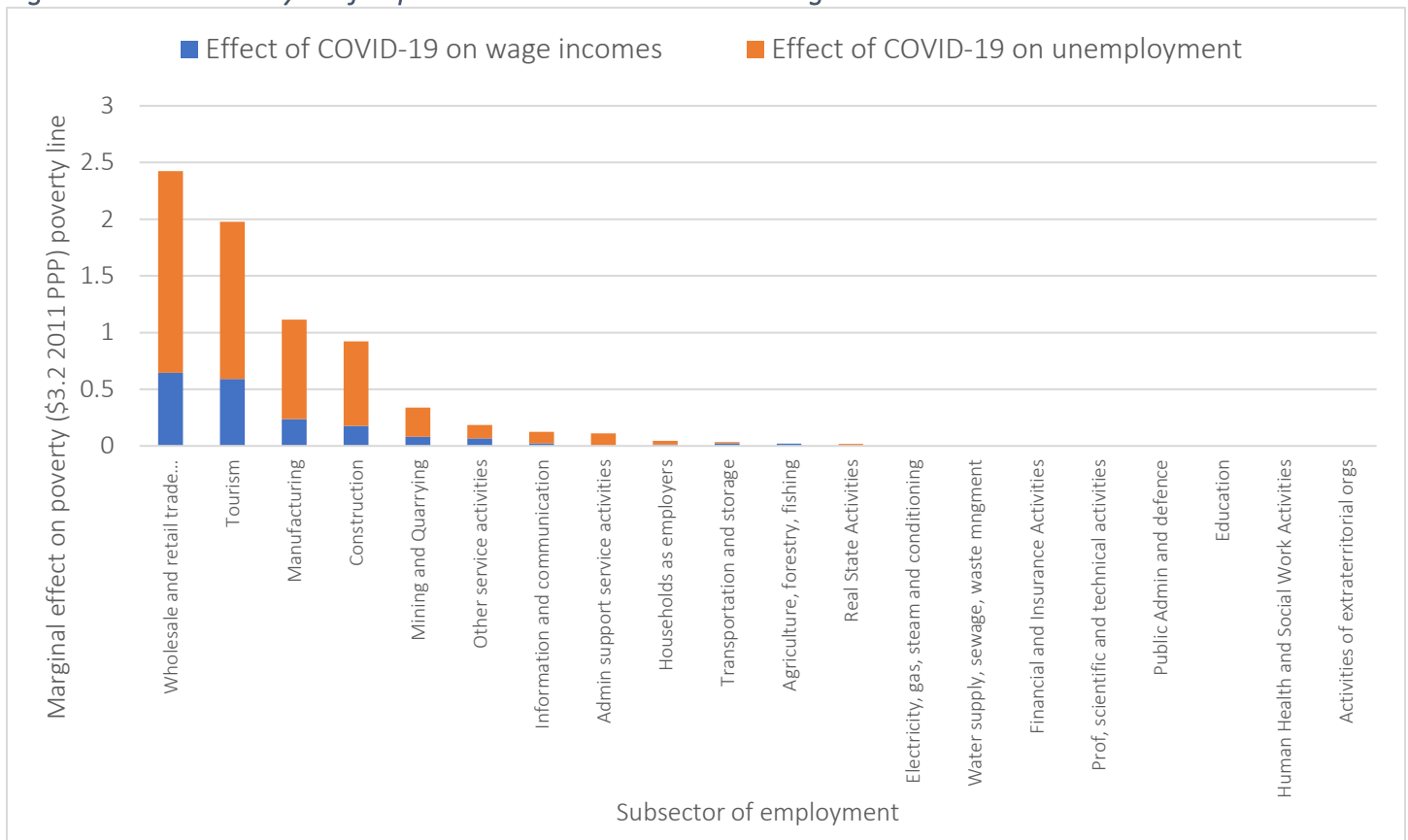
Source: World Bank calculations based on data from the ILCS 2018, MTI, WDI and SCRA. Notes: Microsimulations excluding potential mitigation measures. Notes: Using the \$3.20/ per day (2011 PPP) international poverty line.

Map 1. Geographic distribution of poverty effects of COVID-19



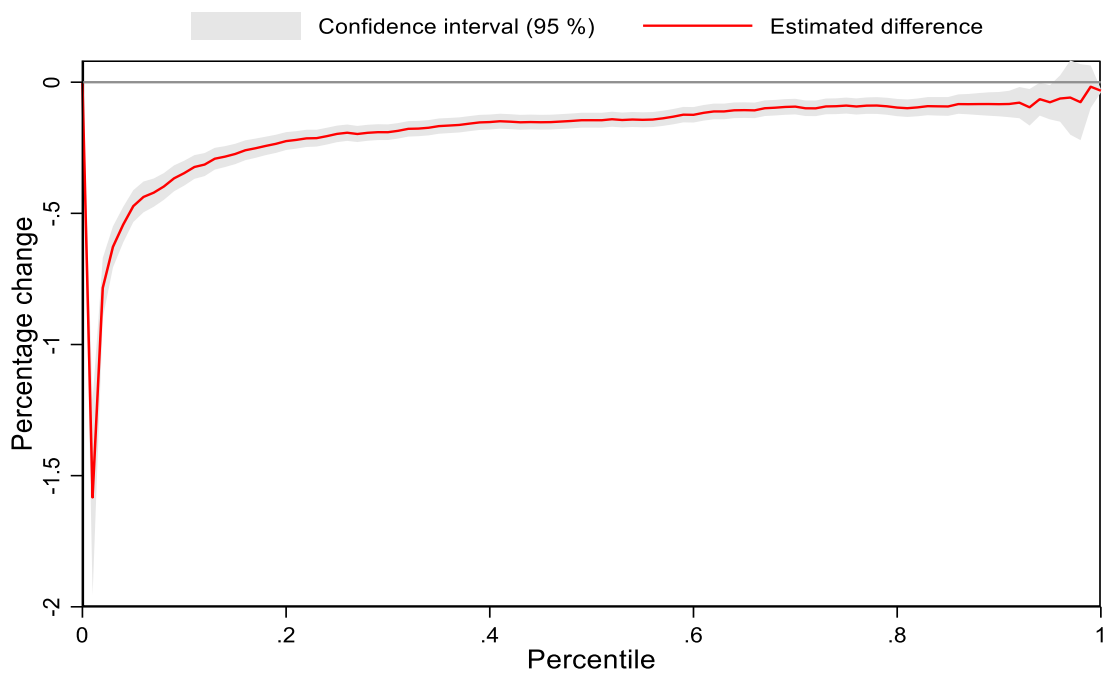
Souce: World Bank calculations based on data from the ILCS 2018, MTI, WDI and SCRA. *Notes:* Microsimulations excluding potential mitigation measures.

Figure 5. Sectoral analysis of impoverishment due to losses in wage incomes



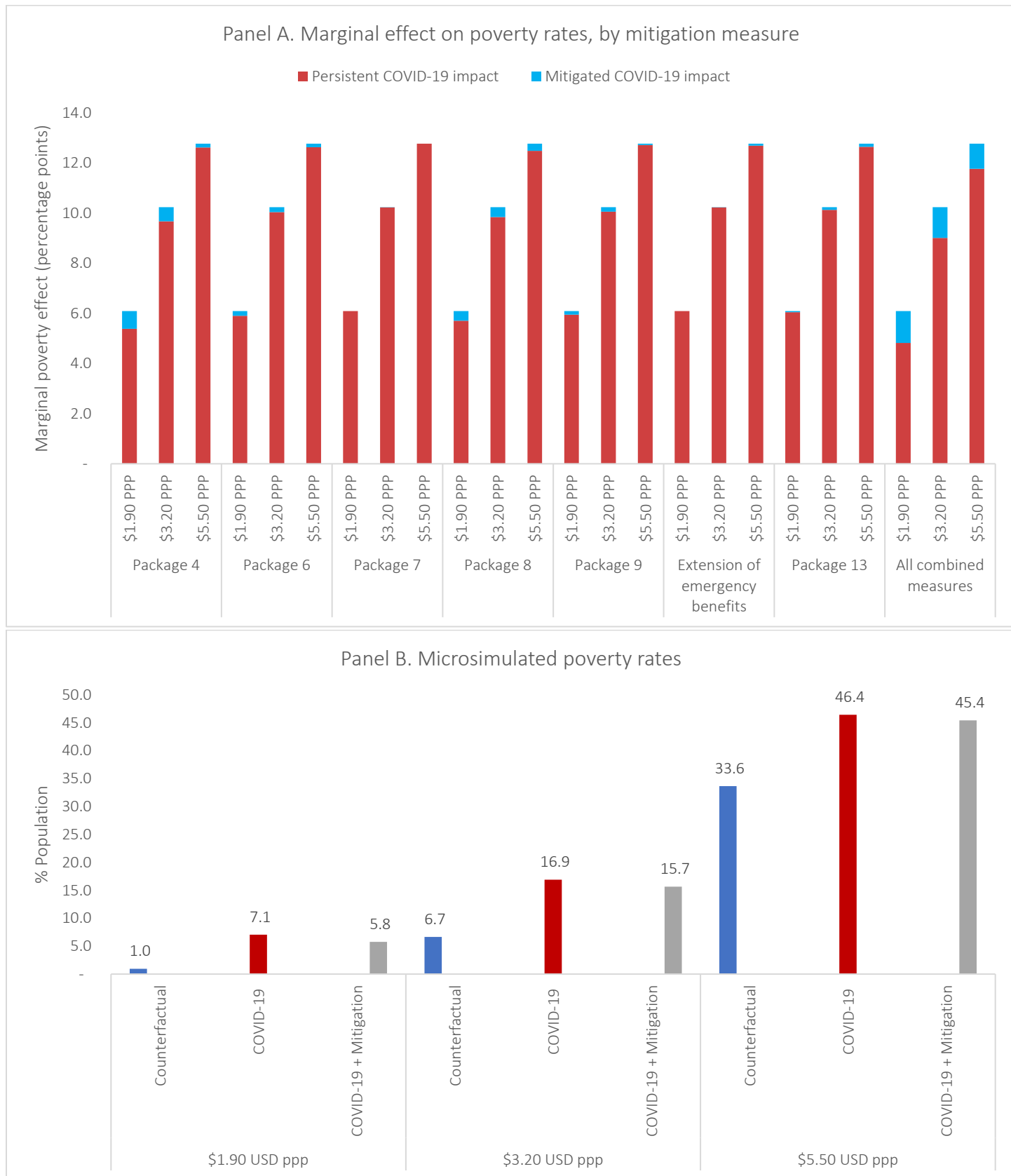
Source: World Bank calculations based on data from the ILCS 2018, MTI, WDI and SCRA. Notes: Microsimulations excluding potential mitigation measures.

Figure 6. Distributional incidence of COVID-19 shock



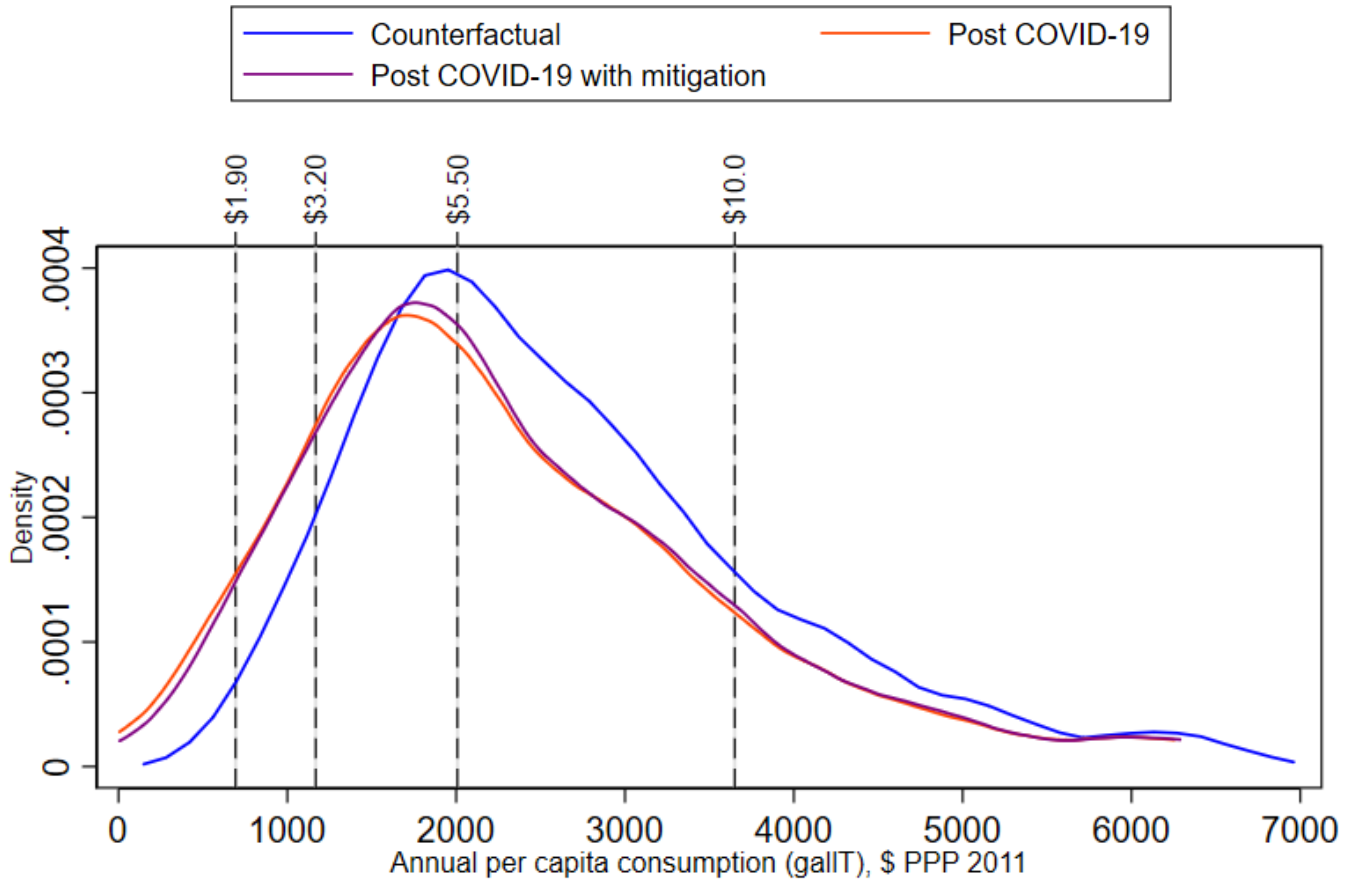
Source: World Bank calculations based on microdata from the ILCS 2018, macroeconomic projections from the MTI, and inputs from the WDI and SCRA. Notes: Percentiles correspond to the pre-COVID-19 household welfare aggregate.

Figure 7. Estimated effect of select mitigation measures



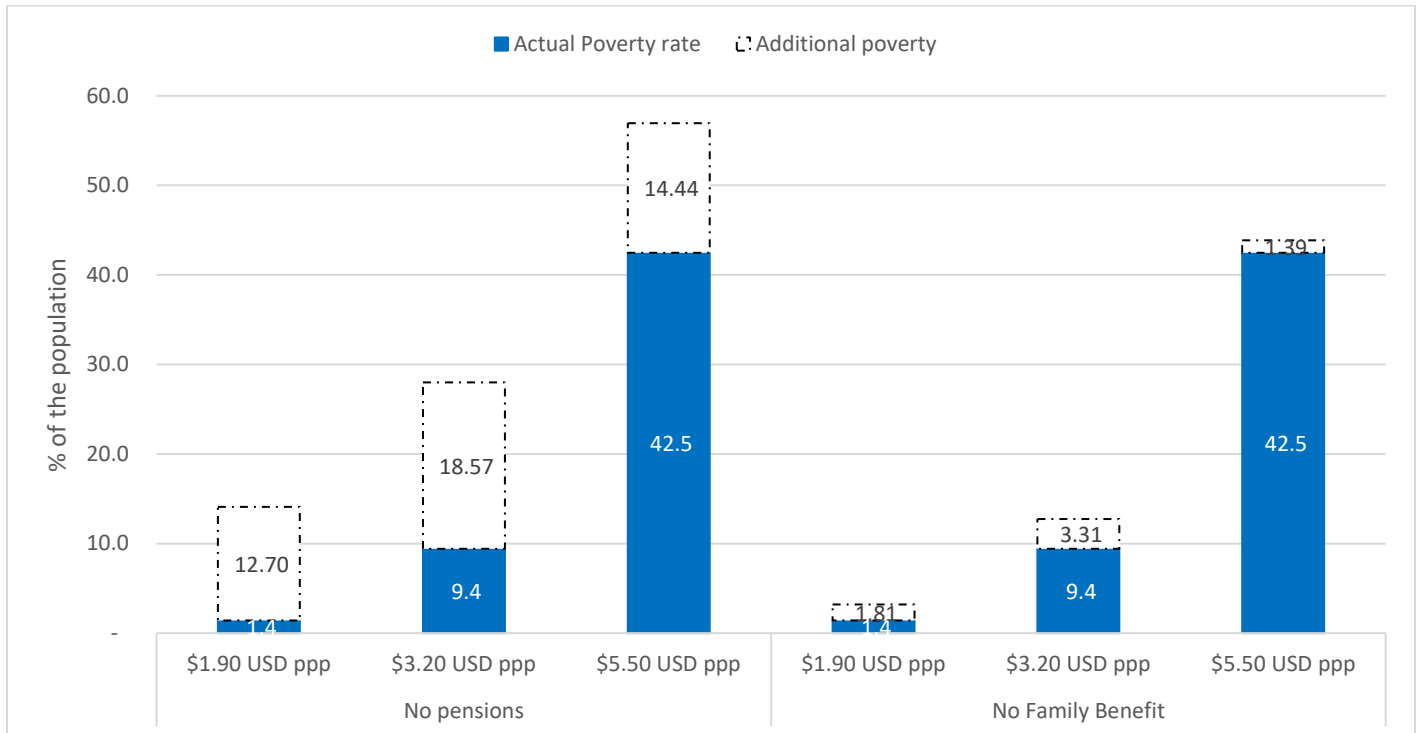
Source: World Bank calculations based on microdata from the ILCS 2018, macroeconomic projections from the MTI, and inputs from the WDI and SCRA.

Figure 8. Distribution of household welfare under counterfactual, COVID-9 and mitigation scenarios



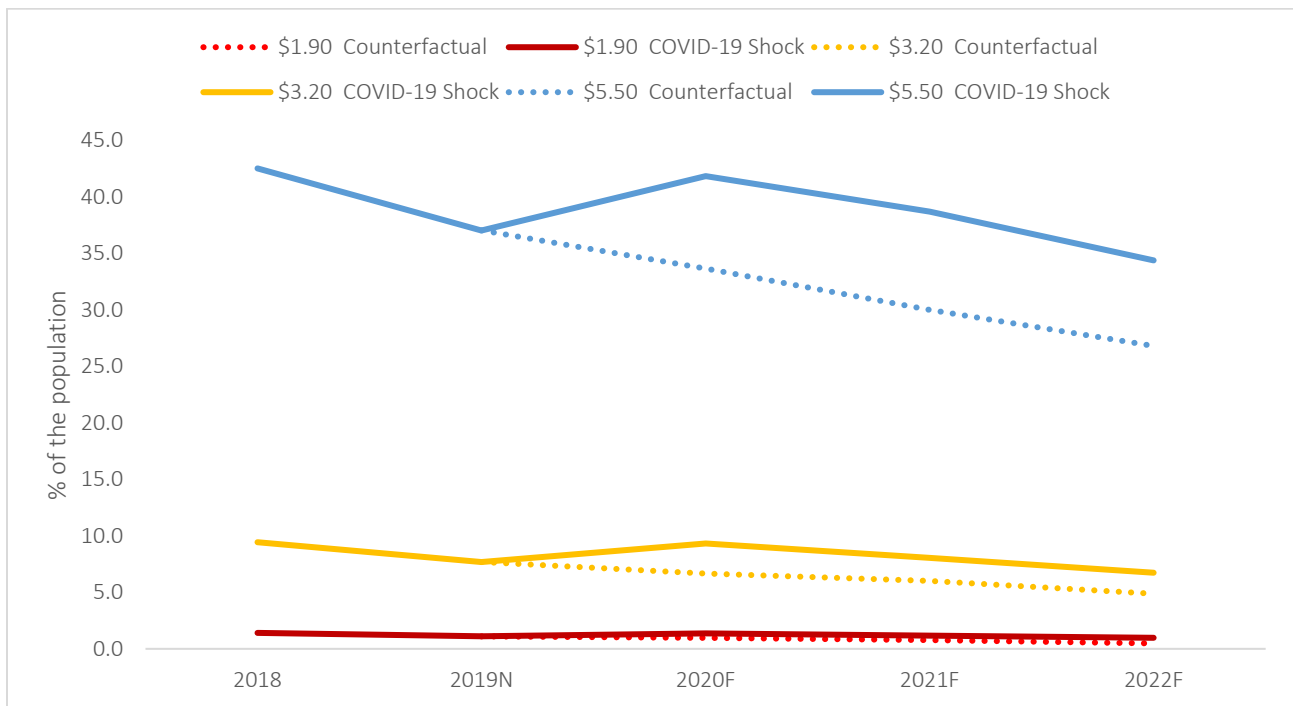
Source: World Bank calculations based on microdata from the ILCS 2018, macroeconomic projections from the MTI, and inputs from the WDI and SCRA. Notes: The graph excludes all households above percentile 95th for illustration purposes. Vertical lines correspond to international poverty thresholds (2011 PPP). gallT is the main household consumption aggregate harmonized by the World Bank poverty team and used for international poverty calculations.

Figure 9. Poverty mitigation of social protection (2018)



Source: World Bank calculations based on data from the ILCS 2018. Notes: Pensions and FBP based on self-reported incomes in the ILCS. Additional poverty rates calculated by subtracting self-reported pensions or FBP incomes from the household consumption aggregate.

Figure 10. Macrosimulations, 2020-2022



Source: World Bank calculations based on microdata from the ILCS 2018, macroeconomic projections from the MTI, and inputs from the WDI and SCRA. Notes: Based on preferred macrosimulation results. N= Nowcasted. 2020 F = Forecasted for 2020 onwards. All international poverty lines expressed in USD PPP 2011.