

COVID-19 IMPACT ON HOUSEHOLDS INCOME:EVIDENCE FROM GEORGIA AND MONGOLIA

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CAREC INSTITUTE RESEARCH CONFERENCE

Resilience and Economic Growth in Times of High Uncertainty in CAREC Region

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Motivation

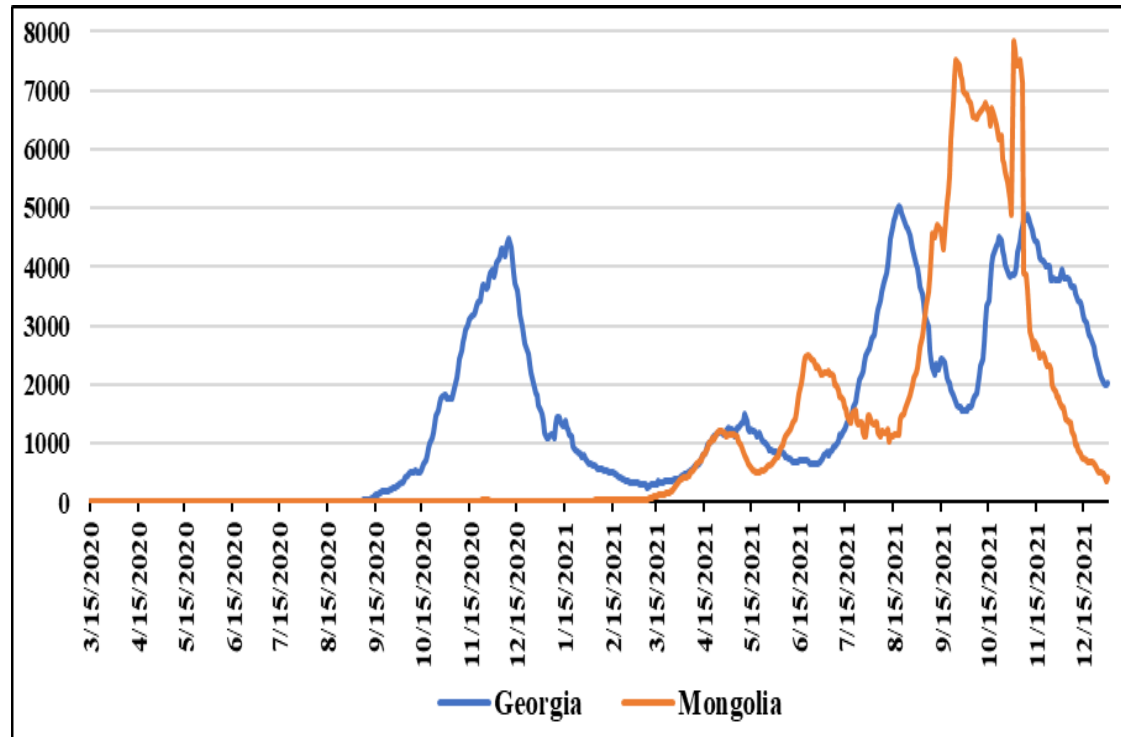
- Economic downturn during the COVID-19 has significant impact on labor market by decreasing employment and restricting labor mobility
- Although, economic recovery perspectives appeared recently gives a hope of building back better, there is a risk that recovery process is not experienced equally by rich and lower income countries, and, even, by groups of population within a country (Sánchez-Páramo et al. 2021).
- Potentials of developing countries in increasing government budget expenditure is restricted with less fiscal space (UNESCAP, 2020).
- Given the high risk of income inequality and poverty effect following income shocks caused by the COVID-19 pandemic, it is important to understand income dynamics at the micro level.

Objective

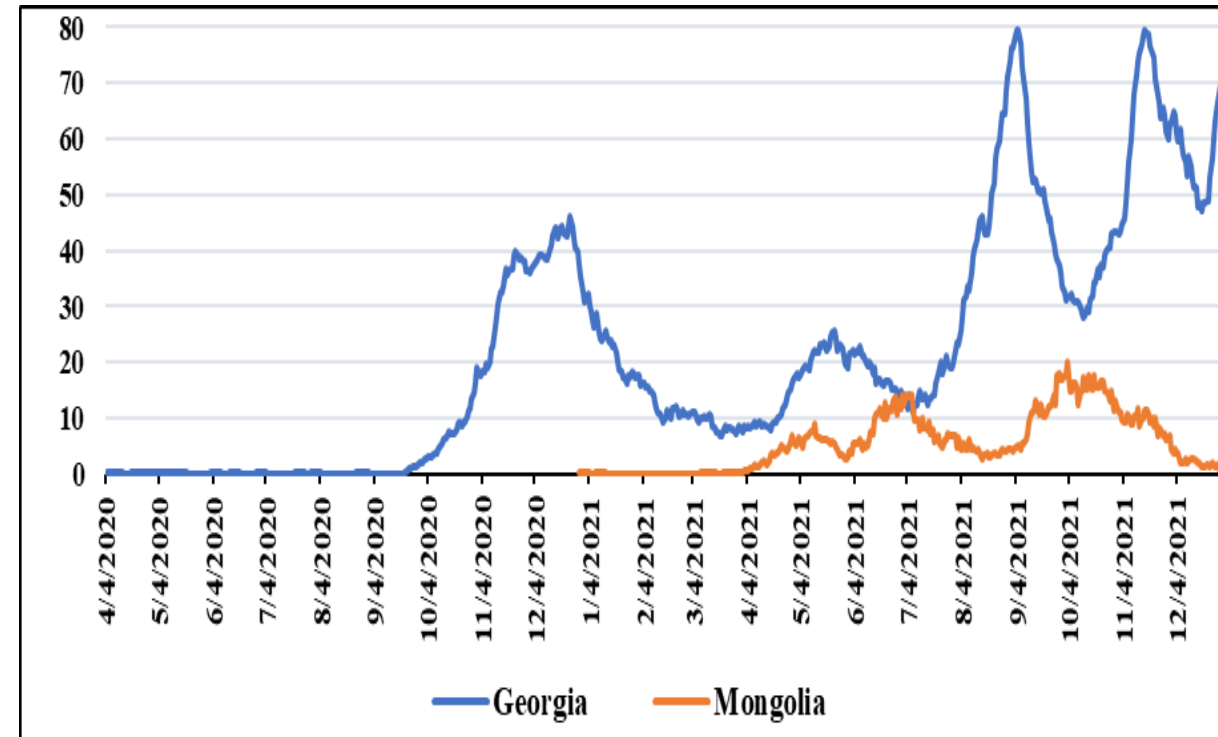
- This study aims to examine household characteristics associated with income decline during the COVID-19 in two CAREC economies: Georgia and Mongolia

COVID-19 in Georgia and Mongolia

Daily new confirmed COVID-19 cases, 7 day rolling average



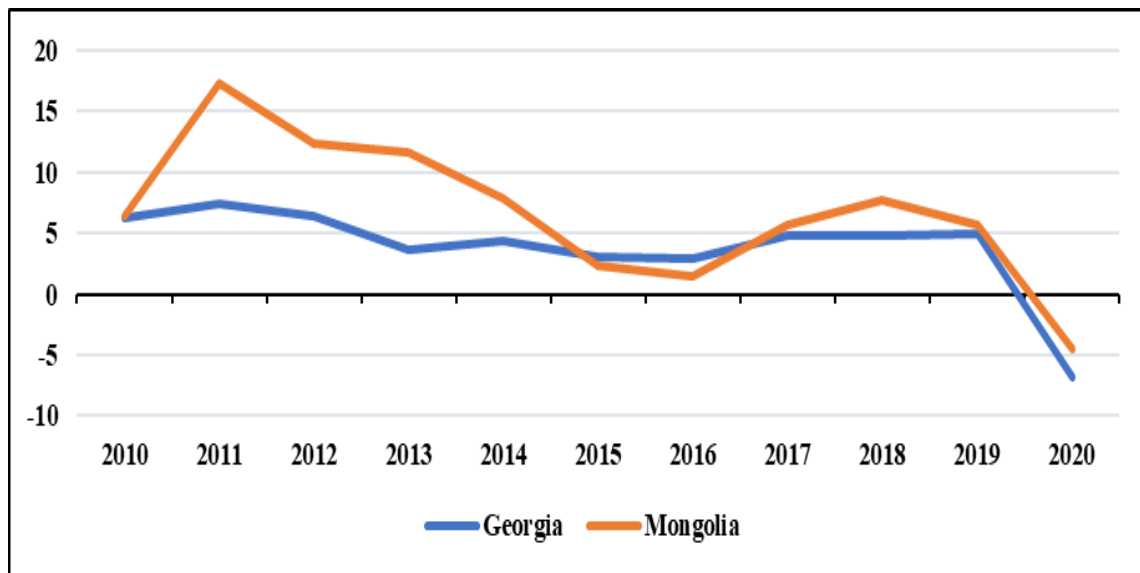
Daily new confirmed COVID-19 deaths, 7 day rolling average



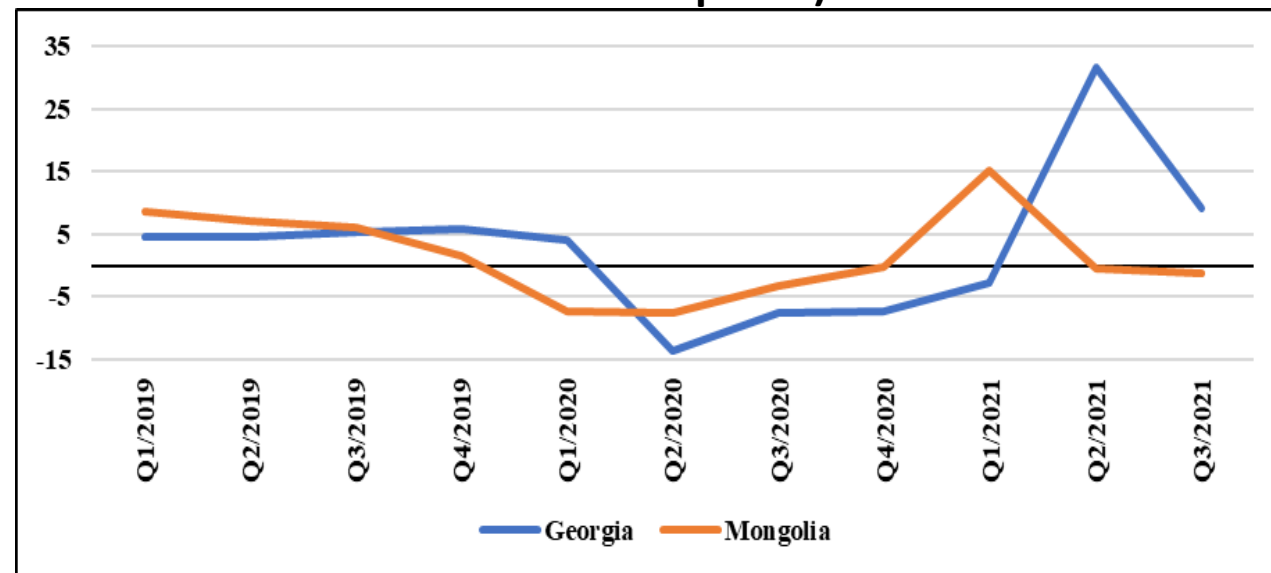
Source: John Hopkins University CSSE COVID-19 Data. Available at:

<https://ourworldindata.org/coronavirus/country/georgia?country=GEO~MNG> (accessed 21 February 2022)

Annual real GDP growth rates in Georgia and Mongolia

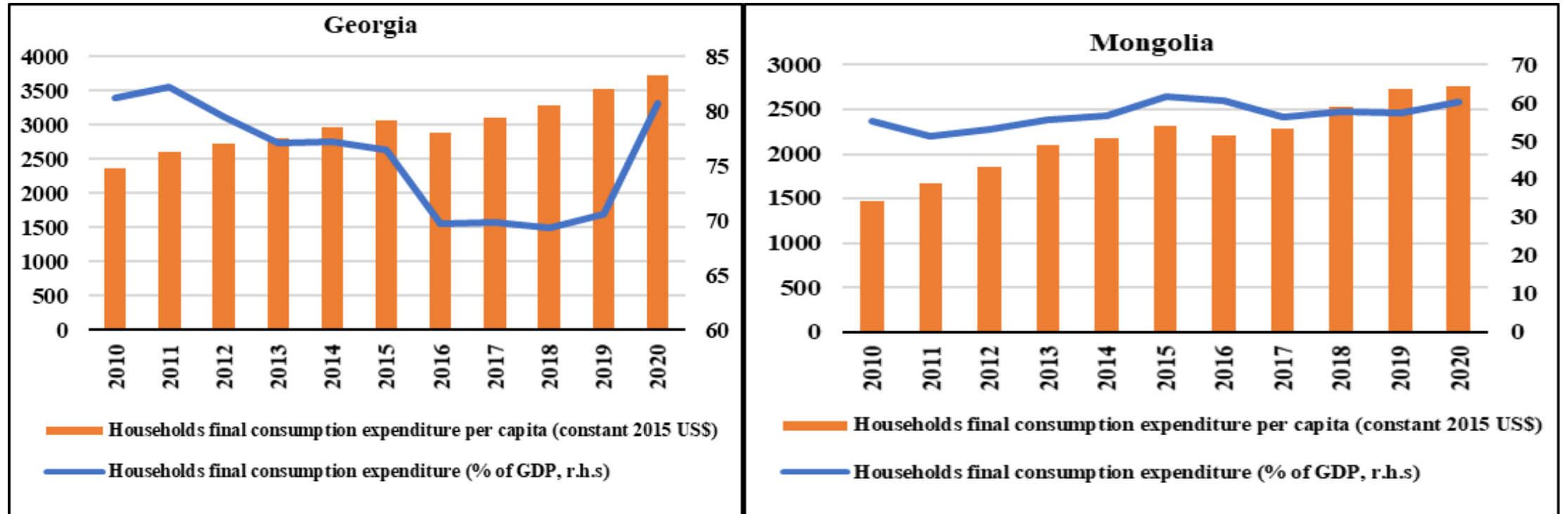


Real GDP growth in Georgia and Mongolia (year-on-year, constant prices)



Source: National Statistics Office of Georgia, National Statistics Office of Mongolia

Households final consumption expenditure in Georgia and Mongolia



Source: World Bank, World Development Indicators (accessed 15 February 2022).

Table 1. Value of policy response to COVID-19 measures (Total Package)

	Georgia	Mongolia
Total Package in USD Million	3,235.31	3,947.48
In % of GDP (2020)	20.11%	29.44%
Package per capita in USD	869.62	1,223.96

Source: ADB COVID-19 Policy Database <https://covid19policy.adb.org/policy-measures/GEO> & <https://covid19policy.adb.org/policy-measures/MON> (accessed 21 February 2022)

Data

- Multiple Indicator Cluster Survey (MICS) Plus Survey by children by (UNICEF)
 - on the impact of COVID-19 on the well-being of families and.
- Due to availability of variables of our interests dataset covers:
 - second and third waves for Mongolia
 - first and third waves for Georgia

Table 2. Survey waves and sample size

	Mongolia	Georgia
Original wave number	Wave 2	Wave 1
Survey Period	December 1-14, 2020	November 24-December 21, 2020
N	1971	1835
Original wave number	Wave 3	Wave 3
Survey Period	February 15-March 1, 2021	June 10-28, 2021
N	1939	1671
Total (N) by country	3910	3506

Source: UNICEF. MICS Plus. 2020-2021. <https://mics.unicef.org/mics-plus/mics-plus-results> (retrieved January 23, 2022).

Descriptive statistics (mean values)

	Total Sample			Mongolia			Georgia		
	Total	Wave 1	Wave 2	Total	Wave 1	Wave 2	Total	Wave 1	Wave 2
Decline in income (1-decline, 0-not decline)	0.47	0.54	0.39	0.49	0.55	0.43	0.44	0.53	0.35
Access to internet	1.18	1.15	1.21	0.88	0.87	0.89	1.52	1.46	1.59
Assets	11.54	11.36	11.72	11.29	11.30	11.28	11.81	11.42	12.24
Government support		1.86			1.23			2.55	
Gender of household head (1-male, 0-female)	0.76	0.76	0.76	0.82	0.82	0.81	0.69	0.69	0.69
Age of household head	53.08	53.02	53.13	47.13	46.90	47.36	59.76	59.64	59.89
Household size	3.73	3.73	3.74	4.01	4.00	4.01	3.42	3.43	3.41
Number of children	1.12	1.12	1.11	1.48	1.52	1.44	0.71	0.69	0.73
Area of residence (1-urban, 0-rural)	0.53	0.53	0.54	0.58	0.58	0.58	0.49	0.49	0.49
Region	15.59	15.88	15.28	3.17	3.18	3.17	29.54	29.63	29.45
Capital city (1-yes, 0-no)	0.21	0.21	0.21	0.27	0.27	0.27	0.15	0.15	0.15
Household member lost job (1-yes, 0-no)							0.23	0.32	0.13

Methodology

- Probit regression model:

$$P(y_i = 1|x_i) = F(\beta_0 + \beta_k x_k)$$

- y_i is the dependent variable that indicates whether the average household income has decreased due to COVID-19 or not
- x_k is the set of explanatory variables that include household characteristics
- Cross-sectional approach is used for each wave sample

Description of Variables

Dependent variable

Decline in income Household's average monthly income has declined due to the COVID-19 (1=yes, 0=no)

Explanatory Variables

Household size Number of members in the observed household

Number of children Number of children in household in ages below 17 years

Gender of household head Gender of household is (1-male, 0-female)

Age of household head Household head ages in years

Capital city Residence/location of the household is in the capital city, Tbilisi or Ulaanbaatar (1=yes, 0=no)

Area of residence If household residence area is urban (1= urban, 0=rural)

Region Regional dummy variables.

Assets Number of assets household has (such as household appliances, electronic or digital devices, and motor vehicles)

Government support Number of types of government benefits received as part of COVID-19 mitigation, such as child money etc.

Access to internet Number of equipment used to access internet

Household member lost job If any member of the household has lost her or his job since March or December 2020 (1=yes, 0=no)

Empirical results

	Mongolia			Georgia		
	Total	Wave 1	Wave 2	Total	Wave 1	Wave 2
Age of household head	-0.00674*** (0.000651)	-0.00637*** (0.000922)	-0.00718*** (0.000915)	-0.00247*** (0.000536)	-0.00244*** (0.000721)	-0.00238*** (0.000791)
Gender of household head	0.0523** (0.0211)	0.0893*** (0.0296)	0.0128 (0.0298)	0.0234 (0.0156)	0.0112 (0.0209)	0.0371 (0.0232)
Household size	0.0699*** (0.00716)	0.0728*** (0.0106)	0.0676*** (0.00965)	0.0357*** (0.00582)	0.0292*** (0.00774)	0.0432*** (0.00865)
Government support	0.0199* (0.0111)	0.0191 (0.0119)		0.0174** (0.00865)	0.0241*** (0.00876)	
Number of children	-0.0472*** (0.00982)	-0.0561*** (0.0143)	-0.0385*** (0.0134)	-0.0244** (0.0104)	-0.0316** (0.0146)	-0.0222 (0.0148)
Internet access	0.0264** (0.0126)	0.0355** (0.0179)	0.0170 (0.0177)	-0.00537 (0.00757)	0.00984 (0.00989)	-0.0261** (0.0120)
Assets	-0.00556*** (0.00207)	-0.00977*** (0.00291)	-0.00111 (0.00291)	0.000332 (0.00222)	-0.000351 (0.00242)	0.00472 (0.00485)
Area	0.107*** (0.0184)	0.122*** (0.0254)	0.0897*** (0.0254)	-0.0758*** (0.0155)	-0.107*** (0.0212)	-0.0478** (0.0231)
Capital city	0.201*** (0.0248)	0.184*** (0.0352)	0.212*** (0.0348)	0.0822*** (0.0278)	0.0596 (0.0369)	0.109*** (0.0415)
Household member lost job				0.615*** (0.0195)	0.540*** (0.0184)	0.797*** (0.0650)
Second wave dummy (2=1)	-0.0967*** (0.0204)			-0.00381 (0.0248)		
Regional dummy	+	+	+	+	+	+
Country dummy						
Observations	3,910	1,971	1,939	3,506	1,835	1,671

Conclusions

- Though, our empirical analysis does not include monetary values of government benefits, empirical findings may indirectly inform about the critical importance of government support mechanisms in sustaining household income during the crisis
- Along with this, income decline effects varying over the wealth position of households emphasize potential risk of unequal recovery from COVID-19 pandemic
- Main limitation of this study: it does not include detailed information about income sources and employment types of households