Private Savings and COVID-19 in Sub-Saharan Africa*

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Innovation to address data demands for statistical analysis in times of crisis

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Agenda

- Motivation and Preliminary Findings
- Trends and Stylized Facts
- Savings Determinants in SSA and Across Income Groups
- Savings Determinants during COVID-19
- Robustness Checks and Additional Tests
- Conclusions

Motivation

- Low saving rates in Sub-Saharan Africa (SSA) represent one of the main bottlenecks for growth and development in the region (including achieving the SDGs).
- The evolution in domestic savings was already under pressure even before Covid-19, given the macroeconomic context in the region and elevated uncertainty on the external environment, including for commodity prices.
- The outbreak of COVID-19 has raised further questions about the dynamics of savings in SSA. COVID-19 has caused a stronger economic activity slowdown and increase in poverty in the region.
- The impact of COVID-19 on private savings could go both ways:
  - Agents may have increased their savings for precautionary motives or owing to foregone consumption caused by the preventive measures against COVID-19 (McGregor et al., 2022).
  - Firms and households may have resorted to a depletion of their private savings given the slowdown in economic activity, and the effect of preventive measures on their income.

Motivation

- Empirical questions:
  - Reexamines the main determinants of private savings in the SSA region and compares them with other world regions.
  - Investigate the impact of COVID-19 (*incidence, mortality, preventive measures, vaccination*) on private savings in SSA.

- Methodology
  - Use of (i) macro stylized facts; (ii) UN's household survey responses on COVID-19; (iii) econometric analyses of savings determinants, including COVID-19 variables.

- Stylized facts in line with other surveys run in SSA in 2020:
  - World Savings and Retail Banking Institute–WSBI (2020);
  - MasterCard Foundation (2020).

Main findings

- *Real per capita economic growth* remains one of the most important determinants of private savings in SSA
  - ↑ 1ppt in *real per capita gross private disposable income (GPDI) growth* (in PPP terms) is associated, on average, with an increase in 0.45 ppt of GPDI in the private saving rates in SSA.
  - Consistent with the previous literature (Elbadawi & Mwega, 2000; and Shawa, 2016).

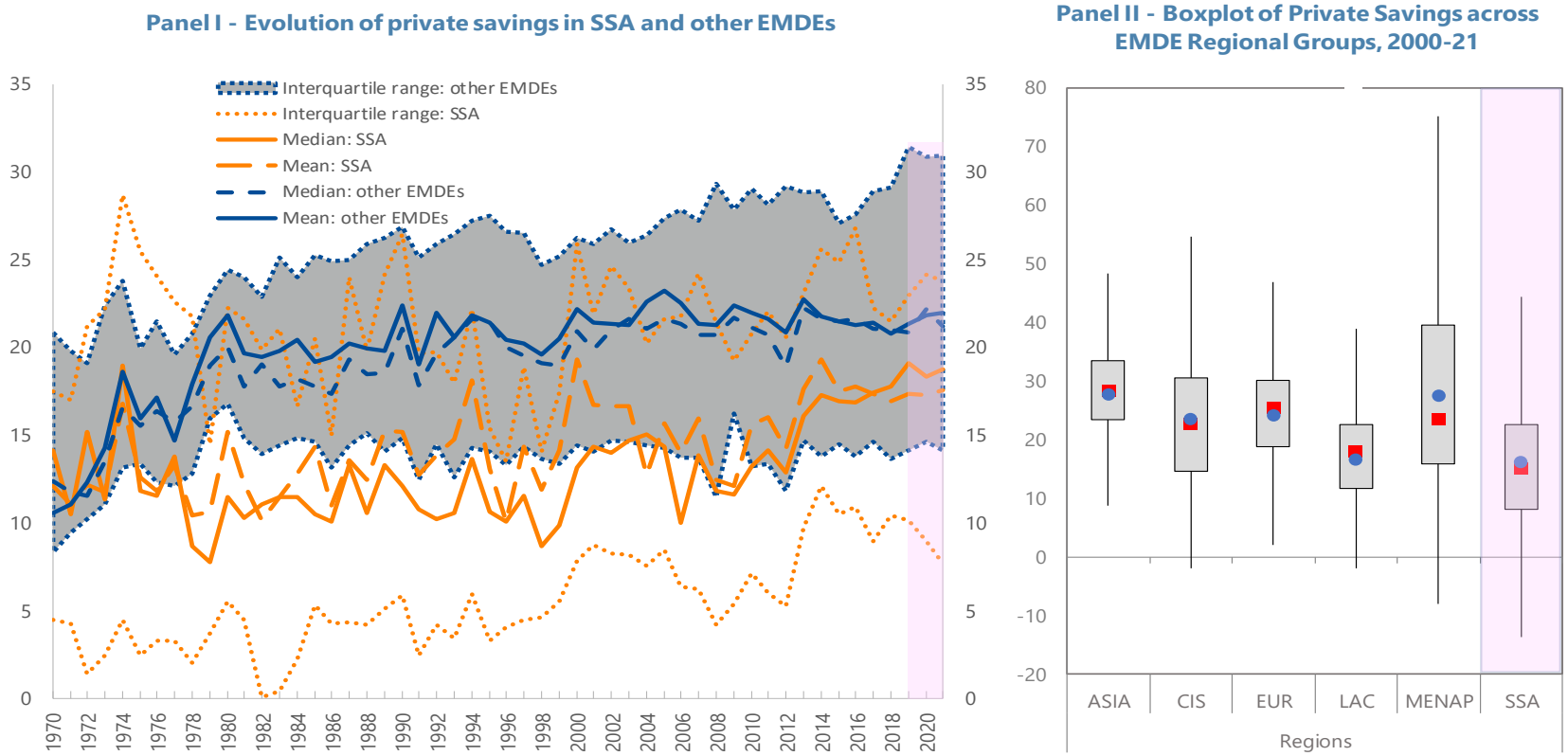
- COVID-19 has not led to an increase in private savings in SSA
  - Macro and micro (household surveys) descriptive statistics for SSA show either a stable or even marginally declining private saving rates during the beginning of the pandemic (2020-21).
  - Econometrically, COVID-19 mortality is negatively associated with private savings in SSA.
  - Each 10 COVID-19 deaths per million people in SSA countries is, on average, associated with a decline in 0.2 ppt of GPDI in private saving rates.

- The *stringency of COVID-19 preventive measures* and *vaccination shots* are not associated with a change in private savings in our sample.

Stylized facts

- Private saving rates in SSA are catching up with other EMDEs, but with its distribution still below other EMDEs' country groups.

Figure 1. Evolution of Private Savings in SSA and other EMDEs
(Percent of Gross Private Disposable Income - GPDI)

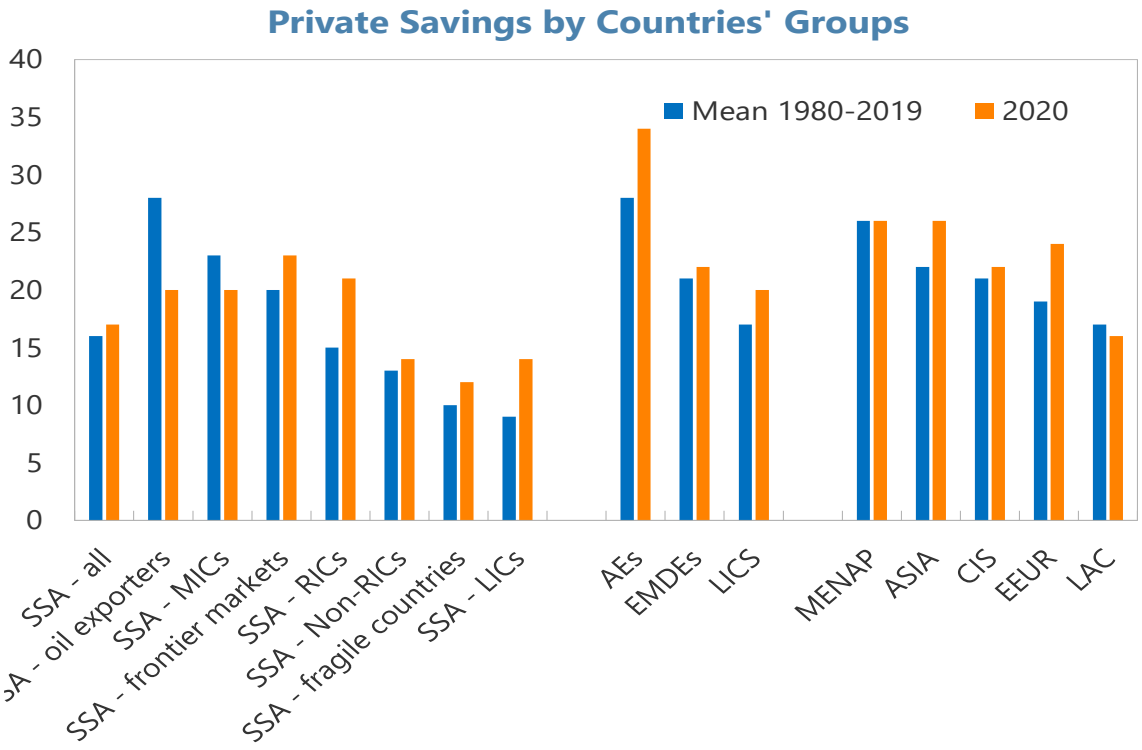


Sources: World Economic Outlook (WEO) database; Grigoli et al. (2018); and authors' calculations.

Stylized facts

- Most economic groups in AEs, and EMDEs observed an average increase in the savings rate in 2020. MENAP and SSA oil exporters and SSA MICs seem to be the exceptions.

Figure 2. Private Savings by EMDEs Regional Groups and SSA Economies
(Percent of Gross Private Disposable Income - GPDI)

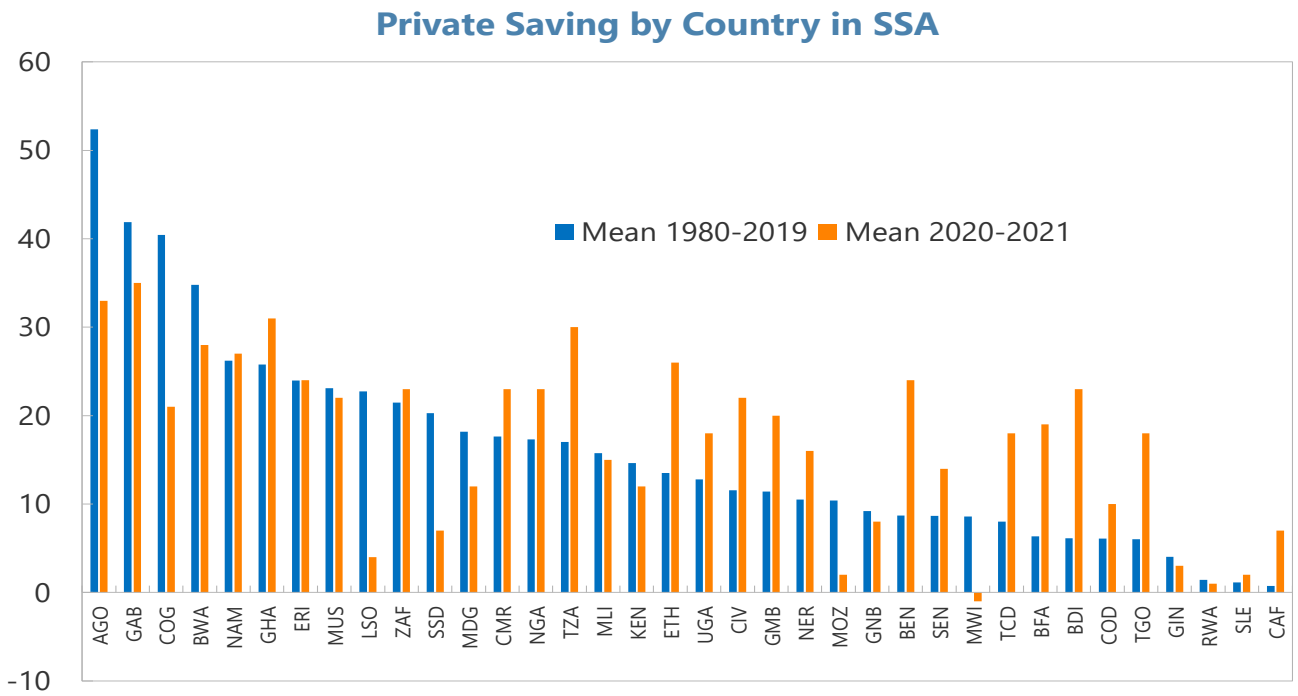


Sources: World Economic Outlook (WEO) database; Grigoli et al. (2018); and authors' calculations.

Stylized facts

- The same effect can also be observed when taking a country-level perspective in SSA.

Figure 2. Private Savings by EMDEs Regional Groups and SSA Economies
(Percent of Gross Private Disposable Income - GPDI)

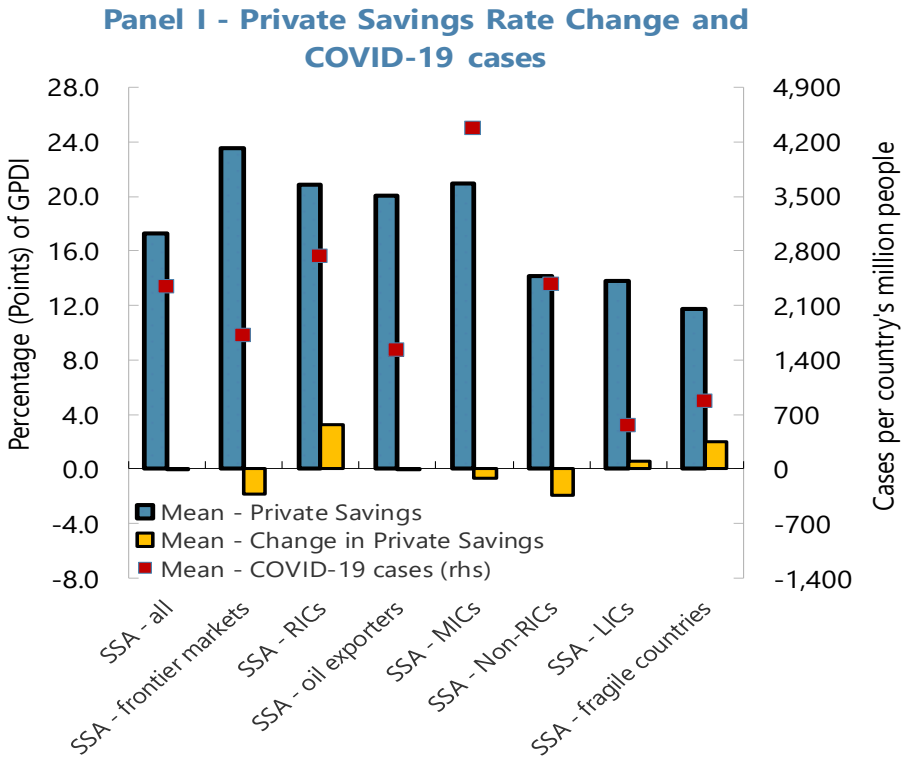


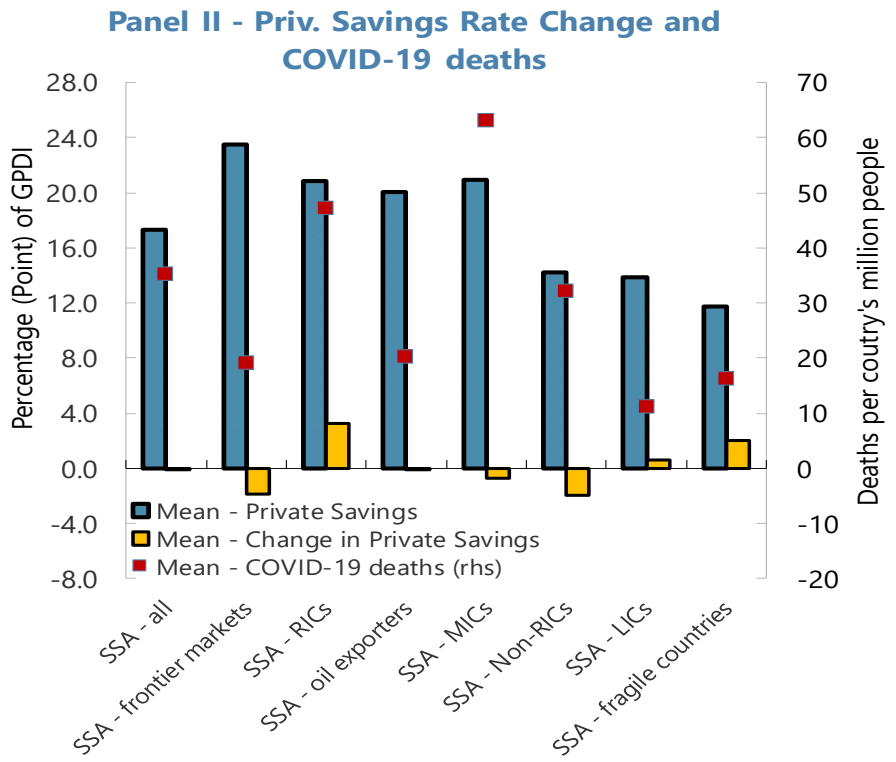
Sources: World Economic Outlook (WEO) database; Grigoli et al. (2018); and authors' calculations.

Stylized facts

- The average number of Covid-19 cases and deaths (per million of people in the country) varies significantly across SSA country groups.

Figure 4. Average Private Savings and COVID-19 Cases and Deaths in SSA, 2020



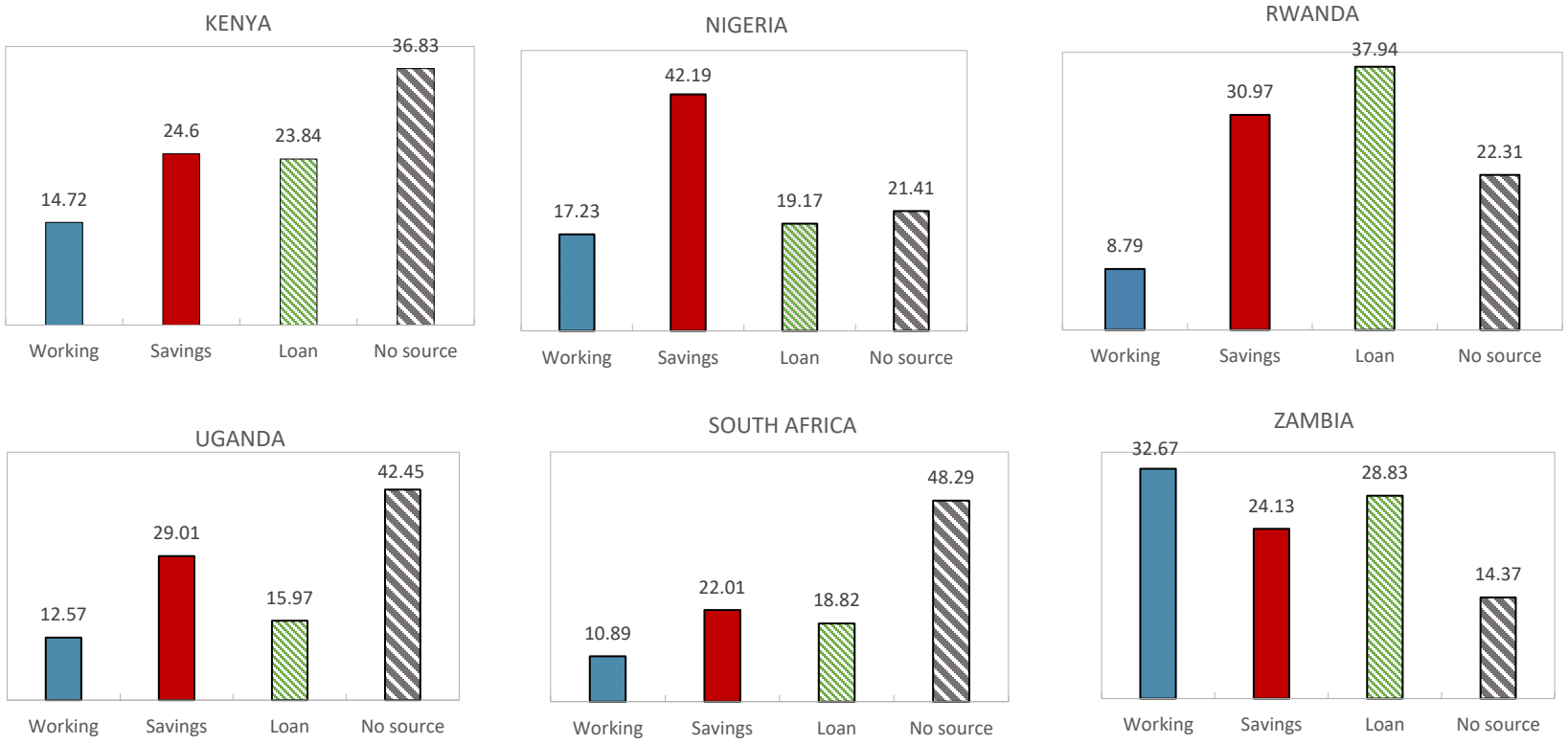


Sources: WEO database; Grigoli et al. (2018); Hannah et al. (2020); and Mathieu et al. (2021); and authors' calculations.

Stylized facts

- *Depletion of savings* was the first or second most source of financing according to households.

Figure 5. Source of Financing of Households Surveyed in Selected SSA, 2020
(Share of households surveyed, percent)

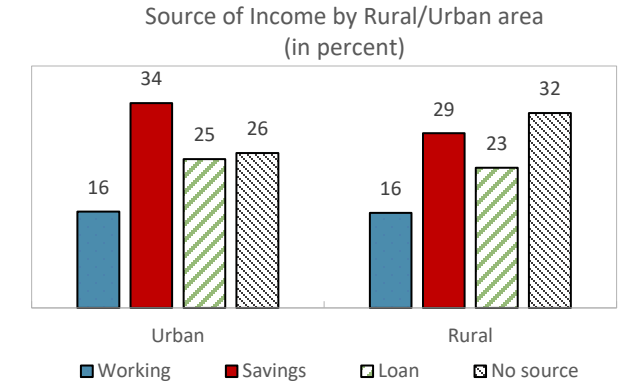


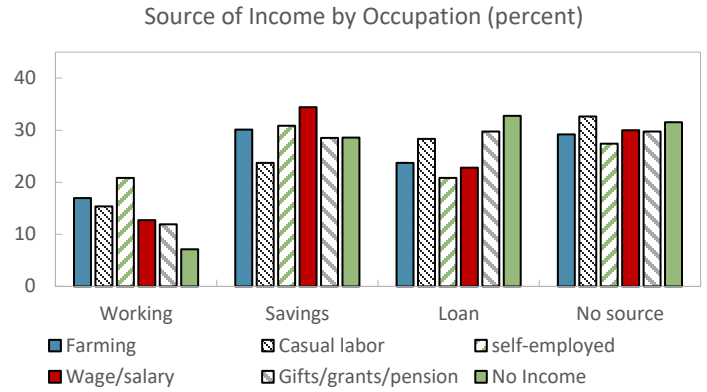
Sources: UNDP (2021); and authors' calculations.

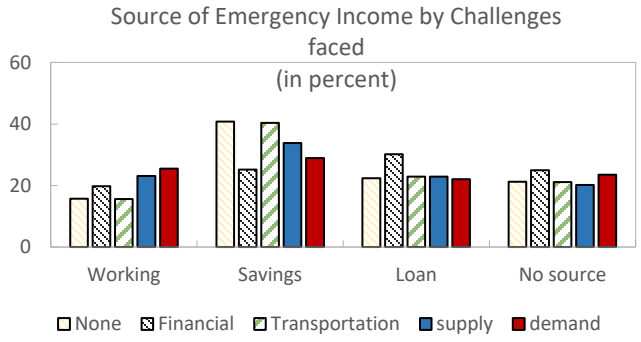
Stylized facts

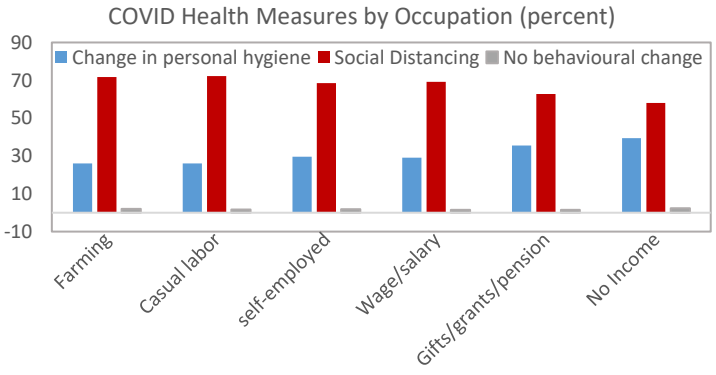
- *Depletion of savings* was the first or second most source of income and emergency income, while social distancing the main form of COVID-19 prevention.

Figure 6. Households' Income Characteristics during COVID-19 in Selected SSA, 2020
(Share of households surveyed, percent)









Sources: UNDP (2021); and authors' calculations.

Historical savings determinants (model)

Empirical model:

$$savings_{i,t} = \gamma savings_{i,t-1} + \beta X_{i,t} + \delta Z_{i,t} + \alpha_i + \tau_t + u_{i,t}$$

Additional details:

- Annual panel data for 128 countries between 1983–2021.
- Datasets: WEO, WDI, WHO, and Grigoli et al.'s (2018) data.
- Regressions estimated FE-OLS and 2-stage system GMM (to mitigate endogeneity issues).
- Based on Grigoli et al (2018), using classical (endogenous and exogenous) determinants of savings in the literature.
- Private savings rate as *percentage of GPDI*.

Historical savings determinants (results)

Table 1. Estimation of Main Savings Determinants, 1983–2021

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	SSA economies		Full Sample[a]		LICs[a]		EMDEs (exclusing SSA)[a]		Advanced economies[a]	
	OLS FE	2-st. Sys-GMM[b]	OLS FE	2-st. Sys-GMM[b]	OLS FE	2-st. Sys-GMM[b]	OLS FE	2-st. Sys-GMM[b]	OLS FE	2-st. Sys-GMM[b]
Constant	-7.947		-12.885**		-10.049		-15.628*		-55.367***	
	(-1.204)		(-2.116)		(-1.260)		(-1.763)		(-3.457)	
Lag dependent variable	0.509***	0.433	0.575***	0.451***	0.449***	0.113	0.605***	0.401	0.614***	-0.951
	(11.388)	(0.677)	(14.747)	(8.018)	-9.819	-0.367	(12.531)	(1.486)	(10.362)	(-0.648)
Ln real per capita GPDI (PPP)	0.026***	-0.005	0.013**	0.032***	0.023***	0.005	0.006	0.013	0.050***	0.034
	(3.856)	(-0.020)	(2.562)	(3.051)	-2.739	-0.159	(1.254)	(0.462)	(3.534)	(0.077)
Real growth rate of per capita GPDI (PPP)	0.112	0.459*	-0.000	-0.000	-0.000***	0.000	-0.000***	-0.000	-0.000*	0.000
	(1.625)	(1.834)	(-0.940)	(-0.127)	(-3.230)	(-0.171)	(-9.008)	(-0.075)	(-1.816)	(0.680)
Ln terms of trade	0.004	0.002	0.033***	0.035*	0.011	-0.089	0.048***	0.126	0.050***	-0.403
	(0.421)	(0.003)	(3.032)	(1.917)	-1.037	(-0.781)	(2.850)	(1.102)	(2.949)	(-0.367)
Inflation	-0.030	0.949	-0.001***	-0.004**	-0.048	0.122	-0.000	-0.000	0.059	0.570
	(-0.851)	(0.589)	(-2.691)	(-2.318)	(-1.633)	-0.794	(-0.958)	(-0.101)	(1.305)	(0.386)
Flow of private sector credit/GPDI	0.059	0.124	0.029*	0.017	0.084	-0.462	0.021	-0.040	-0.007	0.030
	(0.546)	(0.013)	(1.875)	(0.403)	-0.907	(-0.232)	(0.735)	(-0.254)	(-0.618)	(0.066)
Share of urban population	-0.135	0.238	-0.073	-0.018	-0.072	1.754	-0.076	0.013	-0.054	2.661
	(-1.110)	(0.164)	(-1.458)	(-0.321)	(-0.436)	-0.911	(-1.475)	(0.093)	(-0.721)	(0.512)
Public saving/GPDI	-0.348***	-1.352	-0.239***	-0.341***	-0.404***	-0.247	-0.162**	-0.277	-0.209***	-0.371
	(-5.794)	(-1.146)	(-5.135)	(-4.091)	(-6.340)	(-0.190)	(-2.548)	(-1.526)	(-5.207)	(-0.392)
R-squared	0.57		0.49		0.52		0.49		0.76	
Adj R-squared	0.58		0.67		0.54		0.64		0.72	
F test value		163.7		104.4		170.5		1.9		716.7
F-test p-value		0.000		0.000		0.000		0.007		0.000
Arellano-Bond test for AR(1) in first differences (p-value)		0.186		0.000		0.538		0.042		0.569
Arellano-Bond test for AR(2) in first differences (p-value)		0.398		0.867		0.113		0.834		0.427
Hansen *J*-test or instrument validity (p-value)[c]		1.000		1.000		1.000		1.000		1.000
Sargan test of overidentifying restrictions (p-value)		0.000		0.000		0.000		0.000		0.000
Observations	986	986	3,619	3,619	1,250	1,250	1,742	1,742	891	891
Minimum observations per country	11	11	7	7	7	7	7	7	17	17
Number of Countries	31	31	128	128	43	43	66	66	31	31

Savings determinants during COVID-19

Empirical models:

$$\Delta savings_{i,t} = \pi \Delta savings_{i,t-1} + \varphi X_{i,t} + \delta Z_{i,t} + \omega covid\_cases_{i,t} + \alpha_i + \tau_t + \varepsilon_{i,t},$$

$$\Delta savings_{i,t} = \pi \Delta savings_{i,t-1} + \varphi X_{i,t} + \delta Z_{i,t} + \omega covid\_deaths_{i,t} + \alpha_i + \tau_t + \varepsilon_{i,t},$$

$$\Delta savings_{i,t} = \pi \Delta savings_{i,t-1} + \varphi X_{i,t} + \delta Z_{i,t} + \omega stringency_{i,t} + \alpha_i + \tau_t + \varepsilon_{i,t},$$

$$\Delta savings_{i,t} = \pi \Delta savings_{i,t-1} + \varphi X_{i,t} + \delta Z_{i,t} + \omega vaccination_{i,t} + \alpha_i + \tau_t + \varepsilon_{i,t}.$$

Additional details:

- $covid\_cases_{i,t}$ corresponds to the *annual* number of cases per million people in a country.
- $covid\_deaths_{i,t}$ corresponds to the *annual* number of deaths per million people in a country.
- $stringency_{i,t}$ corresponds to the *strictness* of COVID-19 preventive measures in a country.
- $vaccination_{i,t}$ corresponds to the number of vaccine shots applied in a country as percent of its population.
- Annual panel data for 20 SSA countries, 26 LICs, and 36 EMDEs between 2017–2021.
- Datasets: WEO, WDI, WHO, and Grigoli et al.'s (2018) data, Gruss et al. (2020); Ritchie et al. (2020); Hale et al. (2021); ourworldindata.org.
- Regressions estimated FE-OLS and 2-stage system GMM (to mitigate endogeneity issues).

Savings determinants during COVID-19

Table 3. Private Savings and COVID-19 Cases per Countries' Million People, 2017–2021

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
	SSA economies		LICs[a]		EMDEs (exclusing SSA)[a]	
	OLS FE	2-st. Sys-GMM[b]	OLS FE	2-st. Sys-GMM[b]	OLS FE	2-st. Sys-GMM[b]
Constant	47.255	-11.189	116.112	27.076	-38.097	-75.422**
	(0.455)	(-0.064)	(1.259)	(0.413)	(-0.498)	(-2.416)
Covid-19 cases per million inhabitants[c]	**-0.0002****	**-0.000**	**-0.000*****	**-0.000**	**-0.000***	**-0.000**
	(-2.473)	**(-1.020)**	**(-3.276)**	**(-1.140)**	**(-1.958)**	**(-1.268)**
Ln real per capita GPDI (PPP)	-0.042	-0.019	-0.101	0.004	0.011	0.124**
	(-0.489)	(-0.062)	(-1.258)	(0.041)	(0.155)	(2.110)
Real growth rate of per capita GPDI (PPP)	0.762***	0.812***	0.556***	0.550***	0.261**	0.190*
	(6.306)	(3.656)	(4.564)	(3.290)	(2.122)	(1.692)
Ln terms of trade	0.012	0.005	-0.015	-0.067	0.165*	0.059
	(0.222)	(0.022)	(-0.276)	(-0.683)	(1.977)	(0.563)
Inflation (bounded)	0.527	0.219	0.449*	0.571	0.208	-0.240
	(1.725)	(0.367)	(1.731)	(1.386)	(1.200)	(-0.596)
Flow of private sector credit/GPDI	-0.826***	-1.638	-0.438**	-0.265	-0.079	-0.177
	(-3.241)	(-1.321)	(-2.620)	(-0.790)	(-0.823)	(-0.710)
Share of urban population	-0.659	0.702	-1.083	0.115	-0.891	-1.004*
	(-0.408)	(0.241)	(-0.723)	(0.269)	(-1.256)	(-1.973)
Public saving/GPDI	-0.151	-0.443	-0.349*	-0.595	-0.100	-0.153
	(-0.621)	(-0.549)	(-2.017)	(-0.690)	(-0.464)	(-0.616)
R-squared	0.60		0.51		0.21	
Adj R-squared	0.07		0.04		0.01	
F test value		6.29		2.36		1.53
F-test p-value		0.000		0.034		0.160
Arellano-Bond test for AR(1) in first differences (p-value)		0.015		0.007		0.011
Arellano-Bond test for AR(2) in first differences (p-value)		0.302		0.202		0.235
Hansen *J*-test or instrument validity (p-value)[d]		1.000		1.000		1.000
Sargan test of overidentifying restrictions (p-value)		0.417		0.000		0.842
Observations	79	79	105	105	147	147
Minimum observations per country	1	1	1	1	1	1
Number of Countries	20	20	26	26	36	36

Savings determinants during COVID-19

Table 4. Private Savings and COVID-19 Deaths per Countries' Million People, 2017–2021

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
	SSA economies		LICs[a]		EMDEs (exclusing SSA)[a]	
	OLS FE	2-st. Sys-GMM[b]	OLS FE	2-st. Sys-GMM[b]	OLS FE	2-st. Sys-GMM[b]
Constant	51.056	-580.051	111.349	-30.331	-12.146	-33.361
	(0.487)	(-0.961)	(1.151)	(-0.210)	(-0.165)	(-0.719)
Covid-19 deaths per million inhabitants[c]	**-0.010*** **	**-0.020** **	**-0.004**	**-0.000**	**-0.000**	**-0.000**
	(-4.035)	**(-2.602)**	**(-0.645)**	**(-0.014)**	**(-1.050)**	**(-0.237)**
Ln real per capita GPDI (PPP)	-0.050	0.457	-0.101	-0.011	-0.035	0.058
	(-0.601)	(0.892)	(-1.228)	(-0.153)	(-0.511)	(0.709)
Real growth rate of per capita GPDI (PPP)	0.765***	0.625	0.564***	0.565***	0.282**	0.262**
	(6.437)	(1.568)	(4.728)	(4.394)	(2.274)	(2.711)
Ln terms of trade	0.012	0.020	-0.022	-0.074	0.154*	0.030
	(0.221)	(0.109)	(-0.409)	(-0.336)	(1.804)	(0.466)
Inflation (bounded)	0.528*	-0.378	0.502*	0.481	0.234	-0.048
	(1.814)	(-0.322)	(1.864)	(1.489)	(1.331)	(-0.116)
Flow of private sector credit/GPDI	-0.844***	-1.736*	-0.387**	-0.396	-0.060	-0.190
	(-3.518)	(-1.872)	(-2.203)	(-1.391)	(-0.593)	(-0.686)
Share of urban population	-0.605	7.377	-0.837	2.171	-0.557	-0.529
	(-0.381)	(1.108)	(-0.546)	(0.492)	(-0.873)	(-0.630)
Public saving/GPDI	-0.161	-0.499	-0.343*	-0.582	-0.122	-0.171*
	(-0.725)	(-0.730)	(-1.871)	(-1.283)	(-0.567)	(-1.800)
R-squared	0.61		0.50		0.18	
Adj R-squared	0.07		0.04		0.13	
F test value		0.42		8.79		2.98
F-test p-value		0.938		0.008		0.006
Arellano-Bond test for AR(1) in first differences (p-value)		0.204		0.008		0.011
Arellano-Bond test for AR(2) in first differences (p-value)		0.744		0.235		0.185
Hansen *J*-test or instrument validity (p-value)[d]		0.407		1.000		1.000
Sargan test of overidentifying restrictions (p-value)		0.000		0.514		0.000
Observations	79	79	105	105	147	147
Minimum observations per country	1	1	1	1	1	1
Number of Countries	20	20	26	26	36	36

Additional tests and Robustness checks

- Additional tests:
  - Use of additional explanatory variables (Grigoli et al., 2018), including *informality* (up to 2017) and *economic uncertainty* to estimate the historical private savings determinants.
- Robustness checks:
  - Private savings rate as *percentage of GDP* instead of *GPDI.*
  - Use of *Deposits in commercial banks* as a proxy for private savings.

Conclusions

- *Real per capita economic growth* remains one of the most important determinants of private savings in SSA

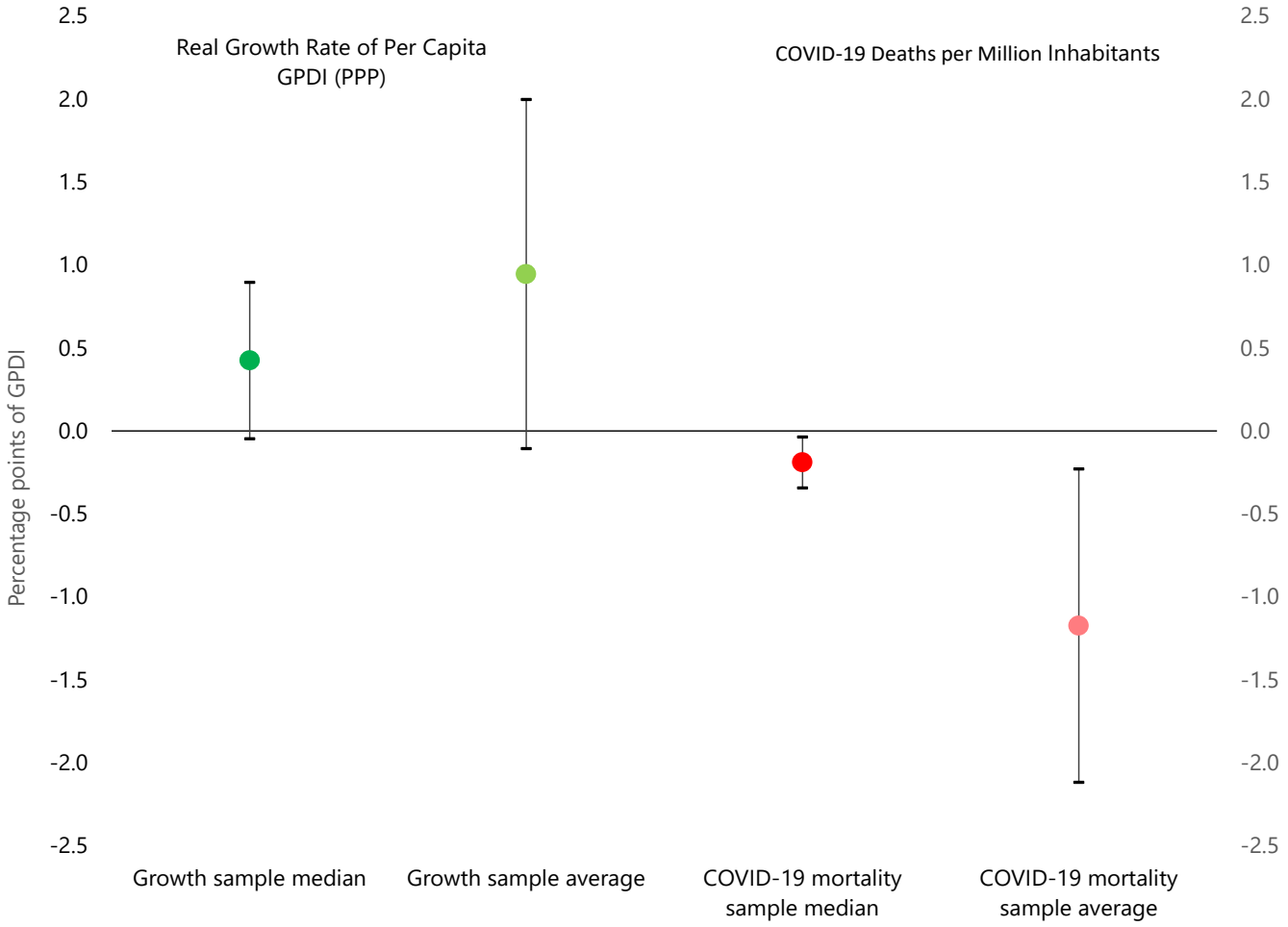
- COVID-19 has not led to an increase in private savings in SSA
  - Macro and micro (household surveys) descriptive statistics for SSA show either a stable or even marginally declining private saving rates during the beginning of the pandemic.
  - Econometrically, COVID-19 mortality is negatively associated with private savings in SSA.
  - Consistent with other surveys performed in the region (WSBI, 2020; and MasterCard Foundation, 2020).

- The *stringency of COVID-19 preventive measures* and *vaccination shots* are not statistically associated with a change in private savings in our sample.

- Policy implications
  - SSA countries should continue adopting policies and structural reforms to accelerate real per capital economic growth in the region.
  - Adopt initiatives to reduce the spread and severity of COVID-19 in the SSA region, notably through *accelerating vaccination*.
  - Well-targeted social spending and poverty-reduction programs for the population impacted by the pandemic and by the compounded food- and energy global crises currently at play.

Main findings

Figure 7. Estimated Effect on Real Growth Rate of Per Capita GPDI and of COVID-19 Mortality on the Private Savings in SSA Economies



Thank you

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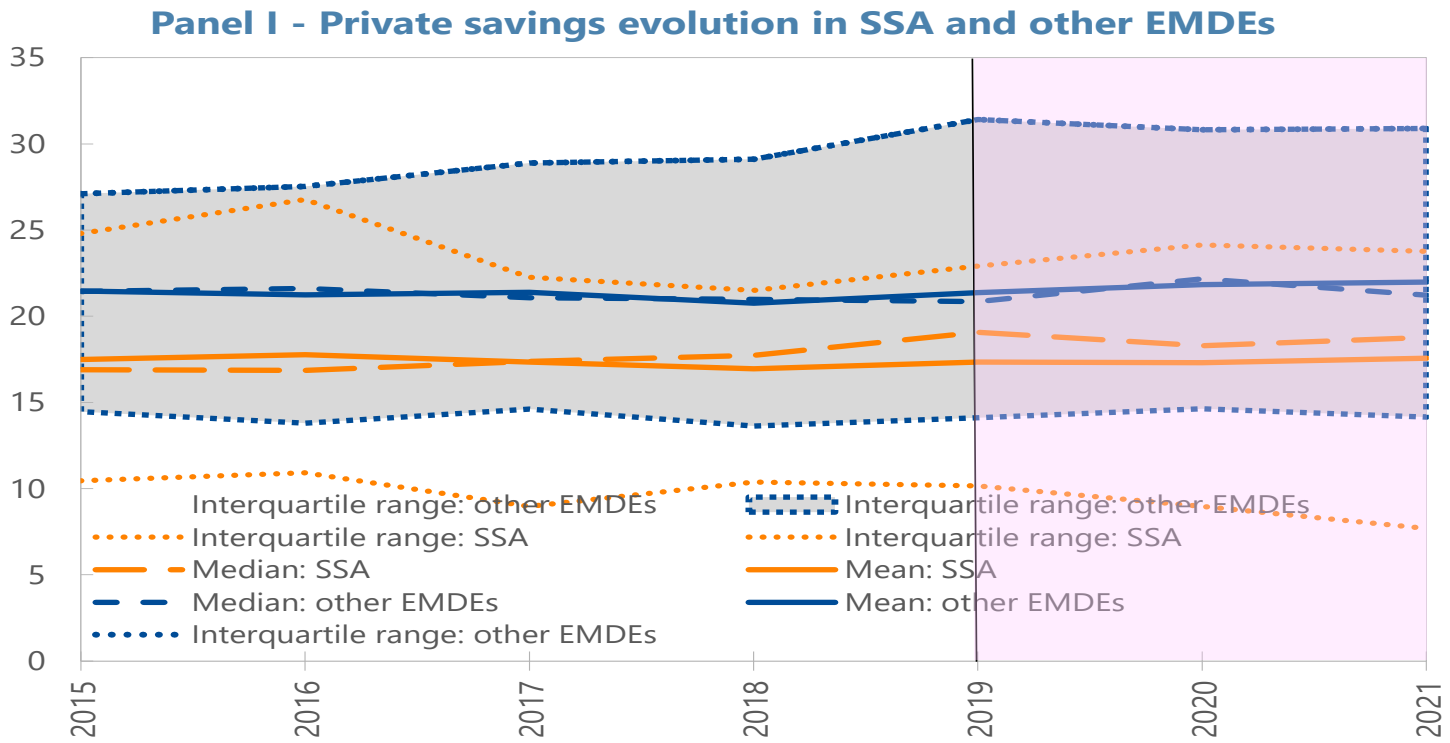
ANNEX

Stylized facts

- Very stable savings rates in 2020 and 2021 in both SSA and other EMDEs.

Figure 3. Savings and Real GDP Per Capita Growth in SSA during COVID-19
(Percent of Gross Private Disposable Income - GPDI; unless stated otherwise)



Sources: World Economic Outlook (WEO) database; Grigoli et al. (2018); and authors' calculations.

Savings determinants during COVID-19

Table 5. Private Savings and COVID-19 Stringency of Measures, 2017–2021

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
	SSA economies		LICs[a]		EMDEs (exclusing SSA)[a]	
	OLS FE	2-st. Sys-GMM[b]	OLS FE	2-st. Sys-GMM[b]	OLS FE	2-st. Sys-GMM[b]
Constant	4.944	-816.910	90.155	-40.680	-30.653	-33.305
	(0.051)	(-0.866)	(1.091)	(-0.337)	(-0.402)	(-0.244)
Covid-19 Stringency Measures[c]	**-0.021**	**0.150**	**0.011**	**-0.085**	**0.128***	**0.032**
	(-0.539)	**(0.321)**	**(0.284)**	**(-0.442)**	**(1.929)**	**(0.243)**
Ln real per capita GPDI (PPP)	0.009	0.685	-0.076	0.134	-0.025	0.056
	(0.116)	(1.211)	(-0.977)	(0.493)	(-0.410)	(0.330)
Real growth rate of per capita GPDI (PPP)	0.747***	0.186	0.496***	0.543***	0.299**	0.276***
	(3.911)	(0.237)	(3.320)	(3.481)	(2.568)	(3.222)
Ln terms of trade	-0.000	0.143	-0.025	0.028	0.172**	-0.007
	(-0.004)	(0.711)	(-0.447)	(0.214)	(2.041)	(-0.089)
Inflation	0.718**	-0.929	0.507*	0.143	0.245	0.010
	(2.363)	(-0.584)	(1.824)	(0.295)	(1.656)	(0.020)
Flow of private sector credit/GPDI	-0.571***	-0.776	-0.335**	-0.362	-0.030	0.010
	(-3.292)	(-0.937)	(-2.293)	(-0.987)	(-0.296)	(0.038)
Share of urban population	-0.308	7.823	-0.695	-1.850	-0.532	-0.191
	(-0.202)	(0.551)	(-0.452)	(-0.270)	(-0.865)	(-0.263)
Public saving/GPDI	-0.015	-0.803	-0.329*	-0.187	-0.121	-0.199*
	(-0.053)	(-0.649)	(-1.907)	(-0.391)	(-0.563)	(-1.788)
R-squared	0.47		0.41		0.23	
Adj R-squared	0.20		0.03		0.02	
F test value		6.38		5.35		63.69
F-test p-value		0.000		0.000		0.000
Arellano-Bond test for AR(1) in first differences (p-value)		0.043		0.008		0.009
Arellano-Bond test for AR(2) in first differences (p-value)		0.802		0.194		0.231
Hansen *J*-test or instrument validity (p-value)[d]		1.000		1.000		1.000
Sargan test of overidentifying restrictions (p-value)		0.424		0.551		0.947
Observations	77	77	103	103	145	145
Minimum observations per country	1	1	1	1	1	1
Number of Countries	20	20	26	26	36	36

Savings determinants during COVID-19

Table 6. Private Savings and COVID-19 Vaccine Shots, 2017–2021

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
	SSA economies		LICs[a]		EMDEs (exclusing SSA)[a]	
	OLS FE	2-st. Sys-GMM[b]	OLS FE	2-st. Sys-GMM[b]	OLS FE	2-st. Sys-GMM[b]
Constant	11.198	59.669	91.981	-4.968	-7.127	-44.516**
	(0.108)	(0.067)	(1.016)	(-0.037)	(-0.107)	(-2.537)
Total Covid-19 vaccine shots (percent of population)[c]	**0.122***	**0.168**	**0.031**	**0.038**	**-0.015**	**-0.129**
	(1.780)	**(0.364)**	**(0.382)**	**(0.388)**	**(-0.319)**	**(-1.209)**
Ln real per capita GPDI (PPP)	0.007	0.018	-0.095	-0.028	-0.047	0.125
	(0.089)	(0.023)	(-1.206)	(-0.251)	(-0.760)	(1.588)
Real growth rate of per capita GPDI (PPP)	0.747***	0.837*	0.573***	0.578***	0.287**	0.241**
	(6.154)	(1.743)	(4.730)	(4.777)	(2.300)	(2.600)
Ln terms of trade	0.010	0.143	-0.022	-0.117	0.142*	0.033
	(0.192)	(0.876)	(-0.411)	(-0.993)	(1.761)	(0.725)
Inflation	0.683***	0.800	0.544**	0.634*	0.239	-0.316
	(3.056)	(0.643)	(2.208)	(1.902)	(1.378)	(-0.685)
Flow of private sector credit/GPDI	-0.696***	-1.130	-0.357**	-0.364	-0.078	-0.172
	(-3.620)	(-1.711)	(-2.069)	(-1.268)	(-0.850)	(-0.736)
Share of urban population	-0.586	-4.109	-0.430	2.369	-0.374	-1.359
	(-0.402)	(-0.375)	(-0.271)	(0.979)	(-0.591)	(-0.758)
Public saving/GPDI	-0.135	0.431	-0.319*	-0.610***	-0.117	-0.160
	(-0.706)	(0.502)	(-1.880)	(-2.984)	(-0.555)	(-1.651)
R-squared	0.59		0.50		0.20	
Adj R-squared	0.15		0.06		0.01	
F test value		11.21		7.881		43.24
F-test p-value		0.000		0.000		0.000
Arellano-Bond test for AR(1) in first differences (p-value)		0.071		0.010		0.014
Arellano-Bond test for AR(2) in first differences (p-value)		0.992		0.275		0.329
Hansen *J*-test or instrument validity (p-value)[d]		1.000		1.000		1.000
Sargan test of overidentifying restrictions (p-value)		0.432		0.011		0.826
Observations	79	79	105	105	147	147
Minimum observations per country	1	1	1	1	1	1
Number of Countries	20	20	26	26	36	36

Descriptive statistics for SSA

Variables	Year(s)	Mean	Median	Standard deviation	25th percentile	75th percentile	Countries	Obs.
Dependent variable								
Private savings, percent of gross private domestic investment	1983–2019	12.92	12.00	13.25	5.51	19.45	31	959
Lag private savings, percent of gross private domestic investment	1983–2019	12.67	11.58	13.40	5.10	19.13	31	959
First-difference in private savings, percentage points of gross private domestic investment	2017–2019	0.32	-0.26	4.97	-1.85	2.30	20	53
Private savings, percent of GDP	1983–2019	12.30	10.36	12.60	4.58	17.57	31	903
Lag private savings, percent of GDP	1983–2019	12.17	10.09	12.83	4.42	17.31	31	903
First-difference in private savings, percentage points of GDP	2017–2019	0.18	0.00	4.10	-1.93	2.11	21	56
Private savings, percent of gross private domestic investment	2020–2021	16.68	17.95	8.18	13.45	22.63	14	27
Lag private savings, percent of gross private domestic investment	2020–2021	17.44	18.51	6.88	15.49	20.49	14	27
First-difference in private savings, percentage points of gross private domestic investment	2020–2021	-0.76	-0.09	4.93	-2.17	3.09	13	26
Private savings, percent of GDP	2020–2021	15.64	16.25	8.39	11.33	21.22	18	36
Lag private savings, percent of GDP	2020–2021	15.67	16.10	8.36	13.40	20.83	18	36
First-difference in private savings, percentage points of GDP	2020–2021	-0.55	-0.22	4.12	-1.97	2.63	13	26
Covid-19-related variabes								
Covid-19 country cases, per million country inhabitants	2017–2019	0	0	0	0	0	20	53
Covid-19 country cases, per million country inhabitants	2020–2021	4,190	946	11,024	439	3,315	13	26
Covid-19 country deaths, per million country inhabitants	2017–2019	0	0	0	0	0	20	53
Covid-19 country deaths, per million country inhabitants	2020–2021	59	10	196	5	36	13	26
Vaccination shots per country, percent of the population	2017–2019	0	0	0	0	0	20	53
Vaccination shots per country, percent of the population	2020–2021	5	0	10	0	8	13	26
Stringency of lockdown measures, index number	2017–2019	0.00	0.00	0.00	0.00	0.00	20	51
Stringency of lockdown measures, index number	2020–2021	40.07	41.94	14.41	29.58	47.81	13	26
Baseline controls								
Inflation (percent)	1983–2019	9.32	6.41	13.54	2.11	12.04	31	959
Inflation (percent)	2020–2021	3.44	2.70	2.20	2.20	4.19	14	27
Flow of private sector credit, percent of gross private domestic investment	1983–2019	2.29	1.53	4.44	0.40	3.34	31	959
Flow of private sector credit, percent of gross private domestic investment	2020–2021	0.55	0.99	2.32	-0.78	1.79	14	27
Public saving/GPDI	1983–2019	5.56	3.49	12.17	0.39	7.97	31	959
Public saving/GPDI	2020–2021	0.96	2.86	6.77	0.79	4.54	14	27
Real GPDI per capita (PPP), US dollars	1983–2019	3,806.83	911.86	38,957.78	592.80	1,513.52	31	959
Real GPDI per capita (PPP), US dollars	2020–2021	1,318.38	1,317.93	950.82	617.84	2,154.35	14	27
Real growth rate of per capita GPDI (PPP), percent	1983–2019	2.06	0.92	17.70	-3.81	5.72	31	959
Real growth rate of per capita GPDI (PPP), percent	2020–2021	-2.02	-2.23	4.21	-4.60	1.35	14	27
Share of urban population	1983–2019	31.57	31.58	14.45	19.26	40.90	31	959
Share of urban population	2020–2021	36.64	38.53	13.90	24.95	48.42	14	27
Terms of trade, percent	1983–2019	119.90	106.82	55.52	93.52	132.55	31	959
Terms of trade, percent	2020–2021	171.45	129.31	92.89	107.99	229.40	14	27
Additional variables and controls								
Bank deposits (liabilities to other depository corporations, as percent of monetary base)	2002–2019	31.33	27.81	17.38	19.83	38.02	20	473
First-difference of bank deposits, percentage points of monetary base	2017–2019	-0.42	0.37	5.40	-2.71	2.85	20	53
Bank deposits (liabilities to other depository corporations, as percent of monetary base)	2020	34.96	28.69	17.62	24.57	42.71	18	18
First-difference of bank deposits, percentage points of monetary base	2020	2.68	1.85	6.01	-2.26	6.51	13	13
Conflict	1983–2021	0.03	0.00	0.18	0.00	0.00	32	1,064
Current account balance, percent of GPDI	1983–2021	-0.09	-0.05	0.67	-0.10	-0.02	31	986
Economic uncertainty	1983–2021	0.14	0.11	0.14	0.04	0.20	31	986
Foreign aid, percent of GPDI	1983–2021	12.84	10.70	11.06	5.37	17.10	30	929
Flow of private sector credit, percent of GDP	1983–2021	0.18	0.23	2.85	-0.70	1.21	31	939
GPDI (permanent component in log)	1983–2021	13.74	14.04	2.35	12.47	15.37	31	889
GPDI (temporary component in log)	1983–2021	11.76	12.00	2.22	10.79	13.22	30	499
Informality, [scale]	1991–2017	38.59	38.01	7.78	33.40	42.30	31	745
Old-age dependency ratio	1983–2021	5.73	5.60	0.98	5.07	6.31	31	986
Population per country, millions of people	1983–2019	17.29	10.58	24.48	5.46	19.31	31	959
Population per country, millions of people	2020–2021	20.43	20.25	10.56	12.23	27.66	14	27
Public saving/GDP	1983–2021	2.47	2.48	7.93	0.00	5.48	31	939
Real growth rate of per capita GDP (PPP), percent	1983–2021	-3.75	-2.50	9.49	-7.68	2.03	31	939
Real GDP growth (5-year forecast), percent	1990-2021	0.30	0.29	0.11	0.24	0.35	33	840
Terms of trade (permanent component), index number	1983–2021	472.22	469.05	27.90	456.97	483.06	31	986
Terms of trade (temporary component), index number	1983–2021	-0.16	-1.00	21.61	-11.28	10.78	31	986
Unanticipated income growth, percentage points	1983–2021	0.05	-0.01	6.43	-2.14	2.04	31	986
Unanticipated inflation, percentage points	1983–2021	-0.36	-0.18	8.54	-3.01	2.46	31	985
Young-age dependency ratio	1983–2021	85.36	86.41	11.14	80.23	92.56	31	986

Country sample used in the estimations

Groups[a]		Countries[b]	Estimations[c] I	II	III	IV	V	VI
Full sample	SSA	Benin*, Burkina Faso*, Burundi*, Central African Republic*, Chad*, Côte d'Ivoire*, Republic of Congo*, Ghana*, Lesotho*, Madagascar*, Mali*, Mozambique*, Namibia, Niger*, Rwanda*, Senegal*, Sierra Leone*, Togo*, Uganda*, Zambia*	X	X	X	X	X	X
		South Africa	X		X		X	
		Angola, Botswana, Cameroon*, Eritrea*, Kenya*, Nigeria*, Tanzania*	X				X	
		Ethiopia*, Guinea*, Malawi*	X					
	LICS (excluding SSA)	Afghanistan#, Cambodia#, Kyrgyz Republic#, Mauritania#, Mongolia#, Myanmar#, Nepal#	X	X				
		Bangladesh#, Bolivia#, Haiti#, Honduras#, Nicaragua#, Papua New Guinea#, Sudan#, Vietnam#, Yemen#	X					
	EMDEs not in SSA (excluding LICs)	Albania, Algeria, Bosnia and Herzegovina, Bulgaria, Croatia, Egypt, India, Indonesia, Iraq, Jordan, Kuwait, Lebanon, Macedonia (FYR), Malaysia, Morocco, Oman, Pakistan, Peru, Philippines, Poland, Romania, Russia, Saudi Arabia, Serbia, Sri Lanka, Thailand, Trinidad and Tobago, Tunisia, Uruguay	X	X				
		Argentina, Armenia, Azerbaijan, Chile, China, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Hungary, Iran, Kazakhstan, Mexico, Panama, Paraguay, Syria, Turkey, United Arab Emirates, Venezuela	X					
	AEs	Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hong Kong SAR, Ireland, Israel, Italy, Japan, Korea, Latvia, Lithuania, Netherlands, New Zealand, Norway, Portugal, Singapore, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, United Kingdom, United States	X					

Source: Authors' calculations

Notes: [a] Group of countries according to their use in different analytical exercises. SSA = Sub-Saharan Africa; LICs = Low-Income Countries; EMDEs = Emerging and Developing Economies; AEs = Advanced Economies. [b] For each country group, each row indicates the list of countries that entered in each type of estimation. Asterisk (*) indicates that the particular SSA country belongs to the LICs group used in the estimations too. Hashtag (#) indicates that the LIC country belongs to the EMDE group used in estimations too. [c] Estimation performed: I = baseline and additional tests estimations (Tables 1 and 2); II = COVID-19 estimations (Tables 3 to 7); III = robustness check of the baseline estimation using the ratio to GDP (Table 8); IV = robustness checks of the COVID-19 estimations using the ratio to GDP (Table 8); V = robustness check of the baseline estimation using the Bank Deposits as a ratio of Money Base (Table 9); VI = robustness check of the COVID-19 estimations using the Bank Deposits as a ratio of Money Base (Table 9).