



MALAWI

Short-term Impacts of COVID-19 on the Malawian Economy, 2020-21: A SAM multiplier modeling analysis

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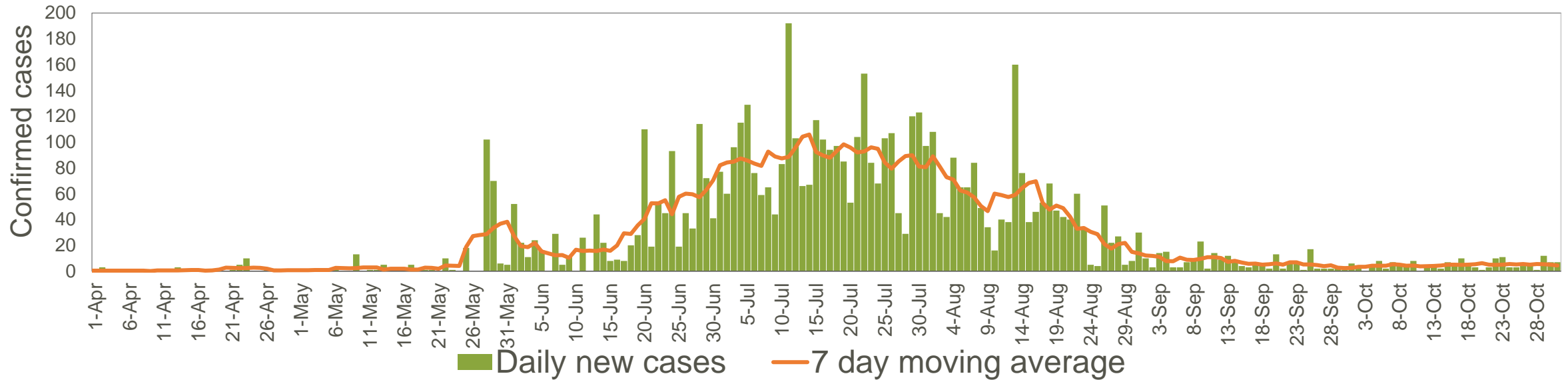
Outline

- Introduction
- COVID-19 incidence and distribution
- Methodology
- Immediate economy-wide impacts of social distancing
- Faster and slower recovery paths by quarter, 2020–2021
- Some cross-country comparisons
- Summary, caveats and policy implications

Introduction

- Revised analysis to measure the short- and medium-term economic impacts of COVID-19 on the Malawi economy
- Objective: broad assessment of the economy-wide impacts of social distancing and other COVID-19 related shocks during 2020 and 2021
- Focus on 2 scenarios:
 - a) Social distancing: 2 months of full enforcement (April –May 2020);
 - b) Easing up scenarios following the gradual lifting of restrictions from June till the end of 2021
- Method: Social Accounting Matrix (SAM) multiplier model to measure the direct and indirect impacts of COVID-19 restrictions on production, incomes and poverty
- Caveats: results are highly dependent on demand shocks assumed; fixed-price model

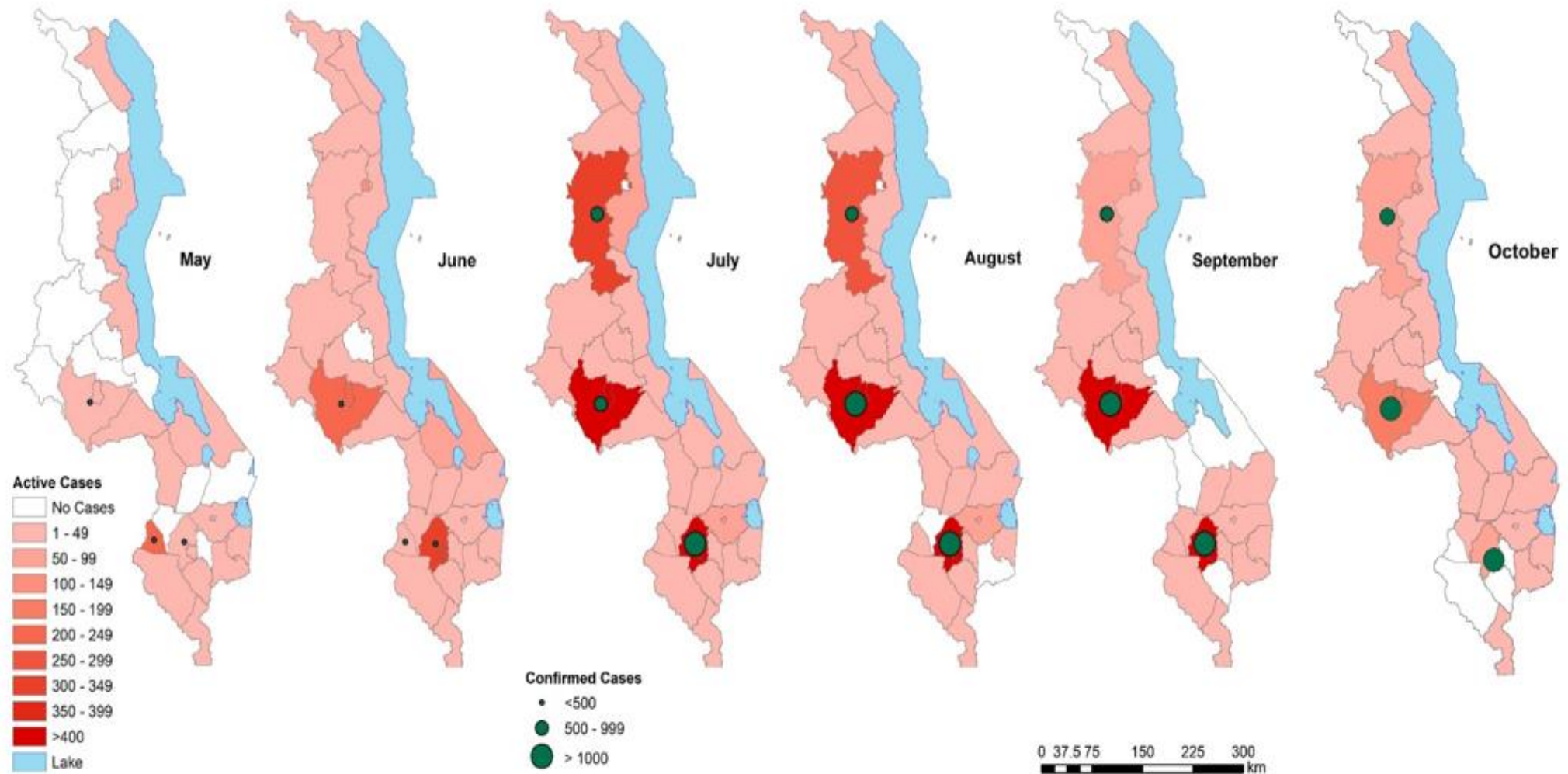
Confirmed active COVID-19 cases since April 2020



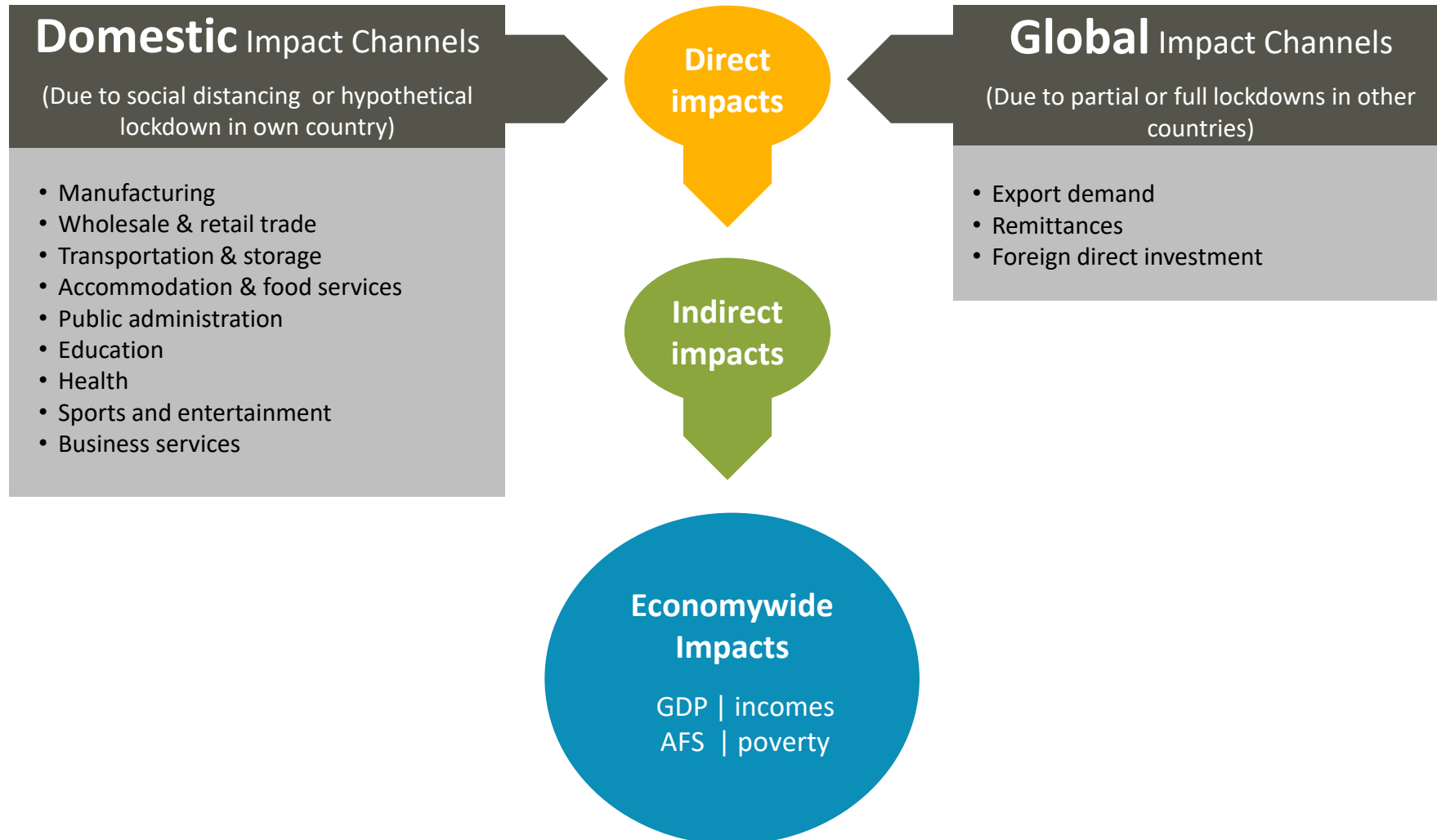
The relatively low incidence of COVID cases in Malawi is still not well-understood, but some of the more plausible socio-economic explanations include:

- Young population (55.5% <20 years old, 5.1% > 59 in Sept 2018)
- Low urbanization (16% in Sept 2018) and moderate population densities in urban areas
- Poor roads and limited mobility between urban and rural areas

Distribution of active COVID-19 cases by district and month



Framework for Analyzing Economic Impacts of COVID-19



Details of Shocks and Recovery Scenarios

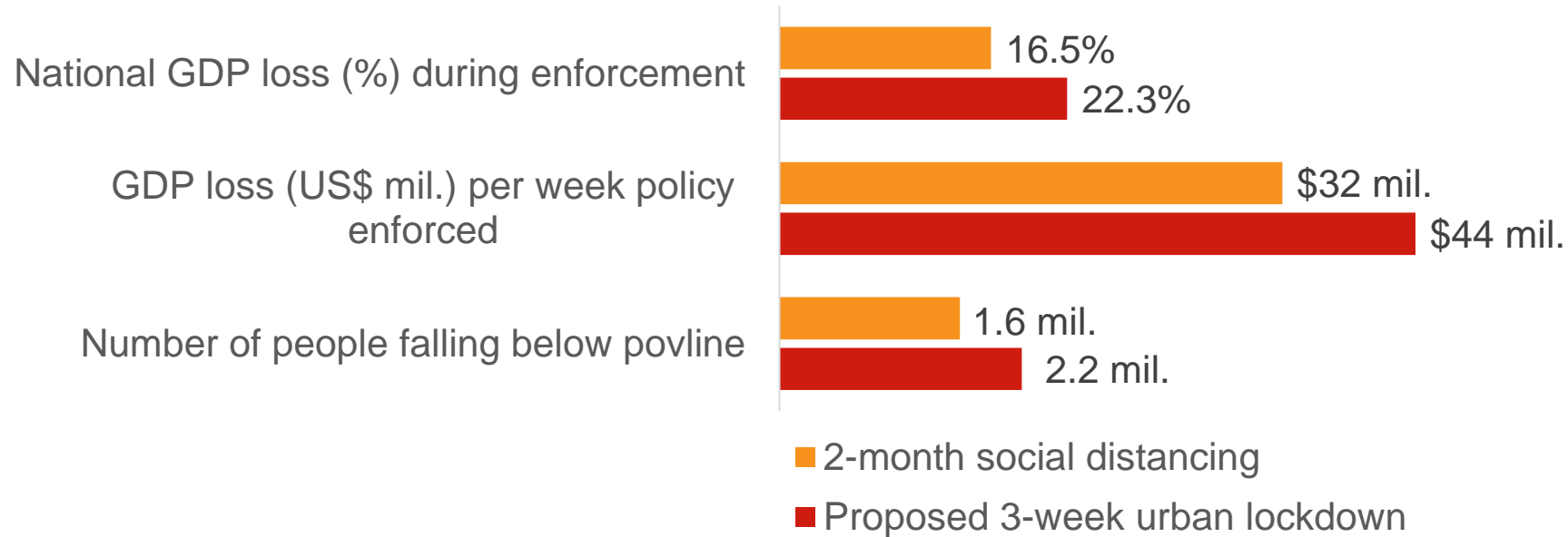
	Initial shocks during Q2		
Impact channels	Social distancing (2 months)	Urban lockdown (21 days)	External shocks (Q2)
Reduction in manufacturing operations	-5%	-30%	
Restricting non-essential wholesale/retail trade	-20%	-50%	
Transport and passenger travel restrictions	-20%	-80%	
Limiting hotel and restaurant operations	-80%	-80%	
Non-essential business services restricted		-30%	
Restrictions on other business services		-50%	
Government work-from-home orders	-20%	-30%	
Closing all schools in the country	-20%	-80%	
Banning sports & other entertainment	-25%	-50%	
Reduced tobacco exports			-20%
Falling foreign private remittances			-33%
Falling foreign direct investments			-10%

* Colors from green to red represent low to high shock values, respectively.

Note: Tourism impact channel is captured as a consolidation of tourism's share in trade, transport, accommodation & food services, business services, and other services sectors

	Period		Social distancing	Urban lockdown	External shocks
2020	Q1	Jan-Mar	Virtually no impact, although some measures (e.g., school closures) introduced March 30th		
	Q2	Apr	Social distancing fully enforced for 2 months	Social distancing measures	Declines in foreign remittances, tobacco exports & foreign direct
		May		Proposed 21-day urban lockdown	
		Jun		Initial easing up after full enforcement:	
	Q3	Jul-Sep	Recovery: shocks at 50-75% (faster) or 75-95% (slower)		Initial recovery phase: shocks at 90%
	Q4	Oct-Dec	Recovery: shocks at 15-35% (faster) or 35-75% (slower)		Further recovery phase: shocks at 75%
2021	Q1	Jan-Mar	Recovery: shocks at 5-10% (faster) or 10-50% (slower)		Initial recovery phase: shocks at 35%
	Q2	Apr-Jun	Recovery: shocks at 0-5% (faster) or 5-15% (slower)		Final recovery phase: shocks at 10%
	Q3	Jul-Sep	Recovery: shocks at 0% (faster) or 0-5% (slower)		Full recovery phase: shocks at 5%
	Q4	Oct-Dec	Full recovery		Full recovery phase: shocks at 0%

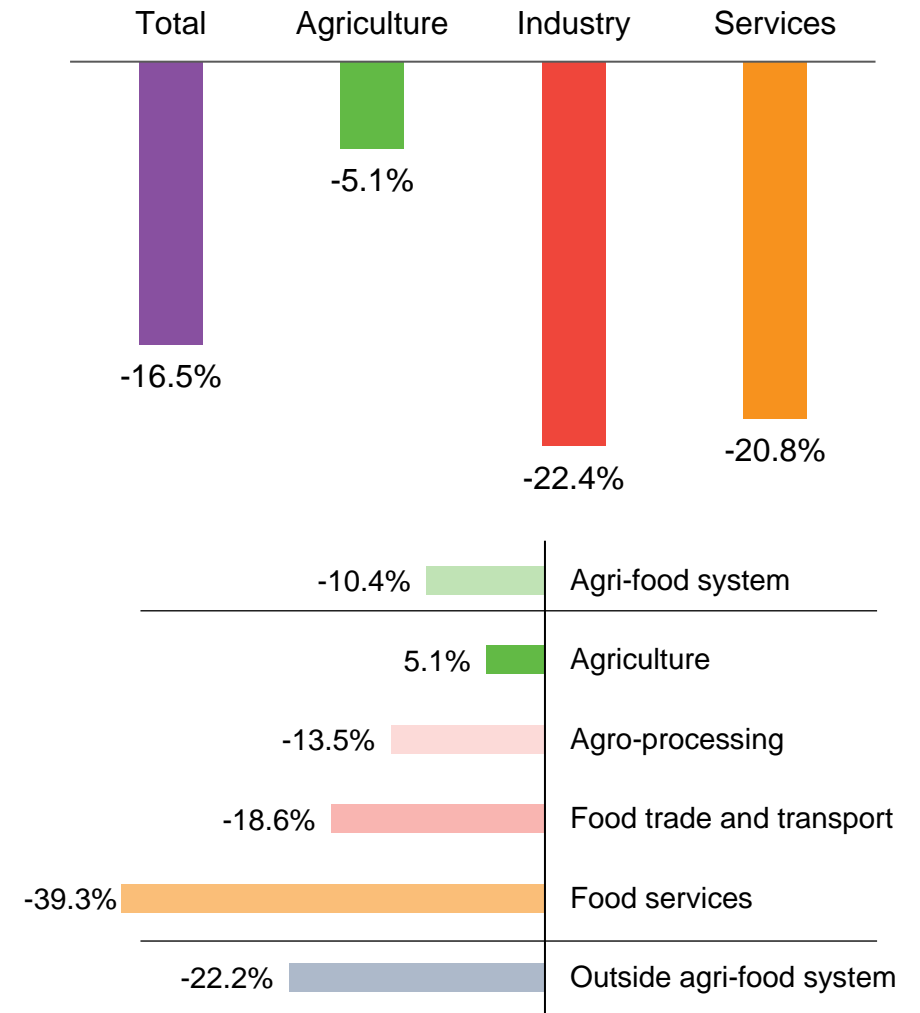
Social Distancing v. Urban Lockdown Scenarios



- In comparison with social distancing, the proposed 21-day urban lockdown increases GDP losses by approx. \$12 m (MWK8.9 b)/ week
- The number of people falling into poverty line is 1.6 million with social distancing, and 600,000 higher with the proposed urban lockdown

Sectoral Effects of Social Distancing

- Overall GDP losses of 16.5% (-\$280 m) during 2 months of full enforcement of social distancing
- Services the most affected in dollar terms (-\$192m) followed by industry (-\$63 m) and then agriculture (-\$25 m)
- Note: agriculture GDP declines by 5.1%, but the agri-food system (AFS) contracts by 10.4%, due to direct and indirect effects of social distancing

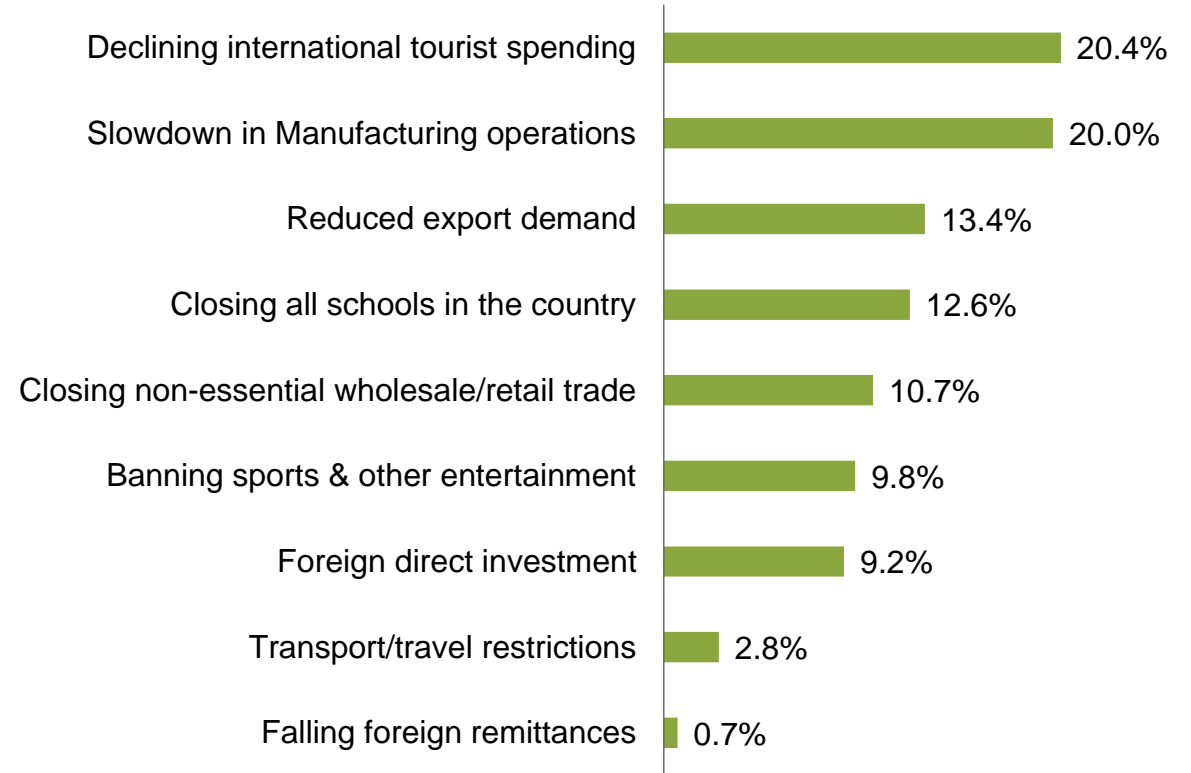


Sources of GDP losses during Social Distancing

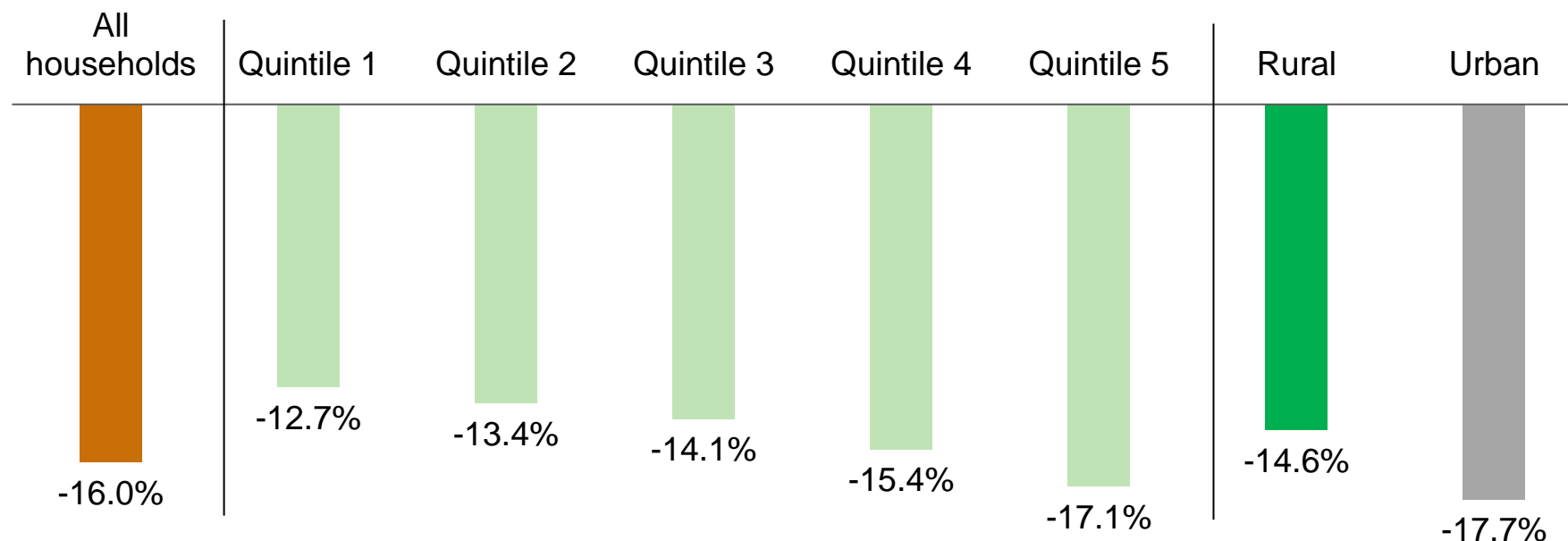
- Overall GDP losses of 16.5% over 2 months

Over two months of social distancing:

- Declining tourist spending accounts for a fifth of the short-term losses
- Slowdown in manufacturing and closure of schools also important
- Reduced tobacco exports and falling FDI are the most important external shocks



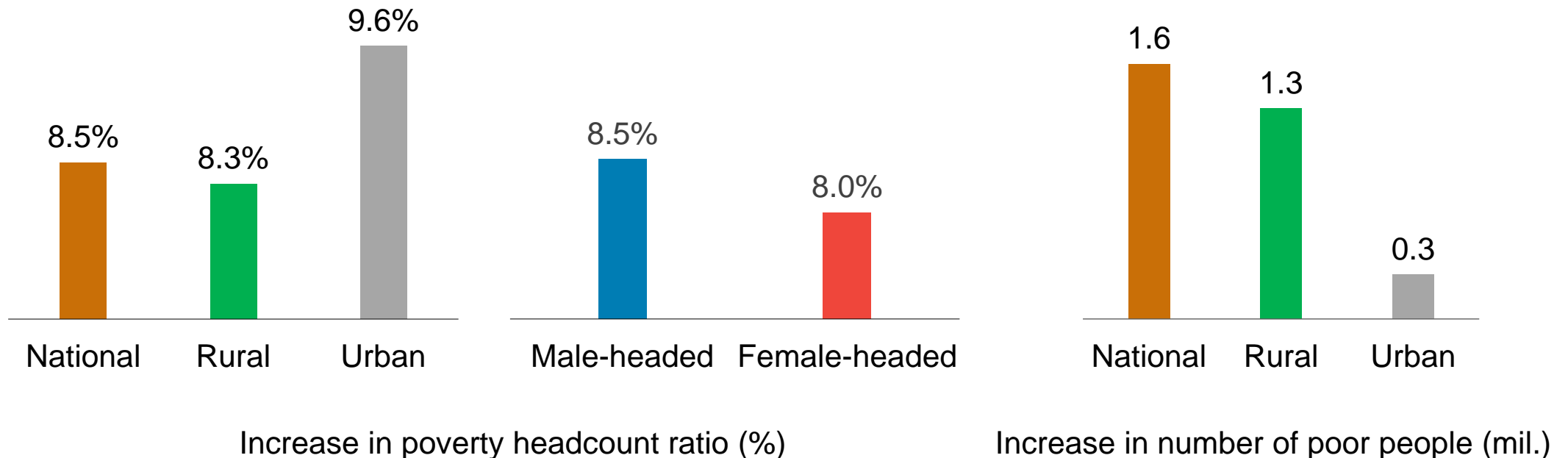
Change in Per Capita Income during Social Distancing over 2 months



- Urban households' income affected most by social distancing measures; this is linked to the sectors and jobs affected most by social distancing policies
- Poorest rural households are the least affected ... but still lose 14.6% of incomes during the 2 months of social distancing
- Serious increase in poverty should be expected

Poverty Impacts of Social Distancing

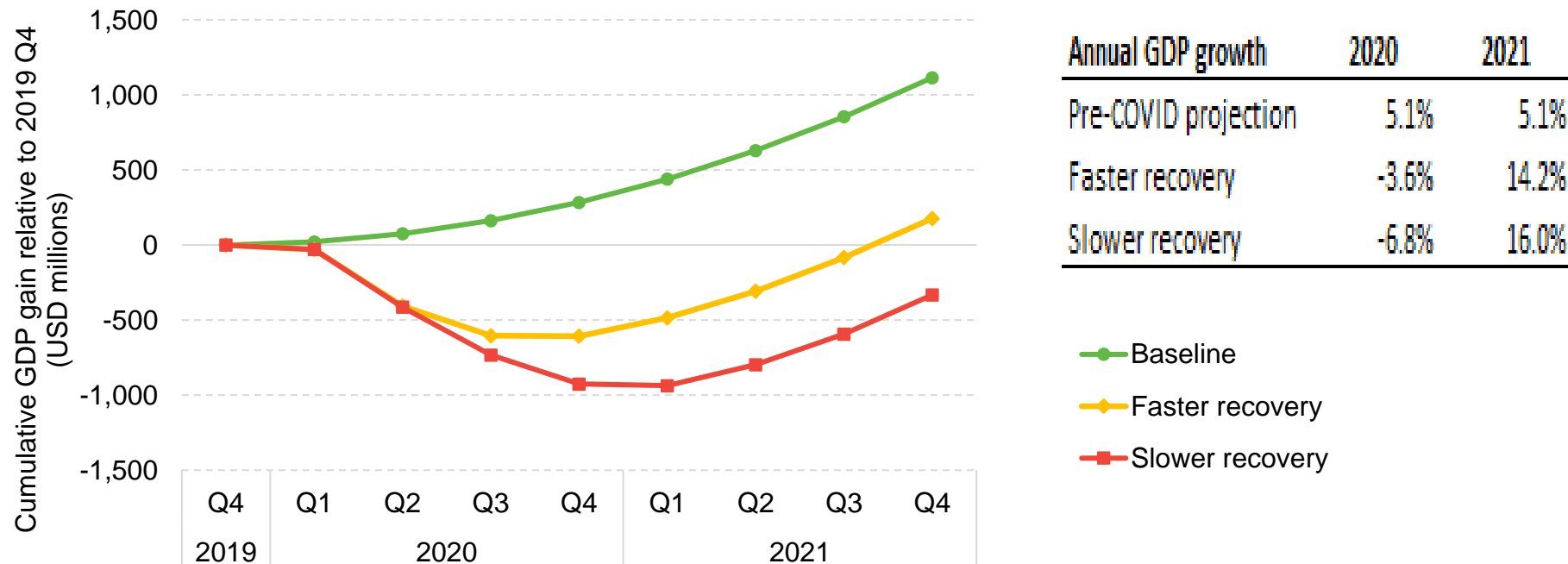
- National poverty rate increases by 8.4 percentage points (1.6 million additional poor people) after 2 months of social distancing using national poverty line



Recovery Scenarios

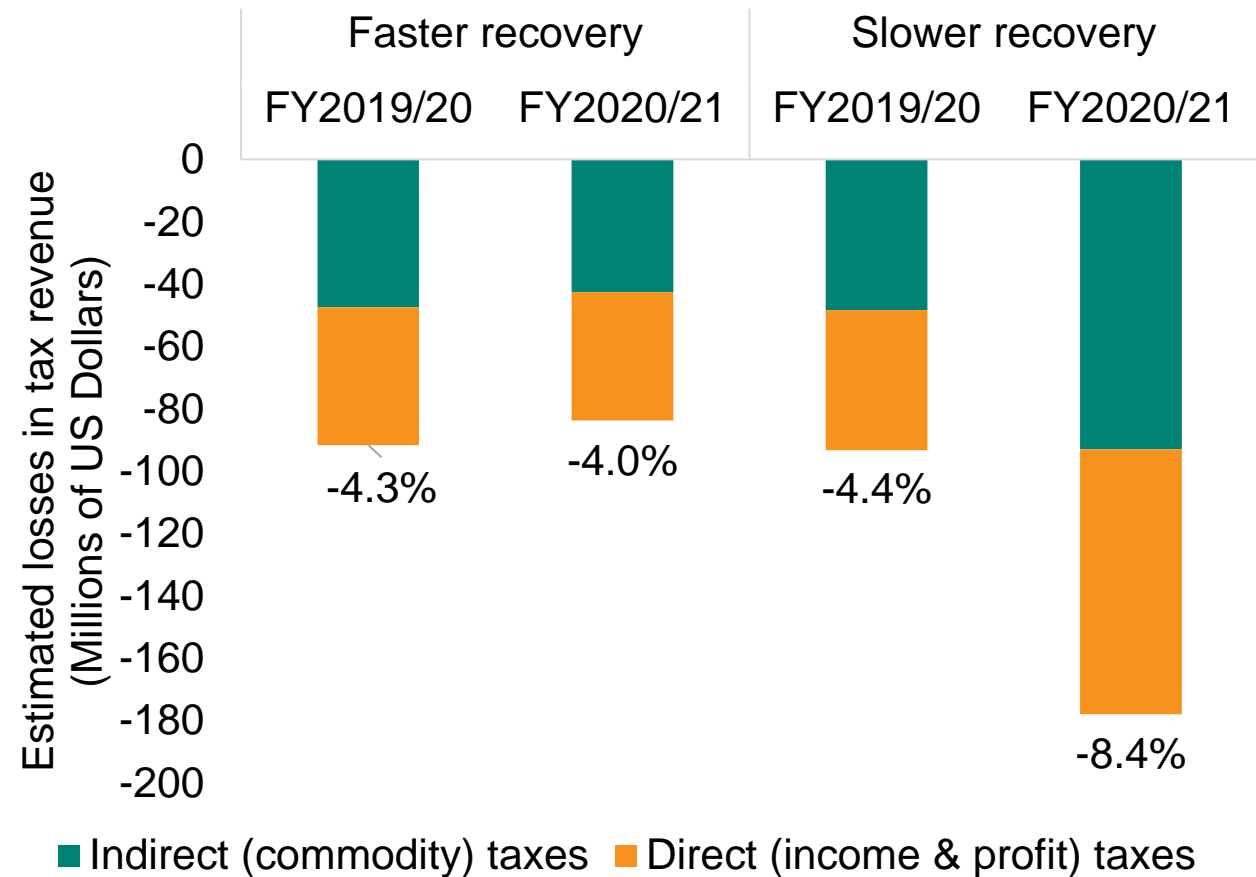
We consider 2 highly-stylized scenarios

- **Faster easing:** economy recovers strongly from Q3 2020 and almost normal by Q4 2021
- **Slower easing;** modest economic recovery in Q1 2021



Impact on Government Revenues

- Government revenues decline by 4.3% to 4.4% in the 2019/2020 FY due to COVID-19
- Higher losses in revenue during the 2020/21 FY (4.0 to 8.4% decline)
- Slightly more is lost from indirect than from direct taxes under both faster and slower lifting of restrictions



Comparison of Results using Initial Shocks with those for Other Countries, 2020 only

		Change in total GDP (%)		Change in poverty headcount ratio (%-point)	
		During Q2 (Apr-Jun 2020)	Annual (Jan-Dec 2020)	End of Q2 (Jun 30, 2020)	End of year (Dec 31, 2020)
Countries with mild restrictions	Ethiopia	-12.2 to -12.9	-4.8 to -6.2	7.5 to 7.9	0.6 to 0.9
	Malawi	-11.1 to -11.4	-4.0 to -5.2	5.6 to 5.7	0.6 to 1.0
	Sudan	-12.8 to -15.8	-3.7 to -5.7	2.6 to 3.5	0.1 to 0.2
Countries with moderate restrictions	Ghana	-24.2 to -27.4	-8.6 to -12.3	10.5 to 12.1	0.8 to 1.7
	Indonesia	-13.2 to -16.2	-5.3 to -7.3	5.9 to 7.6	0.6 to 1.7
	Kenya	-18.6 to -19.8	-7.5 to -10.0	10.6 to 11.4	1.0 to 1.6
Countries with stringent restrictions	Myanmar	-22.7 to -27	-5.6 to -8.1	10.9 to 17.0	3.2 to 6.0
	Nigeria	-22.3 to -25.1	-6.8 to -8.6	8.3 to 9.3	0.2 to 0.7
	Rwanda	n.a.	n.a.	n.a.	n.a.
	South Africa	-34.9 to -44.9	-12.1 to -16.1	n.a.	n.a.

Source: IFPRI SAM multiplier models, circa July/August 2020

Summary

- While the short-term impact of COVID-19 on the Malawi economy are not as heavy as in other African countries, they are still serious:
- After two months of social distancing:
 - GDP falls by 16.5% during April/May, and by 16.2 to 16.5% in Q2
 - Industry and services are most affected, but the agri-food system also contracts by 10.4%.
 - Around 1.6 million additional people temporarily fall into poverty, mostly in rural areas. However, urban households suffer higher income losses.
 - The economy recovers as restrictions are lifted but GDP declines by 8.3% to 11.3% during 2020, before recovering to close to its pre-COVID levels.

Policy Implications

- Minimizing the economic impacts of COVID requires:
 - Maintaining open markets and borders
(with appropriate hygiene/social distancing measures)
 - Social protection measures to protect the most vulnerable
(especially informal services/small retailers in urban areas)
 - Social safety nets for workers who have lost their jobs in tourism & manufacturing
- Future monitoring the impact of COVID-19 restrictions on the Malawian economy should pay special attention to their impact on:
 - tourism and exports
 - manufacturing activity
 - the wider agri-food system
 - the urban informal service sector
- We need to think beyond 'flattening the curve' to '**building back better**'

Questions and Discussion

Visit IFPRI's spotlight page for analyses on the global impact of the COVID-19 pandemic
<https://www.ifpri.org/covid-19>

Visit IFPRI's COVID-19 Policy Response Portal:
<http://massp.ifpri.info/2020/05/18/covid-19-policy-response-cpr-portal/>

For further information on IFPRI Malawi's activities, please see:

Website: <http://massp.ifpri.info/>

Twitter: @IFPRIMalawi

Additional Slides

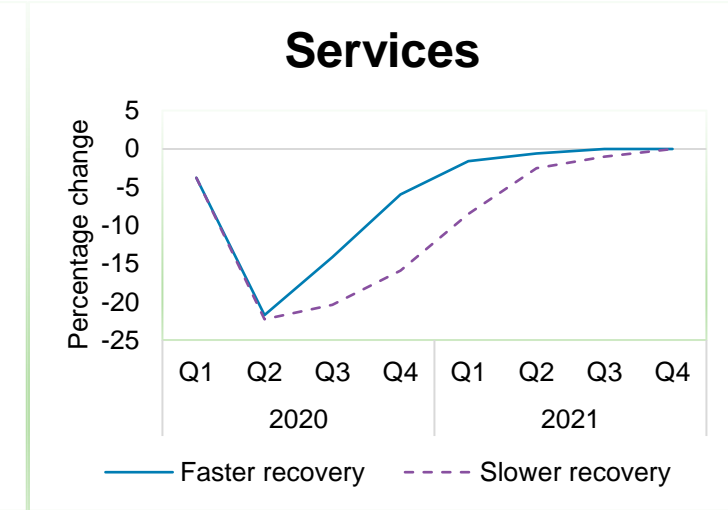
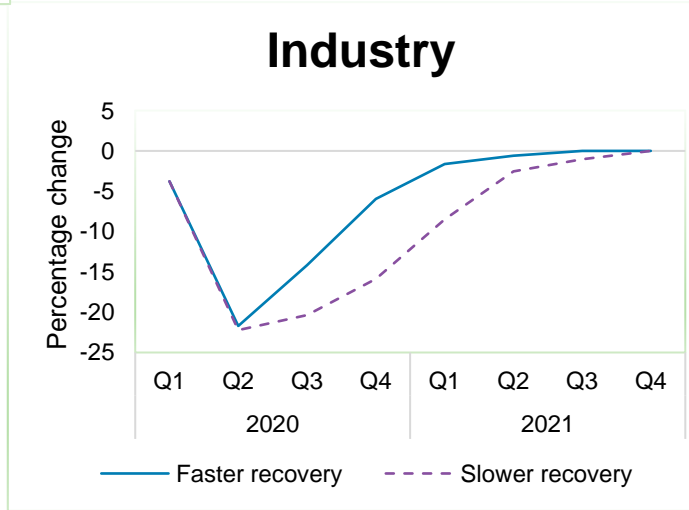
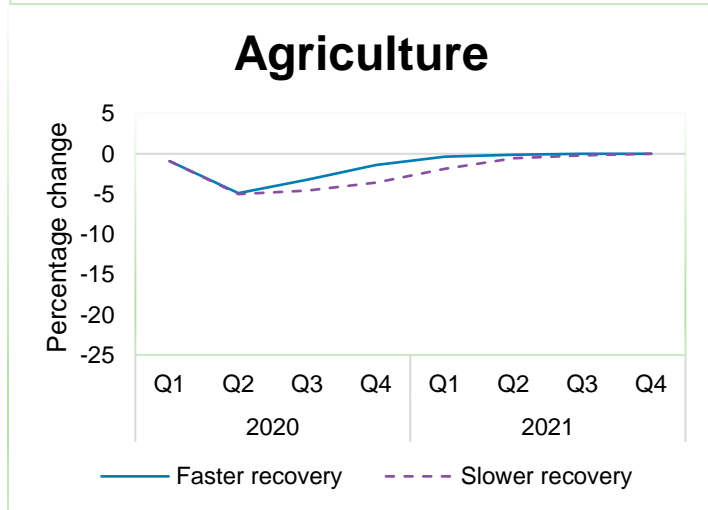
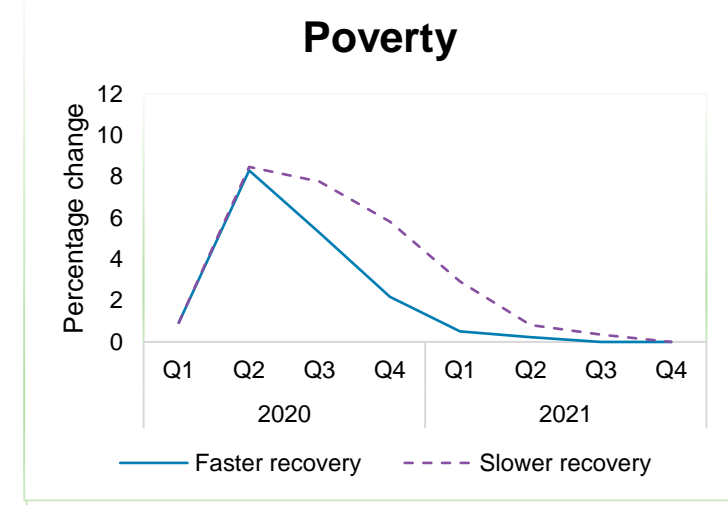
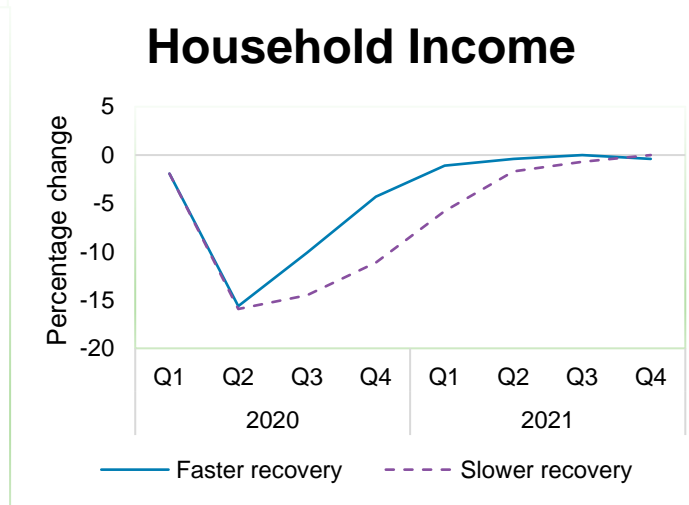
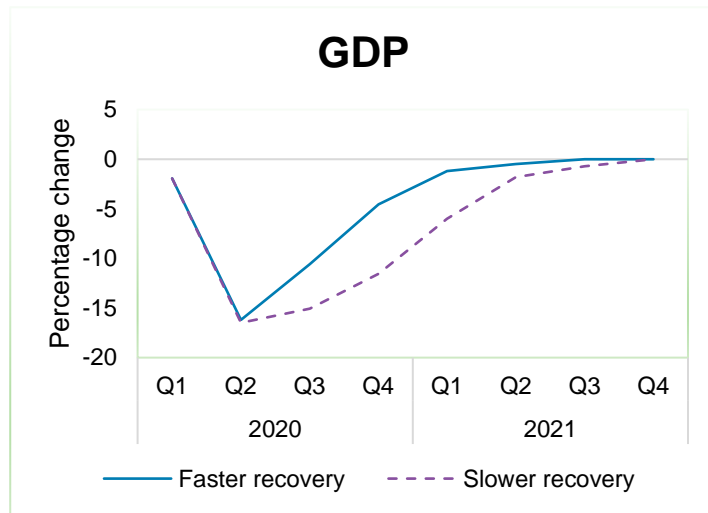
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Sectoral contribution to GDP based on the SAM

Sector	Percentage	Sector	Percentage
Agriculture	29.1	Industry	16.4
Crops	16.8	Mining	1.4
Livestock	2.9	Manufacturing	9.4
Forestry	8.5	Food processing	3.3
Fishing	0.9	Beverages & tobacco	3.3
		Textiles, clothing & leather	0.4
Services	54.5	Wood & paper products	0.7
Wholesale & retail trade	17.4	Chemicals & petroleum	1
Transport & communication	7.1	Machinery, equipment & vehicles	0.5
Hotels & food services	1.5	Furniture & other manufacturing	0.2
Finance & business services	15	Electricity & water	1.5
Public admin., health & education	8.5	Construction	4.1
Other services	4.9		
		Total	100

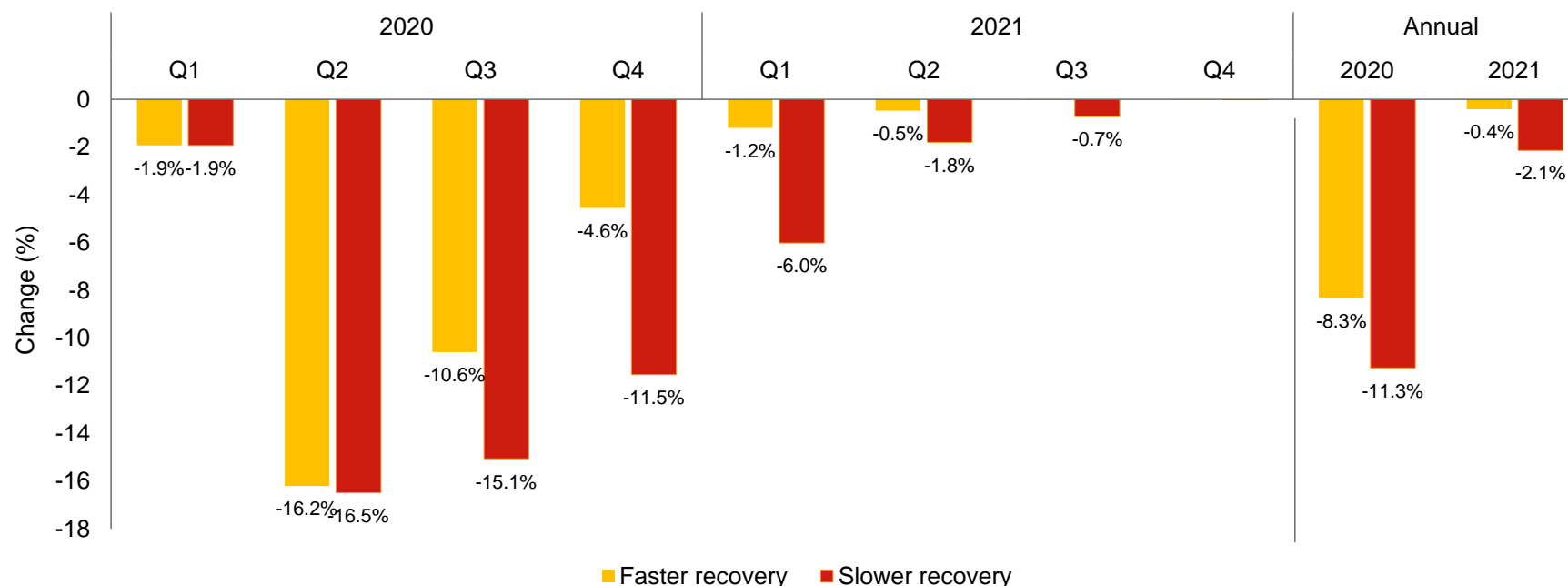
Note: Tourism is estimated to have contributed 6.7 percent to GDP in 2019

Summary of Faster and Slower Recovery Scenarios



Recovery scenarios (2)

- National GDP is 8.3 to 11.3 lower in 2020 and about 0.4 to 2.1% lower in 2021
- GDP recovers to very close to its level in 2019 by end of 2021 under both faster and slower recovery scenarios



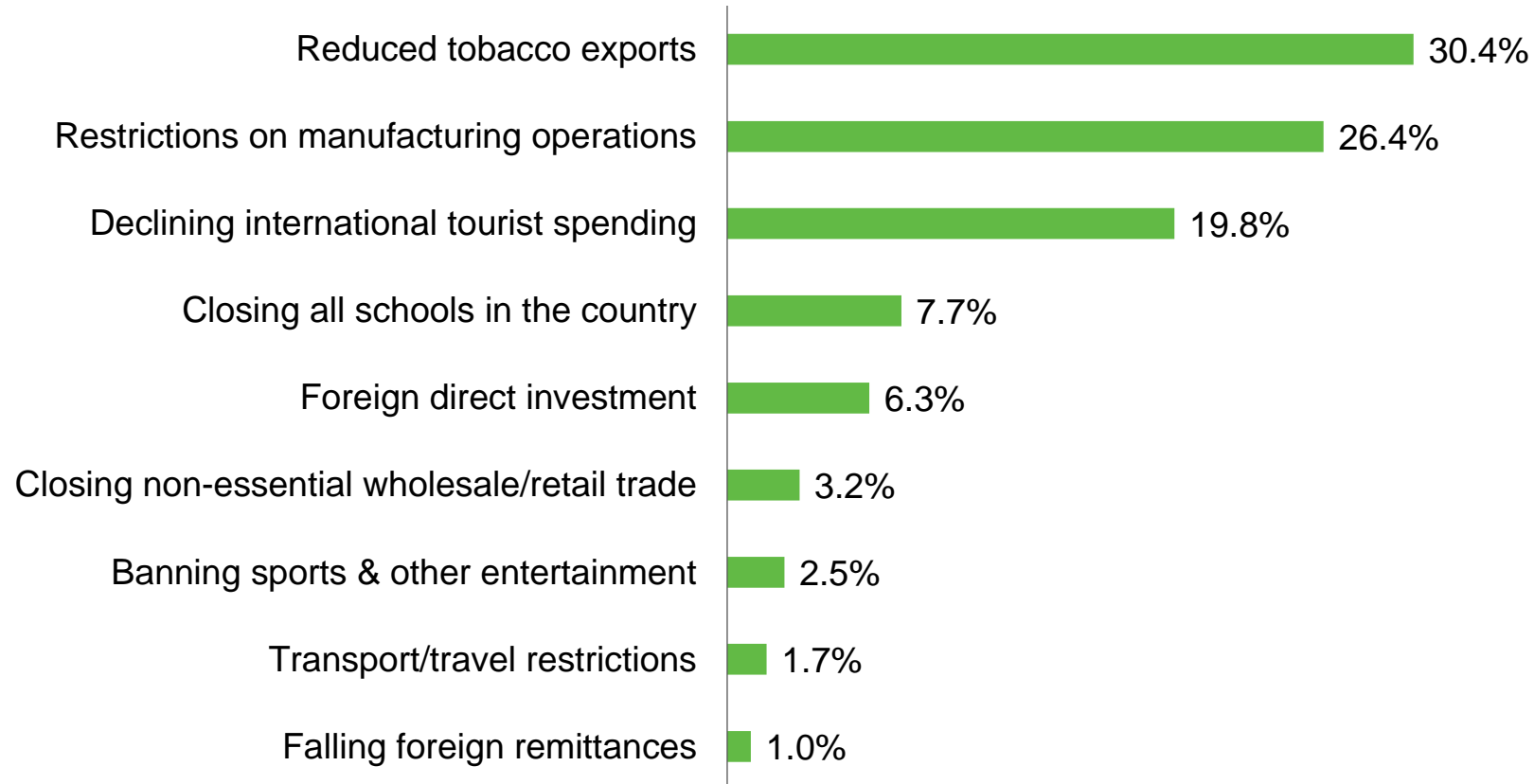
Numbers of Policies Implemented and Government Response Stringency Index in selected African countries, April to September 2020

Country	Number of Policies Implemented	Government Response Stringency Index
Ethiopia	114	77.8
Kenya	82	67.6
Mozambique	102	62.0
Malawi	38	55.6
Rwanda	110	78.7
South Africa	n/a	77.8
Tanzania	n/a	25.0
Zambia	73	50.9
Zimbabwe	n/a	78.9

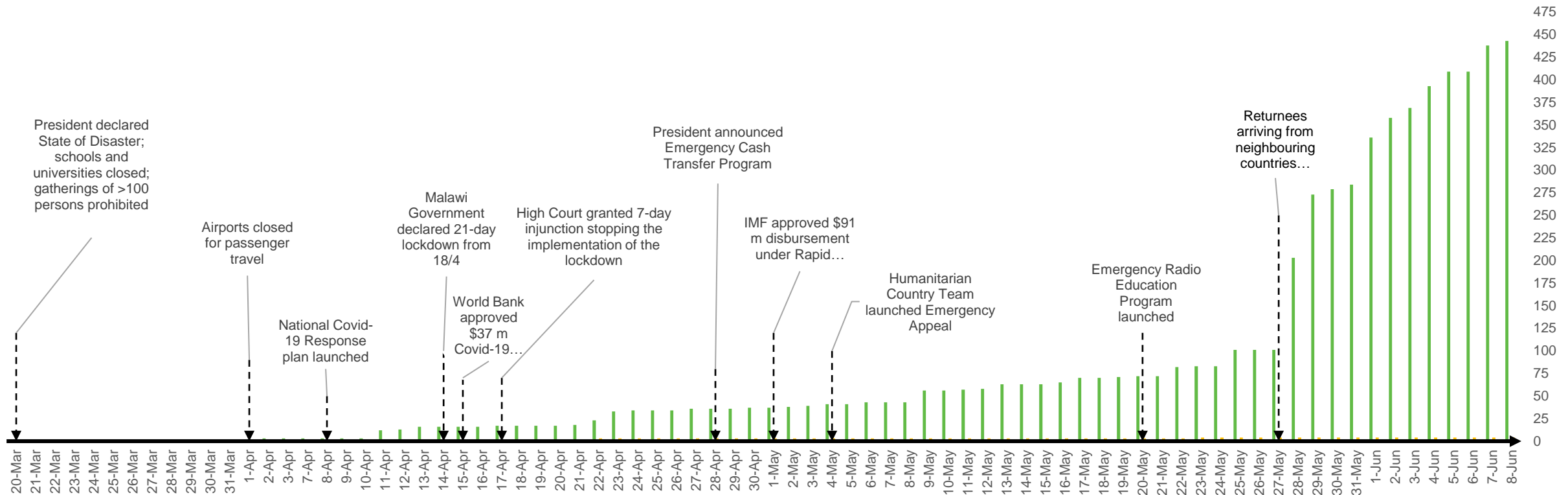
Source: IFPRI and University of Oxford (<https://www.ifpri.org/project/covid-19-policy-response-cpr-portal> and <https://www.bsg.ox.ac.uk/research/research-projects/coronavirus-government-response-tracker>)

Sources of AFS GDP Losses During Social Distancing

- Overall Agri-food system losses of 10.4% over 2 months



COVID Cases and Policy Timeline



Caveats and Extensions

- SAM multiplier models provides a useful accounting framework for highlighting the main direct and indirect production effects of COVID-19 prevention measures on household income, poverty or tax revenues

However ...

- Specification of shocks is relatively simple (13 of 70 sectors in SAM)
- Exports, government expenditures and debt, remittances are determined outside model
- Long-term consequences of loss of education likely very serious
- There is no underlying epidemiological model
- A more comprehensive analysis of the medium-term impacts of COVID on the Malawi economy requires a full CGE model (and ideally an updated SAM too!)

BUT this will take much more time and modeling effort!

Flu Death Rates during the Great Influenza Pandemic, 1918-20

‘A reasonable upper bound for the coronavirus’s mortality effects can be derived from the world’s experience with the Great Influenza Pandemic ... which began and peaked in 1918 and persisted through 1920’

Robert Barro

Deaths as percent of national population

Country	1918	1919	1920	Total
Kenya	3.64	2.14	0.00	5.78
India	4.10	0.86	0.26	5.22
Nyasaland (now Malawi)*				>5.00
Guatemala	2.94	0.00	0.98	3.92
Madagascar	2.20	1.30	0.00	3.50
South Africa	2.11	1.24	0.00	1.81
Spain	1.05	0.14	0.17	1.36
United States	0.39	0.07	0.05	0.52
United Kingdom	0.34	0.12	0.00	0.46
Australia	0.00	0.24	0.04	0.28
Aggregate (48 countries)	1.42	0.52	0.16	2.10

‘the Great Influenza Pandemic is estimated to have reduced real per capita GDP by 6.2 percent [and consumption by 8.5 percent] in the typical country’

‘the realized real return on government bills is depressed by 14 percentage points’

‘the Great Influenza Pandemic and, especially, World War I increased inflation rates at least temporarily’

Source: Barro, R. Ursua, J. and Weng. H. 2020. ‘The Coronavirus and the Great Influenza Pandemic’. *NBER Working Paper* 26866
and * Sambala, E.Z. 2014 ‘Ethics of planning for, and responding to, pandemic influence in Sub-Saharan Africa.’ PhD thesis, U of Nottingham