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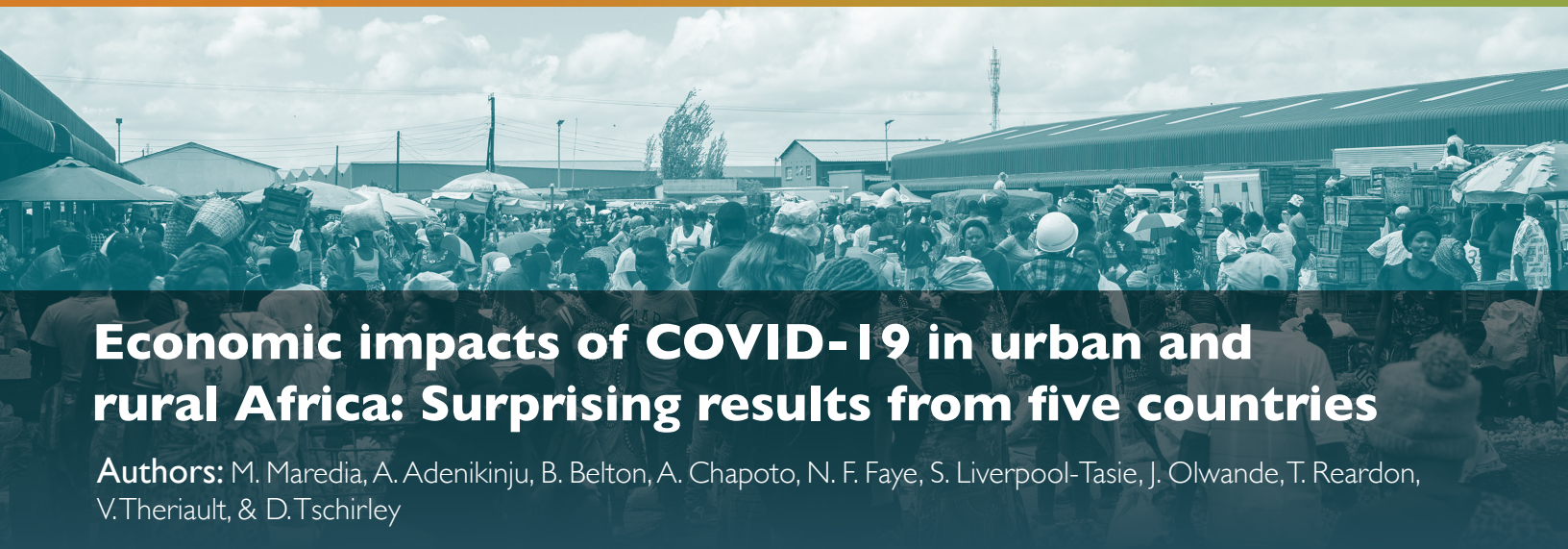


# FEED THE FUTURE

The U.S. Government's Global Hunger & Food Security Initiative

**Feed the Future Innovation Lab for Food Security Policy, Research, Capacity, and Influence**

**Policy Brief No. 1  
May 10, 2021**



## **Economic impacts of COVID-19 in urban and rural Africa: Surprising results from five countries**

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### **Introduction**

The COVID-19 pandemic has gripped the world's attention for over a year. Beyond health effects, observers were concerned that containment measures would drive millions into poverty and reverse hard-won progress on nutrition goals. Moreover, all models predicted the effect to be much worse in urban than in rural areas (Carducci et al. 2021; Nguyen et al. 2020).

We report results that partially challenge these expectations. Results are based on a nationally representative phone survey of 4,000 rural and urban households conducted from September to November, 2020 across five countries of SSA (Kenya, Mali, Nigeria, Senegal, Zambia). The survey's timing means that respondents had been exposed to 3-4 months of peak government restrictions at the time of their interview, as measured by a 'Stringency Index' (Oxford, 2021).

We consider this survey to be the most representative yet found in published research, for two reasons. First, mobile phone penetration among adults in these countries is almost certainly above 90%, and we took standard measures to address non-response bias. Second, these five countries present great diversity in size, economic transformation, agricultural season, and policy responses to the COVID crisis. See Maredia et al. (2021) for more detail.

### **Key Facts**

- The impacts of COVID-19 on incomes and access to food across five African countries were similar in rural and urban areas, a finding strongly contrary to expectations that impacts would be worst in urban areas.
- Negative impacts on income were 35%-55% smaller than early predictions. Yet impacts were large enough to drive millions of households below income levels typically associated with poverty and to reduce the quantity and quality of their diet.
- Policymakers should realize that restrictions put in place in a pandemic affect rural and urban, farming and non-farming, and richer and poorer households.



## What we found

We report results under two categories--impacts on income and poverty and impacts on food consumption and food security.

**Effects on Income and poverty:** Our first income result is an estimated 13-21% decline in average income across four countries and no change in Zambia (Figure 1). These estimates are 35%-55% lower than predictions or early estimates (Arndt, et al. 2020; Andam et al. 2020). Average income dropped most in Kenya (\$0.55, or 21%) and least in Senegal (\$0.38 or 13%). Though much smaller than early predictions, these declines still had major negative effects on welfare, given that the average per capita income per day is less than \$3 in these countries.

Our second income result is that the decline in income was not statistically different between rural and urban samples, except in Kenya. The negative income effects were also similar across a wide variety of households, including those who experienced lockdown or not, did stay-at-home or not, had farm income or not and over other household characteristics. Note that

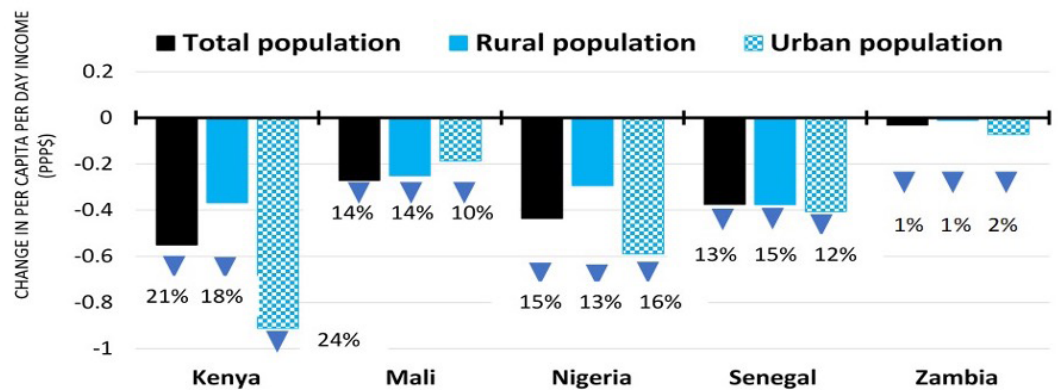


Figure 1. Estimated change in per capita per day income (PPP\$) between March (pre-COVID) and July 2020 and percentage change relative to March in total, rural and urban population

these net effects are based on regression techniques that control for household unobserved characteristics and other observable factors. The higher effects in urban Kenya are consistent with the stringency measures imposed for a longer duration compared to other countries.

Third, the decline in income in Kenya, Mali, Nigeria, and Senegal pushed many households below the income thresholds often associated with poverty.<sup>1</sup> Apart from Nigeria, most of those who fell into poverty resided in rural areas, not urban. This pattern is due to larger shares of the population living in rural areas and the fact that more rural people in normal times live near the poverty line, meaning that any decrease in income pushes more below that line. Across the five countries, and four months into the COVID crisis, we estimate that about 27 million people from households earning more than \$1.90/person/day in March (pre-COVID) were living below that threshold in July 2020.

**Effects on food consumption and coping strategies:** Table 1 presents the share of households reporting reduced quantity or quality of food or skipped meals during the previous month relative to the same time last year. This comparison controls both for COVID and for seasonal effects.

We highlight three results. First, a large share of households (22-58%) reported a decline in the quantity or quality of food consumed, or an increase in skipping meals. In all countries substantially more households indicated declines than improvements in these indicators. Kenya and Nigeria were most affected. Zambians, though experiencing no change in average income, did report a decline in food consumption, possibly due to an increase in the cost of food (Mitimanga 2020).

<sup>1</sup> Our income measure is not equivalent to expenditure-based measures of poverty but we expect them to be highly correlated with these expenditure-based measures.

**Table 1. Self-assessed food consumption effects by total population and rural/urban strata**

Country		Quantity of food consumed was			Quality of food consumed was			Household members skipped meals because of lack of food
		Lower	Same	Higher	Worse	Same	Better	
Kenya	Total	0.46	0.21	0.34	0.55	0.32	0.13	0.57
	Rural	0.44	0.20	0.37 <sup>a</sup>	0.54	0.33	0.13	0.59
	Urban	0.50	0.23	0.27 <sup>a</sup>	0.57	0.32	0.12	0.53
Mali	Total	0.37	0.47	0.16	0.31	0.60	0.09	0.22
	Rural	0.41 <sup>b</sup>	0.43 <sup>b</sup>	0.15	0.33	0.58	0.09	0.24
	Urban	0.31 <sup>b</sup>	0.52 <sup>b</sup>	0.17	0.30	0.62	0.09	0.20
Nigeria	Total	0.55	0.14	0.31	0.63	0.21	0.16	0.51
	Rural	0.59	0.11 <sup>b</sup>	0.30	0.63	0.20	0.17	0.60 <sup>a</sup>
	Urban	0.51	0.16 <sup>b</sup>	0.33	0.64	0.21	0.15	0.43 <sup>a</sup>
Senegal	Total	0.37	0.56	0.07	0.39	0.55	0.06	0.22
	Rural	0.40	0.56	0.04 <sup>a</sup>	0.38	0.55	0.07	0.20
	Urban	0.34	0.55	0.11 <sup>a</sup>	0.40	0.56	0.04	0.25
Zambia	Total	0.53	0.18	0.29	0.58	0.21	0.21	0.58
	Rural	0.52	0.18	0.30	0.57	0.19 <sup>c</sup>	0.23 <sup>b</sup>	0.60
	Urban	0.55	0.17	0.29	0.59	0.24 <sup>c</sup>	0.17 <sup>b</sup>	0.55

Notes: Superscript letters denote mean values for urban and rural strata are statistically significant at: <sup>a</sup> p<0.01; <sup>b</sup> p<0.05; <sup>c</sup> p<0.1.

Second, across countries and urban and rural areas (except rural Mali and rural Senegal) we find that more households reported a decline in food quality than in quantity. Third, and further reinforcing the results comparing rural and urban areas, more rural than urban households consumed lower quantities compared to last year, except for Kenya and Zambia. Also, except in Senegal, more households skipped meals due to lack of food in rural areas than in urban areas.

## Conclusions

Well documented changes over the past decade or more in Africa suggest that our finding of similar impacts in rural and urban areas should not be so surprising. Much literature shows that the economic transformation unfolding in Africa has pushed well into rural areas. People and communities across rural and urban areas are increasingly connected through factor markets (Dolislager et. al., 2020; Tschirley et. al., 2015) and product markets (Reardon et. al., 2021). Rural residents increasingly rely on markets for their own food consumption (Liverpool-Tasie et. al., 2020). Also, lower urban demand for food due to lockdowns can depress incomes for sellers of food crops.

We hypothesize that these rural-urban linkages are contributing to our findings through two complementary mechanisms. On the one hand, the diversification made possible by these linkages provides households with insurance against shocks, which reduces the depth of the impact. On the other hand, these linkages provide a pathway for shocks in urban areas (such as lockdowns) to be transmitted to rural areas, generating more widespread impacts. Thus, for a macro-level shock like a pandemic, the interdependency and interconnectedness implied by these rural-urban linkages can absorb shock and also extend it, potentially explaining our findings of ‘wider but smaller than predicted’ impacts of the COVID shock.

The policy message is that in designing policy responses and relief measures during a widespread economic shock such as COVID-19, decision makers should not assume that rural households are divorced from markets and insulated from the effects. Our finding of similar effects in rural and urban areas reflects the increasing integration of rural people into markets and means that policies and relief measures need to take this population fully into account.

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