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The role of tax-benefit policies during the COVID-19 pandemic in 2020 in Mozambique

by Jose Cardoso, Vanda Castelo, Finorio Castigo, Michael Noble, Rodrigo Oliveira, Pia Rattenhuber and Gemma Wright

FINDINGS

GDP growth was severly hampered by the COVID-19 pandemic in Mozambique, with an estimated seven out of nine sectors contracting during the first nine months of the pandemic

The excellent agricultural season likely cushioned against the immediate effects of the pandemic for the poorest households

The general tax-and-benefit system had a negligible effect on cushioning against income losses

The expansion of the Basic Social Subsidy Program nevertheless provided important income support to the poorest part of the population, underlining the importance of such initiatives

Mozambique reported its first case of COVID-19 on 22 March 2020. GDP estimates suggest a strong pandemic effect, with a reduction in seven of nine business sectors analysed. However, the agriculture sector, one of the most important, experienced a 9% increase, which may have cushioned the pandemic impact.

The government also adopted measures to mitigate the pandemic effects. As a rapid response, they imposed a utility tariff relief. At a later stage, they adopted monetary transfers to vulnerable families during August–December 2020. Specifically, the government provided one additional temporary support to beneficiaries of the cash transfer Basic Social Subsidy Program equal to three months of its usual monthly payment.

Using MOZMOD, the tax-benefit microsimulation model for Mozambique, this policy brief aims to provide evidence how tax-benefit policies impacted, in the light of the pressure of the COVID-19 pandemic, on incomes, poverty and inequality. The analysis focuses on 2020 and thus on the first nine months of the pandemic.

Most sectors were negatively affected by the crisis

Compared to the 2017–19 GDP trend, the pandemic reduced the GDP overall by -5.8% (see Figure 1). The crisis severely hurt the manufacturing industry, mining and extractive industries, and services. However, agriculture, forestry, and fisheries, the sectors that employ the largest share of the population, experienced a good year driven by the production of cereals (maize, sorghum, rice), the production of tuber crops (cassava, sweet potato) and increased production of beans. The estimated growth rate was 9%, one year after the sector was severely hit by two hurricanes.
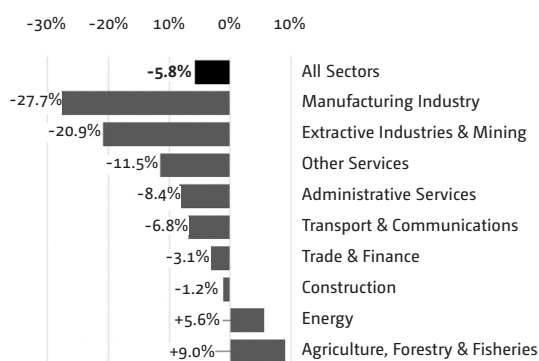
We translate the above sectoral shocks to individuals' incomes and ultimately consumption in the micro-level survey data used by the MOZMOD model to analyse how the tax-benefit system performed during the crisis.

Earnings and disposable income **decreased in the middle and top of** the income distribution: limited buffering of the shock by the general tax-benefit system

For the middle and the upper part of the distribution of disposable income, earnings reduced by an estimated 3.7%, 7.4%, and 7.8% compared to pre-COVID (Figure 2). Particularly In the upper half of the distribution this is mainly due to earnings losses (dark bar).

On the other hand, the general tax-and-benefit system that pre-existed the crisis (so-called 'automatic stabilizers'), had a very limited impact in cushioning against income

Figure 1: Estimated shocks to gross domestic product (GDP) across industries, Mozambique, 2020

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-5.8%	All Sectors
-27.7%	Manufacturing Industry
-20.9%	Extractive Industries & Mining
-11.5%	Other Services
-8.4%	Administrative Services
-6.8%	Transport & Communications
-3.1%	Trade & Finance
-1.2%	Construction
+5.6%	Energy
+9.0%	Agriculture, Forestry & Fisheries

Notes: more information on the estimation of industry-level GDP shocks is available in Oliveira et al (2021) 'Imputation methods for adjusting SOUTHMOD input data to income losses due to COVID-19 crisis'. Technical Note 2021/19. UNU-WIDER.
Source: authors' elaboration using economic data provided by the National Institute of Statistics, Mozambique (Publication of National Accounts IV for Q4/2020).

losses (light grey bar in Figure 2); the automatic reduction of tax payments and social insurance contributions due to lower earnings during the crisis mainly benefited the relatively few indidividuals working in the formal sector, thus mainly the richest quartile of households.

Figure 2: Decomposition of changes in mean disposable household income by quartile in Mozambique, 2020
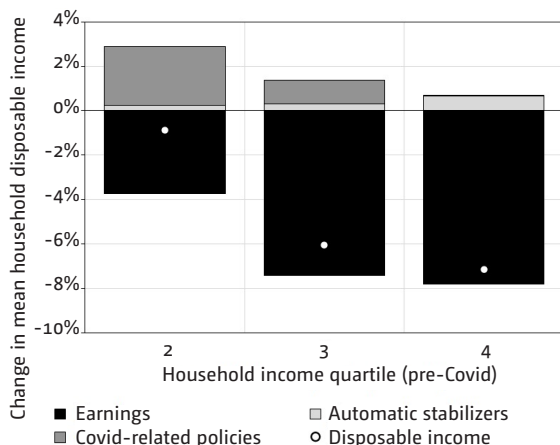
Source: authors' elaboration using MOZMOD v.2.7 and the Inquérito ao Orçamento Familiar (IOF) survey, 2014–15.

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Discretionary policies in response to the crisis did reach the poorest but with negligible impact on poverty

In Mozambique, although many of the households in the bottom quartile of the income distribution report zero income, all households report non-zero consumption). It is thus not possible to calculate the relative change in income for the bottom quartile. Nevertheless, COVID-19 policies also raised incomes and thus increased consumption opportunities for this group of the population in absolute terms.

The expansion of the Basic Social Subsidy Program did not only benefit the very poorest households alone, but instead benefited between 6–7% of households in the bottom three-quarters of the distribution as elegibility for the program depends on many other factors beyond income. Yet, the additional amount provided was relative to households' initial income considerably higher in the second (22%) than in the third quartile (2%). For households in the second lowest quartile of the income distribution, COVID-related policies (grey bar in Figure 2) therefore compensated most of the earnings shock.

Given the severity of poverty in the country these favourable income effects are not large enough to significantly buffer the Increase in consumption-based headcount poverty (Table 1). While the rate Increases by 4.4% (column C) to 48.82% (column B) overall, COVID-related policies only alleviate 0.1% of the overall change (column D). The measures were also not very effective in mitigating the even larger increase (7.6%) in the poverty gap. Inequality as measured by the Gini coefficient increased by 0.8 percent overall.

Due to data constraints the analysis could not take into account the expansion of the Direct Social Support Programme, which likely would have mitigated the detrimental impact of the crisis further.

Table 1: Decomposing the effects of the pandemic on poverty and inequality, Mozambique, 2020

	No COVID scenario	COVID scenario (incl. COVID policies)	Total change (%)	Decomposition of total change (%)	
				Effect of COVID-related policies	Other effects (crisis and stabilizers)
	(A)	(B)	(C)	(D)	(E)
Poverty					
Poverty rate	46.78	48.82	+4.4%***	-0.1%**	+4.4%***
Poverty gap	22.57	24.30	+7.6%***	-0.3%***	+8.0%***
Inequality					
Gini	53.51	53.96	+0.8%***	-0.1%***	+0.9%***

Notes: the table presents consumption-based estimates of the impact of the COVID-19 pandemic on different measures of poverty and inequality in Mozambique. Column (C), 'Total change', shows the overall impact. Column (E), 'Other effects', refer to the impact of the crisis in the absence of COVID-related policy changes. Column (D), 'Effect of COVID-related policies', shows the independent effect of the COVID policies, comparing the COVID scenario with these policies enacted to a scenario without them. The 2020 national poverty line is used in the poverty calculations. Statistical significance are based on bootstrapped standard errors after 200 replications. Significance levels indicated as * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.
Source: authors' elaboration using MOZMOD v.2.7 and the Inquérito ao Orçamento Familiar (IOF) survey, 2014–15.

WHAT IS THE GINI COEFFICIENT?
It is an index that measures the extent of inequality and is often used for the analysis of income inequality prevailing in a country. It takes the value of 0 in the case of perfect equality (everybody has the same income), and 1 (or 100) in the case of perfect inequality (all national income accrues to a single person). Estimates of the Gini coefficient for income nationwide range between around 0.25 (such as in some of the Nordic countries) to around 0.60 (in parts of Eastern and Southern Africa and, formerly, in Brazil). The Gini coefficient can also be expressed as a percentage ranging between 0 and 100.