



Discussion Paper BRIEFS

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Discussion Paper 167

Public Spending and Poverty in Mozambique

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For poor countries in Sub-Saharan Africa, poverty reduction usually requires a combination of well-distributed economic growth and increased investment in human capital, especially among the poor. Two key areas for such investment are education and health, both sectors in which the state is the major service provider. A third area that is often cited is physical capital, and public infrastructure in particular. Faced with tight fiscal constraints, governments must ensure that spending on public services and infrastructure is efficient and benefits the poor.

Using data from Mozambique, this study asks the question, “Who benefits from public spending on education, health, and infrastructure?” In addition to the poverty reduction imperative that most poor countries face, Mozambique also faces the challenge of rebuilding after decades of war that devastated the country.

Introduction

Mozambique gained independence in 1975, after more than a decade of armed struggle against Portuguese colonizers. The new government embarked upon an ambitious program of basic education and primary health care. Within two years, however, the country plunged into violence again, as the Resistência Nacional de Moçambique (RENAMO) guerrillas tried to destabilize Mozambique, with military and monetary support from white-minority governments in Rhodesia and South Africa. RENAMO forces systematically targeted education and health infrastructure for destruction, and teachers and health workers were often killed. The war, plus failed economic policies, led to economic collapse in the mid-1980s.

In 1987 the ruling Frelimo party adopted a set of new, market-oriented economic policies, which helped stabilize the economy. The peace accord in 1992 and first multiparty elections in 1994 made it possible to turn attention to economic recovery and reconstruction, including the restoration and renewed expansion of basic health, education, and economic infrastructure.

Since the war, public spending on education and health has grown sharply, with these two sectors accounting for slightly more than one-quarter of central government spending in 1998–2000. Although it is clear that spending on social sectors has been growing, there is limited knowledge about the extent to which this spending is targeted towards poorer households. While the link from better education to poverty reduction is well established, it is not known to what extent Mozambique’s public spending on education reaches the poorest Mozambicans. This motivates the present paper. We focus on the incidence of public expenditures in

education and health, which are arguably the main fiscal vehicles for improving the welfare of the poor.

Methodology

We estimate the distribution, or incidence, of public spending using the nonbehavioral benefit incidence approach. This combines information on the costs of providing public services with household income data to see which income groups benefit the most from these services. This approach values the benefits of the services at the average unit cost of providing the service, and does not incorporate behavioral information such as opportunity cost or willingness to pay.

To assess the incidence of benefits, we first identify those households that receive a particular service (e.g., primary education). Recipient and nonrecipient households are then ranked by a standard welfare measure, total consumption per capita. We then plot concentration curves, showing the cumulative distribution of benefits received against the cumulative distribution of consumption. This is followed by a set of welfare dominance tests, which test for statistically significant differences among the concentration curves. This procedure is employed twice: once using simple participation rates to measure the benefit incidence, and once using the estimated monetary cost of providing the service.

Two important points of reference are the Lorenz curve, which is the concentration curve for per capita consumption, and a 45-degree line from the graph’s origin. If a benefit’s concentration curve lies everywhere above the Lorenz curve, that benefit is said to be “progressive,” in that it is distributed more equally than current consumption. If a concentration curve lies everywhere above the 45-degree line, the benefit is “per capita progressive,” indicating that poorer households receive disproportionately large shares of the benefit. Concentration curves that lie below the Lorenz curve are classified as “regressive.”

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Data

The 1996–97 National Household Survey of Living Conditions (IAF) is the source of information on welfare levels, use of educational and health services, and recent investment in public infrastructure.

Unit cost data for public services come from budget data provided by the Ministry of Planning and Finance, the Ministry of Education, and the Ministry of Health. The unit cost data are disaggregated to the province level, which allows for some variability in the estimated cost of delivering services in different parts of Mozambique.

Results

Lower primary education (EP1) is distributed almost equally across the population, with the concentration curve closely tracking the 45-degree line. As one moves to higher levels of education the distribution of benefits becomes increasingly unequal. Upper primary education (EP2) is distributed more equally than consumption, so it is progressive. The concentration curves for postprimary education both cross the Lorenz curve, so they are neither progressive nor regressive according to the Lorenz criterion, although upper secondary education is mostly below the Lorenz curve, meaning that it would be considered regressive by most alternative criteria.

The education data were examined further to understand the reasons behind the increasing inequality of benefits received, revealing that inequality increases at each rung in the educational ladder. Children from poorer households are slightly less likely ever to attend school than nonpoor children. Among all students who attend primary school, poorer children are more likely to drop out during EP1, or not pass the test for admission to EP2. Of those who complete EP1 successfully, a smaller proportion of poor children go on to EP2, and among those that do, a smaller proportion complete EP2 successfully. This pattern continues in secondary education as well.

In the area of preventive health services, both antenatal care and child vaccinations are progressive, with concentration curves that are close to the 45-degree line. Among curative services, hospital and health center services are progressive, but not per capita progressive. Benefits from hospital services are distributed remarkably equally, especially compared to other countries in Africa.

The data on benefits from rural infrastructure are based on recent infrastructure investments, and thus reflect marginal benefits as opposed to the average benefits that were measured for education and health. Because of the way public spending programs expand and contract, it is often argued that marginal benefits are more pro-poor than average benefits. Recent infrastructure spending has been progressive, with concentration curves for school, health center,

and road construction all close to the 45-degree line. The main explanation for this is that the investments apply to entire villages, and there is a high degree of economic heterogeneity in rural communities in Mozambique, with the poor and the nonpoor often living side by side.

Mozambique has pronounced regional disparities in public service provision, with much better access to public services in the southern region than in the northern region. In addition, because of the relative weights of primary and secondary education in different regions, benefits tend to be distributed more equally within the northern region than within the southern region.

Conclusions

Public service provision in Mozambique is more equal than in many other African countries, with the major exceptions being upper secondary and university education. Health services and investments in public infrastructure also tend to be distributed progressively. Regional inequalities in access to public services are more pronounced than inequalities by income level.

Although the distribution of benefits for higher education is regressive, spending in this area should not necessarily be reduced because it is not sufficiently pro-poor. Reducing educational inequalities requires expansion of schooling opportunities, especially at the secondary school level, and it is the secondary and postsecondary schools that train the teachers that will staff those schools.

Keywords: public spending, education, health care, poverty, Mozambique

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