



Setting Priorities for Public Spending

Public investment in agriculture and in rural areas plays a pivotal role in increasing productivity and reducing poverty. Knowing which investments will have the most impact helps developing countries spend strategically. IFPRI has been a leader in providing this information.

Agricultural and rural development depend critically on public investments in key public goods—rural roads, power, telecommunications, irrigation, agricultural research, education, and health—most of which are poorly developed in impoverished rural areas. These investments by governments and donors have great potential to improve food security and reduce poverty. They can increase the poor's direct access to food, lower food prices, and raise incomes, all of which improve welfare. Research by the International Food Policy Research Institute (IFPRI) has shed substantial light on the potential of different types of public investment to promote development goals, contributing to more effective investment policies.

Identifying a Knowledge Gap

Public investment in agriculture and rural development is costly. Given tight budget constraints and competing urban demands for public spending, policymakers must make hard decisions about which invest-

ments to prioritize and in which regions. Until recently, these decisions have been poorly informed because there was little reliable information on the relative impacts of different types of public spending on agricultural productivity or on possible synergies between different investments. Nor had many studies measured the poverty impacts of investments—which were, after all, the hoped-for end result of many interventions. Scarcity of information and a focus on market-led development contributed to a decline in the levels of public investment in agriculture after the advances of the Green Revolution.

To rectify this knowledge gap, IFPRI launched a research program in 1998 to demonstrate how available data could be used to estimate the impacts of all types of agriculture-relevant public investments in rural areas, their individual impacts on poverty and productivity, and how investments would interact. With little precedent for looking at these impacts in developing countries, IFPRI researchers developed a model linking government expenditures on agricultural research and development (R&D), various services (extension, education, health), and types of infrastructure (roads, irrigation, power) to agricultural and poverty outcomes.

Pioneering Work in India and China

Starting with research in India, IFPRI showed that national- and state-level investments in agricultural R&D, education, and rural roads had by far the greatest productivity returns among an array of rural investments as well as the strongest impacts on poverty alleviation—they were win-win investments. Subsidy programs for fertilizers, power, irrigation, and credit, on the other hand, while seemingly more direct interventions for the poor, had less impact on poverty reduction, even in the short term, and made little contribution to economic growth. This meant they were not an avenue through which India could grow out of poverty. These findings played an important role in the creation of the Prime Minister's Rural Roads Program (PMGSY) in 2000, which by 2009 had constructed 180,000 kilometers of new roads linking previously unconnected villages to economic centers.

An independent assessment concluded that IFPRI's research, by facilitating the PMGSY, contributed signifi-

cantly to lifting between 18,000 and 90,000 people above the poverty line between 2005 and 2009 and increasing real agricultural gross domestic product by 16 billion rupees to 82 billion rupees, using conservative assumptions.

IFPRI followed up with similar work in China from 1998 to 2002 with its Priorities for Pro-Poor Public Investment in Agriculture program. As in India, the results pointed to the substantial win-win benefits of national investments in rural roads, agricultural R&D, and rural education. China had already invested heavily in expressways and intercity highways, which contributed to the country's economic transformation in the 1980s and 1990s. IFPRI found, however, that the marginal economic returns to these projects, although still positive, had declined. Less attention had been paid to developing rural roads, and a focus on them could have a twofold benefit. The marginal economic return on such projects was higher—building low-cost feeder roads in rural areas yielded a four-times-greater return than building higher-quality roads elsewhere—and rural road improvement would raise more people out of poverty per yuan invested than investment in larger highway projects.

IFPRI's research, undertaken in partnership with researchers in China, provided strong evidence to guide government priority setting for public investment. While direct impacts on Chinese policy are difficult to show, government spending has been consistent with IFPRI's recommendations: public spending on agricultural R&D and rural infrastructure has increased, free compulsory education has been introduced, and resources have been shifted to China's poorer Western regions. Right after the 2008 financial crisis, China launched a major financial stimulus package. More than one-third of the package went to improving rural infrastructure.

New Focus on Africa

In 2002, the African Union Commission adopted the Comprehensive Africa Agriculture Development Programme (CAADP) as one of the main components of the New Partnership for Africa's Development (NEPAD). CAADP serves as a continent-wide framework to guide efforts by African governments to accelerate growth and progress in poverty reduction. The key goal of the program is for each

country to devote 10 percent of its national budget to rural development, to achieve a 6 percent agricultural growth rate per year to combat poverty.

Inspired by IFPRI's approach to evaluating public investments, NEPAD asked IFPRI to collaborate on the implementation of the CAADP agenda in late 2004. The first output of the collaboration was a detailed roadmap to guide implementation of CAADP at the national, regional, and continental levels. This informs both government and donor spending priorities. Much of IFPRI's research on public investment in African countries has been oriented toward understanding how best to boost rural investment spending to meet budgetary targets established by NEPAD. Collaboration at the country level provided relevant information for prioritizing investments and encouraged increased public spending for agriculture. IFPRI's work compiling disparate public expenditure data that underpinned the effort represents a substantial contribution too, not least as a local public good for use by research and practitioner communities outside of IFPRI.

More than 30 countries were shepherded through the CAADP process. Support included IFPRI analyses of agricultural growth and investment options for poverty reduction that fed into the CAADP process and national investment plans. The economic model developed for Rwanda, for example, was designed to analyze the linkages and trade-offs between growth and poverty reduction goals under a variety of growth scenarios. The model showed that growth in staple crops and livestock, rather than export crops or the nonagricultural sector, is more likely to reduce poverty. Achieving growth on the scale required by CAADP would require a boost in Rwanda's public investment in agriculture from 5 percent of government spending to 10–35 percent. The CAADP agendas have been embraced by donor agencies, facilitating access to substantial international funding, particularly through the Global Agriculture and Food Security Program.

Beyond the initial compilation of data on government spending and its impacts, IFPRI has guided the formation and operation of a network of knowledge platforms. Three Regional Strategic Analysis and Knowledge Support Systems (ReSAKSS) established for East and Central Africa, Southern Africa, and West Africa track

30 indicators on investment and development progress. Establishment of the ReSAKSS, as well as a number of country nodes (SAKSS), has boosted regional capacity for monitoring and evaluation of public spending. The ReSAKSS are directly responsible for monitoring and evaluation of country progress on CAADP goals.

In addition to continental and country-level work through CAADP, IFPRI has also engaged with African regional organizations promoting investment in agriculture, notably the Association for Strengthening Agricultural Research in Eastern and Central Africa and the West and Central African Council for Agricultural Research and Development (CORAF/WECARD), to support priority-setting exercises for research and investments in agriculture. As with the country-level analyses, these have contributed substantively to the policy debate in Africa.

Systematically Tracking and Monitoring Government Spending

In another effort to expand knowledge about public investment, two global databases developed and maintained by IFPRI track public spending and research capacity by country, allowing policymakers to measure and compare progress. The Agricultural Science and Technology Indicators (ASTI) portal is deemed the most comprehensive source of agricultural research statistics for low- and middle-income countries. ASTI provides internationally comparable data on agricultural R&D investments and capacity for developing countries, which can be used to raise awareness, prepare funding proposals, and influence governments and donors, as well as providing the data for impact analysis. In a recent external evaluation of the ASTI program, more than a third of stakeholder respondents indicated that ASTI data had influenced funding decisions in their institutions. All respondents “made clear that ASTI data have proven valuable to decisionmakers and in several cases have influenced research budgets and other research policy and resource allocation decisions.” In East Africa, ASTI data was successfully used to lobby for increased spending on agricultural R&D. Calculating the value of the use of ASTI data—through increases in R&D spending and thence

on productivity—in Kenya and Tanzania, the evaluation arrived at a conservative estimate of almost US\$3 million, well above the cost of the ASTI program.

IFPRI also created the Statistics of Public Expenditure and Economic Development (SPEED) database, which provides the most comprehensive and publicly available public expenditure information for 140 countries in agriculture, education, health, defense, social protection, mining, transport and communication, and total expenditure for the years 1980 to 2010. The goal of the project is to improve transparency, accountability, and ultimately effectiveness in public investment, as well as to provide a rich database for further research and analysis.

Analysis of SPEED data, particularly in Asian countries, shows that the returns on investment vary widely across different types of rural regions and types of investment. This diversity highlights the importance of careful targeting of public investments if their full impact potential is to be realized. As was found in IFPRI's work in India and elsewhere, direct government spending on antipoverty programs generally has been shown through SPEED data to have only a small impact on poverty reduction.

Asking New Questions

In the wake of the 2007/2008 global food crises, interest in agricultural development has revived and some spending is increasing. IFPRI researchers have developed the tools for identifying public investment strategies that have the best potential for reducing poverty and generating pro-poor economic growth in agriculture and the

larger economy. However, experience shows that countries do not always adopt the most effective policies. The question now is not just *in what* can governments invest with confidence but *why* is it not being done? Rather than leave the answer to others, IFPRI has entered the complex realm of governance and political economy through the door of research. Today IFPRI not only carries out research to prioritize and evaluate public investments, but also to understand the political economy of reform and the effectiveness of different incentives for directing government spending toward the investments needed to generate productivity and poverty reduction in rural areas.

Resources

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