How can government promote economic development? This is a perennial question, and it has not gone away with the collapse of the Soviet model 20-plus years ago. The debate often becomes acrimonious and ideological, but through it all, one can be hopeful about the accumulation of experience and understanding. The road from experience to understanding is not straightforward, and requires rigorous analysis of data. I want to illustrate that point with the example of rural roads in India.

India’s government did not always seem to pay enough attention to the importance of connecting rural area with centres of economic activity. This seemed to change in the late 1980s, with programmes to build rural roads. The Pradhan Mantri Gram Sadak Yojana (PMGSY), started in 2000, took this effort to a higher level, with an ambitious plan to connect India’s smaller villages to nearby towns, all through the country. The ministry of rural development has been in charge of the scheme, with the Planning Commission playing its usual role. An earmarked tax proved inadequate as a funding source, and the World Bank stepped in with loans at concessional rates.

By the account of the World Bank and the ministry of rural development, the PMGSY has been a roaring success, improving agricultural practices, raising incomes and land prices and increasing literacy and access to health care. Some of these studies have tried to quantify the benefits in terms of social rates of return, which is rarely done for government spending in India. On closer examination, though, the claims of success are built on case studies that focus on a few selected rural roads or villages in a few selected districts. This makes it difficult to be confident about the overall, nationwide impact. One needs more rigorous quantitative analysis.

Some years ago, I had embarked on a project for RBI’s Development Research Group, in which I proposed to understand economic growth in India using the district as the basic unit of analysis. With my co-authors, I found that, using data for about 200 districts across nine states, there was clear evidence that the extent of a road network in a district in 1991 had a positive impact on growth over the following decade. Unsurprisingly, we also found that initial levels of literacy and access to credit also had positive effects on
subsequent growth. But even this analysis did not trace a causal chain from government spending to outcomes. Doing that is the Holy Grail of economic policymaking.

Recently, a young University of California (UC), Santa Cruz, researcher has gone a long way to achieving that for the rural road scheme. Shilpa Aggarwal innovatively combines data on household consumption, schooling and employment with district level data on the spread of the rural road scheme. Her analysis is with nationwide data, so gives an all-important overall picture of how the scheme has impacted rural lives and livelihoods. By using econometric techniques that control for other fluctuations, she gives a true picture of the connection of spending and outcomes, and provides some surprises as well in her results.

Aggarwal’s work verifies earlier case studies in finding that the PMGSY improved market access, reducing price dispersion for crops and leading to more technology adoption. Animal husbandry benefited in particular. We also learn brand new things. Village households were able to consume a greater variety of goods, which is a good thing, and employment opportunities increased. Surprisingly, though, the impacts on education were not all good: teenagers became more likely to skip school in favour of those new employment chances.

There is much more in the study, but let me summarise its benefits. We get a rigorous, unbiased picture of the nationwide impacts of the rural road scheme, but at the individual household level. There is careful control of other variables, so we are quite confident that we are picking up the impacts of the new roads, and nothing else. And we learn things that might not have been obvious, which can help improve policy design. For example, villages with new roads may need some complementary scheme to keep girls in school, or rural schools themselves may need to be redesigned around new employment opportunities.

The existence of such studies—other examples are a well-publicised analysis of the benefits of enclosed toilets by Dean Spears and co-authors, and the impacts of the JSY scheme for subsidising child birth in institutional settings rather than at home, done by another young UC Santa Cruz researcher, Ambrish Dongre—is heartening. These young economists are doing work that validates, questions, refines and shapes policymaking in India, pushing toward government spending that has significant positive benefits for the lives of its rural citizens and the poor across villages and towns. The weak links now in the road to development are the ways in which politicians and technical decision makers interact, how government money is allocated, and how its spending is monitored. But economists are doing their part of the job well.

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