ROADS AND DEVELOPMENT

Can improved rural road maintenance significantly reduce rural poverty? Through the reduction of transportation costs, improved roads can increase productivity and demand for rural labor, thus leading to increased income. Also, improved roads can have meaningful social impacts, facilitating household investments in health and education.

However, macroeconomic adjustment and local governance issues have led to chronic underinvestment in this kind of rural infrastructure. Moreover, when available, rural transport projects have focused on building or upgrading roads. This study examines the Peruvian Rural Roads Program (RRP), which instead focuses on the rehabilitation and permanent maintenance of existing rural roads.

THE RRP PROGRAM AND THE STUDY

Since its launch in 1996, the RRP has rehabilitated more than 15,000 kms of rural roads and 7,000 kms of non-motorized tracks. The program is based on an institutional innovation that contracts the maintenance of rural roads to private locally-owned firms supervised by project agents and community supervisors, who have to issue a satisfactory report for payments to occur. The RRP also includes specific capacity development activities for local firms, authorities and civil society.

The study tries to determine whether this innovation indeed improved the quality of rural roads in developing countries, and whether this in turn led to increased income and human capital investments. The analysis is based on a quasi-experimental approach through which evolution of RRP roads are compared to control roads defined prior to the intervention on the basis of key observable characteristics of the roads and the villages they connect. The study focuses on interventions that started in 2004 and assesses the effects two years later, distinguishing motorized roads from non-motorized tracks.

KEY FINDINGS

- **The program improved road transitability.** There is a reduction in the average travel time on treated roads. Moreover, community leaders and household heads report an increased level of satisfaction with rehabilitation work in treated localities.

- **Income effects are not significant on average, but they appear strong in villages with key pre-existing productive infrastructure.** This favors the notion that road improvements need to be complemented with other key infrastructure to effectively contribute to the reduction of rural poverty.

- **Increased investments in education and health are also found.** School attendance (motorized roads only) and use of local health facilities increased strongly and morbidity fell in villages associated with treated roads.

- **Finally, employment effects vary by type of road, indicating that they play different roles in connecting rural people to markets.** Motorized roads seem to connect rural households to larger cities, while non-motorized tracks are more relevant for the transport of individuals from their houses to the farms. In particular, treatment of the latter increases work by adult women on the family farm, which provides justification for their inclusion in the RRP.

DISCUSSION AND NEXT STEPS

Early results are very positive on the contribution of rural road rehabilitation and maintenance to poverty reduction, especially when complemented with power and communications infrastructure. Extending the analysis over time would allow us to explore the dynamics of RRP’s effects, i.e. which impacts need more time to mature and whether early impacts are sustained. In particular, this would establish whether income effects require more time or complementary interventions. It is also essential to sustain a rigorous impact evaluation strategy for any future innovations in the RRP.