

China: Infrastructure, Growth, and Poverty Reduction

China has invested intensively in public infrastructure during the last 20 years. In the transportation sector, such investment has provided access to markets, facilitated domestic market integration, lowered costs of production and transportation, and allowed China to compete both domestically and internationally. Besides contributing to growth, this investment has directly helped reduce poverty by increasing access to services and economic opportunities.

Targeted infrastructure spending also has been part of national poverty-alleviation programs. Since the 1990s—and especially since the tenth five-year plan, with its proactive fiscal policy to spur economic growth and reduce poverty through better transportation—the Chinese government's investment in transportation infrastructure has increased sharply. Great progress has been made in raising both the quantity and the quality of rural highways. Almost all areas in China can accommodate highways, which means that highways are more accessible than other transport modalities and thus play an important role in economic development and poverty reduction in rural areas.

In 1984, the Chinese government began to construct irrigation, water conservation projects, and county and township highways through the *Food-for-Work* program. The Food-for-Work Program supplies necessary infrastructure in poor areas and short-term jobs for poor populations. The central government provides food, cotton, and industrial products at no cost. Those products are used to pay rural highway workers. Local governments are required to provide matching funds to pay for materials and equipment.

During the *8-7 National Poverty Reduction Program* (which aimed to lift 80 million people out of poverty in the seven years from 1994 to 2000), the Chinese government spent 0.92 billion yuan every year building rural highways in 529 poor counties in 21 provinces. During the plan period, 42,000 kilometers of new rural highways were built each year, and the quality of rural highways improved greatly. In 1998, the Chinese government decided to accelerate construction of infrastructure further, and one of its priorities was county and township highway networks. By the end of 2002, the extent of county and township highways was 1.065 million kilometers—244,000 kilometers more than in 1995.

In 2002, China began to implement a highway construction program to reach counties in the western areas. The new program, an important part of the Chinese government's campaign to improve transportation and promote economic development in the west, covers 17 provinces and 252 construction projects that will result in 26,098 kilometers of roads. The total investment is projected to reach 31 billion yuan—16.7 billion invested by the central government and 14.3 billion by local governments.

In 2003, the Chinese government launched a nationwide inter-county and rural highway construction program. Under the plan, more than 5,300 projects will begin in 2003, representing 78,000 kilometers of construction for a planned investment of 75 billion yuan. In October, the Ministry of Construction (MOC) expanded the plan to 15,500 projects representing 162,000 kilometers of construction at a planned investment of 109.5 billion yuan. This program is an important signal that China will promote rapid development of rural highways in its efforts to eradicate poverty.

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The Roads Improvement for Poverty Alleviation (RIPA) program was launched with World Bank support in selected provinces in the mid-1990s. RIPA focuses on linking those rural villages and townships which do not currently have basic all-weather access to the existing road networks. In the case of Henan Province, quantitative analysis resulting from an ex-post evaluation of the RIPA components showed that remote settlements that had been engaged in subsistence farming prior to the program had made markedly better progress in economic development, social development, and poverty alleviation than comparable populations in control areas. The number of vehicles, and passenger and freight transportation developed quickly in the RIPA impact zone. With the improvement of transportation infrastructure and growth of the farmer's income, more and more rural household purchased motors and vehicles to undertake nonagricultural industries or facilitate travel. The improvement of transportation infrastructure has transferred the potential transportation demand into the real demand and boosted the development of passenger and freight transportation.

The positive impacts of transportation infrastructure improvements on economic growth, social progress, and poverty reduction arise from several factors, including:

- China was strongly committed to development-oriented poverty reduction—and it established policy priorities accordingly.
- Those policies, backed by effective institutional mechanisms for program management and funding, involved all levels of government, as well as users. The active participation of rural residents was instrumental in filling financing gaps.
- Lessons were learned from initial experiences. Management adhered strictly to Chinese regulations and international principles, magnifying the impact of poverty-alleviation funds and ensuring the sustainability of poverty-reduction programs.
- Finally, international organizations have played an important role in providing funding and advice on improving rural transportation management and construction.

The 8-7 National Poverty Reduction Program, in place between 1994 and 2000, was the first program of development and poverty alleviation that had specific objectives, targets, measures, and deadlines. The plan clearly stated that manpower, materials, and financial resources would be concentrated, and all social strata mobilized, to solve the problems of feeding and clothing the rural poor population. The program aimed to enhance the ability of poor areas and populations to develop their own capacities.

Lack of funds is the key factor restricting the development of rural transportation. Since the advent of the era of openness and reform, the private sector has developed quickly, along with state-owned and collective-owned agencies, increasing the number of agencies permitted to invest in transportation infrastructure. Reforms of the investment, finance, and taxation systems have increased the financial resources of local governments and the willingness of those governments to invest in transportation infrastructure. To close the funding gap, governments at all levels have been investing more in rural highways, and investment by the governments has increased rapidly. A much-improved legislative and institutional framework since 1998 has smoothed the process of funding, designing, building, and maintaining rural highways.

During the period of the ninth five-year plan, international organizations and foreign governments contributed \$7.6 billion in loans for the highway and water transportation construction—including rural roads. The World Bank was involved in the southwest, Qinba, and western projects covering 9 provinces, 91 poor counties, and more than 8 million poor people. The Japan Bank for International Cooperation (JBIC), the United Nations Development Programme (UNDP), and the Asian Development Bank (ADB) also have cooperated with the Chinese government in poverty reduction and transportation infrastructure construction.

International cooperation has also brought new management ideas and methods to the construction of Chinese transportation infrastructure. Loans from international organizations and foreign governments have strict requirements concerning planning, surveying, design, construction, and maintenance. These not only ensure the quality and benefit of the projects, but also help to improve the management capabilities of local governments and the professional capabilities of technicians.

While much progress has been made, much remains to be done. Some 30 million poor people in the middle and western areas of China still must cope with poor transportation conditions. To quicken the pace of poverty alleviation, the Chinese government has adopted an Outline for Poverty Alleviation and Development of China's Rural Areas (2001–10). The plan document states that the Chinese government will speed up construction of infrastructure in order to further improve the basic production and living conditions of impoverished areas. The government will increase funds for poverty alleviation, expand the scale of the Food-for-Work program, and enhance transfer payments to impoverished areas. The funds invested by the central and local governments will be used mainly to improve the basic production and living conditions and to construct infrastructure.

Lessons learned

The successful implementation of poverty-targeted interventions such as the RIPA projects results from the constructive role of governments at several levels. Provincial, city, and county governments accounted for 66.05 percent of the total investment in RIPA, for example. To deal with funding shortages, local governments granted tax concessions and formulated preferential terms for land, materials, water, electricity, and so on. Management in strict accordance with the relevant regulations and international principles is one of key reasons for the successful implementation of RIPA. After the RIPA projects were completed, scrupulous maintenance ensured sustainability. Measures included establishing township maintenance stations for professional maintenance, implementing maintenance contests, planting trees to improve the environment of the highways, and formulating regulations to ensure the smooth operation of the highways.

Although the government is the most important source of funds, it alone is not able to afford the total investment of rural highways. The Japan Bank for International Cooperation has supported much-needed infrastructure investments. Loans from international financial organizations are important sources of funds to build rural highways. The period of loans from international financial organizations is comparatively long and the interest rate is lower. Projects financed by international financial organizations can provide funds urgently needed by rural highway construction and, at the same time, bring international practice to the rural areas and make great contributions to raising the ability to manage

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projects of local transportation sectors. Experience with projects such as RIPA can be introduced into other projects, helping to improve the level of transportation administration of the impoverished areas.

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