



FINANCING RURAL ROADS

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The Challenge

Rural roads are critical to development strategies.

In many countries, rural roads are about 70% of the total network.

Therefore constructing, rehabilitation and maintaining them is a huge challenge.



Administration

Central Government or Provincial Responsibility?

Advantages of central:

- Access to technical and managerial expertise
- Access to equipment
- Mobilization of funds

Disadvantages:

- Less knowledge of local environment and opportunities

Provincial responsibility is the reverse



Financing

Most Asian countries are using the provincial or state model with various means of prioritizing roads for development.

Most Asian countries are facing difficulty in maintaining the entire network.

- Countries that have made major expansion in the system have found the cost of maintenance is too high.
- Other countries have difficulty in mobilizing funds for extensive development of community access.



Community Participation

Vietnam:

Provincial governments determine the local contributions in terms of labor, cash and materials. For example:

Province 1: Cash contribution based on size of paddy field or garden. Families without land are exempt. Compulsory labor and voluntary labor was used.

Difficulty is that doesn't take into account drought years. Farmers in arrears can't borrow for inputs the next year.



Community Participation

Province 2: Higher poverty levels and more dependent on national government/donor aid.

Mountainous areas: No requirement. Local people can be paid for doing road work.

Low land areas: Contribution of labor, cost and material required. Cost is calculated on per person formula. Larger households were assessed more with no poverty exemption. Road fee is lumped with irrigation fees, school fees, etc. making the amount quite a burden.



Community Participation

Local feedback:

- Residents placed a high priority on road access and were willing to pay for it in cash and labor.
- Thought the amount assessed was high.
- Wanted more input in the planning for roads.
- Needed a clear policy on land and home expropriation and one that was consistently implemented.
- Poor households needed to be able to substitute labor for cash payments.



Local enterprise involvement

Vietnam:

Private firms have the capacity and regulatory environment to carry out rural road construction.

Yet number of contracts tendered is relatively small.

SOEs have better access to information, land, capital and equipment. Many small contracts are awarded without competition.

To allow fuller participation, need to strengthen contracting procedures, training of local administrators and access to capital.



Output-based Aid

This model bases payment on output rather than cost of project inputs. It is most widely used for water and sanitation, electricity and medical services – services that are metered or based on user pay. Has been applied to roads.

In Argentina, it was applied successfully to road maintenance and then applied to rehabilitation.

World Bank funded 75% of first stage and 50% of second stage. Government of Argentina funded the balance.



Output-based Aid

Initiation:

- Nation-wide survey of roads
- Identification of subsections to contract
- Definition of minimum standards
- Determination of rehabilitation and maintenance required to achieve uniform standards
- Contracts awarded to lowest lump sum bidders with a portion of payment reserved for output quality



Output-based Aid

First Stage:

- Covered maintenance of roads in fair to good conditions with monthly per kilometer installments conditional on work complying to technical standards.
- Achieved output and contracts renewed with same contractors.
- Result: Routine maintenance is costing US\$175 per km per month with penalties for poor performance averaging only 1% of total contract.



Output-based Aid

Second Stage:

- Competed 5 year lump sum contracts to rehabilitate roads in first year and maintain roads for remaining years.
- 60% of contract paid in first year, balance in 48 equal monthly installments.
- Contractor recommended amount and type of rehabilitation and maintenance required to achieve technical standards.

74% of costs went to rehabilitation. Total cost within average for Latin America. Private sector interest in bidding remained high.



Output-based Aid

Benefits:

Requiring contractors to do own design and quality control saved government costs.

Fixed price contracts eliminated cost overruns.

Contracts required government to commit and disburse funds for 5 year periods.

Regular maintenance is reducing capital improvements by 30%.

Share of roads in poor condition reduced for 25% to 5 %, thereby reducing road user costs 10%.



Labor-based Roads

New roads are prioritized and in National Development Plan and master plans updated every 5 years.

Contracts are divided into labor-based/SME and machine-based/prime contractor components.

Labor-based tasks are divided into daily 5-hour tasks paid at a standard rate. A supervisor is responsible for every 30 laborers. SME provides hand tools. Laborers must come from within 5 km of the work site.

SMEs do earth and concrete works. Prime does machine works and overall quality control.



Labor-based Roads

SME training and certification program:

- Technical methods, supervision techniques, business and financial management, labor law, HIV/AIDS awareness, and special bridge financing program.
- Provides manual, project costing spread sheet, project accounting spread sheet and draft partnership contract with prime contractor.
- Prime contractor required to hire 60% newly certified SMEs.
- Roads Authority provides technical and financial advice to recent SME trainees.



Labor-based Roads

Benefits:

- Brings income to subsistence rural households
- 30-40% of laborers are usually women
- Increases purchase of local materials and supplies
- Strengthens growth of SMEs and business understanding
- Cost is about 15% higher because of supervision but larger share of project budget remains in community
- Roads Authority expanding to maintenance contracting.



Rural Development Program

To maximize linkage between road network and agricultural development, farm to market roads are often incorporated into rural development programs.

Once agricultural benefit is realized, maintenance can be funded on a commercial basis using road fees based on agricultural production.



Value chain approach

Review of entire chain of actors required to develop a particular economic activity or trade commodity

Kyrgyzstan opportunity in processing agricultural production; constraints faced:

- Lack of trust/relationships in value chain actors
- Lack of reliable information on market and finance
- Small production volumes
- Lack of inputs
- Lack of mechanization



Value chain approach

Challenges in Russian and Kazakhstan market:

- High transport costs
- Long transport distances and wider competition
- Disconnect between producers and processors
- Using several small processors may not produce uniform product for market
- Few traders experienced in agricultural products
- Lack of working capital
- Lack of trustful relationships with R and K buyers



Value chain approach

Domestic market:

- Comparatively small, but customer base favorable to buying locally
- Develop new brand of local processed foods
- Constraint: capital and value relations with farmers and processors
- Used local NGOs: train farmers, complete contract between farmers and processors, standardize processing to meet local market
- Ready to enter R and K market
- Transport network expanded to meet opportunity



Conclusions

Need to strengthen community participation in planning rural road development: labor, cash, materials and input into planning process;

Consider output rather than input-based contracts;

Evaluate results based on economic benefit to community (institutions, employment, business development) as well as lowest cost

Use rural road development to build SME expertise

Integrate road development to economic development strategies.



Further Information

Sources of additional resources on the topic:



global Transport Knowledge Partnership:

www.gtkp.com

SEACAP Southeast Asia Community Access Partnership:

www.seacap-info.org

Further information on Basic Access can be obtained from the above websites and the gTKP Rural Transport Theme Champion: rob.petts@gtkp.com or gTKP Finance and Economics Theme Champion: lynn.harmon@gtkp.com.