

1. Project Data:		Date Posted : 09/21/2007	
PROJ ID : P058845		Appraisal	Actual
Project Name : Second Jiangxi Highway Project	Project Costs (US\$M):	535.7	371.2
Country: China	Loan/Credit (US\$M):	200	145.2
Sector Board : TR	Cofinancing (US\$M):	0	0
Sector(s): Roads and highways (99%) Sub-national government administration (1%)			
Theme(s): Rural services and infrastructure (33% - P) Municipal governance and institution building (33% - P) Other financial and private sector development (17% - S) Access to urban services and housing (17% - S)			
L/C Number: L4608			
	Board Approval Date :		06/05/2001
Partners involved :	Closing Date :	12/31/2006	12/31/2006
Evaluator :	Panel Reviewer :	Group Manager :	Group :
Kavita Mathur	Kris Hallberg	Alain A. Barbu	IEGSG

2. Project Objectives and Components:

a. Objectives:

The objective of the project is to provide more efficient, safe and effective transport infrastructure in support of social and economic development in Jiangxi Province.

b. Were the project objectives/key associated outcome targets revised during implementation?

No

c. Components (or Key Conditions in the case of DPLs, as appropriate):

- 1. Highway capacity expansion** (estimated cost US\$447.2 million, actual cost US\$303.4 million): construction of Taihe-Ganzhou Expressway (TGE); construction of interconnecting roads; equipment; and construction supervision.
- 2. Road Improvements in Poor Counties (RIPC)** (estimated cost US\$39.6 million, actual cost US\$ 26.8 million).
- 3. Highway safety** (estimated cost US\$2.5 million, actual cost US\$0.4 million) including black spot improvements and supporting guidelines.

4. Institutional strengthening/capacity building (estimated cost US\$2.1 million, actual cost US\$1.0 million) including training and establishment of maintenance centers.

5. Land acquisition (estimated cost US\$42.3 million, actual cost US\$37.6 million).

Revised Components:

(a) The Ganzhou interconnecting road was cancelled and was replaced by a locally financed expressway section. The new 11 km expressway section is expected to serve Ganzhou better than the original Class II road. Also, it would ultimately form part of the Xiamen-Chengdu expressway.

(b) Two additional interchanges were added to the project at the request of county authorities to improve the access of local people to the expressway: Wan'an and Hengshi. These were financed entirely with domestic funds.

(c) One rest area was not completed because it was interfering with the new Wan'an interchange.

d. Comments on Project Cost, Financing, Borrower Contribution, and Dates:

In 2004 the JPCD cancelled US\$54.77 million from the loan as the main civil works on the expressway were completed and the expressway construction costs were 33% lower than the appraisal estimate. The project closed on schedule.

3. Relevance of Objectives & Design:

The project objectives were consistent with the 1998 Country Assistance Strategy (CAS) which identified infrastructure improvement as a key area of China's development agenda to be supported by the Bank. The project objectives are consistent with the current 2006 CAS which focuses on upgrading transport infrastructure, both rural roads and expressways so that transportation benefits accrue to the poor, while also improving network management and traffic safety. The project objectives were in line with the Government's Ninth Five-Year Plan (1996-2000) which gave high priority to the development of the National Trunk Highway System.

The project design was appropriate, geological investigations were done to avoid major problems during construction, which had been experienced in other expressway projects in China. The engineering designs were prepared by Jiangxi Provincial Communications Department (JPCD) and were reviewed not only by the domestic design institute in Wuhan but also by a foreign consultant financed by a Spanish Trust Fund. Safeguard issues were appropriately handled (see Section 11 for details). The main design weaknesses were: (a) baseline data was not collected and no targets were set for the key performance indicators; and (b) although detailed expressway traffic forecasts were developed on the basis of origin-destination surveys and the expected tolls that would be charged on the expressway, there were inconsistencies in the traffic figures in the Project Appraisal Document (PAD) between Annexes 1-1 and 4.

4. Achievement of Objectives (Efficacy):

The objective of the project was to provide more efficient, safe and effective transport infrastructure in support of social and economic development in Jiangxi Province : rated **Substantial**.

- Road closures due to bad weather have been eliminated, except in exceptional cases of flooding and landslides.
- Accessibility to low-income areas was improved. The project improved roads in poor areas of southern Jiangxi. Approximately 78 km were upgraded to Class II highways and 104 km to Class III.
- To improve highway maintenance, two maintenance companies were established in Nanchang and Yichun cities. These companies are independent and maintenance work is based on unit rate contracts.
- JPCD capacity was improved through training in highway management, highway design and planning, financial management, highway construction and maintenance.
- Average daily traffic on TGE (veh/day) fell short of targets. On Taihe-Suichuan corridor, the average daily traffic was 6,409 compared to 7,366 projected at appraisal. The figures for Suichuan-Tangcun corridor are 6513 compared to 6,103 and for Tangcun-Tankou are 8893 compared to 10,838.
- The opening of the TGE contributed towards a significant reduction (140 minutes) in interprovincial travel times.
- Road Safety has improved. The pilot black spot program on an existing section of expressway was completed. A safety audit checklist was also prepared and distributed. The number of accidents/km on Taihe -Suichuan section has reduced from 1.6 in 2000 to 0.8 in 2006. For the same period on Suichuan-Tangcum section accidents/km have decreased from 3.7 to 1.0 and Tancun-Tankou from 2.3 to 0.8.
- It is very difficult to isolate the economic benefits due to the road investments from the overall economic

development. However, the Gross Output Value of Industry and Agriculture (GOVIA) indicator in the two poor counties (Wan'an and Suichuan) increased by 5.8 times and 2.6 times respectively from 2000 to 2006. This was much faster than for the province as a whole, for which GOVIA about doubled in the same period.

- With the opening of TGE, the land-locked province of Jiangxi is now linked to the southern port of Shenzhen.

5. Efficiency (not applicable to DPLs):

The ex-post ERR are slightly higher than the appraisal estimates. This is due to lower construction costs. The expressway construction costs were 33% lower than the appraisal estimate.

a. If available, enter the Economic Rate of Return (ERR)/Financial Rate of Return (FRR) at appraisal and the re-estimated value at evaluation :

	Rate Available?	Point Value	Coverage/Scope*
Appraisal	Yes	20%	78%
ICR estimate	Yes	23.8%	89%

* Refers to percent of total project cost for which ERR/FRR was calculated.

6. Outcome:

Based on project relevance, achievements and ratings presented in Sections 3 and 4 and efficiency indicated in Section 5, the Project Outcome is rated as Satisfactory.

a. Outcome Rating : Satisfactory

7. Rationale for Risk to Development Outcome Rating:

The risk to development outcome is rated "Negligible to Low". Regions commented that with the traffic growth rates and the ability of the provinces to increase toll rates to meet needs, it is likely that much, if not all, of the funding required can be raised through tolls. In fact, in spite of overloading, often expressways in China are able to generate enough tolls to cover maintenance needs and payback the principal and interest of the loans used to pay for their initial construction.

a. Risk to Development Outcome Rating : Negligible to Low

8. Assessment of Bank Performance:

The Bank Performance during preparation is rated satisfactory. The Bank's Safeguard Policies were adequately addressed. A financial management review was undertaken to ensure compliance with the Bank's financial management procedures. Potential risks were identified, but seem to be underestimated given the problems subsequently encountered. The Bank Performance during supervision is rated moderately unsatisfactory. During implementation the domestic and foreign supervision consultant's work was sub-standard. The Bank team did not carefully review all the designs being implemented (for example, a dangerous interchange was constructed at Hengshi which had to be retrofitted with a roundabout to resolve traffic conflicts after the expressway opened). Bank missions did not regularly visit the site for extended periods of time. During Severe Acute Respiratory Syndrome (SARS) epidemic, missions were cancelled as opposed to being postponed which led to an excessive interval between missions during the key construction period.

a. Ensuring Quality -at-Entry: Satisfactory

b. Quality of Supervision : Moderately Unsatisfactory

c. Overall Bank Performance : Moderately Satisfactory

9. Assessment of Borrower Performance:

The performance of the Government during preparation and implementation was satisfactory. The Government was committed to the objectives of the project. The construction of the expressway was completed ahead of

schedule. The implementing agency JPCD performance is rated moderately satisfactory mainly because the interconnecting roads that were financed domestically did not have the same reviews as the Bank financed sections and quality issues arose with the design and construction. When the post-construction problems were identified the government showed full commitment towards resolving them. They mobilized appropriate resources and funds to correct the issues.

a. Government Performance :Satisfactory

b. Implementing Agency Performance :Moderately Satisfactory

c. Overall Borrower Performance :Moderately Satisfactory

10. M&E Design, Implementation, & Utilization:

At appraisal, six output/performance monitoring indicators were selected. These include: (i) travel time reduction in the Taihe-Ganzhou corridor; (ii) average daily traffic on new expressway and existing national road (NH105); (iii) average daily traffic on rural roads in affected areas; (iv) number of days that rural roads in low-income areas were closed to traffic; (v) number of traffic accidents on NH105 (fatalities and serious injuries) reduced; and (vi) increase in the Gross Output Value of Industry and Agriculture (GOVIA) in the project area. The indicators were appropriately selected. However, baseline data was not collected and no targets were set. There was some discrepancy in the traffic figures in the PAD's Annex 1.1 and 4. During project implementation, baseline data was collected by the Jiangxi Provincial Communications Department (JPCD) and the appraisal output/performance indicators were monitored and are reported by the ICR.

a. M&E Quality Rating : Substantial

11. Other Issues (Safeguards, Fiduciary, Unintended Positive and Negative Impacts):

The project was an Environment Category "A" project and the Safeguards Policy on Involuntary Settlement (OD 4.30) was applicable. The Environmental Assessment (EA) was prepared as per Chinese National procedures and the World Bank's OP 4.01. The final EA reports (Environmental Impact Assessment, Environmental Action Plan, and EA summary reports) were submitted to the Bank by December 2000. A Resettlement Action Plan (RAP) was prepared in line with the local laws and World Bank's OD 4.30. During implementation, some environmental problems were noted during construction. These were pointed out by the Bank and were addressed gradually. Regarding land acquisition and resettlement, the total land area acquired was 7% higher than estimated in the RAP. The actual number of Project Affected Persons (PAP) was 11,882, slightly higher than 10,109 estimated at appraisal. The ICR does not provide the reasons for this increase. There were no fiduciary issues or unintended impacts.

12. Ratings:	ICR	IEG Review	Reason for Disagreement /Comments
Outcome:	Satisfactory	Satisfactory	
Risk to Development Outcome:	Negligible to Low	Negligible to Low	
Bank Performance :	Moderately Satisfactory	Moderately Satisfactory	
Borrower Performance :	Satisfactory	Moderately Satisfactory	Although the performance of the Government during preparation and implementation was satisfactory, the implementing agency JPCD performance is rated moderately satisfactory mainly because the interconnecting roads that were financed domestically did not have the same reviews as the Bank financed

			sections and quality issues arose with the design and construction. Therefore, the overall Borrower Performance is rated moderately satisfactory.
Quality of ICR :		Satisfactory	

NOTES:

- When insufficient information is provided by the Bank for IEG to arrive at a clear rating, IEG will downgrade the relevant ratings as warranted beginning July 1, 2006.
- The "Reason for Disagreement/Comments" column could cross-reference other sections of the ICR Review, as appropriate .

13. Lessons:

The ICR identified well known/documented lessons which include:

- Design changes and technical specifications during construction need to be checked more rigorously to make sure they reflect the same standards as were applied to the original design.
- Bank supervision missions should regularly visit the construction sites to identify problems early on and to provide timely advice.
- The foreign consultants need to be carefully selected and their activities supervised. Also, they should be penalized for the performance of unsatisfactory work.

14. Assessment Recommended? Yes No

15. Comments on Quality of ICR:

The ICR is informative and covers the project issues and results comprehensively and well. The main shortcoming is the lack of details regarding safeguard compliance.

a. Quality of ICR Rating : Satisfactory