



1. Project Data:		Date Posted : 03/01/2001	
PROJ ID: P003534		Appraisal	Actual
Project Name: Zhejiang Provincial Highway Project	Project Costs (US\$M)	558.86	486.09
Country: China	Loan/Credit (US\$M)	220.0	213.6
Sector(s): Highways	Cofinancing (US\$M)		
L/C Number: L3471			
	Board Approval (FY)		92
Partners involved :	Closing Date	06/30/1998	06/30/2000
Prepared by :	Reviewed by :	Group Manager :	Group:

2. Project Objectives and Components

a. Objectives

The objectives of the project were to :

- Relieve congestion in the Hangzhou-Ningbo corridor by providing a fast and reliable highway;
- Promote economic development through the provision of road access to population deprived of motorized vehicle access and to improve the provincial and county roads carrying substantial volumes of traffic;
- Further develop institutional capabilities for transport planning and investment prioritization; and
- Promote the transfer of highway construction and maintenance technology .

b. Components

To achieve the above objectives, the project comprised the following components :

1. Construction of a 138 km section of the Hangzhou-Ningbo Highway (HNH), a four-lane divided, access-controlled expressway;
2. Construction and improvement of about 33 road sections (970 km) of the provincial/county road network and five bridges (2,000 m);
3. Construction supervision of the HNH and the provincial /county road construction and improvement components;
4. Purchase of equipment for laboratories, environmental protection, operation, maintenance and for the development and application of the Road Data Bank (RDB) and Pavement Management System (PMS); and
5. Staff training programs.

c. Comments on Project Cost, Financing and Dates

The project was approved in FY92 and closed on June 30, 2000, two years later than scheduled . The actual loan amount was US\$213.6 million, versus the US\$220.00 million approved. The total cost of the project was US\$486.1 million versus the US\$558.9 million appraisal estimate. The 13% decrease from the appraisal cost estimate was in large part due to the substantial devaluation of the Chinese Renminbi . In local currency terms, the total project cost actually increased by 22%, with all major expense categories, except supervision consulting, having cost increases .

3. Achievement of Relevant Objectives:

The project achieved most of its objectives, with all the physical and institutional targets either having been met or exceeded.

- The objective to relieve congestion in the Hangzhou -Ningbo corridor was achieved by the successful construction of the HNH, albeit with initial poor quality of work and some cost overruns . Traffic on the expressway has not met the appraisal projections in the first year of operation, but the economic rate of return indicates that the investment is providing substantial economic benefits in the form of reduced vehicle operating costs and travel time savings in the corridor . The ERR for HNH was estimated at 16.8%, versus the appraisal estimate of 19.9%.

- The objective to promote economic development by providing better road access and improving the provincial and country roads was met. A total of 1066 km of roads (versus 970 km) were constructed and improved, providing critical access to population previously deprived of road transport. The economic rate of return at completion was estimated at 44% and confirms the fact that this investment provides significant economic benefit to the people and businesses served by these roads.
- The institutional development objectives were achieved through the successful implementation of the staff training program and introduction of new technologies for road construction and maintenance. A Road Data Bank and Pavement Management System have been instituted to plan and prioritize road maintenance programming and expenditure.

4. Significant Outcomes/Impacts:

- While not part of the original project objectives, the significant impact from this project is the introduction of innovative private financing scheme through the securitization of toll revenues from the HNH and the establishment of a shareholding company to raise funds in capital markets for further development of the expressway system in the province.
- The other significant impacts of the project are the introduction of contracting out for construction and major maintenance works using ICB and NCB systems, and the development of local capacity to use modern and rational road management and planning systems.

5. Significant Shortcomings (including non-compliance with safeguard policies):

The quality of civil works was poor, in part, due to geological conditions and poor supervision of works. Major repair works, financed by government, have been carried out since the opening of the first half of the HNH in 1995.

6. Ratings:	ICR	OED Review	Reason for Disagreement /Comments
Outcome:	Satisfactory	Satisfactory	
Institutional Dev.:	Modest	Substantial	The achievements in introducing modern road management and planning system and the staff training carried out warrant a "substantial" rating for institutional development impact.
Sustainability:	Likely	Likely	
Bank Performance:	Satisfactory	Satisfactory	
Borrower Perf.:	Satisfactory	Satisfactory	
Quality of ICR:		Satisfactory	

NOTE: ICR rating values flagged with '*' don't comply with OP/BP 13.55, but are listed for completeness.

7. Lessons of Broad Applicability:

The key lessons from this project are:

- Securitization of toll revenues using Bank-financed assets are an innovative and feasible technique to encourage private sector financing of roads in China; and
- Close field supervision by the Bank and consultants is essential when there are adverse geological conditions that could lead to poor quality of civil works.

8. Assessment Recommended? ☒ Yes ☐ No

Why? The project could be audited together with other recently-completed highway projects in China to assess the experience and draw lessons from the securitization of toll revenues to attract private financing for highway development.

9. Comments on Quality of ICR:

The ICR is comprehensive and provides a thorough assessment of project implementation experience and results. The ex-post economic analysis is noteworthy. The ICR could have discussed more thoroughly the innovations in private financing of roads in China, and the lessons learned from this experience.