



Validation Report

Reference Number: PVR-373
Project Number: 35339
Loan Number: 2051
December 2014

People's Republic of China: Yichang–Wanzhou Railway Project

Independent Evaluation Department
Asian Development Bank

ABBREVIATIONS

ADB	–	Asian Development Bank
DMF	–	design and monitoring framework
EIRR	–	economic internal rate of return
km	–	kilometer
MOR	–	Ministry of Railways
PCR	–	project completion report
PPMS	–	project performance management system
PRC	–	People's Republic of China
RRP	–	report and recommendation of the President
YWR	–	Yichang–Wanzhou Railway
YWRCH	–	Yichang–Wanzhou Railway Construction Headquarters

NOTE

In this report, “\$” refers to US dollars.

Key Words

asian development bank, independent evaluation department, lessons, performance evaluation, PRC, project completion report, railway, roads, transport

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PROJECT BASIC DATA

Project Number:	35339	PCR Circulation Date:	Aug 2012	
Loan Number:	2051	PCR Validation Date:	Dec 2014	
Project Name:	Yichang–Wanzhou Railway Project			
Country:	People’s Republic of China		Approved (\$ million)	Actual (\$ million)
Sector:	Transport and ICT	Total Project Costs:	2,363.00	4,125.09
ADB Financing: (\$ million)	ADF: 0.00	Loan:	500.00	500.00
		Borrower:	1,138.00	2,126.67
	OCR: 500.00	Beneficiaries:	0.00	0.00
		Others:	0.00	0.00
Cofinancier:	China Development Bank	Total Cofinancing:	725.00	1,498.42
Approval Date:	15 Dec 2003	Effectiveness Date:	25 Aug 2004	26 Jul 2004
Signing Date:	27 May 2004	Closing Date:	30 Jun 2010	23 Dec 2011
Project Officers:	H. Sakurai M. Parkash W. Fang	Location ADB headquarters ADB headquarters PRC Resident Mission	From Dec 2003 Apr 2004 Jan 2008	To Mar 2004 Dec 2007 Dec 2011
Validators:	J. Supangco, Consultant F. D. De Guzman, Senior Evaluation Officer, IED2	Peer Reviewer:	E. Kwon, Principal Evaluation Specialist, IED2	
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ADB = Asian Development Bank; ADF = Asian Development Fund; ICT = information and communication technology; IED2 = Independent Evaluation Department, Division 2; OCR = ordinary capital resources; PCR = project completion report; PRC = People's Republic of China.

I. PROJECT DESCRIPTION

A. Rationale

1. During project preparation, the area between Yichang (Hubei Province) and Wanzhou (Chongqing Municipality) was economically backward. The population was 3.9 million, with rural poverty incidence estimated to be about 38.4%. Because of its remoteness, people in the project area had limited access to economic and social opportunities. Frequent accidents occurred on the roads in the area, which were congested and poorly maintained.¹

¹ ADB. 2003. *Report and Recommendation of the President to the Board of Directors: Proposed Loan to the People's Republic of China for the Yichang–Wanzhou Railway Project*. Manila.

2. A 377-kilometer (km) missing link on one of the main east–west railway routes, if constructed, could shorten routes across the north–south and east–west axes, and reduce travel time and distance between Shanghai and other economic centers on the east coast and Chongqing and Chengdu, major growth poles in the western region. This railway segment was to traverse eight counties, five of which were considered poor. Significant traffic diversion from all modes to the shortest east–west railroad was expected from the construction of the segment.

B. Expected Impact

3. The design and monitoring framework (DMF) identified pro-poor economic growth as the expected impact. Impact indicators were major welfare indicators and qualitative description of living standards, major socioeconomic indicators, and change of quality of life for the people. Additional performance indicators were included in the DMF of the project completion report (PCR) such as growth of the local economy and decrease in the number of poor people.² The impact indicators, “major welfare indicators” and “qualitative description of living standard,” were deleted.

C. Objectives or Expected Outcome

4. The project had two expected outcomes. The first outcome was promotion of economic growth in the project area, which had the following performance indicators: direct employment, indirect employment, growth of the local economy, poor population, access to wider markets, and increased production of local goods. These outcome indicators were reduced to three in the PCR: provision of direct and indirect employment, increased production of local goods, and reduction in transport costs.

5. The second outcomes were a reduction in transport bottlenecks on the national network, increased transportation capacity of the corridor, and lower transport costs. The outcome indicators were increased volume of traffic by type and origin (transit traffic and local traffic, improved operating efficiency of the existing railway system in the east–west corridor); and improved financial performance of the Ministry of Railways (MOR). During the preparation of the PCR, access to wider markets and construction of complementary roads in the project area were included as indicators. The outcome indicators indicated in the DMFs at appraisal and project completion did not specify the baseline information and numerical targets.

D. Outputs

6. The primary outputs of the project were (i) a 377 km route single-track, standard-gauge fully electrified railway line to be constructed between the Huayan Station in Yichang and Wanxian Station in Wanzhou; (ii) 24 new railway stations; (iii) freight yards; (iv) environmental protection facilities; and (v) institutional strengthening of the MOR.

E. Provision of Inputs

7. The main project activities were track laying and electrification, construction of freight yards and associated facilities, installation of a train control system, procurement of the rolling-passenger and freight-rolling stock, establishment of new stations and expansion of existing stations, provision for operation and maintenance equipment, and environmental protection facilities and maintenance. Two technical assistance projects were undertaken: (i) the first

² ADB. 2012. *Completion Report: Yichang–Wanzhou Railway Project in the People’s Republic of China*. Manila.

(\$250,000) would review alternative alignments,³ assess project feasibility, and strengthen arrangements for ensuring compliance with safeguard requirements; and (ii) the second (\$56,083) would field consultants who undertook an independent review and assessed the project's compliance with the safeguard policy of the Asian Development Bank (ADB),⁴ particularly with regard to the mitigation measures for endangered species in the Yangtze River.

8. At appraisal, in 2003, total project cost was estimated at \$2.36 billion equivalent, comprising foreign exchange of \$1.09 billion (46%) and local currency of \$1.28 billion (54%). The actual cost was \$4.12 billion equivalent, a cost overrun of 75%; this amount arose due to (i) the modification to the original design from single to double-track specification; (ii) the increased land acquisition and resettlement costs; (iii) significantly increased investment for environmental protection; (iv) additional costs for project administration; and (v) higher interest costs because of the appreciation of the yuan against the dollar. Project implementation was planned to occur over 6 years, starting in 2003, with trial freight operations commencing in December 2009. In fact, the loan did not close until December 2011, a time overrun of 2 years.

9. International consulting services (41 person-months) were budgeted to develop an advanced financial management system for a route-based investment return and profitability, and to introduce the latest project appraisal methodology including intermodal traffic modeling. The consulting services were also earmarked for diversifying railway financing, increasing the use of foreign capital, developing business, and marketing for the project.

10. Domestic consultant services (18,992 person-months) were required for project design, international procurement, construction supervision, construction quality assurance, and environmental supervision. Local consultancy services were budgeted for monitoring and evaluation (under the project performance management system [PPMS]) of environmental impacts, land acquisition, and resettlement including impacts on ethnic minorities, poverty reduction, and socioeconomic impacts of the project.

11. A total of 15,498 *mu* of land was permanently acquired,⁵ 5% less than the resettlement plan estimate; 628,748 square meters of buildings were demolished, 40% more than the resettlement plan estimate; and 12,336 persons were displaced, 31% less than the resettlement plan estimate. The project was classified as ADB environment category A.

12. To help finance the project, ADB approved in December 2003 a loan of \$500 million from its ordinary capital resources, representing 21% of the original project cost estimate. The government financed \$1.14 billion equivalent of the project costs from MOR's internally generated funds and the railway construction fund. MOR's actual contribution was increased to \$1.43 billion, plus \$698 million raised through railway bonds. Originally, the China Development Bank was to provide a term loan of \$725 million equivalent, to be repaid over 20 years with a 6-year grace period; and this amount was increased to \$1.49 billion to cover the cost overrun.

F. Implementation Arrangements

13. MOR was the executing agency. A project coordination office, consisting of key divisions under MOR's steering committee, was established as planned. The Zhengzhou Railway Administration Bureau and Chengdu Railway Administration Bureau were the implementing

³ ADB. 2002. *Technical Assistance to the People's Republic of China for Preparing the Yichang–Wanzhou Railway Project*. Manila.

⁴ ADB. 2003. *Technical Assistance to the People's Republic of China for Ensuring Safeguard Practices for the Yichang–Wanzhou Railway Project*. Manila (TA No. 4255).

⁵ A *mu* is a Chinese unit of measurement (1 *mu* = 666.67 square meters).

agencies, as planned at appraisal. In 2007, the Railway Construction Management Center under MOR took over implementation through an on-site construction management headquarters—Yichang–Wanzhou Railway (YWR) Construction Headquarters (YWRCH). However, the PCR did not clearly explain the reasons behind this change. MOR assumed accountability for land acquisition and resettlement. Implementing the resettlement plan was vested to the local governments traversed by the project. The Foreign Capital and Technical Import Center coordinated the project management office's tasks as envisaged at appraisal.

14. Procurement was very complex, with 201 separate contracts being tendered. MOR procured rolling stock separately from the project. Xiangfan SAB in Hubei Province and Chongqing SAB in Chongqing Municipality were to operate and maintain the project. The PCR made no mention whether these entities actually operated and maintained the said lines.

15. Of the 42 loan covenants, MOR fully complied with 41, but did not comply with the financial covenant that required MOR to maintain, for each of its fiscal years commencing from the commercial operation of the project, a ratio of total operating expenses to total operating revenues not higher than 75% (PCR, Appendix 7). The actual ratio fluctuated between 72% and 93% during implementation and remained at 85% 3 years thereafter. With the increase in the national freight tariff of 10% in May 2012, this ratio was expected to improve significantly.

II. EVALUATION OF PERFORMANCE AND RATINGS

A. Relevance of Design and Formulation

16. The PCR rated the project *highly relevant*. Located in the mountainous area of Hubei Province and Chongqing Municipality, the PCR noted that the project removed transport barriers and reduced transport and logistics costs, thus promoting pro-poor economic and social development. The government considered the project a priority in its Tenth and Eleventh Five-Year Plans and its completion established the railway trunk corridor connecting major economic centers in the east and west. The capacity of several connecting lines was improved with the project.

17. This validation notes that under ADB's country assistance plan, 2001–2003 for the People's Republic of China (PRC),⁶ the transport strategy focused on expanding the railway system by constructing connecting lines and linking roads with poverty areas as well as modernizing and increasing the capacity and distribution and tracking of products on key routes of the national railway system. In the 2002–2004 ADB Country Strategy and Program Update for the PRC,⁷ poverty incidence in the western region was observed to be more than four times the national average and about seven times of the eastern region. Inadequate infrastructure, severe ecological problems, and weak human resources partly explained why the western region lagged behind. Infrastructure development was considered critical to creating the conditions for private-sector-led economic growth and to integrating regional markets. ADB's Country Strategy and Program for the PRC for 2005–2007⁸ and country partnership strategies for 2008–2010⁹ and 2011–2015 focused on inclusive growth and balanced development through continued assistance to investments in transport (including railways) needed to improve connectivity, integrate the domestic economy, and boost the service sector.

⁶ ADB. 2000. *Country Assistance Plan: People's Republic of China, 2001–2003*. Manila.

⁷ ADB. 2001. *Country Strategy and Program Update: People's Republic of China, 2002–2004*. Manila.

⁸ ADB. 2004. *Country Strategy and Program Update: People's Republic of China, 2005–2007*. Manila.

⁹ ADB. 2008. *Country Partnership Strategy: People's Republic of China, 2008–2010*. Manila.

18. In 2008, ADB approved two other projects in the same region, the Chongqing–Lichuan Railway and the Lanzhou–Chongqing Railway, both double-tracked electrified railways. The PCR noted that the double-tracked section between Yichang and Liangwu improved project relevance in connection with these lines. The need for double tracking was already anticipated during the project formulation stage (PCR, para. 5) and was already considered by the project (report and recommendation of the President [RRP], para. 25). This validation notes that the shift to double tracking during implementation was a significant change in project design. As the PCR indicated, it allowed compatibility in line specifications along the rail corridor as the connecting railways were already or would soon be double tracked (Wuhan–Yichang, Chongqing–Lichuan, and other sections from the Shanghai–Chengdu corridor). The project design change during implementation seemed to have remedied the project’s initial design and helped to ensure that the project remained relevant. On this basis, the validation rates the project *relevant*.

B. Effectiveness in Achieving Project Outcome and Outputs

19. The PCR rated the project *highly effective*. It stated that the project promoted economic growth in the project area, reduced transport bottlenecks on the national network, increased transportation capacity of the corridor, and lowered transport costs. The project contributed to economic growth in the project area by boosting tourism and attracting enterprises (PCR, para. 31). It generated direct employment of 790,830 person-days of unskilled labor, of which 620,660 person-days (78%) were from the local labor market. Only 193 local laborers were recruited to work on track maintenance and security at completion. The PCR indicated that since the project opened in December 2010, additional local laborers have been hired to load and/or unload freight cars, although no estimated numbers were provided. The PCR indicated that about 493 enterprises with CNY9.7 billion investments were established during 2006–2010. The project increased competition among local freight forwarders and wholesalers: in one of the largest orange plantation bases in Wanzhou District, the price of orange increased from CNY0.4–CNY 0.6/kilogram (kg) to CNY 2.0/kg (PCR, Appendix 13, para. 6).

20. Over 600 km of access roads were constructed during implementation and were transferred to the local governments. These now serve the remote mountainous areas, benefiting the local communities. The PCR noted that the project provided a cheaper, more affordable, and safer transport. The cost to travel by train was much lower than by bus, with travel costs from Enshi city to regional cities or counties by train 70%–87% lower than by bus. However, freight traffic in 2011 was below expectations because of lesser traffic generated and the increased capacity of the Xiangyu Line,¹⁰ which accommodated more freight traffic than anticipated (PCR, Appendix 11, para. 5).

21. This validation notes from the appraisal report that the Xiangyu Line was the existing line from which diverted freight and passenger cargo made up a portion of the forecast traffic on the project. Apparently, the project was unsuccessful in attracting freight traffic from the Xiangyu line, which was estimated at 3 million tons at appraisal. In fact, the project increased the capacity on the Xiangyu Line for freight transport by allowing it to shift its passenger trains to the

¹⁰ Built in 1979, the Xiangfan–Chongqing (Xiangyu) Railway has been the principal carrier of rail traffic in the central corridor. Traffic volume on the Xiangyu Railway was forecast at 9–16 million tons for 2000 and the railway was expected to continuously carry major traffic streams between the east and west. The actual traffic of Xiangyu Railway in 2000 was 23 million tons, exceeding both the forecast and 20-million-ton design capacity of the line. Traffic on the Xiangyu Railway is now 25 million. ADB. 2003. *Report and Recommendation of the President to the Board of Directors: Proposed Loan to the People's Republic of China for the Yichang–Wanzhou Railway Project*. Manila.

project, enabling the line to carry more freight traffic. The Xiangyu Line may have recognized that freight rather than passenger was the more profitable traffic. The project, in this case, may have contributed in decongesting the Xiangyu Line, for one, since it had the project line to which it could transfer its passenger trains. With such strategy, it was able to increase its freight capacity significantly. The PCR had not clearly pointed this out, although it was discussed in the economic reevaluation appendix (PCR, Appendix 11).

22. This validation notes that most of the stated benefits relate to construction, rather than the actual performance of the railway. Thus, this validation is unable to fully assess the extent to which outcome targets were achieved, but mentions traffic volumes and transport fares in view of the absence of specific performance targets at appraisal (PCR, Appendix 1). In particular, little analysis was provided and the observed economic growth in the project area could not be entirely attributed to the construction of the railway. The PCR did not explain the method used to forecast traffic growth rates. In 2011, freight traffic was 0.59 million tons and passenger traffic was 12.26 million passengers, according to the PCR. These numbers were forecast to increase to 18.45 million tons and 28.11 million passengers by 2025, representing an annual increase of 5.8% and 3.9% annual growth rate, respectively (PCR, Appendix 11, paras. 4–5). In both, the estimation procedure for the growth rates was not explained. This validation also notes that freight traffic was lower than projected figures. However, based on 2012 and 2013 traffic data provided by the project team,¹¹ and given the shift in market focus from freight to passenger traffic, the number of passengers generated by the YWR has already in 2013 exceeded both the appraisal and PCR forecasts. If this trend continues, actual traffic could be expected to exceed the forecast figures and could justify the traffic capacity provided by the double-tracking option. Given these observations, this validation rates the project *effective*.

C. Efficiency of Resource Use in Achieving Outcome and Outputs

23. The PCR rated the project *efficient*. This validation notes that civil works were completed almost 2 years later than envisaged (22 months), and trial operation commenced about a year later than the original schedule (PCR, para. 17). The project incurred a cost overrun of 75% of the original total project cost (approved: \$2,363 million, actual: \$4,125 million).¹² The PCR indicated that the additional cost due to double tracking accounted for 30% of the total cost (PCR, para. 14). The PCR indicated that technical difficulties during project implementation (PCR, para. 17) delayed completion. The PCR was unclear in terms of how much of the cost over-run and time over-run was due to the scope change and how much was due to implementation.

24. The results of the PCR's reevaluated economic internal rates of return (EIRRs) ranged from 13.5% to 15.6%. Passenger traffic brought major economic benefits (32.9%), followed by benefits from tourism (31.6%), freight traffic (18.7%), environment and safety (9.6%), and network (7.2%) (PCR, Appendix 11). This validation notes that the PCR excluded benefits quantified at appraisal such as time savings of transit and local freight traffic diverted from the existing railway, roads and waterway, and net economic value in the project area. At the same time, the PCR included new benefits such as those in network, environment and safety, and tourism. The result of the reevaluated EIRR is not comparable with the EIRR at appraisal. This validation notes the possibility of double counting the project benefits—for example, tourism benefits could already be part of generated passenger traffic and network benefits, which are already accounted for under passenger and freight traffic benefits. While this validation is not

¹¹ E-mail of 4 December 2014 by Wang Fang, Senior Project Officer, Financial Management, PRC Resident Mission.

¹² The PCR calculated the increase in total project cost from CNY19,563 million to CNY27,490 million or about 40.5% (PCR, para. 14).

questioning the inclusion of such benefits, the PCR should have more clearly explained how they were estimated (Note the observations about traffic growth forecasts in para. 22). Based on substantial completion delay and cost overrun, and the closeness of the recalculated EIRR to the 12% hurdle rate, this validation rates the project *less than efficient*.

D. Preliminary Assessment of Sustainability

25. The PCR rated the project *likely sustainable*. It noted that since the project links the Shanghai–Chongqing–Chengdu Railway Corridor, the strong economic ties between the eastern and western regions could provide robust freight and passenger traffic. The PCR indicated that the operation of the YWR is integrated into the national railway network through established regional railway administration bureaus, which have demonstrated the capacity to maintain assets in good condition, provide adequate rolling stock, and ensure continuous operations for both freight and passenger transport. The PCR also noted that the national freight tariff for railways was increased by 10% in May 2012. This should improve MOR's financial situation and provide assurance on the sustainability of the YWR.

26. This validation notes that the recalculated financial internal rate of return was 3.9%, lower than the 5.7% expected at appraisal. This is attributed to the higher capital costs inclusive of the double-tracking cost. At PCR, the weighted average cost of capital was recalculated at 2.5%, which was lower than the appraisal estimate of 4.8%. The recalculation was based on the 3.98% interest rate on the China Development Bank loan, the 3.8% interest rate of the railway bonds, and the 8% cost of equity. This validation noted that the increase in national freight tariff and national freight rates in 2012 could enhance financial returns and improve sustainability of the project, assuming forecast freight traffic is achieved. Thus, this validation rates the project *likely sustainable*.

E. Impact

27. The PCR noted that the project has *significant* impact on regional socioeconomic development. Except for the growth in tourism, most of the impacts described in the survey were generated during project implementation. Besides direct and indirect employment and the huge investments poured into the project, the average annual growth of farmers' per capita incomes from 2002 to 2010 ranged from 7% to 17% in the project area. Poverty incidence decreased by 5.8%–18.6% during the same period.

28. The PCR determined that the number of people resettled was less than estimated. The costs increased because many households were resettled in concentrated resettlement sites as only a limited number of sites were available. The YWRCH and railway support offices consulted with local communities and affected people to solve resettlement issues during project implementation.

29. Operation of the project increased competition among local freight forwarders and wholesalers, which benefited poor farmers through fair pricing. Local governments improved the infrastructure for horticulture and livestock business during construction and after project opening.

30. About 39% of the population in the project area was ethnic minorities, of which about 92% were Tujias. To mitigate adverse impacts and ensure that minority communities received project benefits equally, (i) shops close to railway stations were constructed to improve the income of minority households affected by land acquisition, (ii) investment was provided for converting sloped land into terraces to increase agricultural output, (iii) minority laborers were

engaged as unskilled construction workers to increase incomes, (iv) public investment was provided and a railway was constructed to improve infrastructure and minority community facilities, and (v) protection and promotion of minority culture were enhanced to sustain self-recognition. This validation rates the impact of the project *significant*.

III. OTHER PERFORMANCE ASSESSMENTS

A. Performance of the Borrower and Executing Agency

31. The PCR rated the performance of the borrower and MOR *highly satisfactory*. MOR addressed the technical and engineering difficulties in constructing infrastructure facilities in mountainous regions largely by mobilizing the resources of international and domestic experts with specific expertise in constructing tunnels and bridges. Initially, the Zhengzhou Railway Administration Bureau and Chengdu Railway Administration Bureau were the implementing agencies, as agreed at appraisal (RRP, para. 28). In 2007, the Railway Construction Management Center of MOR took over the implementation supervision through the on-site YWRCH; this was not as agreed at appraisal and the PCR did not give reasons for the change. MOR ensured that the project mitigated key environmental risks and complied with ADB's safeguard policies. The borrower promptly endorsed MOR's requests in a timely manner and provided guidance on overall project implementation. However, this validation notes that the loan covenant on MOR's ratio of operating expenses to operating revenues was not complied with. MOR's financial ratio ranged between 72% and 93% during implementation and remained at 85% in the recent 3 years, compared with the required ratio of not more than 75% (PCR, Appendix 7, Loan Covenant 11). Given these observations, this validation rates the performance of the borrower and MOR *satisfactory*.

B. Performance of the Asian Development Bank

32. The PCR rated ADB's performance *satisfactory*. It noted that ADB fielded eight review missions, including midterm review during implementation. The review missions and ADB's frequent communications with MOR resolved problems during implementation. MOR expressed appreciation for ADB's efficient procurement and disbursement and resolution of implementation issues. ADB provided two technical assistance projects, which strengthened safeguards supervision during project implementation. The resettlement database system provided useful information for resettlement management. ADB closely monitored the project impact during construction as well as the impact of the railway on the local economy beyond project completion. This validation rates ADB's performance *satisfactory*.

IV. OVERALL ASSESSMENT, LESSONS, AND RECOMMENDATIONS

A. Overall Assessment and Ratings

33. This validation rates the project *successful* with the criteria ratings of *relevant*, *effective*, *less than efficient*, and *likely sustainable*. On relevance, the need for double tracking was anticipated and yet the project chose the single-track design and later changed to double tracking during implementation. On effectiveness, the project failed to achieve the forecast freight traffic in its first operation year. However, given the shift in market focus from freight to passenger traffic and actual passenger traffic volumes that exceeded the traffic forecast at appraisal, this validation rates the project *effective*. The project is rated *less than efficient* because of significant project cost overrun, completion delays, and lack of clarity on estimation of project benefits for the economic analysis.

Overall Ratings

Criteria	PCR	IED Review	Reason for Disagreement and/or Comments
Relevance:	Highly relevant	Relevant	The original project design was faulty and necessitated a change in scope during implementation (para. 18).
Effectiveness in achieving project outcome and outputs:	Highly effective	Effective	Freight traffic was lower than projected figures. However, based on 2012 and 2013 traffic data, and given the shift in market focus to passenger traffic, the YWR has been generating passenger traffic exceeding the forecast (para. 22).
Efficiency in achieving outcome and outputs:	Efficient	Less than efficient	Implementation delays, significant increases in cost, and lack of clarity estimating project benefits (para. 24).
Preliminary assessment of sustainability:	Likely sustainable	Likely sustainable	
Overall assessment:	Successful	Successful	
Borrower and executing agency:	Highly satisfactory	Satisfactory	The implementing agencies of the project were the Zhengzhou Railway Administration Bureau and Chengdu Railway Administration Bureau, but MOR subsequently took over implementation. MOR failed to comply with the loan financial covenant (para. 31).
Performance of ADB:	Satisfactory	Satisfactory	
Impact:	Significant	Significant	
Quality of PCR:		Less than satisfactory	Refer to para. 37.

ADB = Asian Development Bank, IED = Independent Evaluation Department, MOR = Ministry of Railways, PCR = project completion report, YWR = Yichang–Wanzhou Railway.

Note: From May 2012, the Independent Evaluation Department views the PCR's rating terminology of "partly" or "less" as equivalent to "less than" and uses this terminology for its own rating categories to improve clarity.

Source: ADB Independent Evaluation Department.

B. Lessons

34. The government's decision to double track sections of the project revised the original design. This could have been decided before appraisal since it was apparent that single tracking was not compatible to linking two double-tracked railway lines.

C. Recommendations for Follow-Up

35. ADB should periodically monitor the project's freight traffic, given the failure to meet forecast. This affects the financial viability of the line. Given the effect of other railway lines in the corridor on the traffic of the project, a comprehensive traffic study along the corridor should be undertaken to analyze intra and inter-modal competition characteristics. The financial operations of the project should be monitored to determine changes in financial viability. The financial covenant on MOR was not met and should be closely monitored, given the 10% increase in freight rates.

V. OTHER CONSIDERATIONS AND FOLLOW-UP

A. Monitoring and Evaluation Design, Implementation, and Utilization

36. ADB should determine whether the PPMS is operational. MOR undertook the implementation of the PPMS to ensure that project objectives are achieved and the facilities are managed efficiently. MOR was responsible for collecting information on project performance. The PCR did not indicate whether the PPMS was operational and data was being used.

B. Comments on Project Completion Report Quality

37. This validation rates the PCR quality *less than satisfactory* given the information and analysis provided. The PCR could have been more informative in providing actual performance figures of the railway, a more thorough analysis of the project's contribution to the local economy, and the performance of the railway sector during the period between project completion and PCR preparation. The PCR could have explained more clearly the changes during project implementation and their contribution to project performance. The PCR gave high ratings for relevance and effectiveness, when there were findings that should have resulted in lower ratings. The methodology for estimating economic benefits and forecasting traffic growth rates were not adequately explained. The appraisal and PCR estimates of EIRRs were not comparable. The PCR required additional clarification and updated information from the project team to arrive at the final ratings.

C. Data Sources for Validation

38. This validation used the following data sources: the project's RRP; the PCR; loan review mission reports; ADB's country assistance plan for the PRC, 2001–2003; ADB's Country Strategy and Program Update for the PRC, 2002–2004 and 2005–2007; ADB's country partnership strategy for the PRC, 2008–2010 and 2011–2015; the PRC's Tenth Five-Year Plan, 2001–2005; the PRC's Eleventh Five-Year Plan, 2005–2010; and the PRC's Twelfth Five-Year Plan, 2011–2015. Two publications on the western development strategy were also used: (i) Yu Hong. 2012. China's Western Development Strategy: Ten Years On. *East Asian Institute Background Brief* No. 715. 20 April; and (ii) Zheng Lu and Xiang Deng. 2013. Regional Policy and Regional Development: A Case Study of China's Western Development Strategy. *Annales Universitatis Apulensis Series Oeconomica*. 15 (1). pp. 250–264.

D. Recommendation for Independent Evaluation Department Follow-Up

39. As recommended in the PCR, project performance evaluation should be conducted in 2016 or later so that the impact on the project's operations will include the connecting railway lines. An accurate assessment of the project's traffic and socioeconomic impacts could be made by then.