Validation Report

Reference Number: PCV: PRC 2010-05
Project Number: 34561
Loan Number: 1784
February 2010

People’s Republic of China: Chongqing–Guizhou Roads Development Project (Chongzun Expressway)

Independent Evaluation Department

Asian Development Bank
ABBREVIATIONS

ADB – Asian Development Bank
ADF – Asian Development Fund
EA – executing agency
EIRR – economic internal rate of return
FIRR – financial internal rate of return
GEDC – Guizhou Expressway Development Corporation
IED – Independent Evaluation Department
km – kilometer
NTHS – national trunk highway system
OCR – ordinary capital resources
PCR – project completion report
PRC – People’s Republic of China
RRP – report and recommendation of the President
SAPE – sector assistance program evaluation
TA – technical assistance
WACC – weighted average cost of capital

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

Key Words
people’s republic of china, adb, asian development bank, highways, roads, lessons, independent evaluation department, performance evaluation

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In preparing any evaluation report, or by making any designation of or reference to a particular territory or geographic area in this document, the Independent Evaluation Department does not intend to make any judgments as to the legal or other status of any territory or area.
B. Project Description (summarized from the report and recommendation of the President)

(i) Rationale and expected impacts. In 2000, to cope with the increased demand for road transport, the Government of the People’s Republic of China (PRC) accelerated the construction of a national trunk highway system (NTHS). This consisted of expanding the network to 35,000 kilometers (km) of high quality interprovincial highways to be built during 1991–2010. The 1,129 km Chongqing–Zhanjiang route is one of the seven priority routes of the NTHS. It was partly completed, with about half of the sections open to traffic or under construction. The entire route was scheduled to be completed by about 2005. The Chongqing–Guizhou Roads Development Project covers the northern part of this route and links at its northern end with the ongoing Chongqing Expressway Project financed by the Asian Development Bank (ADB).1

The project was designed to ease capacity and safety constraints to efficient movement of freight and passengers along the north–south Chongqing–Zhanjiang corridor. It was also expected to help reduce poverty by improving the access of Chengdu, Chongqing, Guiyang, and other cities in the less developed interior provinces to the southern seaports of Beihai, Fangcheng, and Zhanjiang. The project road influence area had a population of 6.4 million, of whom 30% earn less than the international poverty line of $1 per capita per day. Poverty incidence in the project area was about three times the national average. Many counties and townships that lack reliable road access were to benefit from the project, which aimed to contribute to poverty reduction by promoting economic growth (i.e., increasing incomes and generating job opportunities). In particular, its feeder road component aimed to contribute directly to reducing poverty and improving social development by providing better access to social services and income opportunities in county centers connected to the main expressway component.

1 ADB. 1996. Report and Recommendation of the President to the Board of Directors on a Proposed Loan and a Technical Assistance Grant to the People’s Republic of China for the Chongqing Expressway Project. Manila (Loan 1470-PRC, for $150 million, approved on 27 September).
**Objectives or expected outcomes.** The principle objective of the project was to support pro-poor economic growth and social development by enhancing incomes and reducing poverty in Guizhou Province through significant improvements to the road system. The project was designed to (a) improve access of industrial and agricultural enterprises to markets and the southern seaports, (b) improve access of the rural population to market opportunities and social services, (c) attract investment through enhanced transport capacity, and (d) reduce congestion and accidents on existing roads. The project also supported sector reforms relating to road safety, vehicle emissions, and corporatization of expressway operations.

**Components and/or outputs.** The overall scope of the project included (a) civil works for the construction of a new 176 km four-lane, access-controlled, toll expressway from Leishendian in Chongqing Municipality to Zunyi in Guizhou Province including interchanges, tunnels (39 km in total), bridges (53 km in total), and service areas; (b) upgrading of 826 km of feeder roads in the hinterlands of the expressway; (c) procuring equipment for toll collection, traffic management and safety, communications, environmental monitoring, vehicle weigh stations, and administration; (d) undertaking land acquisition and resettlement; and (e) providing training and consulting services for construction supervision, traffic safety engineering, and monitoring and evaluation. In line with the administrative setup in the PRC, the project was split into two parts—the Leichong Expressway and the Chongzun Expressway. The Guizhou component or Chongzun Expressway is the subject of this validation report.

**C. Evaluation of Design and Implementation (project completion report assessment and validation)**

(i) **Relevance of design and formulation.** The project completion report (PCR) rightfully assessed project design against ADB's country strategy. At appraisal, the project was in line with the government's long-term NTHS strategy, with a goal of having a 35,000 km expressway network in place by 2010. It was generally consistent with ADB's strategy and program, which focused on road projects located in poorer central and western provinces and financing the construction of new tolled, access-controlled expressways under the NTHS.

Besides construction of the expressway, the project had a number of features linked to ADB's road subsector strategic priorities. Some of these features have been embedded in the scope and implementation model adopted by ADB for supporting expressways in the PRC. They were included in five earlier PRC road development projects. These features comprise (a) link and local roads (i.e., network integration so that the NTHS is supported by a system of feeder roads); (b) promotion of road safety; (c) institutional strengthening; (d) axle load testing, and vehicle emissions; and (d) corporatization; and

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2 ADB. 2000. *Report and Recommendation of the President to the Board of Directors on Proposed Loans to the People's Republic of China for the Chongqing–Guizhou Roads Development Project* (Loans 1783-PRC and 1784-PRC, for $120 million and $200 million, respectively, approved on 21 November). Manila. The report and recommendation of the President pointed to two different targets for the local road component (i.e., 826 km versus 704 km) at loan approval. The PCR does not explain this discrepancy.

3 The Guizhou component comprised (i) civil works for construction of the Chongzun Expressway, a 126 km, four-lane, access-controlled toll expressway between Chongxihe (connecting point with Chongqing expressway) and Zunyi, including tunnels (31 km), interchanges, access roads, service areas, and toll facilities; (ii) civil works for upgrading 704 km of feeder roads serving poor counties and townships; (iii) procuring equipment for toll collection, traffic management and safety, communications, environmental monitoring, vehicle weigh stations, and administration; (iv) implementing land acquisition and resettlement; and (v) providing training and consulting services for construction supervision, traffic safety engineering, and monitoring and evaluation.


5 ADB’s country strategy at the time of appraisal called for (i) the construction of expressways and highways that connect major growth centers and promote linkages with hinterland economies; (ii) integration of the network so that the NTHS is supported by a system of feeder roads, particularly those that provide access to poor areas; (iii) promotion of road safety; (iv) further institutional strengthening to increase the commercial orientation and efficiency of expressway organizations; (v) improvement of highway planning and evaluation techniques; (vi) adoption of appropriate pricing policies to ensure optimum use of road transport capacity; and (vii) use of alternative methods of investment financing, including private sector participation (ADB. 1999. *Country Operational Strategy: People's Republic of China*. Manila).

(e) pricing and cost recovery (i.e., adoption of appropriate pricing policies). Despite its high relevance, the project could still have been enhanced if it had ensured that improved highway planning and evaluation techniques and the use of alternative financing methods such as private sector participation were incorporated. Further, the inclusion of local roads to increase the poverty reduction impact of expressways remains debatable for reasons explained in detail in the sector assistance program evaluation (SAPE) of ADB Assistance on the Roads and Railways in the PRC prepared by the Independent Evaluation Department (IED) in 2006 (footnote 6).²

(ii) Project outputs as envisioned during appraisal compared to achievement of outputs; reasons for any deviation. Project outputs as described in section II.B of the PCR are summarized in Table 1:

<table>
<thead>
<tr>
<th>Expected at Appraisal</th>
<th>Actual</th>
</tr>
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<tbody>
<tr>
<td>1. Construction of the Chongzun Expressway − 126 km including interchanges, tunnels (31 km), bridges (41 km), access roads, service areas, and toll facilities</td>
<td>Due to design changes, the total length constructed was 117.9 km including associated 7 interchanges, 18 tunnels (19.2 km), 121 bridges (25.6 km), 346 overpasses and underpasses (11.2 km), and 3 service areas</td>
</tr>
<tr>
<td>2. Upgrading 704 km of feeder roads</td>
<td>Although the final length of feeder roads upgraded is not specifically mentioned in the PCR (para. 9), the implication is that all 13 feeder roads of local roads were upgraded over the project period</td>
</tr>
<tr>
<td>3. Equipment procurement for road maintenance and safety, toll collection, communications, traffic management, vehicle weigh bridges, and office administration</td>
<td>Equipment was procured but late</td>
</tr>
<tr>
<td>4. Land acquisition and resettlement</td>
<td>The PCR stated that land acquisition and resettlement activities were completed to the satisfaction of the affected persons.</td>
</tr>
<tr>
<td>5. Consulting services and training</td>
<td>Consulting services and training were provided in accordance with the terms of reference</td>
</tr>
</tbody>
</table>

km = kilometer, PCR = project completion report.

Implementation of the various components completed is covered well in the PCR.

(iii) Project cost, disbursements, borrower contribution, and conformance to schedule (as relevant to project performance). The total cost at appraisal was estimated to be $834.0 million but it was actually $809.0 million or about 3% lower than the appraisal estimate (Table 2). By component, the PCR indicates that realized savings came from the main expressway civil works component. In particular, para. 13 of the PCR states that civil works contracts awarded were about 33% lower than appraisal estimates. Likewise, para. 15 stated that loan savings were mainly caused by lower contract award prices for civil works. Both statements are misleading as the PCR basic data (section C[3]) shows the actual expressway civil works cost as $594.1 million (73% of total actual cost) compared with the appraisal estimate of $517.0 million (62% of total estimated cost). Civil works costs had increased by about 15% because of variations approved during construction (including differences between preliminary design and detailed design, which resulted in substantial variations). With costs in other categories being close to appraisal estimates and the total cost at $737.6 million compared with the appraisal estimate of $667.5 million, loan savings were not mainly in the base costs as implied by the PCR but totally caused by unused contingency funds. These cost deviations could have been explained better in the PCR.

² The PCR is relatively thin on aspects of the local road component. Without ADB financing, the PCR mission has little interest in following specifics on its implementation. Likewise, the expressway executing agency has no interest at all in collecting data on the local roads. Understandably, it is only when ADB is directly involved in the financing of the local roads that it is really likely to become more active and carefully review the project component.
Table 2: Project Cost and Implementation Schedule ($ million)

<table>
<thead>
<tr>
<th>Item</th>
<th>At Approval</th>
<th>At Completion</th>
<th>Ratio (%)</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base Cost</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Civil Works</td>
<td>517.00</td>
<td>591.40</td>
<td>114.39</td>
<td>Caused by variations during construction</td>
</tr>
<tr>
<td>Buildings and Ancillary Facilities</td>
<td>11.30</td>
<td>11.30</td>
<td>100.00</td>
<td>Within budget</td>
</tr>
<tr>
<td>Equipment</td>
<td>30.00</td>
<td>28.10</td>
<td>93.67</td>
<td>Reduced cost for equipment</td>
</tr>
<tr>
<td>Land Acquisition and Resettlement</td>
<td>43.80</td>
<td>41.00</td>
<td>93.61</td>
<td>Reduced cost for land acquisition</td>
</tr>
<tr>
<td>Consulting Services and Training</td>
<td>13.00</td>
<td>13.40</td>
<td>103.08</td>
<td></td>
</tr>
<tr>
<td>Feeder Roads Upgrading</td>
<td>52.40</td>
<td>52.40</td>
<td>100.00</td>
<td>Within budget</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td><strong>667.50</strong></td>
<td><strong>737.60</strong></td>
<td><strong>110.50</strong></td>
<td></td>
</tr>
<tr>
<td>Contingencies</td>
<td>114.30</td>
<td>0.00</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>IDC and Front-End Fee</td>
<td>52.20</td>
<td>71.40</td>
<td>136.78</td>
<td>Caused by longer implementation period</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>834.00</strong></td>
<td><strong>809.00</strong></td>
<td><strong>97.00</strong></td>
<td></td>
</tr>
</tbody>
</table>

IDC = interest during construction.


The loan closing date was extended twice from 30 September 2005 at appraisal to 31 March 2007 because of delays in the start of construction and equipment procurement (Table 3). Delay in loan effectiveness, clarifications on bid evaluation, and lengthy domestic procedures for approving the detailed design resulted in a 15-month delay in the commencement in civil works. As in the case of the Leichong component, this is unusual as most expressway projects funded by ADB in the PRC were implemented more expeditiously. However, despite the long start-up delay, completion of civil works in December 2005 was only 8 months later than the appraisal target of April 2005. Procurement for equipment started in April 2005, and delivery and installation were completed in June 2007. The upgrading of feeder roads started in September 2001 and was completed in 2007. Of the 13 feeder roads, 12 were improved before 2006 and one was upgraded in 2007 to a better technical standard than envisaged at appraisal.

Table 3: Project Schedule

<table>
<thead>
<tr>
<th>Item</th>
<th>At Appraisal</th>
<th>At Completion</th>
<th>Months Delay</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completion of Engineering Design</td>
<td>April 2000</td>
<td>April 2001</td>
<td>12</td>
</tr>
<tr>
<td>Completion of Civil Works</td>
<td>April 2005</td>
<td>December 2005</td>
<td>8</td>
</tr>
<tr>
<td>Completion of Equipment Installation</td>
<td>April 2005</td>
<td>June 2007</td>
<td>26</td>
</tr>
<tr>
<td>Start of Operations</td>
<td>April 2005</td>
<td>December 2005</td>
<td>8</td>
</tr>
</tbody>
</table>


(iv) Implementation arrangements, conditions and covenants, related technical assistance, and procurement and consultant performance. As expected at appraisal, Guizhou Expressway Development Corporation (GEDC), a state-owned enterprise responsible for financing, construction, and management of all expressways in Guizhou Province, was the Executing Agency (EA). The municipal government of Zunyi and its affiliated counties and districts were responsible for implementing the upgrading of the locally funded feeder roads. All expressway operation and maintenance in Guizhou Province is assigned to the Guizhou High-Grade Highway Administration Bureau.

No covenants were modified or waived during implementation. Most of the loan covenants (27 of 30) were either complied with or being complied with. Two were partly complied with relating to financial reporting (delayed submission of the audit report for FY2006) and monitoring and evaluation (baseline survey not conducted before land acquisition and resettlement). The covenant on nongovernment financing was not complied with. Weakness in complying with some of these covenants was experienced in a number of similar ADB-funded projects in the PRC during project implementation.
Project preparatory technical assistance (TA) was used in preparing the project, but no TA was associated with this loan. Procurement followed ADB’s guidelines or other procedures acceptable to it. Consultant performance was rated satisfactory by the PCR.

(v) **Performance of the Borrower and Executing Agency.** The PCR rated the performance of the borrower and the executing agency as satisfactory. The PCR states that GEDC implemented the project efficiently. The project had delays in mandatory approvals that contributed to the overall project implementation delays. The PCR attributes this to lengthy approval processes that are common for all projects in the country. Construction and environmental monitoring aspects were carried out well. Domestic funds were mobilized on time. According to the PCR, land acquisition and resettlement were carried out on time and to the satisfaction of the affected persons. However, para. 44 of the PCR states that the government did not adopt the compensation rates mentioned in ADB’s resettlement plan. At the same time, there has been no evaluation of the level of income restoration of the affected households as of the end of 2008 (section D[v]). This indicates room for improvement in the government’s performance. Nevertheless, the overall performance of the borrower and EA is rated satisfactory, taking into account the effective project completion, efficient project management, and general compliance with loan covenants.

(vi) **Performance of the Asian Development Bank.** The PCR rated ADB’s performance satisfactory. ADB carried out six multiproject supervision missions (with Loan 1783-PRC) between June 2001 and September 2007 (including a midterm review mission in March 2004). These exclude an inception mission in May 2001 and a project completion review mission in March 2008. Five of the missions coincided with engineering design and civil works. ADB inputs were perceived to give effective advice to the executing agency on project implementation, including procurement matters. However, there was a lack of effective input from ADB for land acquisition and resettlement supervision, with the first mission focused on these activities occurring 2 years after major activities were completed. Responsibility for project administration was transferred to the PRC Resident Mission in December 2004. The issue of lack of implementation of the project performance management system (section F) also indicates room for improvement in ADB’s performance. Overall, ADB’s performance is rated satisfactory in light of the regular review missions, ensuring compliance with loan covenants and continuity in loan administration.

**D. Evaluation of Performance (project completion report assessment and validation)**

(i) **Relevance.** The project was in line with the government’s NTHS plan as well as ADB’s past and present country strategy and program. The route is a priority NTHS section and is designed to bring better connection between (a) the western provinces with seaports in the major coastal provinces, and (b) within growth centers in the area. The project is also located in the poorer southwestern provinces, specifically in the northern part of Guizhou Province. Overall, the project design follows the scope and implementation model adopted by ADB for supporting expressways in the PRC although the inclusion of a local roads component to increase the poverty reduction impact of expressways is debatable (section C[i]). The project is rated highly relevant at the time of project preparation and at completion.

(ii) **Effectiveness in achieving outcome.** The PCR rated the project effective in achieving its expected outcomes. This validator agrees. The project contributed to an improved highway network, which effectively reduced travel times in the project area, improved road safety, reduced vehicle emissions, and strengthened the institutional capacity of GEDC to construct highways. Project outputs generally met appraisal targets. A summary of the components included under the project and actual achievements is given in Table 1. Construction of the expressway and improvement of the local roads were completed with satisfactory quality (para. 50 of the PCR). Expressway traffic indicated good growth (section D[iii]). While the expressway was generating the benefits envisaged, traffic was lower than expected. Training under the project was effective, detracting from a higher effectiveness rating.
for the project are questions concerning land acquisition and resettlement and poor planning on the need for an appropriate number of toll lanes.

(iii) **Efficiency in achieving outcome and outputs.** The economic internal rate of return (EIRR) was 14.1% compared with 16.4% estimated at appraisal. The PCR attributes the lower EIRR to the lower than expected traffic volumes (para. 35 of the PCR). The incremental traffic growth is difficult to analyze as the appraisal used medium-truck equivalents, while the PCR used passenger car units as the measure of traffic. The PCR forecasts future traffic by category but does not provide the vehicle operating savings by vehicle category. Furthermore, passenger time savings account for up to 78% of total benefits, and these were estimated to increase in real terms by 6%–10% per year. Given modern forms of communications, the value of these time savings to the economy might be significantly overstated. In the absence of specific values, the validator cannot confirm the EIRR with certainty. As a result, the PCR’s rating has to be accepted with a caveat that it needs to be reviewed in the future. In terms of implementation efficiency, expressway operations started 8 months behind target (i.e., major civil works components were delayed by 8 months), despite an initial 12-month delay in the completion of engineering design (section C[iii]). On the other hand, installation of equipment was substantially delayed at 26 months. Based on the information presented in the PCR and IED’s guidelines on assessing the efficiency of public sector projects, the validator confirms the PCR’s rating of efficient.

(iv) **Preliminary assessment of sustainability.** The physical sustainability of the expressway is likely, given the sound engineering technology used in its construction and the well-developed technical capacity of GEDC (para. 39 of the PCR). GEDC is expected to continue practicing good maintenance and sound financial management. Continued economic development in the project area will assure a steady stream of toll revenues for GEDC. The PCR reestimated the financial internal rate of return (FIRR) as 4.2% compared with 5.6% at appraisal. The rate is at the lower end of the range of FIRRs of other road projects in the PRC. This was attributed to lower than expected traffic, lower tariff in the early years of operation, and higher costs of major rehabilitation. While there has been a diversion of traffic from the national highway, actual traffic was lower than expected in the early years of expressway operation. Pricing policy, meanwhile, was apparently not implemented in this project. In addition, the toll rates used at appraisal and for the PCR evaluation were not compared nor any differences mentioned. The financial evaluation appendix does mention the introduction of a toll scheme based on axle weight for freight vehicles was applied to all expressways in Guizhou Province with a view to curbing overloading. This raises a number of questions about the sustainability of the project given the FIRR. Yet on a positive note, the recalculated FIRR was more than 20% of the reestimated weighted average cost of capital (WACC) of 2.95%. Once again, insufficient data are available for a validation to be made with a high degree of certainty. Based on the facts currently available from the PCR, the project rating of likely to be sustainable is validated.

(v) **Impact (both intended and unintended).** An environmental impact assessment was prepared at appraisal, but a different alignment was subsequently chosen to minimize construction costs, resettlement costs, and environmental damage. ADB’s environmental procedures and guidelines were

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11 The recalculated EIRR was found to be more sensitive to changes in benefits, i.e., traffic growth and passenger time savings, than to changes in operation and maintenance costs.
12 Clarifications provided by the PCR author indicate that such data could not be included in the document owing to space constraints.
14 A project for which the estimated EIRR is 12%–18% would be rated efficient.
15 The operation and maintenance costs were calculated on a different basis from the appraisal method without any explanation.
16 In June 2007, axle weight-based tolls for trucks were introduced, This brings in a different tolling structure than that envisaged at appraisal.
17 The weight-based toll scheme could discourage some heavier vehicles and change the revenue structure of the toll road.
18 The reestimated WACC is lower than the appraisal estimate of 5.2%. The actual WACC results, meanwhile, seem to be low for this type of project. The connecting Leichong Expressway completed under ADB financing at about the same time had a WACC of 3.0%. Other recently completed expressway projects in the PRC with similar financing had a WACC of 3.5%, and a recently completed ADB-funded railway project estimated the WACC as 4.9%.
followed, and environmental monitoring and mitigation measures were carried out. The PCR concludes that negative environmental impacts were mitigated.

As a new highway, the project involved substantial land acquisition and resettlement. The resettlement plan prepared at appraisal was based on feasibility preliminary engineering. During implementation, the alignment changed with the result that land acquisition increased by 190% to 1,126.5 hectares and buildings demolished increased by 400% to 432,521 square meters. Adequate reasons for this change are given in the PCR, yet total land acquisition and resettlement costs were less than estimated at appraisal. This occurred because the local authorities that implemented the resettlement plan followed their procedures and used least-cost compensation rates. One result is that 4 years after resettlement, the incomes of many of the affected persons have not been restored to the level of nonaffected persons. This is attributed to the reduced land resources for those affected and because converting cash compensation into a sustainable income-restoring modality is requiring considerable time to bring to fruition. The local government is reportedly actively assisting affected persons to restore incomes. Much of this might have been resolved earlier, but ADB did not have staff available until 2004 to help supervise these activities when most of the acquisitions had been completed. To evaluate the status of the income restoration of affected households as of the end of 2008, a survey report was to be prepared and submitted to ADB by March 2009. As of 5 November 2009, the government had not submitted this to ADB.

As in other road projects in the PRC, the project has led to improvements in transport efficiency, which facilitated economic growth and reduced poverty. Impacts from the expressway and feeder roads as outlined in the PCR have been positive. These include economic and social development by providing better and faster access to markets, jobs, schools, hospitals, and other social services. In addition, construction of the expressway generated about 2,000 long-term positions for local labor, while expressway operations have created 416 positions for local residents and another 120 for local labor in the affected villages. Considerable attention has been given to developing opportunities for ethnic minorities. The PCR also reported substantial economic impacts. External investments have been facilitated, and industrial and business development in the corridor has been substantial as enumerated in the PCR. The PCR assessed the project to have positive socioeconomic impacts. Using the appropriate IED guidelines for rating, the validator rates the project’s impact significant.

E. Overall Assessment, Lessons, and Recommendations (validation of project completion report assessment)

(i) **Overall assessment.** Based on the four-level evaluation criteria of relevance, effectiveness, efficiency, and sustainability, the project is rated successful. It is considered highly relevant, effective, efficient, and likely to be sustainable. Considering that the project was in line with ADB’s development strategy and the government’s emphasis on developing the NTHS, it is highly relevant. Although the project experienced some initial delays, the main objectives and outputs of the project were achieved. The project removed a bottleneck section of the NTHS in the region. Expressway traffic is reportedly good. Project benefits were disseminated and trickled down to poor areas along the road corridor. The EIRR indicates that the project is economically efficient. Detracting slightly from this was the questionable implementation of the resettlement plan and the relatively low (compared to appraisal), although acceptable, FIRR.

(ii) **Lessons.** The PCR recommends that bidding documents be prepared based on detailed designs and not preliminary or feasibility design. The Ministry of Communications has subsequently adjusted regulations incorporating this suggestion.

The detailed design apparently did not take into consideration envisaged socioeconomic development in the project area. As a result, some expressway facilities such as entrances, exits, and service and toll facilities are inadequate and result in bottlenecks and other inefficiencies.
In many of the early ADB-funded expressway projects in the PRC, adequate ADB staff was not available to help design and monitor the implementation of the resettlement plan. This led to apparent inequities and other shortcomings. The PCR has provided suggestions to improve the process such as updating the resettlement plan when new data are available, better supervision by ADB, better monitoring, and more timely submission of monitoring reports.

(iii) **Recommendations.** Financial covenants linked to revenue-generating transport infrastructure projects provide the usual rhetoric, which needs to be improved. For example, the general thrust of these recommendations is that financial indicators as required by covenants should be realistic in their expectation. Enough time should be allowed (e.g., 5 years) for the project's financial performance to mature instead of requiring immediate compliance. Given the procurement delays experienced with this project related to differences between government practices and ADB requirements, the PCR suggests that harmonization of ADB and government procurement procedures be a continuing process.

The project was characterized by multiple executing agencies—Chongqing Expressway Construction Company was the executing agency responsible for constructing and operating the Chongqing section of the project expressway; GEDC was the executing agency for constructing and operating the Guizhou section of the expressway. Qijiang and Wansheng counties were the implementing agencies for implementing the feeder road upgrading component in Chongqing. This required considerable efforts for coordinating among the agencies. The implementation delays witnessed on the project indicate that it is difficult to manage, finance, operate, and maintain such components because they cut across jurisdictions.

As local consultants have gained considerable experience in implementing large infrastructure projects, the PCR stated that the input of international consultants could focus more on value added in fields such as environmental protection, resource and energy saving measures, and financial management. This validation could add better methods of undertaking and presenting economic and financial evaluation to the list.

To evaluate the level of income restoration of the affected households as of the end of 2008, a survey report was supposed to have been prepared and submitted to ADB in March 2009. This has not been submitted to date. It is recommended that the PRC Resident Mission follow up with the government on this issue.

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**F. Monitoring and Evaluation Design, Implementation, and Utilization** (project completion report assessment and validation)

The project design as stated in the RRP included a good project performance management system for monitoring and evaluation of the project's impacts and outcomes. However, this structure was not implemented. The original structure included a set of indicators for evaluating performance of the project in relation to its goals, purposes, outputs, and conditions, which has been agreed with GEDC. At the beginning of project implementation, GEDC was expected to establish baseline and target values of the indicators. The indicators were supposed to be measured at completion and 3 years after completion, and compared with the benchmarks. GEDC was supposed to recruit a qualified consultant for monitoring and evaluation for about 3 months to help establish the evaluation and monitoring system, and to train staff of GEDC and implementing agencies in its use. Control groups outside the sphere of influence of either expressway or feeder roads were to be included for comparative purposes. However, the PCR does not provide any information on this.

While the environmental monitoring is reported to have been implemented effectively, land acquisition and resettlement were the responsibility of local authorities. These activities were not implemented in line with ADB’s resettlement plan. At the time of this project, these procedures were relatively new to projects in the PRC. Moreover, staffing constraints prevented ADB from providing adequate guidance, especially in the critical early stages of the project. As a result, pending issues relating to restoring the income of affected households remained even after project completion. In addition, the resettlement plan was not followed by the local agencies responsible, which used their land acquisition rates that are generally not acceptable to ADB for equity reasons.
Implementation of civil works was carried out well as envisaged, but substantial remedial work was needed because of under-design. Award of civil works contracts was delayed as was procurement of needed operational equipment.

G. Other (e.g., safeguards, including governance and anticorruption; fiduciary aspects; government assessment of the project, as applicable) (project completion report assessment and validation)

Safeguards were in place regarding environment and resettlement. However, a lack of oversight by ADB may have contributed to a somewhat lax imposition of these safeguards. Local counterpart funds were provided in a timely manner. Given local practices and the limited experience of the EA, governance appears to have been adequate and corruption is not apparent from the data provided in the PCR. The project was part of the large government-sponsored National Trunk Highway Plan and was thus important to the government.

<table>
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<tr>
<th>H. Ratings</th>
<th>PCR</th>
<th>IED Review</th>
<th>Reason for Disagreement/Comments</th>
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<tr>
<td>Relevance</td>
<td>Highly relevant</td>
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<tr>
<td>Effectiveness in Achieving Outcome</td>
<td>Effective</td>
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<td>Efficiency in Achieving Outcome and Outputs</td>
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<tr>
<td>Preliminary Assessment of Sustainability</td>
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<td>Likely</td>
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<tr>
<td>Borrower and Executing Agency</td>
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<tr>
<td>Performance of ADB</td>
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<td>Satisfactory</td>
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<td>Impact</td>
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<td>Overall Assessment</td>
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<tr>
<td>Quality of PCR</td>
<td>Satisfactory</td>
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I. Comments on PCR Quality

The PCR is of reasonable quality. It could have been more candid in its analysis of the various issues and shortcomings of the project. There remains room for improvement in the PCR's economic and financial reevaluation, which needs to provide more details on the differences in the methodology used at appraisal and at completion. While it is noted that the method used at completion could be superior, there needs to be a sensitivity analysis carried out to take into account the method used at appraisal.

The delay in procurement is not common in the PRC and could have been explained better. ADB’s strategy for transport in the PRC is spelled out, but no explanation is provided as to why the project formulation did not espouse all aspects.

Para. 9 of the main text on the length of feeder road upgrading (of 704 km) is not consistent with the stated target in the project framework (Appendix 1) of 826 km.

In Appendix 16 of the PCR, the project is rated highly efficient. The rating reported in the main text of the PCR and agreed to by the validator is efficient.

J. Recommendation for Independent Evaluation Department Follow Up

The PCR suggests that a project performance evaluation report be prepared in 2010. Several issues raised by the PCR are important and need to be postevaluated, i.e., resettlement compensation, institutional coordination, and project impact.

K. Data Sources for Validation

Data sources included the RRP; PCR; minutes of Management Review Meeting and Staff Review Committee, summary of Board discussions; as well as back-to-office reports of review missions and other documents, such as the SAPE for roads and railways in the PRC.
On 14 December 2009, Director, IED2, Independent Evaluation Department (IED), received the following comments from the PRC Resident Mission, East Asia Department.

We have reviewed IED’s earlier draft Project Completion Report Validation Report circulated to us on 6 November 2009 and its final draft that was sent to us for review on 10 December 2009. We appreciate that the comments we made to IED on the earlier draft have been adequately incorporated in the final draft. Therefore, we have no formal comment to make on the final draft.