



1. Project Data

Project ID

P122321

Project Name

CN-Jilin-Hunchun Railway

Country

China

Practice Area(Lead)

Transport & ICT

L/C/TF Number(s)

IBRD-80520

Closing Date (Original)

31-Dec-2016

Total Project Cost (USD)

6,303,000,000.00

Bank Approval Date

24-May-2011

Closing Date (Actual)

31-Dec-2016

IBRD/IDA (USD)
Grants (USD)

Original Commitment

200,000,000.00

0.00

Revised Commitment

198,672,232.78

0.00

Actual

198,672,232.78

0.00

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2. Project Objectives and Components

a. Objectives

The Project Development Objective (PDO) as stated in the Loan Agreement (Schedule 1, page 4) and in the Project Appraisal Document (PAD, page 5) was:

"To respond to existing and anticipated transport demand along the Jilin- Hunchun corridor by providing increased capacity for freight and passengers, and faster travel time and increased frequency of services for passengers."



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

No

c. Will a split evaluation be undertaken?

No

d. Components

This project was part of a wider national program of railway projects that supported the construction of 2,660 km of rail lines during the period. There was one component.

Railway line between Jilin and Hunchun. (Estimated cost at appraisal US\$5,436.90 million. Actual cost at closure US\$4,768.05 million). This component aimed at connecting Jilin, the capital and second largest city of Jilin Province, with the long-distance Passenger Dedicated Line (PDL) network at Changchun, the largest city of the province. Activities in this component included:

1. Construction of about 300 Kilometers (km) of double-track, electrified, passenger-dedicated high-speed rail line including construction of subgrade, tunnels, bridges, buildings, installing communications systems (such as a telephone exchange network, a dispatching communication system, data communication network, video conference network and an emergency communication system), installation of signaling, mechanical, electrification and maintenance equipment, a safety monitoring system and rolling stock.
2. Construction of eight new stations along the line.
3. Land acquisition and resettlement of displaced persons.

e. Comments on Project Cost, Financing, Borrower Contribution, and Dates

Project Costs. The total estimated project cost (including baseline cost, costs associated with physical contingencies, interest during construction and Front-end IBRD fee) was US\$6,303.00 million. The total cost at closure (including actual project cost, costs associated with physical contingencies, interest during construction and front-end IBRD fee) was US\$5,272.45 million, about 86% of the appraisal estimate.

Project Financing. The project was financed by an IBRD loan of US\$200.00 million. At closure, US\$198.70 million was disbursed.

Borrower Contribution. The Borrower contribution was estimated at US\$6,103 million. At closure, their contribution was US\$5,257.40 million, or 86% of the appraisal estimate.

Dates. The project closed as per schedule on 12/31/2016.

3. Relevance of Objectives & Design

a. Relevance of Objectives

Between 2000 and 2008 passenger traffic (measured in passenger kilometer (km) and freight traffic (in ton km) grew by 70% and 82% respectively in China and although the railway network had been expanded by 11% since 2000, it was unable to keep pace with demand. The PDO of increasing railway capacity to meet the existing and anticipated demand was highly relevant, as railways provided the most economic means of



transport for movement of passengers and freight over long distances compared with road transport. Railways were also more energy-efficient, safer and less land-hungry than the road mode and were more conducive to reducing atmospheric pollution. Construction of railways was also more economical in terms of land usage as compared with construction of highways.

The importance of the PDO to the government was articulated in the following documents. In 2004, The government's *Mid and Long-Term Railway Network Plan* adopted in 2004 and updated in 2008, set out the investment required at the rate of about US\$12 billion per year through 2020. This plan aimed at developing high-speed passenger networks and highlighted the need for progressive separation of freight traffic that was to use the existing conventional rail network from passenger traffic that was to be met through the high-speed network. This plan also identified the railway line between Jilin and Hunchun as a national priority. As the majority of passenger traffic were expected to transfer to the JiTuHun high speed line, the existing lines would be able to offer additional capacity for the anticipated growth of freight traffic.

Of the government's November 2008, economic stimulus program, nearly half was allocated to the transport sector, with railway construction forming over 40% of that transport component. The PDO was consistent with China's 12th Five Year plan for the 2011-2015 period. China's 13th Five Year Plan for the 2016-2020 period aimed at developing integrated and eco-friendly transportation networks through building a comprehensive transportation system that connected domestic and international transportation routes and covering both urban and rural areas in the country. The PDO was also relevant to the government's commitment to the economic development of the region under the ChangJiTu plan issued in 2009 (the region stretching from Changchun to Jilin To Tumen in eastern China).

At appraisal, the project contributed to the priorities set in the Country Partnership Strategy (CPS) for the 2006-2010 period on the dimensions of: (i) Integrating China into the world economy through creating opportunities for facilitating rail services between northeast China, North Korea and Russia; (ii) Reducing poverty, inequality and social exclusion; and, (iii) Managing resource scarcity and environmental challenges. The PDO continues to be relevant with the Bank's CPS for the 2013-2016 period, on the dimensions of fostering greener growth through low carbon-transport and improving transport connectivity for balanced regional economic development within the country.

Rating

High

b. Relevance of Design

The statement of the PDO was clear and the causal links between the project activities, their outputs and the outcomes were clear. And the intended outcomes were measurable in principle.

The construction of double-track, electrified, passenger-dedicated high-speed rail lines was intended to increase capacity for long haul movement of passengers and this, in conjunction with increased frequency of passenger services, can be expected to reduce travel time and thereby contribute to meet the existing and anticipated transport demand for passenger rail services along the Jilin-Hunchun corridor. The construction of the new passenger line could be expected to free capacity on the existing line for freight services and this can be expected to meet also the growing demand for moving freight along the corridor. The outcomes could be expected to contribute to the higher-level objective of integrating China into the world economy, reducing poverty and inequality within China and address transport-related environmental challenges facing the



Chinese economy. The design also identified the exogenous effects on the environment and incorporated measures to address such effects.

Rating

Substantial

4. Achievement of Objectives (Efficacy)

Objective 1

Objective

To respond to existing and anticipated transport demand along the Jilin-Hunchun corridor by providing increased capacity for freight and passengers

Rationale

Outputs.

Project outputs which are common to the three objectives are as follows.

- 360 km of double-track electrified, passenger-dedicated high-speed rail line was constructed between the cities of Jilin and Hunchun in Jilin province and capable of a maximum speed of 250 km/h was built, as targeted. This included construction of sub-grades, tunnels, bridges, culverts and buildings and acquisition and installation of goods (including communications, signaling and electrification equipment and maintenance vehicles). The 360-km railway track has 90.96 km of track on bridges and viaducts and 155.7 km of track in 66 tunnels and included a 3.3 km four track bridge over the highway and Songhua River on the outskirts of Jilin. The technical parameters of the railway met international standards in respect of track, power supply, overhead electric system, signaling, communications, train control and dispatching system and energy conservation.
- Ballasted track except in tunnels, as opposed to the originally envision ballast-less track for the entire line, was provided. Jilin loop was removed from the project because it was constructed by another entity (ICR, page 24). The ICR (page 6) reports that the project experienced an accident when a part of Xiaopanling Number 1 Tunnel collapsed during construction: 12 workmen were trapped, but were subsequently rescued and there were no fatalities. This issue was eventually resolved and corrective measures were taken during implementation.
- Six stations were completed and commissioned at project closure. This was short of the target of eight stations as two stations still remained to be commissioned at project closure.
- Technical assistance was provided in selected areas, such as governance and structure of the railway industry, were completed as targeted.

Outcomes.



- Additional rail capacity (defined as a combination of the new high-speed rail line and the existing conventional rail line) was provided with the number of train pairs operating per day on the JiTuHun line increasing to 26 at project closure. This exceeded the target of 13.
- At closure, the HSR line carried 8.2 million passengers across the project screen line (a fixed measuring point between Jilin and JiaoHe stations) as compared to the target of 8 million passengers.

A beneficiary survey was conducted to assess the benefits at project closure. The methodology followed was passenger surveys on the JiTuHun High-Speed Rail (HSR) on May 10, 2016 and November 24, 2016 on a sample of 500 randomly selected passengers-on board the trains and in the stations. The survey included 406 interviews from on-board the High-speed trains and 49 from HSR stations. For comparison, 57 passengers from conventional trains were interviewed. The surveys indicated that 17% of passengers on the line represented generated traffic (travelers who would not have travelled without the HSR) and 83% of passengers would have taken another mode if the HSR had not been available. The survey indicated that residents had increased their travel frequency for both business and personal trips. The survey results revealed that the rail service was used by a relatively broad range of income levels. The on-board surveys based on the 2016 traffic, indicated that traffic density for 2016 was about 24% lower than estimated at appraisal. The ICR (page 27) notes, although passenger volumes on High-Speed Rail lines were expected to increase to 7.0 million in the second year of operation, albeit lower than the appraisal estimate of 7.3 million.

Although the project contributed to increasing the supply of HSR and thereby increasing capacity, it is not clear the extent to which the project activities contributed to the PDO of responding to the existing and anticipated transport demand for freight and passengers, given that passenger demand for HSR services were lower than estimated at appraisal and even if they were to increase in the second year of operation, they were still expected to be below the appraisal estimate. Regarding the existing and anticipated demand for freight traffic, there was a reduction in freight traffic from earlier years, although this primarily due to exogenous factors, such as change in government energy policy away from coal-fired power. Given the low traffic density than anticipated at appraisal for High Speed Rail at project closure and non-completion of some activities associated with construction of bridges as targeted, it is reasonable to assume that the project at best made a significant contribution to realizing the PDO of responding to existing and anticipated passenger transport demand along the corridor.

Rating
Substantial

Objective 2

Objective

To respond to existing and anticipated transport demand along the Jilin-Hunchun corridor through faster travel time.

Rationale
Outcomes



- The transit time for passengers travelling between Tumen and Jilin reduced from 420 minutes to 113 minutes at project closure, exceeding the target reduction of 145 minutes compared with the seven hours on the conventional rail line. The beneficiary survey cited above indicated that more than 50% of travelers chose HSR due to the shorter travel time (ICR, page 43).

Rating
High

Objective 3 **Objective**

To respond to existing and anticipated transport demand along the Jilin-Hunchun corridor through increased frequency of services for passengers.

Rationale **Outcomes.**

The frequency of high-speed trains increased to 26 pair trains in 2016 as compared to the target of 13 trains (ICR, page 12-13). The ICR notes that although it was assumed at appraisal that the service would be predominantly operated by 16 car trains travelling the full length of the route, many services at project closure were operated by more frequent 8-car trains, several of which only travelled short distances. While the service frequency before the project was eight trains per day, or approximately two hour and forty minutes between trains during operating hours, at closure the number of operating was 28 pairs, which was approximately 35 minutes between trains between operating hours.

Although the project contributed to increasing the supply of HSR, the PDO aimed at responding to the existing and anticipated transport demand for freight and passengers. It is not clear if the demand for HSR were overestimated given that the traffic density was lower than estimated at appraisal and even if they were to increase in the second year of operation, they were still expected to be lower than anticipated at appraisal. Given the low traffic density than anticipated at appraisal for High Speed Rail on the corridor, in conjunction with non-completion of two stations at project closure, it is reasonable to assume that the project made a significant contribution to realizing the PDO of responding to existing and anticipated transport demand along the corridor for freight and passengers.

Rating
Substantial



5. Efficiency

Economic Analysis. A Cost-Benefit Economic Analysis was conducted for the project's single component that accounted for approximately 86% of the project cost at appraisal and 90% of the project cost at closure, using the same methodology. The project benefits were assumed to come from the travel time savings associated with High Speed Rail, as compared with travel by existing road and rail links. Other benefits which were identified but not factored in the economic analysis included agglomeration benefits associated with regional economic development due to improved accessibility (the notion is that a transport project that leads to reduction in travel times between regional economic centers can impact on companies locational choices and agglomeration of companies in particular areas can generate positive externalities such as knowledge spillovers between companies and greater productivity due to competition). The ex post Economic Internal Rate of Return (EIRR) was 8.4% as compared to the ex ante EIRR of 6.2%.

Administrative and Operational Issues. The actual project cost was lower than the appraisal estimate (about 86% of the estimate). Actual cost was lower due to changes in design: (i) as opposed to the originally envisaged ballast-less track structure, the design opted for a ballasted track and this resulted in cost savings of about Renminbi (RMB 3.1 billion); and, (ii) the exclusion of the construction of the Jilin hub loop resulted in cost saving of RMB 2.4 billion. There were no time overruns and despite the suspension of activity for about a month due to the collapse of the tunnel during implementation, the railway line opened for service on September 20, 2015, a year before loan closing and a month ahead of schedule. All activities, with the exception of two small stations, which had been commissioned at project closure, were completed.

Efficiency Rating

Substantial

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

	Rate Available?	Point value (%)	*Coverage/Scope (%)
Appraisal	✓	6.20	86.00 <input type="checkbox"/> Not Applicable
ICR Estimate	✓	8.40	0 <input type="checkbox"/> Not Applicable

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

6. Outcome

Relevance of objective for the government strategy and the Bank strategy for China is rated as High. Relevance of design is rated as Substantial. Efficacy of the two objectives- to respond to existing and anticipated transport demand along the Jilin-Hunchun corridor by providing increased capacity for freight and passengers and



through increased frequency of services of passengers was rated as Substantial, albeit that there were minor shortcomings such as underestimation of passenger traffic flows on the corridor and non-completion of two stations at project closure. Efficacy of the third objective to respond to existing and anticipated transport demand for passenger and freight through travel time saving was rated as High. Efficiency was rated as Substantial. The ex-post EIRR exceeded the ex-ante EIRR. The project activities were completed ahead of time and at lower costs and the line was operational ahead of the loan closing date.

a. Outcome Rating
Satisfactory

7. Rationale for Risk to Development Outcome Rating

Financial Risk. Although the cash revenues of Changji Company exceeds its operating cost and the company has restructured its RMB22 billion debt so that it is repayable over a longer time period, it is not clear if the Company will be able to cover its expected maintenance cost, given that the traffic forecast was based on the assumption of improved cooperation between China, North Korea and Russia. Additional clarifications provided by the team indicated that in the short term, the Shenyang Regional Administration (which was a major shareholder of the Changji Company) was committed to absorbing the infrastructure maintenance cost associated with maintenance of the line. Thus financial risk is rated as Low.

Technical Risk. Given that similar train systems were operating with high levels of safety and reliability in China since 2008, the technical risk is rated as Low.

Social Risk. Rail passenger fares are regulated and set below cost-recovery in China in line with the government policy of considering public transport as a social good. However, the price for railway tickets was competitive with alternative costs of travel (such as bus, air or even automobile) and given that passenger surveys showed that passengers were willing to pay a surcharge, the social risk is rated as Low.

Government Commitment. China has been investing in railways more than planned and railways remain a priority in the 13th Five Year Plan and up to 2030. The government moreover sees the high-speed network as a key instrument for rebalancing regional growth in less developed regions as well as an important contributor to a low-carbon economy. Given this, this risk is rated as Low.

a. Risk to Development Outcome Rating
Negligible

8. Assessment of Bank Performance

a. Quality-at-Entry

This project, a part of a large railway program, was prepared based on lessons from past railway projects in China. Given that experience of the Sixth Railway Project (1993) and Seventh Railway Project (1995) had



shown that constraints on supervision due to limited resources when the size of one component overshadows other components, the project was designed with a single component. Given the problems associated with resettlement and environmental compliance in the case of some prior projects (the second, third, sixth and seventh railway projects), the design envisioned monitoring of safeguards compliance through independent consultants. As in the case of two prior Bank-financed Railway Projects (the Shizheng and Guang Railway projects), the project design envisioned the creation of a project company - the JiTuHun Passenger Dedicated Railway Line Company (JRC) and transfer of assets created by the project to the company by the Ministry of Railways (MOR), to strengthen ownership of the project. Though the Bank financed only 3.3% of the total project cost which was relatively low compared to most Bank projects in China, it contributed towards supporting a wider program of railway projects (2,660 km or rail lines over six projects during the period) and leveraged efficient use of Bank resources by extending the application of Bank safeguard requirements, over a much larger project. Risks were identified at appraisal (delays given the size of the project, protests caused by resettlement and loss of businesses, and the impact of traffic volume on greenfield sites) and appropriate risk mitigation measures were incorporated at design especially safeguards and fiduciary compliance (discussed in section 11).

Quality-at-Entry Rating

Satisfactory

b. Quality of supervision

Ten Implementation Status Reports (ISRs) were filed over a six-year period, implying supervision missions of approximately twice a year. The team conducted regular supervisions and provided training to the external monitoring agency hired for addressing environmental issues (discussed in section 11) and contributed to reaching agreement with the Government on debt restructuring to ensure financial sustainability. The supervision team was diligent and had the required expertise. Given that there was an accident when part of the one tunnel collapsed during implementation, it is not clear that there was adequate risk assessment of the contract for tunneling and adequate mitigation measures were incorporated of the contract for tunneling. The supervision team however subsequently worked closely with the China Railway Company (CRC) to ensure workers' and safety of sites and helped in preparing an action plan to address and prevent work-related accidents in future, including monitoring of tunnel deformation by a professional geologist and inspections of the tunnel daily. In parallel with project activities, the supervision team engaged in policy dialogue with the Ministry of Railways and CRC on sector reforms and analytical work in railway financing.

Quality of Supervision Rating

Highly Satisfactory

Overall Bank Performance Rating

Satisfactory

9. Assessment of Borrower Performance



a. Government Performance

The government's commitment to meet the growing demand for rail services through increasing capacity was evidenced by the increase in investment in the railway sector and providing the counterpart funds in a timely fashion. The government complied with loan covenants, including fiduciary and safeguard aspects. The Ministry of Railways (MOR) delegated responsibility and provided the needed resource and this aided in timely project implementation. The MOR demonstrated strong ownership during implementation by participating in Bank supervision missions and engaged with the Bank on railway sector reform.

Government Performance Rating

Satisfactory

b. Implementing Agency Performance

The Foreign Capital and Import Technical Center (FCTIC) of the MOR was in charge of implementing the project. With the formation of the Changi Company Limited in April 2011, the company took over as the project implementation entity. The FCTIC, the China Railway Corporation (CRC) and the newly formed company adhered to project implementation requirements and this in conjunction with their engagement in Bank missions, contributed to the timely completion of the project. The railway company monitored resettlement and ensured timely payment of compensation to project affected persons. The railway company also coordinated closely with local governments to review options to improve connectivity between urban and rural areas and provided data on performance indicators in a timely fashion once the service was operational.

Given that the project experienced an accident when a part of Xiaopanling Number One Tunnel collapsed during construction, it is not clear if the implementing agency took adequate risk assessment measures at preparation. The issue was resolved during implementation and there were no technical problems in the months after the commencement of commercial operations.

Implementing Agency Performance Rating

Satisfactory

Overall Borrower Performance Rating

Satisfactory

10. M&E Design, Implementation, & Utilization

a. M&E Design

The key M&E indicators were, number of trains operating per day on the JiTuHun line, number of passengers travelling on the line and reduction in transit time for passengers travelling between Tumen and Jilin, and they



were appropriate for monitoring performance. The data for monitoring indicators were simple and could be collected easily.

The results framework did not include an indicator for monitoring freight traffic. It is not clear how the baselines were established and how intermediate indicators "Completion rate of civil works" and "delivery of Bank finance goods" were to be measured.

b. M&E Implementation

The Ministry of Railways through the Foreign Capital and Technical Import Center (FCTIC) and the JiTuHun Railway Company were in charge of monitoring progress in the initial years and, later, the Changji Railway Company was responsible for monitoring performance compared with targets.

c. M&E Utilization

The indicators were used for monitoring project performance.

M&E Quality Rating

Modest

11. Other Issues

a. Safeguards

The project was classified as a category "A" under Environmental Assessment (OP/BP 4.01). Four other safeguard policies were triggered: Natural Habitats (OP/BP 4.04); Physical Cultural Resources (OP/BP4.11), Indigenous Peoples (OP/BP 4.10) and, Involuntary Resettlement (OP//BP 4.12).

Environmental Assessment, Natural Habitats and Physical Cultural Resources. The PAD (page 27) notes that a number of environmentally sensitive sites were identified near the project corridor, including nine nature reserves, scenic areas and forest parks, three cultural relic sites and five water resource protection areas. The main environmental issues included impacts such as noise, dust, social disturbance, ecological impact and soil erosion during construction and noise, safety and community connectivity during operation. A Full Environmental Impact Assessment (EIA) was conducted at appraisal that addressed the key environmental issues including issues pertaining to nature reserves, cultural resources and water protection areas. An Environmental Impact Assessment (EIA), a stand-alone Environmental Management Plan (EMP) and an Environmental Assessment (EA) Summary was prepared and publicly-disclosed (PAD, pages 14 and 15).

The ICR (page 8) notes that an independent external environmental monitoring consultant was in place during the implementation period and this in conjunction with the Bank's supervision missions, aided in compliance with environmental safeguards. Environmental protection and pollution control measures were implemented as per the EIA's requirements and all temporarily disturbed land were either restored or reclaimed and handed over to local communities and owners and noise barriers were installed as per



design requirements and the railway line was fenced for safety.

Involuntary Resettlement and Indigenous Peoples. The PAD (page 14) notes that the approximately 17,000 mu (a unit of land area, equivalent to 1,133.3 hectares) of land was to be permanently acquired, of which 98% was rural collective land and approximately mu of buildings were expected to be demolished, of which 39% was rural housing, 49% urban housing and the balance included residential, enterprises and schools. The project was not expected to involve demolition of illegal structures. The project was estimated to affect 4,221 households (24% rural and 76% urban) who were to be resettled. A Resettlement Action Plan (RAP) was prepared at appraisal which included grievance handling procedures, arrangements for internal and external monitoring, implementation arrangements and clarifying financing sources for resettlement (PAD, page 14). An Indigenous People screening conducted at appraisal showed that Korean minority villages in Jiaohe Country and some villages in Man minorities in Yanji City were within the project intervened areas. An Ethnic Minority Development Plan (IPP) was prepared and integrated with the Resettlement Plan. Both the RAP and IPP were publicly disclosed in accordance with Bank's policy (PAD, page 31).

At project closure, the Changji Railway Company acquired 1,233 hectares of land as compared to the 1,133.3 hectares estimated at appraisal and had paid the appropriate compensation. 5,508 households were relocated as compared to the 4,221 households estimated at appraisal and the resettlement cost at project completion was about RMB 5.24 million, about 22% higher than the anticipated project resettlement cost.

b. Fiduciary Compliance

The Foreign Capital and Technical Import Center (FCTIC) in the Ministry of Railways (MOR) was in charge of financial and procurement management.

Financial Management. A financial management assessment conducted at appraisal concluded that the Center's financial management arrangements satisfied the Bank's requirements (PAD, page 13) and financial management risk was rated as Moderate (PAD, page 25). The ICR (page 8) notes that there was compliance with financial management. The auditors issued unmodified/clear opinions on project financial statements and the interim unaudited financial reports were submitted in a timely fashion.

Procurement. The FCTIC had managed four Bank-financed projects with similar procurement arrangements. An assessment of the procurement arrangements at appraisal concluded that the Center had the required ability to address procurement issues (PAD, page 13). A procurement plan providing the basis for procurement arrangement was developed at appraisal. The ICR (page 8) notes that there were no procurement issues or delays and procurement management was deemed to be satisfactory.

c. Unintended impacts (Positive or Negative)

d. Other



12. Ratings

Ratings	ICR	IEG	Reason for Disagreements/Comment
Outcome	Highly Satisfactory	Satisfactory	Efficacy of the two sub objectives - to respond to the existing and anticipated transport demand for freight and passengers and to increase frequency was rated as Substantial in view of the minor shortcomings.
Risk to Development Outcome	Negligible	Negligible	---
Bank Performance	Satisfactory	Satisfactory	---
Borrower Performance	Highly Satisfactory	Satisfactory	The implementing agency performance was rated as Satisfactory in view of the minor shortcomings which was resolved during implementation.
Quality of ICR		Substantial	---

Note

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 draws the following main lessons from the experience of implementing this project, with some adaptation of language.

(1) A unified and autonomous management structure can facilitate the creation and implementation of a railway program. In the case of this project, the China Railway Corporation was solely responsible for planning, financing and implementation of individual projects and delivery mechanisms. This combined with legal and institutional power contributed to unified control over the problem and enabled timely completion of activities, despite the relatively marginal financial contribution from the Bank.

(2). Although agglomeration benefits have been recognized in theory with railway projects, there are few quantitative data to assess the results. This may be due to the longer time span required for reaping the benefits. An ex-post analysis after five or ten years after the railways have been in operation could be undertaken to assess the quantitative benefits.

(3) A multi-project World Bank engagement can help in engaging in a broader policy dialogue aimed at



institutional change. Although Bank financial contribution to this project was limited, it enabled the Bank to support a unified program of railway projects and enabled the Bank to provide holistic support through policy dialogue with the Ministry of Railways and China Railway Corporation.

14. Assessment Recommended?

No

15. Comments on Quality of ICR

The ICR is concise and well written. Given that this project was classified as an Environmental Category "A" project, the ICR provides a thorough description of the possible environment impacts and the measures taken to ensure compliance.

The ICR draws some unwarranted conclusions. Given that the focus of the project was only on infrastructure building, it is not clear the extent to which the project activities directly contributed to advancing sector reforms (ICR, page 21).

a. Quality of ICR Rating

Substantial