1. Country and Sector Background

A. Country Context

For the last two decades China has made investment in transport infrastructure a centerpiece of its successful strategy for promoting trade and sustaining high economic growth rates. All modes of transport have benefited from massive improvements to the capacity and quality of infrastructure. This infrastructure hosts a burgeoning transport service industry of small, medium and large-sized businesses: freight haulage and forwarding companies; passenger transport services that meet the growing public aspiration for higher personal mobility; and many associated service companies in areas such as logistics, equipment maintenance and tourism.
Until recently, the largest part of transport infrastructure investments in China, around three-quarters, was in the road system, while the railway sector attracted only about 17 percent of investments. Ports, airports and inland waterways made up the rest. China is now giving increasing attention to investments in its national railway network, which carries around 29 percent more traffic (in traffic-unit kilometer) than the road system.

This increased attention was also evident in China’s November 2008 economic stimulus program. Of the total program funds, nearly half was allocated to transport, with railway construction projects forming over 40 percent of that transport component. As the stimulus package has been subsequently enhanced, the planned investments in railways have been further augmented. While many of the projects brought forward are naturally in the more prosperous areas, some are more regionally focused, reflecting the Government’s desire to spread the benefits of development to more remote parts of the country. The JiTuHun Railway Project, designed to support the ongoing economic development of the Tumen River area, is one such project.

B. Sectoral and Institutional Context

Major transport infrastructure improvements are already under way in the area to be served by the JiTuHun Railway. The new Changchun – Tumen Highway is nearly completed and an upgraded border crossing to North Korea at QuanHe has been opened. The Changchun – Jilin high speed rail line is currently under construction. Finally, the proposed JiTuHun railway line will dramatically improve regional accessibility between Jilin and Hunchun and free up additional capacity for freight transport on the existing line.

The existing railway line serving the region was opened before the establishment of the People’s Republic of China, when the region was under foreign occupation. It is a mixed passenger-freight single-track line that operates for the most part at a maximum speed of about 100 km/h. Average rail passenger travel time between Jilin and Tumen is seven hours. In 2009, the railroad between the Jilin and Hunchun carried about 5.9 million passengers and 7 million tonnes of freight. The low level of rail service offered by the existing line in combination with relatively poor roadway infrastructure has for many years been a constraint to accessibility in the eastern region of Jilin province. This poor accessibility is thought to contribute to the relatively low GDP per capita in the region of USD $2,641 (2009), which is 30 percent lower than the average for the province as a whole.

The Chinese Railway Sector

Government policies and railway management actions over the last decades have transformed the railway sector into a vital element of China’s national transport system and facilitated China’s economic growth. In 1949, China had only 22,000 km of poorly maintained and war-damaged railway line. Today, on a railway network of nearly 80,000 route-km, China Railways carries the highest volume of passenger traffic and the second highest volume of freight traffic of any railway in the world. Between 2000 and 2008, traffic grew very rapidly, with passenger traffic growing by 70 percent (in passenger-km) and freight by 82 percent (in tonne-km). The economic downturn has had some impact, with passenger traffic in 2009 up by only 1.3 percent and freight traffic by 0.5 percent compared with the year before. The Ministry of Railways, along with its
constituent regional railway authorities and other entities, has created a modern rail system by adopting proven international practices and technologies and adapting them to Chinese circumstances.

The railway sector as a whole in China faces two key challenges. The first is to improve the capacity and quality of infrastructure and services in a railway network that is already the busiest, by a wide margin, of any in the world. The second is to adapt the railway industry to become more commercially responsive to the market economy. Addressing these challenges is key but, as importantly, their answers will also have to reflect the Government of China’s regional policy aims to ensure the benefits of development are shared with the more remote provinces, such as Jilin in the northeast of China where the proposed railway line is located. China’s railway infrastructure development strategy, including this regional development dimension, is embodied in the Government’s Mid- and Long-term Railway Network Plan, which was adopted in 2004 and updated in 2008 and describes railway development up through 2020. The strategy, containing the most ambitious program of railway network development anywhere in the world since the nineteenth century, is ahead of its original implementation schedule. The plan in particular entails the development of the largest high-speed passenger network in the world and the progressive separation of freight traffic, which will use the existing conventional network, from passenger traffic, which will increasingly use the new high-speed network. This will greatly enhance the overall capacity and quality of services and create the conditions for high operational and financial efficiency for each line of business. The railway line between Jilin and Hunchun has been identified as a national priority in the updated Mid- and Long-term Railway Network Plan.

In terms of commercialization, China’s rail sector has adopted many structural and organizational reforms. These include the separation and divestment of non-core activities, granting concessions to branch lines, establishing regulations to permit foreign investment, establishing specialist companies for particular freight markets, and establishing joint-ventures with provincial governments and others. The sector has also changed by eliminating an entire layer of management and developing ways to access new sources of funding.

2. Objectives

The development objective of the proposed project is 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.

3. Rationale for Bank Involvement

The Bank’s involvement in this project, and more broadly in the railway sector, contributes to both pillars of the sector strategy and to setting up one of the most important structuring elements of the Chinese economy of tomorrow. The high-speed railway program is expected to lead to a new model of spatial economic integration in China by contracting economic distances and generating agglomeration benefits. The value added comes from the long-term partnership between China and the Bank, spreading over twenty years in the sector, and combining continuous support to the physical development of the Chinese railway system with a wide range
of demand driven analytical and advisory activities that contribute to the railway system’s transformation. With this 14th loan to the Ministry of Railways (MOR), the Bank will have lent over US$3.5 billion in support of China Railway development.

The implementation progress and challenges witnessed as part of the physical upgrades of the system will also provide a platform for continued and informed high-level engagement on railway and transport policy between the Bank, the Ministry of Railways and the National Development and Reform Commission (NDRC). At project level, this partnership provides the Ministry with timely access to technical advice on the application of safeguard policies, economic evaluations and procurement, which can be applied across its broader Mid- and Long-term Railway Network Plan.

Recent technical and analytical assistance provided by the Bank has included topics as diverse as: specification of new traffic management information systems; advice on non-traditional financing sources; advice on handling multiple train operators on the railway network; comparison of the social costs of railways and other modes; railway infrastructure investment policies in selected countries; and research into market-based railway pricing policies and structures. The Asian Development Bank and other donors have also been active in areas of technical co-operation. The Bank has also supported the transfer of lessons learned in China to other countries, most recently in the form of a high level study tour of Indian Railways to China and a review of high-speed rail experience in China and its applicability to other parts of the world.

The project will also include assistance to China in quantifying the regional benefits of transport investments based on economic principles that have become known as the New Economic Geography. These benefits arise through the stimulation, over time, of regional economic development associated with the productivity and agglomeration of firms, the working of product and service markets and the working of the labor market. This is particularly relevant for this project as the far northeast region that will be served by the new railway was historically dominated by state-owned enterprises operating in the heavy industrial sector of the planned economy, and which has since struggled to broaden and diversify its economic base.

4. Description

The project will construct a double-track, electrified, passenger-dedicated high-speed rail line capable of a maximum speed of 250 km/h of about 360 kms between the cities of Jilin and Hunchun in Jilin province. In addition it will construct two links between West Tumen station and Qushui (2.1 km) and between Tumen-Hunchun Railway and Qushui (0.83km) as also a double line track between Jilin station and South Terminal of Longtanshan station. Nine new railway stations will be constructed. The project consists of civil works; acquisition and installation of goods, maintenance equipment, and rolling stock; as well as land acquisition and the resettlement of displaced persons. This line is an extension of the high speed Intercity Changchun-Jilin Railway currently under construction.

5. Financing
Source: ($m.)
6. Implementation

Institutional and implementation arrangements are identical to those applied in the previous three Bank financed railway projects in China. The Ministry of Railways, through its Foreign Capital and Technical Import Center (FCTIC), will be responsible for: (i) overseeing the project implementation including monitoring, reporting, and compliance with safeguards; (ii) financial management of the World Bank loan, including disbursement and reporting; and (iii) all Bank-financed procurement with the support of an independent procurement company. FCTIC will provide implementation progress reports every half year. The Bank will also supervise this project closely through half yearly supervision missions.

The Ministry of Railways formed a Preparatory Group (PG) for the JiTuHun Passenger Dedicated Railway Line Company on July 3, 2009, staffed primarily by the Ministry of Railways’ regional Shenyang Railway Bureau. The Preparatory Group is tasked with the day-to-day responsibility for the railway line construction. This includes the procurement, management and supervision of all contracts for non-Bank funded civil works, installation of goods and equipment funded by the Bank loan through contractors, coordination with the local government entities responsible for resettlement and land acquisition, transfer of funds for resettlement to local authorities, monitoring of project progress and reporting to the Ministry of Railways on physical progress, safeguards and financial management.

A project company, the JiTuHun Passenger Dedicated Railway Line Company (JRC or JiTuHun Railway Company), is expected to be formed for the construction and management of the line as a successor to the Preparatory Group. The controlling share of the company will be held through an investment arm by the Ministry of Railways. The other major shareholder is expected to be the Province of Jilin through a provincial investment body. The percentage of shares will be provisionally defined based on the project cost estimates for construction and land acquisition contributed by the Ministry and the Province respectively, and will be adjusted based on actual equity contributions. Once the JiTuHun Railway Company is formed, it is expected that, as in the past, staff from the Preparatory Group will be transferred to the new company, occupying similar roles and functions. The JRC will then take over all the Preparatory Group’s responsibilities. Because of this, all references in the Bank’s project-related documents to the Preparatory Group will become references to JRC upon its establishment.

7. Sustainability

The project’s sustainability comes from its strategic, economic, operational, environmental, social and financial dimensions. The project is part of the Government’s Mid- and Long-term Railway Network Plan to 2020 and as such has been strategically endorsed. The project has a positive economic internal rate of return (EIRR) of 6.2 percent and its economic sustainability will likely even strengthen over time because the value of the main non-financial benefits of the project, such as saved time, are all expected to increase in the future. There are no obvious
threats to operational sustainability as the technical requirements for maintaining fast passenger train services are well known and the project will be using established technologies. Railway services also offer a more sustainable approach to meet future mobility needs of China in terms of energy efficiency and greenhouse gas emissions than a road transport alternative.

The social sustainability of the project will depend mainly on the affordability of the services it offers. To gauge this, the Ministry of Railways has carried out detailed passenger attitude surveys. These have established a strong willingness to pay a surcharge of 50 percent on high-speed services compared to conventional rail. In addition, even with higher fares on the new services, the cost increase to most passengers will be less because of the substantial time savings. Overall, the project will encourage more passengers to use rail transport. Inter-city railway services in China are used by a people from a range of socio-economic backgrounds, unlike either private cars or airlines, which tend to serve higher income groups. Because of this, the impact of railway improvements tends to be more equitable, and so more socially sustainable.

In financial terms, the project will be sustainable if at a network level the transport services are able to earn a positive contribution above long-run marginal costs; if so, they will make a positive financial contribution to the railway’s financial performance and not be an increasing financial drain that might threaten its survival. With the inclusion of revenue from the existing line, the project is expected to be “cash positive” and generate sufficient income for its own maintenance and operations immediately from the opening of the new JiTuHun railway project. The risk that the Ministry of Railways might not be able to maintain the infrastructure after services are implemented therefore seems negligible.

8. Lessons Learned from Past Operations in the Country/Sector

The Ministry of Railways and the Bank have drawn valuable lessons from preparing and implementing past railway projects and these lessons have been taken into account in the preparation of this project. The project is part of a large and ambitious program with tight deadlines. As such the project needs to have a straightforward design, reflecting the latest policy development—such as the separation of high-speed passenger trains from freight, with strong client ownership and solid cooperation among the respective project participants including the Ministry of Railways, Regional Administration railway staff and provincial and regional authorities. It should be at an advanced stage of readiness, while at the same time exhibiting flexibility in implementation.

Recent experience in the Bank’s large railway portfolio indicates that the inclusion of too many components or components with limited client commitment, as was done in the earlier Sixth Railway Project (19931) and Seventh Railway Project (1995), negatively affects implementation because both the client and the Bank have limited resources for effective supervision and implementation. This is particularly true when the size and urgency of one component greatly overshadows lesser components. Building on these experiences, this project was designed as a single component consisting of the construction of the JiTuHun Railway.

1 The date in parenthesis refers the year the project was approved by the Bank’s Board.
Recent projects have indicated the need to follow up more closely on reporting requirements. The Ministry of Railways and the Bank team will set up a system to closely monitor the delivery of required reports across the portfolio of activities.

The Client’s commitment to the Bank’s safeguard guidelines and procedures is essential. Problems arose with regard to resettlement and environmental issues Sixth Railway Project (1993), Seventh Railway Project (1995), Second National Railway Project (2004) and Third National Railway Project (2006). The Chinese Government, however, has since then internalized concern for environmental impacts and resettlement to a far greater degree, and domestic safeguards are converging to the standards required by the international financial institutions. Because provinces now share the project cost by financing, in part or fully, resettlement and land acquisition, the formation by the Ministry of Railways of project companies with the provincial governments to help finance and implement railway projects, has increased the provincial accountability for the appropriate application of social and resettlement practices. Implementation progress in that respect is being monitored closely through independent consultants.

The progress of China Railways towards improving business processes and policy reform has been steady and nearly always in a direction that the Bank supports. The Bank’s support in improving the management of China Railways and its business processes has been effective and is being continued. However, it is being done in a manner that separates policy and strategy support from project delivery, thereby avoiding that national policy conditions are embedded in project design, as was the case with the National Railway project.

9. Safeguard Policies (including public consultation)

Environmental Assessment (OP/BP 4.01)
Natural Habitats (OP/BP 4.04)
Physical Cultural Resources (OP/BP 4.11)
Indigenous Peoples (OP/BP 4.10)
Involuntary Resettlement (OP/BP 4.12)
Public Consultation

10. List of Factual Technical Documents

Economic Assessment

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