Restructuring of China Railways: Implications for India?

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March 1, 2002
New Delhi, India
Restructuring of Ministry of Railways of China: Implications for India?

- General railway restructuring trends and issues
- Current thinking in China – implications for India?
- Restructuring in Indian Railways:
  - Is the Chinese experience useful?
  - Is Indian restructuring necessary?
  - Options and choices
  - Getting started
General railway restructuring trends and issues (1)

- Separation of “Government” from Enterprise: MOT, not MOR
- Spinoff of non-core activities
- Encouragement of competition
- Shifting the public/private balance: the public plans, provides social resources, private sector operates, sometimes under contract with public
General railway restructuring trends and issues (2)

- Clear separation of rail commercial functions – accounting and/or institutional
  - US and Canada: formation of Amtrak/VIA, deregulation, restructuring of Conrail
  - EU: separation of infrastructure from services, separation of services (freight, intercity passenger, “social passenger”), required contracts for social services, competition for contracts, removal of old debts
  - Japan: separation of JR freight, creation of 6 passenger companies
  - Similar process nearly everywhere
Directions of Railway Change

Mixtures and partnerships are possible!

<table>
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<tr>
<th>Structural Change</th>
<th>Integral</th>
<th>Dominant Integral, Separated Minority Operators</th>
<th>Separation</th>
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<td>Public Ownership</td>
<td>Partnerships: Concessions or Franchises Awarded</td>
<td>Private Ownership</td>
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<td>China, Russia and India (ministries), MAV, SRT, MZ, others, (SOE's)</td>
<td>Argentina (13), Brazil (9), Mexico (5), Peru (3), Guatemala, Bolivia (2), Panama, Cote d'Ivoire/Burkina Faso, Cameroon, Congo (Brazzaville), Malawi, Madagascar, Jordan</td>
<td>New Zealand, Ferronor (Chile), CVRD (Brazil), A&amp;B (Chile)</td>
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<td>Amtrak, VIA, Japan Freight</td>
<td>Mexico City suburban, CONCOR (India)</td>
<td>US Class I, CN and CP, East/West/Central Japan Railways</td>
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<td>E.U. and Chile passenger</td>
<td>Swedish suburban, FEPASA (Chile), LHS line (Poland)</td>
<td>U.K. franchises and EWS, Polish and Romanian freight</td>
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Current railway thinking in China – implications for India: MOR’s Problems

- Confusion of government and enterprise roles
- Geographic organization causes
  - fragmentation of traffic and decisions (but ~60 percent of freight moves inter Administration)
  - bureaucratic decisions (revenue distribution, wagon allocation) made at the center
  - 14+ points of management
  - no competition in rail transport (>70% of freight)
- Organization for production, not market
  - no Lines Of Business, no costing information
  - “command and control” mentality
  - no price mechanism (flat tariff structure)
- Non-core distractions (e.g. factories, restaurants)
- Imposed social role (e.g. schools, hospitals)
Organization of MOR today

Today: 14 Administrations
19.7 million wagons interchanged
276.4 million passengers interchanged
Broad change themes in China

- Separate MOR’s enterprise functions from its Government functions – eventual creation of an MOT
- Restructure the enterprises
- Make the enterprises commercial
- Spin off all non-rail activities (manufacturing as well as social) and make them independent
Separating enterprise from Government

- Today’s MOR becomes “ministry” eventually combined with other transport functions
- Ministry will plan national investment strategy, oversee infrastructure dispatching and scheduling, regulate tariffs and safety, oversee revenue divisions
- Today’s Administrations will become enterprises, wholly owned by Government
- All non-rail commercial spun off from MOR (Done) and eventually some from Government as well
- All social transferred to appropriate Government
- These are agreed and committed in principle
Restructuring the enterprises and making them commercial (1)

- **First step**: Administrations will become enterprises, with separate profit centers for passengers (PTEs), freight (FTEs) and cost center for infrastructure.
- **Second step**: existing 14 enterprises will likely be combined into 4 or 5 (still under study).
- **Third step** (alternatives under study): institutional separation of PTEs and FTEs (less likely) from infrastructure.
- **Fourth step**: redrawing the boundaries of PTEs or FTEs to reflect the market for transport.
Percent of Rail Passenger Traffic to Total Rail Traffic
P-Km/(P-km+T-Km)
Four Freight Railways:
8.7 million wagons interchanged

19.7
Restructuring the enterprises and making them commercial (2)

- Create rail/rail competition by:
  - Trackage access rights
  - Redesign of service territory
  - Creating parallel tracks in selected markets
  - Creating source competition
  - There is debate on this

- Involve private sector by: (agreed measures)
  - Branch line ownership and operation (many)
  - Focused market operations (Guangshen) or containers
  - Wagon ownership and leasing
Beijing jointly owned by the other four groups and operated as neutral connection
MOR’s Restructuring: Issues and Approaches

- **Separation of enterprise and government** -- establish an MOT, set up railways as enterprises, initially at Administration level

- **Commercial approach** -- Line Of Business (LOB) organizations at all levels -- freight, passenger companies, and related infrastructure

- **Rail enterprise structure** -- full separation versus freight integral and passenger separation (US model) or fully integral models on 14 Administration or regrouped (5 Administration) basis

- **Market structure organization** -- mergers of PTE’s and possibly FTE’s across Administration boundaries (infrastructure likely set up at Administration level, though other structures are possible)

- **Competition** -- could have parallel/competitive infrastructure, but more likely will be competitive trackage rights or source competition, if any

- **Private sector involvement** -- non-core and local lines may be sold (Guangshen), private equipment ownership probable, specialized operators possible, generalized privatization not on the horizon (if ever)

- **Transition** -- holding companies at the regrouped Administration level

- **Overall** -- cautious, “experiment”-based approach, with many compromises and mixes (as always) – **committed and unstoppable**
MOR Restructuring: Analytical Tools for Evaluating Options

- **TMIS** -- traffic, routing operating and revenue data (operational)

- **Traffic costing models** -- use basic data to estimate cost and “contribution” of traffic on shipment, commodity, line segment and area basis (operational)

- **PC-based network models** -- for traffic flow analysis (initial version operational)

- **Next challenge**: integrating TMIS data with costing and network models for rapid and accurate system analysis

- **PC-based financial planning models** -- to permit rapid analysis of cost and revenue scenarios
Restructuring IR: is the Chinese approach relevant?

Similarities with China
- Enterprise/Government role confusion -- politics
- Regional monopoly structure, not market driven
- Imposed social functions, large non-core activities

In other ways, India is different
- Variations in Zonal characteristics
- Three gauges in India, one in China
- Suburban operations (2000 trains daily)
- Destructive freight-to-passenger cross subsidies
- Much greater deferred maintenance, especially wagons

Clearly, India will need its own mix of ideas
Is Indian Railway restructuring necessary? The Mohan Report

- Financial Crisis is looming -- need to act sooner rather than later
- Lack of clear purpose and autonomy (government agency, not commercial agency)
- Lack of Customer focus -- IR has three markets (freight, intercity passengers and suburban passengers) and needs differentiated organization
- Outdated business structure: confusion of government and commercial, too much vertical integration, large inefficiencies
- Freight market share is down and falling (low quality, overpriced caused by freight cross subsidy to passengers)
- Large backlog of investments which cannot be funded under the current setup (government has no money)
- Missing: Clear Indian Objectives
Mohan Report: Principles of Restructuring

Broad changes:
- separate railway from government (create MOT and regulator), Separate policy, regulatory, management
- manage railway commercially (LOB organization)
- Focus on core, spin off non-core (no mention of privatization) businesses and social activities
- Bring in some outside skills and management

Marketing:
- Freight -- better quality of service, lower tariffs, competition
- Passenger -- rebalance passenger tariffs

Improve efficiency (accelerated reduction in manpower (25 percent) with safety net

Financing including private sector

Recast accounts in structure and with Indian GAAP
Places to start: where the World Bank could help

- Overall policy framework is good
- Accounting work to install GAAP, construct LOB accounts and define PSO payments
- Investments in IT hardware and systems needed
- Formulation of Government and Regulatory functions and agencies
- Analytical assistance in structure of new organizations (traffic flow studies to analyze need to redraw zonal boundaries, set up specialized companies, establish competition, etc)
  - Separate suburban operations
  - Assess current Zonal and operating enterprise structure
- Support in valuation and spin off of non-core (commercial and social)
- Labor analyses and safety net programs
- Assistance in spin off of branch lines
- Appropriate physical investments identified during restructuring analyses
What Has the World Bank Done?

- Restructuring analyses, analytical tools and TA
- Asset rehabilitation to support new structure
- Labor transitions and retraining
- Resettlement
- Environmental cleanup
- Support changes in structure (suburban devolution, creation of management and accounting systems)
- Investment in appropriate private operators (Concor)
Zonal Railways Are Different: Freight Ton-Km as Percent of Total Traffic
The Gauge Effect: India’s Three Separate Railways
IR’s Suburban Activities
(Passenger-Km in 000,000)

2000 trains daily
Suburban Rail Systems:
Annual Passengers Per Km of Line

- Johannesburg
- Cape Town
- Pretoria
- Rio:CBTU-RJ
- Sao Paulo:CPTM
- RA:Mitre
- BA:Sarmiento
- BA:Roca
- BA:San Martin
- BA:Belgrano Sur
- BA:Urquiza
- Mexico City
- Baghdad:Skylan
- Mumbai:Central
- Mumbai:Western
- Madras:Southern
- New York City:LIRR
- Tokyo:JR East
- Tokyo:Keikyu
- Tokyo:Keio
- Cairo Metro

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Employee Productivity is Relatively Low
(000 Pkm+000 Tkm/Employee)
Average Annual Output per Freight Wagon is Not High
(000 Tkm per Wagon)
Ratio of Wage Costs to Revenues

- India
- China
- US Class I
IR Ratio of Average Passenger Fare to Average Freight Tariff Is Very Low:
IR’s Destructive Linkage With High Passenger Share
IR’s Program: Initial Actions

- IR as enterprise separated from government -- enterprise under commercial rules (profit motive, business Board with outside involvement and private sector personnel rules)
- Existing Zonal Railways adopt LOB organization on an accounting basis
- Separate and localize suburban operations -- accounting first, then institutional
- Spin off social, non-rail activities
- Make manufacturing activities independent and competitive, then privatize (if and when)
IR Restructuring: Medium Term Actions

- Separate out NG and localize, concession or privatize the pieces
- Finish high MG priority pieces, localize, concession or privatize the unconverted pieces
- Localize, concession or privatize BG “bits and pieces”
- Create local (accounting separation at first) companies to operate local, short haul passenger companies (4800 trains daily). Mumbai, Kolkata, Chennai
- Create accounting-based LOB’s at national level for freight and long-haul passengers (1200 trains daily)
- Consider more specialized companies like CONCOR (commodities, value-added services) with private involvement
IR Narrow Gauge Lines Compared With Smaller Operating Concessions
(gold = line-km, blue = traffic density in TU/km)
IR Meter Gauge Lines Compared with Middle-Sized Operating Concessions

(gold = line-km, blue = traffic density in TU/km)
Three IR Markets: the Impact of LOB Focus and Private Involvement

Traffic Volume Index: 1994=100
Km of Line: MOR Administrations Compared with IR Zones
Inter-city Passengers Originating (000,000): Comparison of MOR Administrations with IR Zones
Freight Tons Originating (000,000): Comparison of MOR Administrations with IR Zones

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MOR’s Freight Orientation: Percent Passenger Traffic

P-km/(P-km+T-km) in %

- India
- China

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Freight Traffic
(billions of ton-km)
Passenger Traffic
(000,000 p-km)
Point to Point Rail Passenger Flows in China
(1997 data excludes intra-zonal flows)
1997 Passenger Flow Density (excludes intrazonal traffic)
Percent of Originating Tons -- 1997

The World Bank
Point to Point Rail Freight Flows in China
(1997 data excludes intra-zonal flows)
1997 Freight Flow Density (Tons) (excludes intrazonal traffic)