

Lessons from PPPs of Indian Railways and Way Forward

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Outline

- **Where is IR?**
- PPPs: An Imperative for IR
- History and Status of PPPs
- Analysis of PPPs
- PPPs: Way Forward

Where is IR?

- India's largest transportation and logistics organization
- As a single rail organization
 - World's fourth largest network, after USA, Russia and China
 - World's third largest network as a single entity, after Russia and China
 - World's third largest freight transporter, after China and Russia
 - World's largest passenger transporter
 - World's largest employer
- India's sixth largest revenue earning organization, at Rs 96,681 cr in 2010-11 (after IOC, Reliance, BPCL, HPCL and SBI)
- In 2011-12, IR retained its position as the sixth largest revenue earning organization, at Rs 106,647 cr in 2011-12 (after IOC, Reliance, BPCL, HPCL and SBI)

Top 15 Companies by Revenue 2012

SNo	Company	Revenue (Rs crore)
1	Indian Oil	4,16,816.20
2	Reliance Industries	3,64,695.00
3	Bharat Petroleum	2,13,596.23
4	Hindustan Petroleum	1,86,327.55
5	State Bank of India	1,77,032.83
6	Tata Motors	1,66,316.27
7	ONGC	1,54,147.27
8	Tata Steel	1,37,834.66
9	Coal India	82,641.61
10	Hindalco Industries	81,604.44
11	Bharti Airtel	71,770.10
12	NTPC Ltd	69,036.00
13	ICICI Bank	66,658.28
14	L & T Ltd	65,198.85
15	Mahindra & Mahindra Ltd	59,853.22

Top 15 Companies by Profit 2012

SNo	Company	Net Profit (Rs crore)
1	ONGC	25,122
2	Reliance Industries	20,040
3	State Bank of India	11,686
4	Tata Consultancy Services	10,957
5	National Thermal Power Corporation	9,223
6	Infosys	8,470
7	Coal India	8,065
8	National Mineral Development Corporation	7,265
9	Bharat Heavy Electrical Limited	7,039
10	Tata Steel	6,696
11	ICICI Bank	6,465
12	ITC	6,162
13	Bharti Airtel	5,730
14	Hind Zinc	5,526
15	HDFC Bank	5,167

Where is IR?

- In 2005-06, carried
 - 35% of country's freight traffic in ton kms (RITES Study, 2009)
 - 15% of country's passenger traffic in passenger kms
- In 2009-10, carried
 - 890 million tons of freight over a lead of 656 kms
 - 7380 million passengers over a lead of 125 kms
- In 2010-11, carried
 - 921 million tons of freight
 - 7651 million passengers
- In 2011-12, carried
 - 970 million tons of freight

Source: http://articles.economictimes.indiatimes.com/2012-04-11/news/31324982_1_freight-traffic-indian-railways-tonnes , accessed on January 15, 2013

Where is IR?

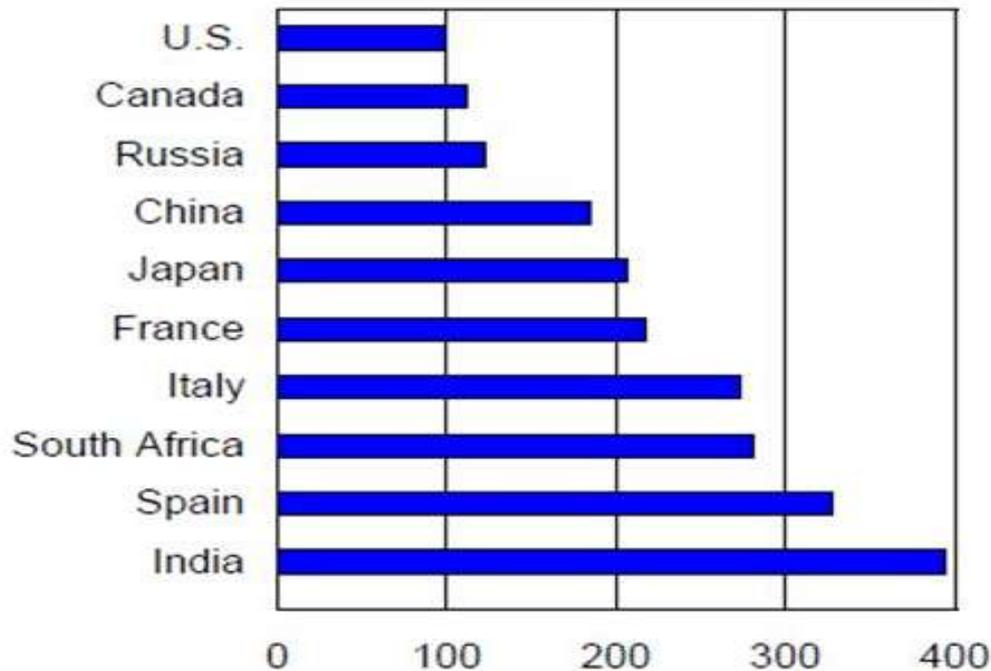
- Highly energy efficient with least carbon impact amongst known land based transport modes
 - High potential for net to tare weight
 - Low surface friction: rolling steel on steel
 - Low air friction: tailgating
- Investment for growth of rail transport: an imperative in India

Where is IR?

- Customer orientation less than desirable, attributed to a large, hierarchical, government run organization
- Pricing distortions
- Asset creation, maintenance, and services not as efficient as can be

Freight Rates

U.S. Freight Rail Rates Are the Lowest in the World
(Index U.S. = 100)



Data are 2005, adjusted for purchasing power parity. Source: World Bank

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PPPs: An Imperative for IR

- For the period 2010-20, Vision 2020 states
 - Total investments: Rs 14,00,000 crores
 - Funding sources:
 - Budgetary support: Rs 5,00,000 crores
 - Internal resources, 'prudent' borrowings and PPPs: Remaining Rs 9,00,000 crores

With whatever level of optimistic projections for the internal resources and borrowings for the coming decade, clearly, PPPs would have to be a significant source. This makes it imperative for the IR to create a policy framework that would attract PPPs.

PPPs: An Imperative for IR

- Railways recognizes this, as can be seen from Vision 2020,
 - “To achieve the mammoth task Railway has set itself, it has to concentrate on its core activity of creation of railway infrastructure and operations and forge partnerships with private sector to do the rest. **The challenge of project execution and efficient provision of service can not be accomplished without involving private sector in a big way.**”

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PPPs in IR: A Brief History

- PPPs in IR can be traced back from 1853 when government provided free land and a guaranteed rate of interest between 4.5 to 5.0%
- After the Acworth Committee recommendations in 1921, private railway systems, except a few railway lines, were nationalized
- We inherited a government run railway system on Independence
- IR today constitutes 16 railway zones, seven independent manufacturing units, five associated units and 13 corporations

PPPs in IR: A Brief History

- All railway projects, manufacturing and operations were solely developed and managed by the MoR through internal resources and budgetary support.
- Private parties were involved significantly in construction, wagon manufacturing, stores and component supplies, and catering, through a tendering process.
- Freight end users could have their own sidings for captive use, and engage handling contractors for loading and unloading even at railway terminals.
- An insignificant number of private railway lines and 'out agents' at certain important towns outside the railway network continued, but in a reducing manner.

PPPs in IR: A Brief History

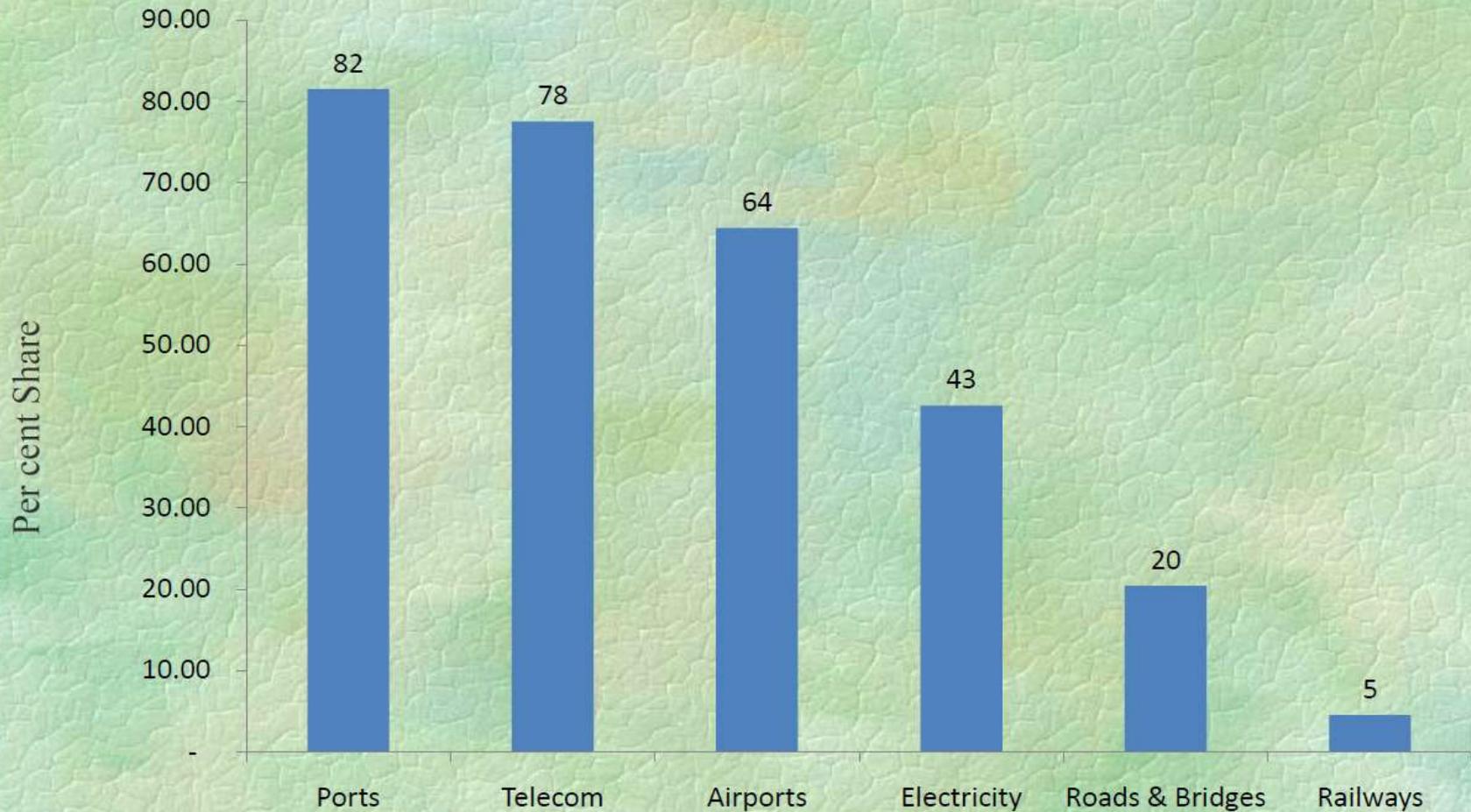
- The first project was the IR-CIDCO partnership in 1986 where CIDCO contributed two third of the costs for providing rail connectivity to Mumbai
- The next was the Konkan Railway Corporation in 1990, a joint venture between MoR and the state governments of Maharashtra, Goa, Karnataka and Kerala, for building a 738 kms coastal rail connectivity line between south of Mumbai and Mangalore on BOT
- These projects gave a kick start to state government involvement in rail connectivity projects
- Till date IR has executed about 24 PPP projects and 10 are in pipeline

PPPs in IR: Status

Sector	X Plan (Actual)		XI Plan (Original Projections)		XI Plan (Revised Projections)	
	Rs cr	%	Rs cr	%	Rs cr	%
Electricity (incl NCE)	340,237		666,525		658,630	
Public	203,403	59.78	481,013	72.17	371,085	56.34
Private	136,834	40.22	185,512	27.83	287,546	43.66
Telecom	101,889		258,439		345,134	
Public	48,213	47.32	80,753	31.25	61,503	17.82
Private	53,676	52.68	177,686	68.75	283,631	82.18
Roads and Bridges	127,107		314,152		278,658	
Public	117,884	92.74	207,360	66.01	232,771	83.53
Private	9,223	7.26	106,792	33.99	45,887	16.47
<i>Railways (incl MRTS)</i>	<i>102,091</i>		<i>261,808</i>		<i>200,802</i>	
<i>Public</i>	<i>101,422</i>	<i>99.34</i>	<i>211,454</i>	<i>80.77</i>	<i>192,486</i>	<i>95.86</i>
<i>Private</i>	<i>669</i>	<i>0.66</i>	<i>50,354</i>	<i>19.23</i>	<i>8,316</i>	<i>4.14</i>
Other						
Public						
Private						
Total Infrastructure	906,074		2,056,150		2,054,205	
Public	680,854	75.14	1,436,559	69.87	1,311,293	63.83
Private	225,220	24.86	619,591	30.13	742,912	36.17

PC (2010). "Investment in Infrastructure During the Eleventh Five Year Plan,"

Share of Private Investment in different Sectors (11th Five Year Plan)



PPPs in IR: Status

- Planning Commission (PC) estimated the public and private investments across all infrastructure sectors for XI Plan. Private investments estimated originally were
 - All sectors: 30%
 - Railways (incl MRTS): 19%
- PC revised the estimates based on mid term appraisal after two years (2007-08 and 2008-09). As per revised estimates
 - All sectors: 36%
 - Railways (incl MRTS): 4%

While PPPs in the MRTS sector have not lived up to their expectations, the more significant implication is that the PPPs in IR have not taken off as projected.

Infrastructure Investments: Other Sectors

Sector	X Plan (Actual)		XI Plan (Original Projections)		XI Plan (Revised Projections)	
	Rs cr	%	Rs cr	%	Rs cr	%
Irrigation, Water Supply and Sanitation	166,851		397,031		136,323	
Public	165,833	99.39	391,610	98.63	135,839	99.64
Private	1,018	0.61	5,421	1.37	484	0.36
Oil and Gas Pipelines	32,367		16,855		127,306	
Public	31,367	96.91	10,327	61.27	74,545	58.56
Private	1,000	3.09	6,528	38.73	52,761	41.44
Ports	22,997		87,995		40,647	
Public	4,670	20.31	33,516	38.09	8,130	20.00
Private	18,327	79.69	54,479	61.91	32,517	80.00
Airports	6,893		30,968		36,138	
Public	4,523	65.62	9,338	30.15	12,983	35.93
Private	2,370	34.38	21,630	69.85	23,155	64.07
Storage	5,643		22,378		8,966	
Public	3,539	62.71	11,189	50.00	351	3.91
Private	2104	37.29	11,189	50.00	8,615	96.09

Projected Investments in Infrastructure- Twelfth Plan

Rs billion	X Plan	XI Plan	2012-13	2013-14	2014-15	2015-16	2016-17	XII Plan
Total	9061	27747	7480	8601	9962	11645	13777	51464
Centre	6809 (75.1)	9652 (34.8)	2467	2778	3130	3529	3981	15885 (30.9)
State		7683 (27.7)	1929	2103	2294	2501	2728	11554 (22.5)
Private	2252 (24.9)	10412 (37.5)	3084	3720	4539	5616	7068	24025 (46.7)
GDP		384249	94757	102338	111548	121587	132530	562760
% of GDP	5.2	7.2	7.9	8.4	8.9	9.6	10.4	9.1

Source: Interim Report of the High Level Committee-Financing Infrastructure

Infrastructure Investments: XII Plan

Sector	X Plan (Actual)		XI Plan (Original Projections)		XI Plan (Revised Projections)		XII Plan (Projection)	
	Rs cr	%	Rs cr	%	Rs cr	%	Rs cr	%
Total Infrastructure	906,074		2,056,150		2,054,205		4,099,240	
Public	680,854	75.14	1,436,559	69.87	1,311,293	63.83	2,049,620	50.00
Private	225,220	24.86	619,591	30.13	742,912	36.17	2,049,620	50.00

Share of Infrastructure as % of GDP: X Plan 5.15
: XI Plan (Original) 7.60
: XI Plan (Revised) 7.55
: XII Plan (Projected) 9.95

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Analysis of PPPs: Infrastructure Creation vs Service

- A perspective based on IR's executed and in pipeline PPPs indicates that IR is more comfortable with infrastructure creation PPPs rather than service PPPs
- Infrastructure PPPs are for rail connectivity, wagon procurement, locomotive manufacturing, world class railway stations, multimodal logistics parks and high speed corridor projects
- Service PPPs are only few (6 out of 24 executed PPPs)
 - catering (and more recently train and reservation enquiry, and (limited) train booking), luxury tourist trains, cleaning of coaches at major stations and depots, parcel, container trains, and special freight trains

Analysis of PPPs: Infrastructure Creation vs Service

- Internationally and in other sectors (road, aviation), services were the first to get privatized.
- IR thinks it has competitive advantage in managing services given the complexity of railway operations
- IR's argument is not true since services have many levels: maintenance, operations and customer services

Analysis of PPPs: Infrastructure Creation vs Service

- The customer services which deal with value added customer interfacing and maintenance like input services are workable in the PPP space.
- But there is a sense of discomfort by IR in services moving into PPP space
 - customer interfacing services, since they involve revenue generation and control on end user pricing.
 - maintenance services, since there would be need for specifying and overseeing the critical elements of such input services, especially from the safety perspective.

Analysis of PPPs: Issues

- The partner selection for many of the PPPs including the rail connectivity projects has been more contextually (strategically?) based than through open competitive bidding. This does not lend itself to due diligence. Also, does not promote development of independent BOT player capacity.
 - eg all port connectivity projects
- Delays with more than acceptable time lags between conceptualization and project execution.
 - eg world class station at New Delhi, locomotive factories at Madhepura and Marhowra in Bihar

Analysis of PPPs: Issues

- Changing stances of IR.
 - eg Own Your Wagon Scheme (OYWS), Liberalized Wagon Investment Scheme (LWIS), Wagon Leasing Scheme (WLS)
- Transactions with the IR have not always been smooth. Who decides pricing of haulage, restrictions, service levels, especially in a monopoly context?(conflict of interest)
 - eg container train operations
- Denial and delays in extending the project scope
 - eg Kutch Railway Corporation Ltd (KRCL)

Analysis of PPPs: Issues

- The policy statement comes through as being a one sided government circular rather than for a commercial partnership
 - eg luxury tourist trains
- Conflict of interest
 - eg dispute resolution mechanisms in wagon procurement schemes like LWIS, WLS, Special Freight Train Operators Scheme, and Automobile and Ancillary Hub Scheme.

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PPPs: Way Forward

- Learn from other sectors and encourage PPPs, not just as schemes, but in a manner to attract real players
- Focus on the complementing need of entrepreneurial and managerial energies that private parties can bring in
- Review the performance of the umbrella SPVs
- Develop well written contracts to minimize the scope of misinterpretation
- PPPs should also be explored in other essential areas
 - environmental concerns (no open discharge of train toilets and solid waste management along the tracks and platforms)
 - safety management through advanced systems like automatic train control and
 - indigenous innovation by developing an R&D infrastructure.

PPPs: Way Forward

- Develop a more flexible approach based on not just a political language of PPP, but creating an organization that
 - listens to
 - learns from, and
 - is responsive to a variety of stakeholders including customers, other affected and involved entities, and partners in PPPs

PPPs: Way Forward

- Top management restructuring
 - Begin immediately with a separation in the IR's roles of licensor, operator and regulator. *This will address conflicts of interest.*
 - Railway Board Members' roles should be redefined from the current functional (cadre based supremos) towards strategizing for key market segments. *This will bring in greater customer orientation.*

PPPs: Way Forward

- Rail Technology is critical for transportation in India, especially in the context of moving towards a low carbon economy. Should the 'ownership' for this be restricted to 'Indian Railways,' or the citizens at large, being a key public good?

Thank You

OYW Scheme:

Procurement of Wagons (Wagon type wise)

WAGON TYPE	NO OF WAGONS	APPROXIMATE COST OF WAGONS (RS CRORE)
BTPN	2750	408.37
BCNA	2305	292.89
BTPGL	766	233.24
BOX 'N'	723	79.11
BOBRN	253	48.41
BOY	162	14.15
BCCW	125	26.25
TOTAL	7084	1102.42

OYW Scheme:

Procurement of Wagons (Commodity type wise)

COMMODITY TYPE	NO OF WAGONS	APPROXIMATE COST OF WAGONS (RS CRORE)
POL	3932	716.49
CEMENT	1594	199.07
COAL	434	67.26
FERTILIZERS	420	45.19
STEEL	403	39.24
CLINKER	301	35.17
TOTAL	7084	1102.42

A Comparison of Wagon Related PPPs

	Own Your Wagon Scheme (OYWS)	Wagon Investment Scheme (WIS)	Liberalized Wagon Investment Scheme (LWIS)	Wagon Leasing Scheme (WLS)
Who can invest	<ul style="list-style-type: none"> •Bulk users •Financing/leasing companies 	<ul style="list-style-type: none"> •Individuals as producers •Corporate entity as producers 	<ul style="list-style-type: none"> •Wagon leasing companies^[1] •End users 	<ul style="list-style-type: none"> •Wagon leasing companies
Types of wagons	any	<ul style="list-style-type: none"> •BCN •BOXN 	<ul style="list-style-type: none"> •HCW^[2] •SPW^[3] 	<ul style="list-style-type: none"> •HCW •SPW •Wagons for container movement
Wagon procurement	From IR or directly from wagon manufacturer	Directly from wagon manufacturer or import	Directly from wagon manufacturer or import	Directly from wagon manufacturer or import
Restricted commodities	no	no	Coal and coke, ores and minerals including iron ore	Coal and coke, ores and minerals including iron ore
Benefits	<ul style="list-style-type: none"> •Pure Lease (IR will pay 16% lease charge per annum for the first 10 years to owners.) 	<ul style="list-style-type: none"> •BCN 10% freight concession for 15 years. 4 guaranteed rakes per month 2 additional rakes without EOL scheme and 4 additional rakes with EOL scheme as bonus per month without freight concession 	<ul style="list-style-type: none"> •HCW 12% freight concession for 20 years. 	<ul style="list-style-type: none"> •HCW 12% freight concession for 20 years.
	<ul style="list-style-type: none"> •Lease cum Guaranteed Clearance with General Service wagons (Lease charges as above. IR assures the lessor to clear a minimum volume of traffic during a specific period.) 	<ul style="list-style-type: none"> •BOXN 10% freight concession for 10 years. 6 guaranteed rakes per month 2 additional rakes without EOL scheme and 4 additional rakes with EOL scheme as bonus per month without freight concession 	<ul style="list-style-type: none"> •SPW 15% freight concession for 20 years 	<ul style="list-style-type: none"> •SPW 15% freight concession for 20 years

	Own Your Wagon Scheme (OYWS)	Wagon Investment Scheme (WIS)	Liberalized Wagon Investment Scheme (LWIS)	Wagon Leasing Scheme (WLS)
	•Guaranteed Clearance with Special Wagons (No lease charges to owners. Concession in freight rates)			No benefits if wagons are leased to contractors
Wagon maintenance	IR, without any extra cost (chargeable for special wagons)	IR, without any extra cost	IR, on payment basis	IR, on payment basis
Empty run	Not charged	Not charged	Class 100	Class 100
Dispute resolution	By three arbitrators. One arbitrator is to be nominated by the Investor, the other by the Railways and the third by mutual agreement between the parties	By three arbitrators. One arbitrator is to be nominated by the Investor, the other by the Railways and the third by mutual agreement between the parties	By arbitrator nominated by the General Manager of the Zonal Railway	By arbitrator nominated by the General Manager of the Zonal Railway

¹Wagon Leasing Company: A Leasing Company engaged in the business of procuring railway wagons and making them available to other business entities authorized to deploy such wagons for operation over IR network in accordance with the extant policy of MoR

²High Capacity Wagons: Wagons with payload which are at least 2 tons higher than the payload of extant similar wagons on IR for 25.0 or 22.9 tons axle load route, as the case may be.

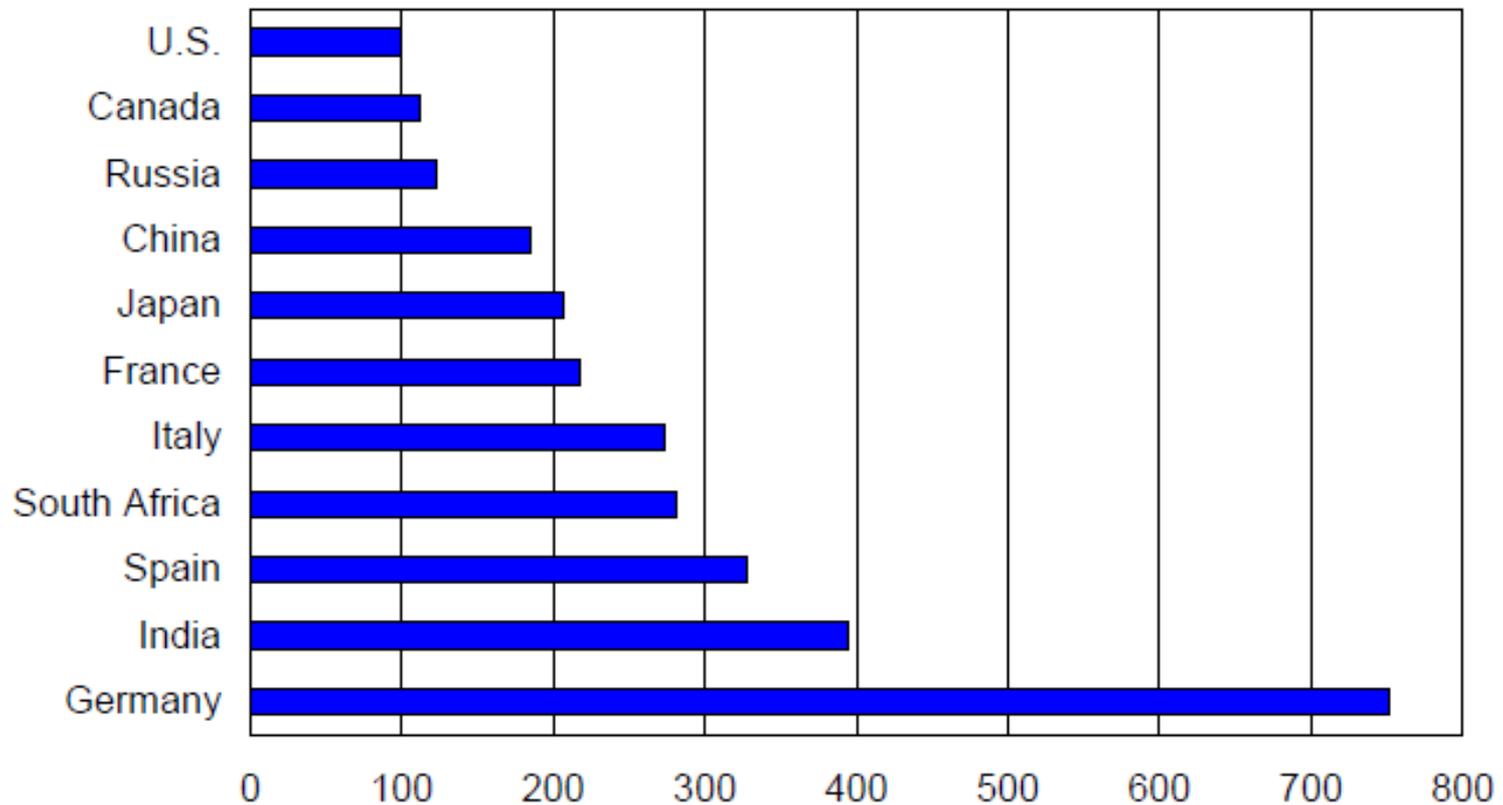
³Special Purpose Wagons: Wagons designed for rail transportation of a specific commodity or group of commodities.

PPPs: An Imperative for IR

- The justification for this comes primarily from the resource mobilization argument. To quote the Vision 2020 document,
 - “Of the estimated Rs 14,00,000 crores, most of the investment for world-class stations and high speed corridors could be mobilized through PPPs. A sizeable part of the investment required for port connectivity projects, setting up of electric/diesel locomotive manufacturing units and new coach manufacturing units could also be mobilized through private sector participation by SPV or Joint Venture route. Metropolitan Transport Projects and some of the new line projects could be taken up with partnerships with the state governments. PPPs could also be used in setting up of private freight terminals, logistics parks, wagon investment schemes and licensing of freight service operators who would bring in specialized rolling stock and new terminals. Railways can also borrow within prudent limits through IRFC.”

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