

Experiences of Various Forms of Commercial Partnerships in Indian Railways¹

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Introduction

This paper brings out issues of governance between the Ministry of Railways and various service delivering commercial entities under the Ministry. Some of this is accentuated by both the ministerial and administrative powers vested in the same body, namely the Railway Board. We examine a set of eight case situations, wherein there has been an attempt to focus on a commercial approach. However, the extent of success/failure is varied. A study of these cases brings out the potential of improving railway infrastructure under a governance framework of (i) distancing the ministerial role from the commercial activity, (ii) increased private participation, (iii) improving transparency, contestability and competition, and (iv) appropriate regulations

We describe salient features of each of the cases, with comments from the perspective of commercial viability. A concluding section brings out some of the key concepts which would be relevant for such commercial partnerships in the future. At a broader level, given the budgetary constraints, under exploited potential of the IR's assets and service possibilities, lack of commercially oriented professional and accountable management, such commercial partnerships have implicitly been accepted (by both the central government and the top management of IR) as the way forward.

Case Situations

The eight case situations with the nature of stake of the Indian Railways (IR) are listed below. There is an attempt to order them on the dimension of decreasing stakes of the IR in the investment.

	Cases	Nature of IR's Stake
1.	CONCOR	Wholly owned autonomous company
2.	Palace on Wheels (POW)	Revenue, cost and investment sharing
3.	Railway Sidings	Investment sharing
4.	Pipavav Railway Corporation Limited (PRCL)	SPV with equity partnership
5.	Konkan Railway Corporation (KRC)	BOT
6.	BOLT Schemes for Gauge Conversion	BOLT
7.	Own Your Wagon Scheme (OYW)	Lease payments and service guarantees
8.	Catering Contracts	License fee and revenue sharing basis

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1. CONCOR

Introduction

CONCOR was incorporated in March 1988 as a Public Sector Undertaking under the Ministry of Railways with the main objective of being a catalyst for promoting containerization and to give a boost to India's international and internal trade and commerce by organizing multimodal logistics support. CONCOR is viewed as one of the success stories of creating a focused corporate entity under the IR.

It was established as a separate organisation for undertaking certain concentrated and specialised intermodal activities in the field of containerization where IR had not been able to focus adequate attention.

The mission is *to develop multimodal logistics support for the country's international and domestic trade and commerce*. The objectives are:

- To provide transportation logistics services for export-import as well as domestic cargo in containers.
- To expand CONCOR's terminal network in the country so as to enhance its market share in container business.
- To bring back less than trainload general goods cargo from road to rail in containers through extensive marketing efforts.
- To provide multimodal transportation logistics consultancy services to potential operators who would help CONCOR grow its business.

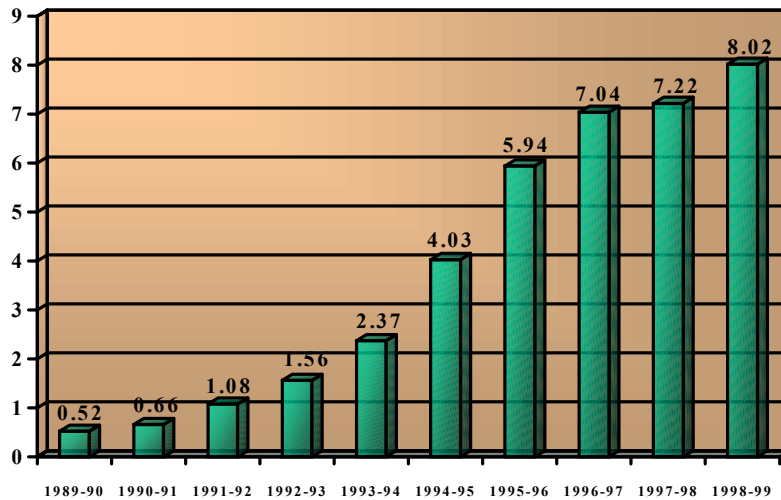
Performance Highlights (1998-99)

As compared to the previous year (1997-98)

1. Traffic turnover grew by over 11% to 8,01,946 TEUs.
2. Financial turnover increased to Rs 684.77 crores, registering a growth rate of 12.95%.
3. International traffic grew by 17.36%.
4. Domestic general cargo traffic volumes increased by 80% to 57,316.
5. Net profit increased to Rs 140.65 crores from Rs 115.80 crores.
6. Earning per share increased to Rs 21.64 from Rs 17.82.
7. Net worth increased to Rs 472.35 crores from Rs 363.86 crores.

Over the past four years, the following growth was achieved:

	1994-95	1998-99	CAGR (%)
Sales (Rs Crores)	217.34	684.77	33
Profit (Rs Crores)	23.89	140.66	56
TEU's (Lacs)	4.03	8.02	19



Financial Issues

CONCOR was incorporated with an authorized capital of Rs 100 crores. The IR subscribed an amount of Rs 64.99 crores in phases. CONCOR is a profit making company and have been granted 'Mini Ratna' status by the GOI. All the capital requirements are met with by CONCOR either through its internal resources or from a loan sanctioned by International Bank for Reconstruction and Development (IBRD).

Government of India (GOI) has already disinvested 129 lakh shares in 1994-95 at an average price of Rs 71.15. Thus GOI disinvested their stake in the Company by 23% upto 1995-96. Disinvestment commission studied various aspects of CONCOR and recommended that disinvestment of GOI holding in CONCOR may be restricted to 100 lakh shares and the company may also go in for public issue of 125 lakh shares. This would bring down GOI holding to 51% and therefore, the Company would continue under the control of GOI. Accordingly, GOI further disinvested 9 million shares in Nov '98 at a price of Rs 250/- per share. Another one million shares of GOI are required to be disinvested to retail subscribers. A decision in this regard is awaited. GOI shareholding is now reduced to 63%. Remaining shares of about 37% are now held by FIIs, Domestic Financial Institutions, mutual funds, banks and individuals etc. In view of the present cash surplus position of the Company it does not contemplate to raise resources through issue of fresh equity in near future.

Management

CONCOR is functioning under the direction and supervision of a Board of Directors consisting of a Part time chairman, Managing Director, three functional Directors, two Govt. Directors and three part time non-official Directors. One more post of a Director to look after the domestic traffic is likely to be filled in shortly. The day-to-day function of the company is managed by the Managing Director assisted by three functional Directors viz Director (M&O), Director (Finance) and Director (P&S).

Privatization/JVs

Over the years, CONCOR has responded to the environment by setting up own container terminals, obtaining new rolling stock and cutting down transit times on key routes (Delhi-Mumbai). Substantial portion of container traffic is transported through IR. Door-to-Door services and transportation of containers from some of the CONCOR facilities which are not connected with IR are undertaken through road. The road transportation is completely outsourced to private contractors. Handling of containers in most of the facilities has also been privatized. Most of the ancillary activities have also been outsourced.

Business arrangements have been made with Madhya Pradesh State Warehousing Corporation and the ICD Malanpur at Gwalior is being run with their association. Some more projects for Joint Ventures (JVs) are under consideration by the company.

Source:

(i) *CONCOR, Annual Report, New Delhi, 1998-99.*

(ii) *Communication from Railway Board, New Delhi, 2000 (Regarding Financial Issues, Management and Privatization/JVs of CONCOR)*

Comments

While CONCOR is moving in the right direction of creating the necessary infrastructure and service concepts, the pricing for the usage of IR track capacity - a key input cost for CONCOR - is currently an internal administrative matter and not subject to tests of competition or even transparency.

2. Palace on Wheels

Introduction

The Palace on Wheels (POW) is a joint venture between the IR and Rajasthan Tourism Development Corporation (RTDC). It was introduced with the objective of increasing (i) India's foreign exchange, (ii) overall flow of tourists to India significantly (contributing to India's image abroad), (iii) opportunities for employment, promoting potential of RTDC, by offering a unique rail travel experience. It was first started as a meter gauge service in 1982, using the erstwhile royal saloons of the various princely states of Rajasthan. The over the first five years of service, the average occupancy went up from 41% to 58%. The risk for this service has been shared both by IR and RTDC. In the initial days, the fare was arrived at on a cost plus basis, with 50 % occupancy assumption. The service has grown popular over the years. The entire train was replaced by a newly manufactured meter gauge train set, into which both the parties had invested, in the late eighties.

Broad Gauge POW

With conversion to broad gauge of the various routes in Rajasthan, the broad gauge POW train was introduced during 1995-96 as a 50-50 joint venture between IR and RTDC. The rake of the POW comprises of 21 coaches. IR and RTDC have mutually decided to run the train in the Rajasthan Sector on the following tourist circuit:

Day 1	Wednesday	Delhi Cantt
Day 2	Thursday	Jaipur
Day 3	Friday	Chittaurgarh & Udaipur
Day 4	Saturday	Sawai Madhopur
Day 5	Sunday	Jaisalmer
Day 6	Monday	Jodhpur
Day 7	Tuesday	Bharatpur & Agra
Day 8	Wednesday	Delhi Cantt

The financial and management arrangements of the POW between IR and RTDC are currently as under:

- IR and RTDC have invested equal share in the capital cost of the rake. The actual cost of the rake as worked out by ICF came to Rs 22.48 crores.
- IR are responsible for operation and maintenance of the train and to provide the entire infrastructure needed for the operation of the train including security of the rake, safety and security of the train during its run.

- RTDC is responsible for house keeping, catering on-board as well as on ground, local sight seeing, entertainment of guests at all the destinations at the desired standard.
- RTDC is responsible for the maintenance of interiors and furnishing and décor etc. by the RTDC either through the IR on payment or from the outside sources.
- The earnings are shared between IR and RTDC. While the Railway Board has "decided" to share the earnings in the ratio of 67:33 between IR and RTDC, the management of RTDC is insisting that the earnings of the should be shared at 50: 50 since they have made equal investment in the capital.

Source:

(i) *"Palace on Wheels" by Sanjeev Bhatt, Unpublished Case of the Indian Institute of Management, Ahmedabad, 1990.*

(ii) *Communication from Railway Board, New Delhi, 2000 (Regarding Broad Gauge Palace on Wheels).*

Comments

The popularity of this circuit is beyond doubt. It appears so even for the commercial viability. While the revenues are transparent, the costs are not. This venture has so far been managed as an "arrangement" between IR and RTDC, with each bearing its own costs. As is obvious, both parties, presumably depending on internal cost assessments, are seeking an "appropriate" revenue share. It is time to make this venture an SPV, with an appropriate understanding of investments, and cost and revenue transparency. The SPV would pay the IR and RTDC for services rendered. The net profits could then be shared as dividends or used for further investments in this or even other circuits, depending on the SPVs business plans.

3. Railway Sidings

Introduction

In the early years of railway development in India and until the seventies, IR took it up on themselves to construct railway sidings to various factories on the paradigm that this would bring in rail traffic. There were norms of what traffic levels would justify a siding, depending on the costs. The entire cost was borne by IR, except the rail related assets within the factory premises. This was paid for by the factory owners, more to retain "ownership" of such assets.

The policy towards sidings began changing soon after, primarily driven by the fact that IR was in a sellers market and were not really "soliciting" traffic. Today, siding costs, right from the survey stage, are expected to be borne by the customer. The IR does make exceptions in sidings with high traffic potential. The issue gets a little more complicated when the adjoining main line is electrified or converted. IR has been issuing a variety of notifications to deal with such issues and arrive at cost sharing terms. There is an apparent non-mutuality about such terms.

Non Mutuality of Relationship

- *Gauge conversion of sidings:* The policy circular for gauge conversion of sidings has become more complicated and involved over the years. A 1994 circular had four conditions in one page while the revised 1997 circular had 16 conditions in four pages. More importantly, the 1997 circular introduced a concept of guaranteed traffic being supplied by the industry over and above the maximum traffic of the past eight years, to qualify for IR spending on the siding conversion. However, though expected by the industry, there was no mutuality in that the IR could have guaranteed in the same circular that their freight rate would remain frozen for eight years.
- *Electrification of sidings:* IR are going ahead with railway electrification as a cost saving strategy. The IR are putting conditions on the owners of the sidings for sharing of the cost of electrification. The industry views that traction therefore remains the choice of the carrier and not of the customer. The user is offering traffic from one place to another and the carrier, in a market driven economy, should

carry it. The IR, therefore, cannot impose the conditions of sharing of cost etc on the user. (If the IR have already taken the total traffic of the section without electrifying the siding, it is not relevant to ask for the cost from the owner. Alternatively, they have to reduce the traffic originating from the siding and justify the conversion of the section. Neither is happening).

- *Time and motion study*: There are IR rules providing for time and motion studies to be done for all the sidings to calculate reasonable loading/unloading times and consequent demurrage charges. These studies always exclude the times on IR account like that for cleaning of the wagons, riveting etc. A specific example is that of Gujarat Ambuja's siding at Kodinar, commissioned in December '86. The time and motion study was done in 1988. This resulted in benefits to Gujarat Ambuja. The implementation, however, took place in 1994, ie after 8 years of opening of the siding. The IR did not extend the benefits retrospectively. The Ropar siding of Gujarat Ambuja was commissioned in 1995 and the time and motion study was done in 1997. Again implementation was not done retrospectively. The IR, however, reserve the right to open all money matters retrospectively.
- *Wagon load vs train load rates*: Coal normally moves to the siding in train load rates. However, when a wagon gets disconnected (due to IR's operations) and is placed into the siding, the higher wagon load rate is charged.
- *Enhanced carrying capacity rate*: Certain varieties of coal cannot be loaded upto the enhanced capacity of the wagon. It is open to the IR to conduct a joint trial alongwith the industry and Coal India in a transparent manner and demonstrate how the enhanced carrying capacity can be achieved. Once they have done it they can charge the freight on enhanced carrying capacity. However, there are collieries where the IR officers, Coal India and the consumers feel that loading cannot be done upto the defined carrying capacity, but the IR continue to charge freight at the enhanced capacity.
- *Penal charges due to overloading*: Section 73 did not exist in the 1890 IR Act. It was incorporated in the 1989 Act and is reproduced below:

Section 73 - *Where a person loads goods in a wagon beyond its permissible carrying capacity as exhibited under sub-section (2) or sub-section (3), or notified under sub-section (4), of section 72, a railway administration may, in addition to the freight and other charges, recover from the consignor, the consignee or the endorsee, as the case may be, charges by way of penalty at such rates, as may be prescribed, before the delivery of the goods.*

Provided that it shall be lawful for the railway administration to unload the goods loaded beyond the capacity of the wagons, if detected at the forwarding station or at any place before the destination station and to recover the cost of such unloading and any charge for the detention of any wagon on this account.

This Act now states that if coal is loaded beyond the permissible capacity, punitive charges can be recovered from the consignee or the endorsee. In other words, even if Coal India violates the carrying capacity, the punitive charges can be recovered from the cement siding owner. The 1962 Goods Tariff did not levy any penal charges if overloading was detected at the destination. The 1965 Tariff had the same provision.

The Act permits the unloading of the excess quantity, if detected, at the forwarding station or any place before the destination station. Even when the excess is detected at the forwarding station (as per railway receipt), the IR are not taking any steps to take out the excess quantity, since operationally they find it difficult. The IR therefore carry this excess coal until the destination and then reserve the right to penalize the siding owner.

Customer Orientation

Siding owners, as key customers of the IR, often put forth the following requirements from railway operations.

- *Supply of wagons:* IR should supply the stock asked for with little or no delay. Open wagons should not be supplied against request for covered wagons. The supplies should be arranged with little or no bunching.
- *Transit time guarantee:* "Just In Time" approach is becoming important to the cement industry to eliminate inventory costs. This requires transit time guarantees and even containerization.
- *No restrictions on free flow of goods:* The traffic must move freely, determined by market forces and not by IR. For example, if food grain loading picks up from Firozpur division, loading of covered wagons towards Mughalsarai runs into difficulties. Similarly, frequent restrictions are imposed on movement to individual railway destinations where a quota is applicable. If it is a capacity problem, what have the IR done to remove the bottlenecks? If it is a problem of terminals, what can the IR and industry do?
- *Rail connections to minor ports:* Traffic will start moving in a big manner to the interiors from the ports, especially coastal traffic from and to the minor ports. Therefore, transport infrastructure planning not only for the major ports but also the minor ports is important.
- *Claims settlement:* IR's record for claim settlement is poor. For example, when wagons are involved in accidents due to suspected sabotage, IR are not willing to refund the freight and also not willing to prove that the unloaded goods were taken care of as required by law. The result is that the industry is fighting cases in the claims tribunal and adding to the workload on the both sides.

Source:

Communication from Gujarat Ambuja Cements Limited, New Delhi, 1999.

Comments

From the experiences of sidings, it is clear that customer orientation is not part of the management ethos of the IR. As quoted by an ex railway officer turned senior executive of an industry association, "This (lack of customer orientation) permeates the whole process of definition of rules, procedures, interpretation and policies of IR. Customer centered policies on the part of IR would be imperative, if more freight traffic has to be attracted. Sidings should be viewed as a proactive measure to invest in and make the customer "captive" to IR.

Apart from the marketing angle, investment in sidings is also an important issue for wagon utilisation. As per the IR Year Book 1998-99, out of a wagon turn-round of 8.2 days, only 28 hours was the revenue earning run over an average lead of 669 kms. Most of the wagon turn-round time is spent in terminals, due to inadequate infrastructure or lack of co-ordination.

It may be best to think of SPVs in which IR and the concerned factory/factories have an equity share in owning and operating the siding. This would bring in stakeholding in making the siding commercially viable. (A recent example is the siding to the GAPL port at Mundra, in which IR and GAPL share 50% of the infrastructure costs. This is however not structured as an SPV).

4. Pipavav Railway Corporation Limited

Introduction

Pipavav Railway Corporation Limited (PRCL) is a joint venture between Gujarat Pipavav Port Ltd (GPPL) and IR. GPPL is a joint venture port between the Gujarat Maritime Board (GMB) and private operators including Sea King Ltd and Port of Singapore Authority. In the current phase, it has a capacity of 12.06 mt at Pipavav, which is now operational, though not at full capacity. A major issue is with respect to the evacuation infrastructure, for which in January 2000, a pioneering joint venture memorandum had been signed between GPPL and the IR. GPPL and IR would form a Special Purpose Vehicle (SPV) to execute the infrastructure project. This project is pioneering in the sense that an operating segment of IR is being 'handed over' to an SPV for upgradation and revenue generation.

The project involves establishing a 295 km broad gauge link to the port by a 281 km gauge conversion project and a 14 km laying of a new line. The project is estimated to cost Rs 270 crores. The project will be funded with a debt equity ratio of 1:2. The IR, and GPPL and its associates will have 50% equity each. Recent investments made by IR towards upgradation of this route would form its equity contribution. The ownership of assets so created will remain with the SPV. The project is expected to be completed within 18 months. As per a news item, the Container Corporation of India (CONCOR), Maersk and the Central Warehousing Corporation Ltd (CWCL) would be associates to GPPL in the new SPV.

The demand risk and the project construction risk are to be borne by the SPV. Traffic guarantee as already offered by the GPPL (1mt in the first year, 2 mt in second year and 3 mt from the third year onwards) would now be given to the SPV. Revenues will be collected by IR as per IR determined rates. IR will first take a certain percentage of revenues as a charge for operating and maintaining the line, including the hire charges for wagons, locomotives and coaches. The remaining will be apportioned to the SPV as per agreed terms and would form the revenues of the SPV. A lease rental is payable to the IR for the use of the existing assets to be valued at historical cost. Other costs would be interest, marketing and administration, and depreciation.

IR would have the option of running passenger and freight trains other than to the port. This would be done in consultation with the SPV and apportioned earnings would accrue the SPV. IR would also be free to provide rail connections with the project line. The SPV would be managed by a board with equal representation from IR and GPPL. The chairman would be from IR while the chief executive would be from GPPL. While the detailed terms of the agreement have yet to be worked out, it has not yet been clarified whether the project is being taken up with a definite tenure of the SPV or not. Similarly, the obligations of IR towards operational and maintenance effectiveness may need to be spelt out rather than being taken for granted.

Source:

"Regulation and Privatization: A Comparative Case Study of Gujarat Maritime Board and Jawaharlal Nehru Port Trust," by G Raghuram, Indian Institute of Management, Ahmedabad, 2000.

Comments

A major plus point of the JV is that the partner is a key stakeholder, driven by interests to make the port viable. Issues that would need further attention are whether the JV is sufficiently 'mutual' or one-sided in favour of IR. The issue of the correct determination of costs of operation and maintenance is significant and not clarified, especially since it is not subject to market forces or even transparency. It is very important from the perspective of other such ventures that this pioneering model does not fail on account of lack of mutuality.

As per a news item in the Economic Times dated August 31st 2000, the project cost has been stated at Rs 294 crores. The traffic projections are 2.5 mt by 2002-03 and 10 mt by 2008-09. The return on investment is expected to be 15%. The concession would be for 33 years on a BOOT basis.

The SPV would be entitled to rights and obligations under the Railways Act. While IR would be entitled to run passenger services in the project area as they exist today, additional services will require the consent of PRCL.

5. Konkan Railway Corporation

Introduction

Konkan Railway Corporation Limited (KRC) was set up as a Public Sector Company under the Ministry of Railways in July 1990 to bridge the 738 km "Konkan Gap" by providing railway connection between Roha (150 kms South of Mumbai) and Thokur (about 22 kms North of Mangalore). KRC was structured as a build - operate - transfer (BOT) project, with a concession period of 10 years from start of operations. KRC completed the project at a cost of Rs 3,375 crores (Rs 2,425 crores as investment and Rs 950 crores as capitalized interest) and commenced operations since January 26, 1998. Out of Rs 3,375 crores, Rs 800 crores was equity capital.

The cash operating and maintenance expenses were in excess of Rs one crore per day. Given that KRC was expecting of daily earnings of Rs 25 lakhs by way of passenger traffic (seven pairs of trains on the segment), they needed about 10 loaded freight trains to ply over the entire KRC segment daily (at an average contribution of Rs 7.5 lakhs/train in 1998) to break-even. (Each freight train going over the entire KRC segment could bring in a revenue of Rs 9 to 10 lakhs, at the average freight rate inflated by 50%, as per railway board pricing. The average cost payable to IR for wagon and loco hire, fuel and crew was Rs 1.4 to Rs 2.7 lakhs for a train going over the entire segment. This would depend on the number of wagons and locos hired for the train. The contribution figures in 2000 was expected to be Rs 9 lakhs per freight train and Rs 1.3 lakhs per passenger train). KRC also needed to make surpluses to pay back the debt burden of Rs 2,575 crores.

At the end of 9 months of operation, only 94 rakes had moved over the KRC segment. Earlier projections of business growth had not materialized. Out of the 94 rakes, 61 either originated or terminated in the KRC segment, while 33 passed through. Even out of this 33, 30 rakes either terminated or originated at stations immediately adjacent to KRC. KRC thus did not really serve the purpose of a "via" railway bridging the Konkan Gap and offering shorter routes. It was servicing new traffic from/to the KRC segment. One of the major reasons for this was the inflated price on the KRC segment, making it unviable for north south traffic on the IR to be rerouted via KRC.

KRC is thus in a financially unhealthy situation. Over the past two years, their survival has been ensured through budgetary support from the IR and some further debt. In response to the situation, KRC has been trying to increase its revenues through a marketing approach. They have proactively solicited freight traffic from Rajasthan and Gujarat towards the south and from Kerala towards the north. They have advertised and distributed promotional material on the benefits of using KRC and offered discounts on the KRC segment of travel.

Pushed to the corner, they attempted service innovations like a Ro-Ro service and are proposing other schemes for revenue generation, like leasing their station area for budget hotels ("Railotel"), catering, parcel traffic in break vans etc. They have also leveraged their transport project management and tunneling expertise to bid and construct similar projects like tunnel segments in the Mumbai-Pune Expressway. They have also business plans for the area of urban transportation.

Ro-Ro Services on Konkan Railway

Ro-Ro services were started on 26/01/1999 for carrying trucks on train on the KR section, between Kolad (150 km south of Mumbai) and Verna (Goa), a distance of 420 km. (The total KRC segment is 738 kms). The financial analysis of the project proposal and the actuals are given below. The Ro-Ro service was

expected to be financially viable, if reliable and regular services were offered. The customers saw this service as having a definite advantage over road driving, saving fuel and wear and tear of trucks.

Assumption: Traffic earning would start on day one, at full utilisation. There was enough traffic potential of trucks on NH 17 running parallel to KR. The third line at Kolad will be in position to deal with two trains daily. The new flats will have 100 km/h speed, with a length of 40 feet to accommodate two trucks. (The flats would be fit to take container traffic also).

- i) Services: 2 trains daily in Kolad -Verna section, with 30 flats each, offering space for 60 trucks. (This service could be extended to Suratkal/ Panvel/ Cochin/ Mangalore in the future).
- ii) Turn-round of a train: 36 hrs
- iii) No of flats required: 100 (3 rakes of 30 flats each, and 11% spare).
- iv) Cost of flats: Rs 17 lakhs x 100 = Rs 1,700 lakhs (approx)
- v) Traffic earning per annum:
Rs 3,800/truck x 60 trucks/trip x 4 trips/day x 365 days/year = Rs 3,218 lakhs
- vi) Annual running expenses:
- | | | | |
|----|-------------------|--------------------|-----------------------|
| a) | Loco hire charges | : 15,208 x 4 x 365 | = Rs 222 lakhs |
| b) | Oil | : 38,688 x 4 x 365 | = Rs 565 lakhs |
| c) | Lubricant | : (10% of oil) | = Rs 56 lakhs |
| d) | Mileage | : 1237 x 4 x 365 | = Rs 18 lakhs |
| e) | Repairs | : 783 x 4 x 365 | = Rs 11 lakhs |
| | Total | | = Rs 872 lakhs |
- vii) Interest on capital and other expenses at 20% = Rs 340 lakhs
- viii) Annual net expenditure = Rs 1,212 lakhs
- ix) Annual net surplus = Rs 2,004 lakhs

On a capital of Rs 1,700 lakhs, the net surplus expected was Rs 2,004 lakhs per annum.

In contrast to the above, new wagon flats had not yet been invested in. They were hired from the IR, like the locos. There were also expenses on fixed assets to the tune of Rs 73.31 lakhs. The actual revenue and expenses for the period 26/01/99 to 31/05/00 (16 months) was as follows:

- | | | | |
|------|----------------------|--|------------------------|
| i) | Traffic earnings | | = Rs 427.53 lakhs |
| ii) | Running expenses: | | |
| | a) Loco hire charges | | = Rs 90.79 lakhs |
| | b) Oil | | = Rs 197.75 lakhs |
| | c) Lubricant | | = Rs 18.15 lakhs |
| | d) Mileage | | = Rs 8.09 lakhs |
| | e) Repairs | | = Rs 9.61 lakhs |
| | Total | | Rs 324.39 lakhs |
| iii) | Wagon hire charges | | = Rs 69.01 lakhs |
| iv) | Net expenditure | | = Rs 393.39 lakhs |
| v) | Net surplus | | = Rs 34.14 lakhs |

On a capital of Rs 73.31 lakhs, the net surplus was Rs 34.14 lakhs over 16 months.

The period wise analysis of Ro-Ro services between 26/01/99 to 31/05/00 is given below:

(Rs lakhs)

Period	Total expenditure	Total earning	Net surplus
26/01/99 to 31/03/99	49.53	49.82	0.29
01/04/99 to 30/09/99	112.26	107.01	(5.25)
01/10/99 to 29/02/00	132.98	153.07	20.10
01/03/00 to 31/05/00	98.63	117.63	19.00
Total	393.39	427.53	34.14

Source:

- (i) "Konkan Railway Corporation Limited" by Bibek Banerjee, G Raghuram and Narayan Rangaraj, published in "Vikalpa - The Journal for Decision Makers," Indian Institute of Management, Ahmedabad, Jan - March, 2000.
- (ii) Communication from Konkan Railway, Mumbai, 2000 (Regarding Ro-Ro Services on Konkan Railway).

Comments

The KRC experience has not been as successful as it was envisaged. The KRC successfully carried out the asset creation. They had autonomy at this stage and funding for a separate entity was easier. However, during the operations phase, they have not been doing well due to lack of traffic. While they were responsible for raising revenues and going after the market, they do not have the authority to set their own prices and do not have access to the major industrial market of Mumbai. This was an ill-structured project because issues of market access were not properly considered, leading to high revenue risks. The project began from the supply (rather than customer) oriented perspective of filling up of what is called the 'Konkan gap.'

The inflated rates on the KRC segment, which were supposed to help bring in more revenues, have become a liability in that traffic is not being re-routed via KRC. Ofcourse, it is also interesting that the re-routing is partly being denied due to a competitive outlook from the neighbouring railway zones, who wish to keep the revenues to themselves. In the end, the "parent," namely IR itself would have to come to the rescue of KRC, rather than as a business deal. To that extent, the BOT structure of KRC is at best a "pseudo" BOT.

One significant issue in favour of IR is that a major railway investment to the tune of Rs 3,375 crores was made possible with just an equity investment of Rs 400 crores.

Given the tight financial situation, the many innovative responses of KRC are a railway first. The Ro-Ro service is certainly one of them. (A similar Ro-Ro service proposal between Mumbai and Ahmedabad, taking advantage of the congested NH-8 route, has been at the drawing board stage ever since the mid eighties). However, in the above financial analysis, it comes through clearly that sufficient homework was not done by KRC, given that actual traffic earnings were less than one tenth of what was envisaged. Also, the type of wagons that were hired had to be frequently taken off service during emergencies, there by affecting reliability.

6. BOLT Schemes for Gauge Conversion

Introduction

The attractiveness of the BOLT (Build, own, lease and transfer) scheme, for project development, lies in its innovativeness. It helps in lowering the administrative costs for the IR as the main construction work is taken over by the private contractor. It is assumed that this privatization would bring in efficiency through better project management and reduced time and cost overruns.

Project Selection

This is common to both the conventional method and the BOLT scheme.

- *Reconnaissance survey*: This survey comprises a preliminary project feasibility study.
- *Detailed engineering survey*: As the name indicates it is a detailed study under for finalizing the alignment and includes final location of stations, bridges, tunnels and any other important land-mark. At this stage detailed cost estimates for the project are also prepared.

- *Traffic survey*: This survey is made estimate the traffic, both goods and passenger, expected and the additional revenues generated to make an assessment of cash inflows.
- *Project sanction and financing*: Project sanction is a part of the Annual Railway Budget process. The allocation is done as per priority of the project and the projects under execution. All the projects which have high importance due to strategic or other reasons are accorded priority. The process includes sanction by Railway Board and finally by Parliament.

After this stage, the projects follow a different path for conventional method and for the BOLT scheme.

Project Execution (Conventional Method)

Under this method the main project is split into small sub-projects of around Rs 10 crores each so that they are manageable and easy to execute. The subcomponents are usually

- earthwork
- laying of ballast and sleepers
- laying and linking of rails
- major bridges
- signalling and telecommunication works
- electrical works
- PWD and minor work.

Tenders are invited for each of these subcomponents separately. The contracts are awarded to the successful bidders. Payments are made to the contractors on receipt of progress reports from railway engineers. An interesting and important part of the conventional method is that the IR has to do all the material procurement such as rails, sleepers, ballast, cement etc.

Project Execution (BOLT Scheme)

Under the BOLT scheme, bids are invited from the private parties for the whole project. The bids follows a two stage process, for each stage separate documents are provided hence called two packet process.

Packet 1 contains the following details:

- Details of the plant and machinery with the contractor.
- Track record of projects handled by the contractor previously. He should have handled the previous projects in a satisfactory manner. He has to provide documentary evidence about these projects and their progress. The contractor should have also handled at least one project whose project cost is more than 5 per cent of the bare construction cost of the present project bid for.
- Managerial expertise of the contractor in handling such projects has to be stated by the contractor together with supporting evidence.
- Financial plan for the project has to be spelt out in minute detail together with the cash flows over the project's life. He has to specify the sources from where he will get the funds and the way he would manage the cash payments to be made over the project's life.
- Complete financial statements of the contractor or the company have to be provided so as to reflect their financial health. The net worth i.e. the paid up equity capital and free reserves of the company has to be more than the 25 per cent of the bare construction costs of all the projects in hand with the company. If the foreign equity is less than 10 per cent of equity capital then it is not taken into account for eligibility purposes.

Packet 2 contains a proposal of lease payments the company expects under different scenarios. The different scenarios are a function of:

- With/without tax benefits
- With/without depreciation benefits
- For a period of 8/10/12 years

Thus the company has to give 12 different acceptable lease amounts to the IR. He should also specify the final transfer payment to be made at the end of the lease period in each case.

Packet 1 is used to find out the eligible bidders. After that Packet 2 is opened to find out the most cost effective bid for IR. The successful contractor is awarded the project and he has to sign the various agreements with the IR. It is followed by the exchange of the engineering drawings and plans of the IR with the PERT chart for the project as prepared by the contractor.

Conditions for the BOLT Scheme

The various conditions under which the BOLT scheme operates are as follows.

- The contractor has to execute a performance guarantee for 5% of the project cost in favour of IR.
- As a first step the land is leased to the contractor on a nominal payment for a specified time period. Then starts the **build** part of BOLT scheme.
- All structures planned by the contractor are to be approved by the IR.
- There are penal clauses for delay in project implementation and also for block bursting (Block refers to the condition where traffic is stopped to do maintenance/construction activities on a railway line which could not be otherwise done. Block burst is a railway lingo, which means that the duration of stoppage of traffic has exceeded the time that was originally agreed).
- After the asset has been created by the contractor, he **owns** it.
- Construction is deemed complete if Commissioner of Railway Safety certifies that the trains are fit to run at a pre-specified speed. (Commissioner of Railway Safety, though a former IR man in most cases, is under the Ministry of Civil Aviation and is responsible for safety of the travelling public).
- He then **leases** it to IR for a monthly lease payment.
- At the end of the lease period, the asset is **transferred** to the IR on a transfer payment.
- Mechanism of arbitration, in conventional and BOLT schemes, are settled under the existing general clauses of contracts which specify that
 - General Manager appoints two railway officers for arbitration on a specific request
 - Contractor can use legal machinery after exhausting the arbitration proceedings.

During project execution, constant monitoring and evaluation is to be done by the engineers from the IR to ascertain quality and timely progress of the project.

Risks under the BOLT Scheme

The risks under the BOLT scheme, as compared to the conventional projects, for the IR and for the private contractors are given below:

Risks for IR

- *Decrease in funding risks* as the project financing has been taken over by the private contractor. Thus there are very few chances of the project suffering due to lack of funds from budgetary support or the diversion of funds for other urgent or important project.
- *Increase in project selection risks* as financially and technically unfeasible but politically important projects can be taken up as finances would be seen to be easily available.
- *Project completion is dependent on the contractor selection* as he is the crucial variable in the whole scheme. Previously the project used to be broken up and given to many contractors. Thus the risks were diversified among different parties but now it is dependent on a single contractor.
- *Decrease in project completion risks* for the IR as they have many clauses in the agreement which are able to cover virtually all probabilities of delay or hold up in the project construction.

Risks for private contractors

- *Project completion risks* are high as he has the sole responsibility for the whole project. There are also heavy penalties in case of time overruns and block bursting.
- *Increase in raw material supply risk* as he has to arrange for its regular supply and the IR won't be party to it. In addition most of the material like rails, sleepers are specific to the IR. Thus he will also have to also bear the increase raw material costs due to inflation or adverse demand-supply position.
- *Information uncertainties* faced by the contractor increase the risks, as he is unaware of the exact details of the project as appraised by the IR. Thus he is not aware of the difficulties he would face and the project cost that he should take in his calculations while making a competitive bid.
- *Risks on cash flows* are negligible as these are guaranteed under the authority of president of India. The risks on return are the same as those of a sovereign bond. Therefore these can be considered as return without a risk. However problems can be on contractual issues which could effect the either effect cash flows or the perception of investors.
- *Market risk* is negligible as the lease payments are decided in advance and the cash flows are assured irrespective of whether the project is able to break even or not. and involving empty running in one direction.

Source:

"Alternate Means of Financing Railways" by G Raghuram and M Ravi Babu, published in "Infrastructure Development and Financing: Towards a Public-Private Partnership," G Raghuram et al (editors), Macmillan India Limited, Delhi, 1999.

Comments

The BOLT scheme has conceptual merits, especially since it clubs the relative strengths in project management of the private partner and in rail operations of the IR. Unfortunately, no BOLT scheme has been successful primary due to poor implementation. At one time three MG to BG conversion projects were offered under BOLT. One was taken back by the IR due to the urgency of the project, another got caught into court litigation and is currently a closed issue, while the third is still "alive," but at a very slow pace. The issues have been in proper marketing of the concept, and getting the right kind of stakeholders as bidders.

7. Own Your Wagon Scheme

Introduction

The Own Your Wagon (OYW) scheme was started in the early 90s to get private investments for building up modern wagon stock.

The parties eligible to enter the scheme are:

- Individuals as producers
- Corporate entities as producers
- Association or group of companies
- Thermal plants and other bulk consumers
- Leasing companies

Under the scheme, the wagons could either be procured directly from a wagon builder or from the IR. In the former case, the wagon buyer has to pay a design loan and an inspection charge of one and a half per cent and in the latter case, the buyer has to pay a service charge of three per cent of the price. The utilisation of the wagons, which could either be under a general pool or a closed circuit, would be mutually decided. The benefits to the owners under three possible arrangements are given below:

- *Pure lease*: As a pure lease, the wagon is used by the IR as a general wagon and it pays lease charges at the rate of 16 per cent per annum, on quarterly basis for a period of ten years, followed by a rate of one per cent for the next ten years. This lease charge will be calculated on the current price of similar wagons owned by the IR. After the expiry of further ten years the lease is continued on mutually agreed terms. Owner however also has freedom to dispose of the wagon. Maintenance will be done by IR at its own cost.
- *Lease cum guaranteed clearance with general service wagons*: Under this arrangement, IR in addition to paying the lease as specified before would assure the lessor to clear a minimum volume of traffic during a specific period. The movement of traffic would however be subject to rules, legal and administrative provisions like the Railway act, preferential traffic schedule, central or state government restrictions/bans on movement of goods etc. There would be no further freight concession. Maintenance of the wagons would be done by IR at its own cost.
- *Guaranteed clearance*: In this category, lease charges will not be paid to the wagons moving in dedicated routes. However IR would give a concession in the freight rates depending on the movement patterns of the wagons. The freight concession would vary with changes in budget provisions. Maintenance would be done by the IR and the rates would be charged to owners at rates which are mutually agreed to.

In spite of the changes in the modalities of the scheme, it has not picked up as expected.

Source:

"Alternate Means of Financing Railways" by G Raghuram and M Ravi Babu, published in "Infrastructure Development and Financing: Towards a Public-Private Partnership," G Raghuram et al (editors), Macmillan India Limited, Delhi, 1999.

Comments

The scheme has many one-sided contract clauses, like the termination of guarantees in case of damage of wagons in accidents by paying the book value (which due to depreciation provisions of Income Tax law would be much lower than the market value of the asset). Similarly, in case there are any change of rules, which are unacceptable to the owner, the wagons would revert to IR at the book value.

While availability of wagons to participants could increase due to supply guarantees, the non-participants could also benefit due to increased overall supply of wagons. Thus, competing firms might have different capital costs while enjoying similar benefits of increased wagon allocation.

Another significant issue is the IR's own ability in delivering service level guarantees. Conceptually, there would be a question as to whether such a scheme can be successful at all in a pooled wagon system. There still would be scope where wagons could be dedicated to a customer like in iron ore circuits, coal merry-go-round etc. In terms of the stakeholding for wagon investment, the incentive compatibility is appropriate for major users, provided the scheme meets with their requirements.

8. Catering Contracts

Introduction

As a part of passenger business, IR provide catering/vending services at stations and in selected long and medium distance Mail/Express trains. Catering facilities are available at more than 3200 stations and in 170 pair of trains. Catering services at 68 stations and in 48 pair of Mail/Express trains are managed through departmental staff whereas at more than 3100 stations and 120 pair of Mail/Express trains, catering services are being managed by private operators.

IR recovers a percentage of sales turnovers towards licensee fee in addition to rent on building/space, electricity/ water charges etc. from the licensees. So far, 3-5% of sales turnover in case of static units and 5-8% of sales turnover in case of mobile units was being charged as licensee fees. In the direction of IR's efforts to raise resources through un-conventional sources, it has now been decided to increase the license fee in all cases of catering/vending units to 15% of sales turnover in case of Rajdhani/Shatabdi Express trains and 12 % of sales turnover in case of other Mail/Express trains and static units. The revised license fee has come into effect from 1-7-1999.

In the year 1998-99, IR has realized approximately Rs 8.80 crores as license fee from the licensee operated catering/ vending units on IR. It is likely that there would be substantial increase in this regard for the year 1999-2000 for which details are being collected from Zonal Railways.

Today, licensees are managing the catering/vending units under 5-year agreement, which is renewed every 5 years, subject to performance being satisfactory. However, there has been no proper arrangement of assessment of sales. As such, there has been significant under-reporting of sales affecting the in-flow of revenue to the IR adversely. Keeping this in mind, the Ministry of Railways has decided to enhance the license fee across the board with effect from 1-7-1999.

So far catering/vending services are being provided on IR where there is a regulation of price and the menu. In order to provide branded products from reputed manufacturing companies, it has been proposed that IR should provide Food Marts/Food Plazas at 25 nominated stations through private participation. A beginning has been made on Western Railway (WR) in this regard where 2 fast food outlets are being operated at Ahmedabad by a reputed brand company. WR is getting Rs 3.11 lakhs as license fee from these 2 units per month which is more than the total license fee collected all over Vadodara division. In their arrangement, party has to pay a minimum amount specified or a percentage on sales turnover whichever is higher. In this way, IR has been sharing revenue with the catering licensee. Besides, there has been tremendous improvement in the quality of standard and hygiene level.

It is also under the consideration of Ministry of Railways that exclusive supply of food items is obtained from reputed manufacturers in case of New Delhi-Howrah and New Delhi-Mumbai Rajdhani Express trains. Food-manufacturing companies will be given advertisement space in trains. The railway is expecting a significant amount besides getting a good discount on supply of catering items. If found successful, IR may consider extension of this scheme on other trains also.

Source:
Communication from Railway Board, New Delhi, 2000.

Comments

While the contracting out to private parties for catering is welcome, three issues remain:

- (i) Monitoring of revenues under revenue sharing arrangements (which has been raised above)
- (ii) The role of the newly setup Catering Corporation (presumably for the kitchens under IR ownership) and
- (iii) Since food is a key complementary element of travel, the responsibility of IR for quality of service will always remain.

Conclusions

Based on the case studies, we identify eight dimensions for good commercial partnerships. We describe these briefly.

1. *Equity Leverage*

This is a significant dimension, since prima facie this often justifies the partnership from the IR's viewpoint. (One would hope that in the long run complementary expertise and appropriate managerial competence would be the primary drivers for the partnership, though currently they are not). The POW runs with 50% investment from the IR. PRCL would create an infrastructure with one third contribution from IR, the Konkan Railway, involving a project cost of Rs 3,375 crores has been created with an investment of Rs 400 crores from the IR. The BOLT and OYW schemes were structured with no investment requirements from IR. A significant share of catering infrastructure has been created with no investment from IR.

As a general principle, while IR would be interested in higher equity leverage (by reducing its investments), it would be important to provide as much equity as would be required to demonstrate IR's interest in the project, make the partner feel reasonable secure and commensurate with the management control desired.

2. *Goal Clarity*

A clarity of goals to enable the commercial partnership to evolve clear strategies is a must. CONCOR and POW are good examples of this. Both organizations have developed the market and created a valuable niche for themselves. The development of Railway Sidings and the OYW scheme has suffered due to lack of goal clarity, and a consequent visualization of service levels and operating strategies. In the case of KRC, the goals were sharp for the project management stage, but are not so in the operations stage. KRC is not in a position to go after potential revenue generating markets, since this has scope of conflict with the other Railways zones. This is partly affected by the project structuring.

3. *Revenue/Market Risk*

The two issues here are the extent to which IR (i) can help mitigate this risk and (ii) seeks revenue sharing. Risk mitigation measures would require a high degree of operational efficiency and effectiveness so that the partner who can put their best in attracting revenues. This is applicable in the case of CONCOR, POW and the Railway Sidings. For KRC, and possibly in PRCL, IR's own traffic routing policies would be a major determinant of revenue. In the BOLT and OYW schemes, revenue to the partner is guaranteed through a lease rental. In terms of revenue sharing, the POW administrative arrangement is being questioned. In the case of Railway Sidings, PRCL and KRC, the principle of distance based sharing seems acceptable as 'fair'. PRCL and some Railway Sidings also offer a traffic guarantee to IR. In Catering Contracts, there is an attempt to move from license fee based to a revenue sharing arrangement, at least for large contracts.

The important question for IR is whether it is doing the best in terms of risk mitigation and seeking a revenue share which is acceptable, both in amount and accounting requirements.

4. *Decision Making Autonomy*

The commercial partnership must have decision making autonomy (independent of 'interference' from IR) to pursue its goals and implement strategies effectively. CONCOR and to a certain extent, KRC, would be good examples of this. They have been able to develop a variety of customer oriented initiatives. The POW and Railway Sidings are not structured for such autonomy, though they could do a lot better if provided the autonomy. For example, the expertise developed in running POW has not been made sustainable in a manner that it can be transferred to other potential tourist train circuits.

Railways Sidings have more often been an area of conflict between IR and the partner, rather than being viewed as a commercial opportunity.

5. *Partner/Stakeholders' Interest*

This is a significant dimension for the success of the commercial partnership. Technically, in the context of CONCOR and KRC, there is really no partner since the organizations have been given 'birth' by IR itself. This does have attendant problems where in the stakeholding in these organizations might not fully mature towards their goals since a lot of 'baggage' from the 'parent' IR could be carried over. Special efforts to distance these organizations from IR would be required.

The POW has done reasonably well and the PRCL has chances of doing well, since the partners (RTDC and GPPL respectively) have strong stakes in the success of these partnerships. The BOLT projects have failed primarily because the selection of the partner was done without sufficient homework on their stakeholding. In the context of Railway Sidings and the OYW schemes, while the partners have strong stakes, the structuring and decision making scope have not permitted the partners' interests to fully mature.

6. *Project Structuring Quality*

CONCOR and the Catering Contracts can be viewed as well structured projects, in which there is a consistency between the goals, decision making autonomy, scope of operations and financing. The POW, Railway Sidings and OYW schemes have not been well structured, since they are just administrative arrangements, lacking any form of 'ownership' which would have been possible, say, through an SPV. Often, these administrative arrangements are implicitly one sided, biased in favor of IR. KRC, though an SPV, is not well structured since the scope of operations are not consistent with the market risk. For example, KRC has no direct access to the Mumbai market or for that matter, customers whose traffic originates in other zones.

In the OYW scheme, the partners are not happy with the structuring on the service levels, even though the financial returns, especially by current standards are good. In fact, the IR may be a loser financially in this scheme due to the high lease payments. The BOLT projects were not structured well enough to attract players with relevant experience and dissuade those without. In the case of PRCL, the structuring exercise is still in progress. It appears that a significant amount of homework is being done to give it a sustainable structure.

7. *Transaction Costs*

All the commercial partnerships have transaction costs with respect to IR and the partners. The issue of defining and monitoring such transactions would add to costs. For example, the charges payable by CONCOR to IR for carriage of containers, liabilities dues to delays and safety violations need proper definition. The same would apply in all the other situations with varying degrees of complexity. In the case of PRCL, defining and monitoring traffic rights, route interconnections, traffic guarantees, operations and maintenance charges and service levels, etc would be complex. If such a project were undertaken within the ambit of IR, there would not have been the need to define these transactions. But then, a project like PRCL may not even take off, given the broader priorities of IR.

The real issue is that the value of the commercial partnership with the attendant structuring should be higher than the transaction costs. The value is derived not only in the materialization of the project and leveraging of complementary expertise, but also from the increased focus and clarity of important transactions related to costs, service levels, safety responsibilities, etc.

8. *Transparency/Contestability*

The various dimensions of the commercial partnership must be at one level transparent and further contestable. For example, the charges paid by CONCOR, KRC (and possibly PRCL in the future) to IR are neither transparent nor contestable. If this were the case, then other stakeholders and possible players in the activity could have the opportunity to contest and offer better charges. In the context of revenue sharing on the POW and service levels on the Railway Sidings and OYW, even though there is transparency, there is no contestability. The BOLT projects and Catering Contracts were contestable, partly because a competitive tendering process was adhered to.

The principle here is not only to ensure transparency and contestability in all the transactions, but sustain the same through appropriate competitive processes.

The table below summarizes the attributes of the eight case studies in the dimensions discussed above. In three of the dimensions (Goal Clarity, Decision Making Autonomy and Transaction costs), the data and/or the actual operations have not been sufficient for some of the cases to enable an analysis. The corresponding cells have been left blank.

	Equity Leverage	Goal Clarity	Revenue/Market Risk	Decision Making Autonomy
CONCOR	Low	High	High	High
POW	Low	High	High	Low
Sidings	Low – Medium	Low	High – Medium	Low
PRCL	Medium		Medium	
KRC	High	Medium	Medium	High
BOLT	High		Low	
OYW	High	Low	Low	
Catering	High		Low	

	Partner/ Stakeholders' Interest	Project Structuring Quality	Transaction Costs	Transparency/ Contestability
CONCOR	Low	High	High	Low
POW	High	Low		Medium
Sidings	High	Low		Medium
PRCL	High	Medium	High	Low
KRC	Low	Low		Low
BOLT	Medium	Low	High	High
OYW	High	Low		Medium
Catering	High	High		High