

FEASIBILITY OF INDIAN RAILWAYS AS A COMPLETE LOGISTICS PROVIDER

**Final year project report submitted in partial fulfillment of the requirement
for the award of the degree of**

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IN

INTERNATIONAL BUSINESS



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DECLARATION

I, **ALPANA KHALKHO**, Roll No. R, Batch 2013-15, MBA (International Business Management) of the UNIVERSITY OF PETROLEUM & ENERGY STUDIES (UPES), Dehradun hereby declare that the dissertation report entitled

“FEASIBILITY OF INDIAN RAILWAYS AS A COMPLETE LOGISTICS PROVIDER”

Is an original work and the same has not been submitted to any other institute for the award of any other degree.



(ALPANA KHALKHO)

CERTIFICATE

This is to certify that dissertation report on **“FEASIBILITY OF INDIAN RAILWAYS AS A COMPLETE LOGISTICS PROVIDER”** has been completed and submitted to University of Petroleum and Energy Studies, Dehradun by **Ms. Alpana Khalkho** in partial fulfillment of the requirement for the award of degree of **MASTER OF BUSINESS ADMINISTRATION (INTERNATIONAL BUSINESS MANAGEMENT)**, 2013- 2015 is a bonafide work carried out by her under my supervision and guidance.

To the best of my knowledge and belief the work has been based on investigation made, data collected and analyzed by her and this work has not been submitted anywhere else for any other university or institution for the award of any degree/diploma.



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Preservation, inspiration and motivation have always played a key role in the success of any venture. In the present world of cut throat competition REPORT is likely a bridge between theoretical and practical working, willingly I have prepared this particular report

I would like to thank the supreme power, the almighty God who is obviously the one who has always directed me to work on the right path of my life. With his grace this project could become a reality.

I have taken efforts in this project. However, it would not have been possible without the kind support and help of individuals and organization. I would like to extend my sincere thanks to all of them.

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EXECUTIVE SUMMARY

Indian Railways' plan to set up the Logistics Corporation of India – a proposed one-stop solution for all its logistics needs – may soon get the nod of the Union Cabinet. Logistics focuses on managing the transfer of goods from point of origin to point of consumption. Experts argue that the Rs.9000 crore logistics industry in India, which is currently growing at over 5 per cent, holds tremendous potential and the Railways has much to gain from this enterprise.

However, the ambition of the Railways to graduate from a bulk commodity supplier to a full logistics provider, while a step in the right direction, demands a change in the attitude of the national transporter when it comes to doing business with the private sector. Allow some room for flexibility and transparency in policy making and the private players will be keen to participate as partners, especially when a mere 1 per cent of the logistics industry currently falls in the organised sector. The proposal is to start the Logistics Corporation as a joint venture or a public private partnership across 28 cities where the traffic volume is more than two million tonnes a year. The logistics company will use a mixed network of roads and rail. The majority share will be held by the private player, who will develop warehouses and take care of the entire operations. The Railways' contribution to the equity will be its land resources in strategic areas in the 28 cities. An integrated logistics company has been long-awaited in India. While the industry in the US and Europe moved on from being just operation-focused logistics provider to supply chain manager in the 1970s, the Indian logistics industry has lagged. The Railways' role has been limited to being a supplier of bulk commodities without any commitment to time-bound delivery. Industry players term this as 'highly unprofessional'.

“Acknowledging the limitations of our current freight operations is one reason why we are keen on a logistics corporation,” says D P Pande, member traffic, Railway Board. “As in countries like the US, where trucks can be loaded on wagons and then loaded off on roads for the last mile, a similar set-up is what India looks forward to.”

This, of course, would not be the first attempt by the Railways to inject sophistication into logistics. It had trod the route earlier in 2007 when it allowed private participation in container operations. The Konkan Railways' Roll-on Roll-off, or RORO, scheme (in which trucks are loaded on wagons and offloaded for last mile), has met with reasonable success. In addition, the Railways has set up the Central Railside Warehouse Company to manage warehouses across India. “But,” says J P Batra, former chairman of the Railway Board, “each of these efforts still lacks integration and there is a need to move beyond container operations. The private players have always shown interest in developing the logistics area with the help of the Railways.”

Contents

| | |
|---|-------|
| Declaration..... | (i) |
| Certificate..... | (ii) |
| Acknowledgement..... | (iii) |
| Executive Summary..... | (iv) |
| Chapter 1 | 3 |
| 1.1: INTRODUCTION | 3 |
| INDIAN RAILWAYS | 3 |
| 1.2: BACKGROUND | 4 |
| 1.3 LOGISTICS INFRASTRUCTURE IN INDIA..... | 5 |
| 1.4 LOGISTIC FREIGHT OF RAILWAY | 7 |
| 1.5 INVESTMENT PLAN..... | 8 |
| 1.6 RECENT POLICY INITIATIVES TO ATTRACT INVESTMENTS | 11 |
| 1.7 SECTOR OUTLOOK..... | 12 |
| Chapter 2 | 14 |
| LITRERATURE REVIEW..... | 14 |
| 2.1: 3PL Services in India: Challenges, Opportunities and Recommendations-A Study at IIFT. | 14 |
| 2.2: Global Logistics Markets | 14 |
| 2.3 An industry in transition; 3pl in information age..... | 14 |
| 2.4 Overview & outlook in logistics industry | 15 |
| 2.5 Indian logistics industry gaining momentum | 15 |
| 2.6 Logistics and supply chain management in India | 15 |
| 2.7 Advantage of Third Party Logistics in Supply Chain Management | 15 |
| 2.8: INDIAN RAILWAYS..... | 16 |
| 2.9: Rail Road Choice in India | 16 |
| 2.10: 3PL mergers..... | 16 |
| CHAPTER 3 | 17 |

| | |
|---|----|
| OBJECTIVES | 17 |
| CHAPTER 4 | 18 |
| RESEARCH METHODOLOGY | 18 |
| 4.1: Type of Research Design | 18 |
| 4.2: Type of data..... | 18 |
| 4.3: Method of data collection | 18 |
| 4.4: TOOLS FOR DATA ANALYSIS..... | 19 |
| 4.5: FRAMEWORK OF THE STUDY | 19 |
| 4.6: SCOPE OF THE STUDY | 19 |
| 4.7: LIMITATIONS OF THE RESEARCH..... | 19 |
| CHAPTER 5 | 20 |
| DATA ANALYSIS | 20 |
| 5.1: Executing a focused on last-mile rail program: | 20 |
| 5.2: Strengthening coastal freight corridors: | 22 |
| 5.3: Enabling better equipment and setting common standards: | 24 |
| 5.4: GOVERNANCE CHANGES NEEDED AT THE HIGHEST LEVEL TO DEVELOP THE POLICY AND ENSURE IMPLEMENTATION..... | 25 |
| 5.5 ESTIMATING CONCENTRATION ON CONNECTORS | 25 |
| CHAPTER 6 | 26 |
| CONCLUSION..... | 26 |
| CHAPTER 7 | 29 |
| BIBLIOGRAPHY | 29 |

Chapter 1

1.1: INTRODUCTION

INDIAN RAILWAYS

Throughout the most recent 40 years the Indian economy has transformed from a base in agribusiness and substantial industry to one ruled by optional merchandise and administrations. In the meantime the populace has developed to more than 980 million with more than 65% living in expansive urban focuses (more than 100,000).

Indian Railways run 12617 trains to continue 23 million travelers every day associating more than 7172 stations spread over the sub-landmass. It is proportional to moving the whole populace of the Australia. Routes run more than 7421 cargo trains conveying around 3 Million Tons of cargo consistently. They have attained to the refinement of entering the select club of tracks of China, Russia and USA in conveying more than one billion tons of cargo. What's more, is further focusing to turn into the biggest cargo transporter on the planet?

India's rail system is a remnant of British tenet. More than 80 every penny of the current system was assembled before the nation's freedom in 1947. India consequently has a system grown by more than 40 diverse line elements. Further, numerous autonomous kingdoms had their own particular route systems. Not long after segment, around 40 every penny of the system turned into a piece of Bangladesh (a large portion of the Bengal-Assam route lines) and Pakistan (the North-Western track lines). The remaining tracks were amalgamated into the Indian Railways. While movement on rail has become more than 10-fold somewhere around 1951 and 2007, rail track length has just grown 1.4 times in the same period. In spite of the overcapacity in 1950 and the effectiveness changes like gage transformation and charge from that point forward this stark hole in the middle of movement and base development has brought about limit limitations on key parts of the system with high activity. Moreover, activity development will proceed at high rates, obliging a step increment in the rate of system fabricate up.

Subsequently, Indian Railways basically conveys everything without exception and it never says no to 'a thing' on the off chance that it fits in the wagons. Above all, they are the foundation of production network of the protection foundation and assume an exceptionally essential part in security of the country.

As indicated by the Railway Budget

"It conveys steel
It conveys bond
It conveys salt
It conveys sustenance grains and grub and
It likewise conveys milk."

1.2: BACKGROUND

Routes, while they convey 23 million travelers a day. They extend one-billion tons of cargo a year, interfacing ports and mines to mechanical bunches, yet there are inconceivable tracts of hinterland sitting tight for rail network. In spite of the fact that cargo business has developed consistently through the years, Indian Railways convey just 31% of the aggregate cargo conveyed in the nation by all modes. There are the different difficulties they need to face.

Over the period, the offer of street cargo movement has ascended from 11% to 60% in 1995, with a relating abatement in rail activity. The street offer of traveler movement has expanded from 28 to 80%. This example has quickened in the previous 20 years with aggregate street activity developing at around 10% every year by and large contrasted with a 5.9 with 6.0% development in GDP. Rail activity developed at a normal rate of 5-6% in this period, in any case diminished in 1998-99 because of the retreat in substantial industry (especially iron and steel generation) which cut into rail movement more than different modes. In spite of the fact that this drop in rail movement will soon be recuperated, it is an image of defenselessness to both monetary powers and street rivalry.

The notable advancement of tracks has been a real quality of the Indian economy, generally as the a work in progress of the street framework has been a controlling power. As an aftereffect of monetary development the streets which contend with the railroads in the "Brilliant Quadrilateral" of India, connecting the real urban communities, are exceptionally congested. They are for the most part two-path, cleared streets with an expanding length of 4-path segments. Notwithstanding, as indicated by the Ministry of Surface Transport (Kumar, P. 1999), the aggregate length of National Highways (49,585 km) makes up under 1.65% of the aggregate and there are "no freeways worth the name in the nation". Tracks brag 62,000 course kilometers covering the nation, of which 60 % is expansive gage. The wide gage lines are amassed in the real cargo passages, where jolt and twofold track lines are the standard and they conveyed 83% of the aggregate cargo in 1995.

In spite of the fact that the absence of improvement in the street segment is as a rule gradually handled with the approach of duties to bolster a National Highway Fund, the tracks will advantage from a beneficial aggressive position. This position has permitted Indian Railways to

keep up a sensible development rate in cargo activity, without transforming its way to deal with the cargo market.

This circumstance, be that as it may, is prone to change with the normal change in street base throughout the following 5-10 years. The Indian Railways will confront much stiffer rivalry which could bring about considerably quicker disintegration of the rail mode offer.

1.3 LOGISTICS INFRASTRUCTURE IN INDIA

Logistics infrastructure is a key enabler of economic growth. Recognizing its importance to India's development, the government has increased its spend on logistics infrastructure in the last decade. Several major projects like the Golden Quadrilateral have been initiated, two dedicated freight corridors (DFCs) have been conceptualized and port capacity doubled. Nevertheless, much of the country's network built before independence is plagued by insufficient planning and investments. This has resulted in the shortfalls we see today. For example, India logistics infrastructure delivery is characterized by high costs and low service levels compared to other countries. Furthermore, the installed infrastructure capacity lags behind global peers.

Since a large part of India's future logistics network is still to be built, the country has a chance to build infrastructure optimally, to meet the growing demand. Doing so requires an integrated and coordinated approach in which the development of each mode—railways, waterways and roads—is matched to the needs and existing assets are better utilized.

In particular, India needs to increase its use of rail. For example, in the normal course, India's rail share in freight would decline to 25 per cent from the current 36 per cent. This is relative to almost 50 per cent rail share in China and the US, similar continental sized nations. The concerted approach suggested in this report can increase India's rail share to 46 per cent.

If India fails to achieve this, waste caused by poor logistics infrastructure will increase from the current USD 45 billion¹ equivalent to 4.3 per cent of today's GDP, to USD 140 billion or more than 5 per cent of the GDP in 2020. If tackled in an integrated and coordinated manner, this can be reduced by half and India's transport fuel requirement reduced by 15 to 20 per cent.

Perceiving these difficulties, the legislature has expanded the spend on logistics since 2003. In the Eleventh Five-Year Plan, spend on logistics framework at around USD 160 billion is higher than spend dispensed to power at USD 150 billion.¹⁷ Yet, India's logistics system is not prepared to deal with an over two fold increment in cargo movement expected by 2020. An on a very basic level distinctive methodology will be expected to fabricate India's logistics base. This methodology ought to be created on a reality based comprehension of the nation's current cargo

stream profile, the level of wastefulness in the logistics framework, future development, and improvement of both districts and items.

An efficient logistics infrastructure strategy requires a shift along four key dimensions by 2020

| | | | SHIFT | | |
|---|-----------------------|---|---|---------------------------|-------|
| | | | From current trajectory ... | ... to balanced modal mix | |
| 1 | Network structure | Network components and mode | Corridors (rail and water) | ~4 ¹ | 7 |
| | | | Connectors (expressways) | 5-7 ² | 20-30 |
| | | | Last mile links (road & rail) | N A ³ | ~750 |
| 2 | Enablers | Illustrative enabler to support network | Logistics parks | N A | 15-20 |
| 3 | Asset efficiency | Illustrative shift | Per cent of toll booths with electronic tolling | <50% ⁴ | >90% |
| 4 | Investment allocation | Share of spend (per cent ⁵) | Water | ~10 | ~10 |
| | | | Rail | ~40 | 50 |
| | | | Road | 50 | ~40 |

1 No focused last mile programme in current plans

2 Expressways only

3 Two rail Dedicated Freight Corridors (DFCs) planned, plus coastal corridors

4 Assuming all current manual toll booths not upgraded, whereas all new toll booths created have electronic tolling lanes

5 100% = ~USD 500 billion over the next decade

SOURCE: McKinsey

THE NATION BUILDERS UNIVERSITY

Table 1.1 – An efficient logistics infrastructure strategy requirement.

1.4 LOGISTIC FREIGHT OF RAILWAY

Traveler and cargo activity on Indian Railways has seen a reliable increment amid the period from FY 2006-07 to FY 2011-12 at a CAGR of 8.54% and 6.70% respectively¹¹. Nearly, production of base has not kept pace. Base expansion occurred at a snail's pace with CAGR for expansion of line limits and moving stock over the same period being under 5%. Thus, rail base has been confronting push and major courses face clogging and oversaturation. Especially in the cargo fragment, from which Indian Railways (IR) wins about 70% of its income, IR has been losing piece of the pie to streets division. Given that rail transportation structures is immensely critical particularly for transportation of real mass products like coal, bond, sustenance grains and iron mineral, deficient route limit developments and modernisation could hinder future financial development of the nation. A McKinsey Study highlights the under-use of rail foundation as a method for transportation and brings up that rail transport costs in India are around 70% more than that in the US¹². It gauges that the offer of rail in the cargo business sector would decrease to 25% throughout the following couple of years, if sufficient ventures are not made. Arranging Commission, in its 12th FYP record, has likewise noticed the extension for development in the benefit levels of IR in examination to Chinese and Russian Railways.

Three key components of the logistics network account for over two-thirds of total freight traffic in the country

■ Key elements

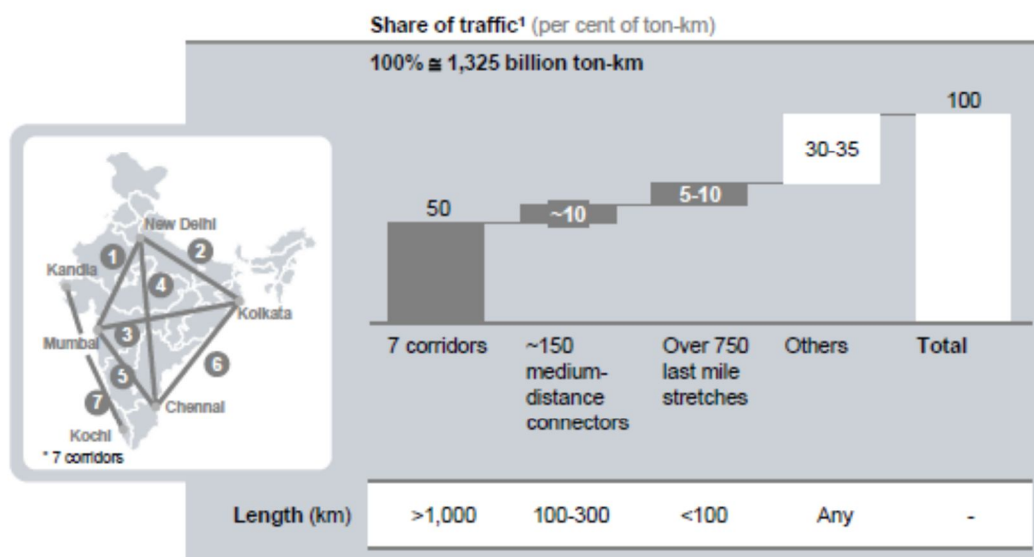


Table.1.2: Logistic network in India



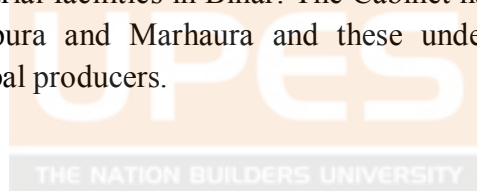
1.5 INVESTMENT PLAN

Venture Plans Recognizing the potential, Ministry of Railways (MoR) set aggressive development focuses in the 11th and 12th FYPs and launched strategies to make open doors for private interest. The focuses for 11th FYP were situated impressively higher than those accomplished in 10th FYP and with spotlight on making of base; these targets were attained to and, truth be told, surpassed in certain classifications. Be that as it may, the toss forward of the activities was likewise high including undertakings for building up of 132 New Lines¹³. Speculation arrangements have been set at still more elevated amounts for the 12th FYP stressing consummation of the expensive Eastern and Western Dedicated Freight Corridors ventures. Comparative yearning targets have been set for procurement of moving stock with more than 100,000 wagons and 25,000 mentors being wanted to be procured amid FY 2012-13 to 2016-17. Ministry of Railways focuses to build rail's cargo piece of the overall industry by no less than 2% amid the period.

Financing Challenges Traditionally, IR has relied on upon general budgetary bolster (GBS), market borrowings (EBR) and interior era for financing its costs and ventures.

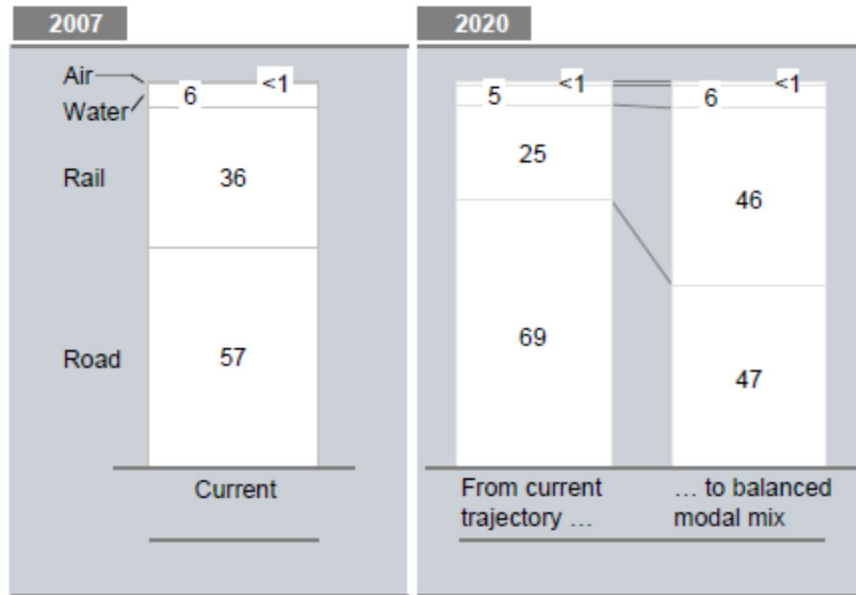
Amid the 11th FYP, IR went for general speculations worth Rs. 2,332.9 billion to be financed generally through EBR and inward era. In any case, inside era for IR did not appear to the sought degree, over this period, regardless of change in income procuring cargo activity, by virtue of expansion in wages taking after the usage of the Sixth Pay Commission. A significant part of the speculation was financed through GBS and business sector getting through Indian Railways Finance Corporation. Indian Railways has possessed the capacity to pull in private speculation at around 4% of its arrangement cost. In accordance with the physical focuses for securing of moving stock and making of rail framework, Indian Railways is visualized to require a speculation of Rs. 5,192.2 billion¹⁴ over the 12th FYP.

The expansive forthright expenses of setting up rail framework, readiness to influence efficiencies of private area and the criticalness of making this foundation has driven the legislature to open up the part to private venture. One of the key activities included opening up of the holder rail business for private interest in 2006-07. It permitted the passage of private holder train administrators who have until date acquired a venture of about Rs. 60 billion (in light of an industry gauge) which incorporates moving stock, terminal offices, holders and a significant measure of License Fee. This venture could ostensibly have been higher, had IR approach on compartment rail transportation been more strong. IR has welcomed PPPs in assembling moving stock and trains at two industrial facilities in Bihar. The Cabinet has endorsed setting up of these production lines at Madhepura and Marhaura and these undertakings are liable to create enthusiasm from driving global producers.



The proposed shift will lead to a very different modal mix

Per cent



SOURCE: McKinsey



Table 1.3 :- Proposed Initiatives.

1.6 RECENT POLICY INITIATIVES TO ATTRACT INVESTMENTS

Venture Plans Recognizing the potential, Ministry of Railways (MoR) set aggressive development focuses in the 11th and 12th FYPs and launched strategies to make open doors for private interest. The focuses for 11th FYP were situated impressively higher than those accomplished in 10th FYP and with spotlight on making of base; these targets were attained to and, truth be told, surpassed in certain classifications. Be that as it may, the toss forward of the activities was likewise high including undertakings for building up of 132 New Lines¹³. Speculation arrangements have been set at still more elevated amounts for the 12th FYP stressing consummation of the expensive Eastern and Western Dedicated Freight Corridors ventures. Comparative yearning targets have been set for procurement of moving stock with more than 100,000 wagons and 25,000 mentors being wanted to be procured amid FY 2012-13 to 2016-17. MoR focuses to build rail's cargo piece of the overall industry by no less than 2% amid the period.

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1.7 SECTOR OUTLOOK

Association with the Ministry of Railways uncovers that some private players have communicated enthusiasm for port network ventures, and presently communications are on to comprehend venture suitability and danger offering. In any case, the longing of engineers for substantial base undertakings on PPP in the track area needs to be tried. Up to this point, private interest in tracks has not been as much as it has been in other base areas. Because of variables, for example, prerequisite of high forthright venture, and also absence of priority of ventures, arrangements and administrative system alluring for private speculation, assessing feasibility and dangers for activities in lines is seen to be harder. The proposed systems need to give more prominent clarity on models inside which private and open elements could take an interest. For example, IR does not incline toward private interest in train operations and it makes the checking of IR's working execution on the concerned stretch troublesome for the private speculator. Private compartment train administrators expect a level-playing field to have the capacity to contend or work together with CONCOR and make an example of overcoming adversity. Shortly, the excitement for PPPs or any private interest with IR has all the earmarks of being low and would maybe need to be tried going ahead. Overall, while the part offers a real open door, all the more needs to be done regarding area administration, assistance of private members and opening up of Indian Railways to draw in private support.

This charge modification will bring Indian Railways an extra income of about ` 8,000 crore. Nonetheless, we require more than ` 9 Lakh crore to finish the Golden Quadrilateral Network and about ` 60,000 crore for presenting one shot prepare alone.

With a specific end goal to enhance its estimating of cargo and traveler movement, the Indian Railways launched the improvement of a Long Range Decision-Support System in 1994, which has as of late been finished. Six modules make up this framework, and one of these six is a Market Analysis Module that is situated in substantial part on a national shipper overview and an activity source destination review.

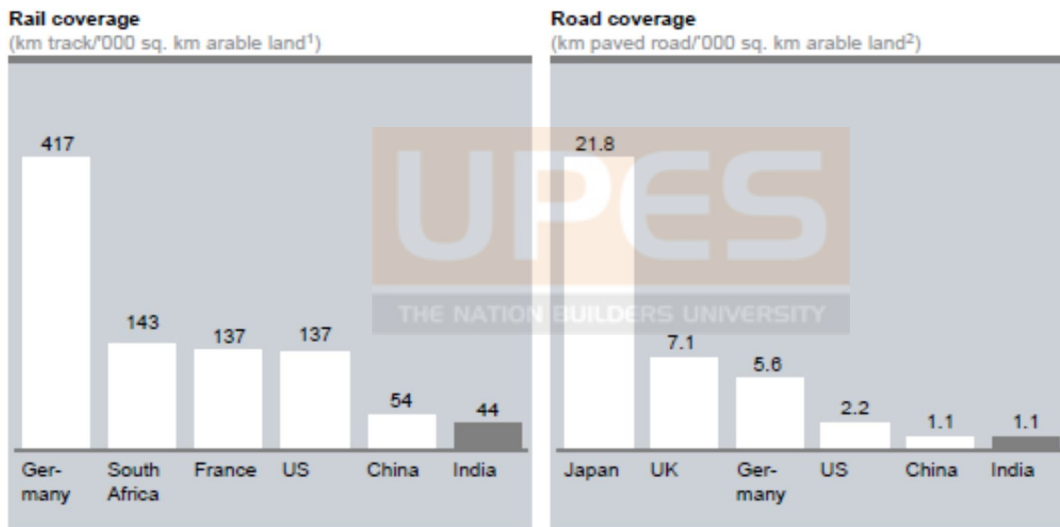
The shipper review did for the LRDSS was intended to fit a Logistics Cost Model for street rail mode decision. The extent of the study is point by point in Annex A. The Logistics Cost Model is depicted beneath.

It's the period where India's requirement for base in the logistics division is critical. As indicated by an examination in simply 10 years time India has seen its financial size more than twofold to \$ 1.37 trillion (2012) and aggregate outside stock exchange twofold from 20% of GDP (2000) to 42% of GDP (2012). This development has been went with a remarkable ascent in the volume of cargo activity development over the period. On the other hand, logistics foundation and

administrations in the nation have apparently not created at the same pace to bolster and further this development. As indicated by worldwide models, the Indian logistics part is portrayed by concerns around higher expenses, lower benefit, absence of satisfactory accessibility of prepared labor assets and absence of innovation in its procedures. In the course of recent years, the nation's Logistic Performance Index rank has tumbled from 37 (2007) to 46 (2012) as its score has stagnated over the period while contending nations have enhanced the same. India falls behind other major markets, for example, Brazil (41), China (26), US (9), and Germany (4).

Traveler and cargo movement on Indian Railways has seen a predictable increment amid the period from FY 2006-07 to FY 2011-12 at a CAGR of 8.54% and 6.70% individually.

India's logistics infrastructure lags behind global peers as well as other developing countries



¹ Estimated as of 2006
² Estimated as of 2007

SOURCE: CIA World Fact Book 2007; Transport Corporation of India; Planning Commission; Government of India; Ministry of Surface Transport Government of India; McKinsey

Table 1.4:- Comparison between Rail & Road Coverage.

Chapter 2

LITRERATURE REVIEW

2.1: 3PL Services in India: Challenges, Opportunities and Recommendations-A Study at IIFT.

The companies today are moving towards outsourcing their logistics function & while the 3pl companies give their clients the advantage of specialized skill through economies of scale. The difficulty in establishing a reliable and cost effective partnership between firm & the 3pl provider has also been highlighted. The increasing globalization has lead to more & more companies venturing into this field. Thus, the opportunities for 3pl service providers are increasing at a manifold. However, the cost imperatives & being efficient in all ways will be a challenge to overcome in coming times.

2.2: Global Logistics Markets

-Alexander Doll: Co-Ceo Barclays Germany
Dirk Friebe: Principal Roland Berger – Restructuring & Corporate Finance
Matthias Rückriegel: Partner Roland Berger – Restructuring & Corporate Finance
Christian Schwarzmüller: Vice President Barclays – M&A August.

Volatile market conditions are constantly challenging the operations as the sector is highly dependent on global economic environment & international trade flows. There is a need to develop the current customer portfolio so that the global logistics providers can overcome the challenge of making right strategic decisions to access growth markets & high margin business.

2.3 An industry in transition; 3pl in information age

Amelia C. regan&JiongJiong song from the Institute of transportation studies & department of civil & environment engineering,University of California, Irvine.

The logistics industry especially the 3pl in the world is going through a rapid transition where communication technology & information technology are main drivers. Stability will prevail in

the market as opposed to the general belief that the market will continue to grow. Characterizing the industry will be challenging & new opportunities will be emerging for all stakeholders while, we the industry goes through this rapid transition in technology.

2.4 Overview & outlook in logistics industry

Evotech Capital-1/4/2014 Shipping, warehousing, courier, & road/ rail/ air freight are the constituents of a complex range of freight & cargo related transportation sectors comprise the global logistics industry. China, India, other Asian economies, the middle east & Latin America are the emerging market that will see the growth & demand apart from traditional western economies.

2.5 Indian logistics industry gaining momentum

Nov,2013, IBEF (Indian brand equity foundation)

It is a report on performance & emerging trends in the Indian logistics industry. In the coming years, the key trends that are likely to affect the industry positively are entry of global players, increase in number of multi-modal logistics service providers, and greater investments. Also, automobile, pharmaceuticals, FMCG & retail industries will be key growth drivers. FDI regulations, private sector participation & development of infrastructure & the integration of world economies will result to a tremendous increase in trade.

2.6 Logistics and supply chain management in India

Sameer K. Srivastav

Logistics & supply chain practices in India have been separately studied as they are seamlessly integrated in the Indian context. Supply chain collaboration structure facilities, network design, transportation & the role of I & C technologies have been focused upon.

2.7 Advantage of Third Party Logistics in Supply Chain Management

Toshinori Nemoto

Graduate School of Commerce and Management, Hitotsubashi University

Naka, Kunitachi, Tokyo 186-8601, Japan Koichiro Tezuka

Graduate School of Commerce and Management, Hitotsubashi University

Naka, Kunitachi, Tokyo 186-8601, Japan.

In this paper, we have considered the relationship of SCM and 3PL, and offered some hypotheses about logistics and production outsourcing. It is recommended that joint usage of SCM and 3PL should be promoted because of their positive interactive effects, as indicated by the hypotheses. That is, when firms are intent on introducing SCM, it would be beneficial to outsource logistics activities and utilize a 3PL provider. The reverse could be true as well.

2.8: INDIAN RAILWAYS

Narendra Kumar

This paper mostly talk about the railways infrastructure. Focuses on modeling and analysis of the inventory systems of the railways. Also includes multi-indentured inventory system in the dynamic environment. And how to choose a appropriate modeling strategy for the study of the system.

2.9: Rail Road Choice in India

Peter D. Cook, Sanjay Das, Andreas Aeppli, Carl Martland.

There have been major changes in the share of road and rail traffic in India as the economy and the population has grown and become more urbanized. This paper summarizes the key factors for mode choice in freight transport that were found in India in a recent survey basedon the Logistics Cost Model of shipper behavior. Both the relative importance of these factors and customer rating of satisfaction is presented.

2.10: 3PL mergers

Perry A. Trunick

Mergers and acquisitions occur all the time in the world of third party logistics providers. Some, like the proposed combination of TNT and UPS, make headlines. Others go largely unnoticed — except by customers and their supply chains. For the user of 3PL services, the news that a 3PL has been acquired or is making an acquisition may raise mixed feelings. The most common response appears to be a “wait-and-see” attitude coupled with a little hedging — more open dialogue with back-up suppliers.

CHAPTER 3

OBJECTIVES

- To study the need for logistics and supply chain services.
- To study the challenges in 3rd party logistics services.
- To study the challenges for last mile delivery.
- To study the Rail logistics in India.

To determine those elements of the rail transport system which determine the choice of road or rail shipment in major transportation corridors, with specific attention to those commodities which represent potential rail traffic. Prime importance to be given to identifying and interviewing those individuals who represent a cross section of decision-makers who control the transport decisions for major commodities.

Table 5: Rating of Rail Service for Selected Factors for Different Commodities (on a scale of 10)

| Commodity | Reliability | Availability | Price | Transit Time |
|---------------|-------------|--------------|-------|--------------|
| Coal | 6.00 | 6.06 | 6.24 | 5.71 |
| Chemicals | 3.86 | 3.57 | 4.36 | 3.93 |
| Consumer Dur. | 4.75 | 4.25 | 6.75 | 7.25 |
| Foodgrains | 4.00 | 3.67 | 2.67 | 3.33 |

Table 2.1 Rating of rail service

CHAPTER 4

RESEARCH METHODOLOGY

- To study the need for logistics and supply chain services.
- To study the challenges in 3rd party logistics services.

4.1: Type of Research Design

There are 3 types of research design:

- Exploratory research
- Descriptive research
- Causal research

The research that has been conducted here is a descriptive type of research.



4.2: Type of data

Secondary data (research papers, industry reports, business journals, published articles, business magazines, newspaper articles)

4.3: Method of data collection

The study is carried out through secondary sources of data through research papers, industry reports, business journals, published articles, business magazines, newspaper articles etc. In depth analysis of indicator, reporting of inferences and recommendations has been carried out. A primary research was conducted with industry experts to better understand the practical issues associated. No standard questionnaire has been prepared as the people don't feel comfortable to answer formal questionnaire directly.

4.4: TOOLS FOR DATA ANALYSIS

Simple conventional methods of tabular analysis, observation and also by drawing inferences, this study has been done to understand the need for logistics and supply chain services and the challenges in 3rd party logistics services.

4.5: FRAMEWORK OF THE STUDY

This study has been conducted by studying the available secondary data like research papers, industry reports, business journals, published articles, business magazines, newspaper articles etc. to be able to better formulate different perspectives around the subject matter. In-depth discussions with academic experts and industry operators have been carried out to understand the various practical aspects in the working of 3rd party logistics service providers and the need for such logistics and supply chain services in the world today.

4.6: SCOPE OF THE STUDY



For the purpose of this study, the global and the Indian logistics industry have been analyzed. The emerging trends, the advancements in technology and their implications on the movement of the industry have also been studied. In particular, the effects on the 3rd party logistics services including the prevailing & potential challenges in respect to them.

4.7: LIMITATIONS OF THE RESEARCH

Primary research has not been conducted in this case due to the wide area of the study, given the cost, time and budget constraints.

CHAPTER 5

DATA ANALYSIS

5.1: Executing a focused on last-mile rail program:

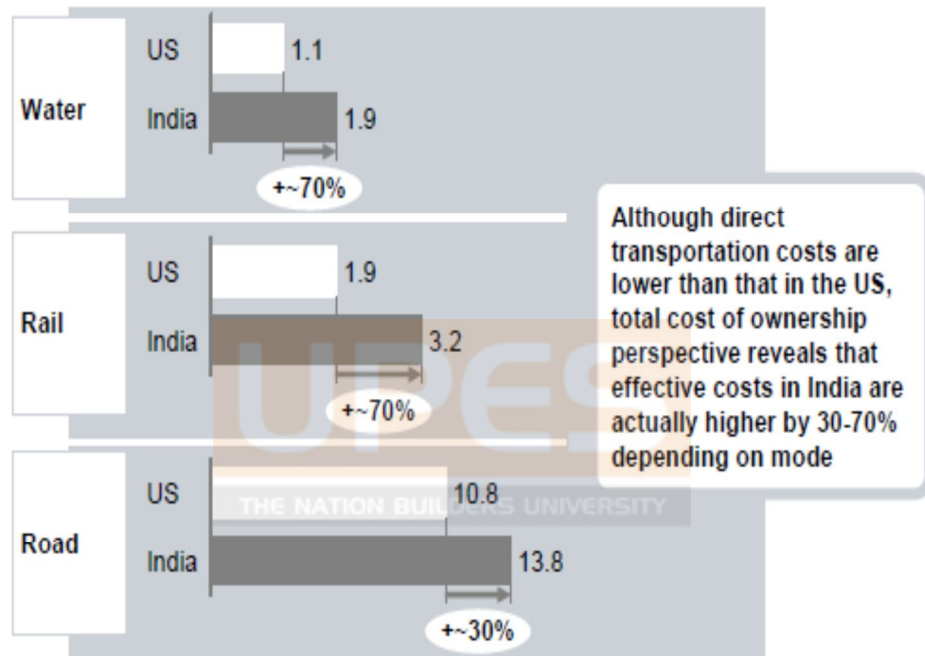
This obliges procurement of track linkage to huge numbers of the 750 last mile joins, which incorporates recognizing need connections, guaranteeing satisfactory activities to upgrade limit of these connections and ventures to quicken/ quick track usage of select undertaking to guarantee auspicious rail scope. The last mile connections to be secured would incorporate some basic coal hallways covering mines like Jharkhand, Chattisgarh and Orissa and additionally key ports (e.g., Paradip, Dhamra, Gangavaram) to guarantee smooth rail network for real power, steel and concrete plants. This will be critical given a more than 6.5 every penny every annum development anticipated in the transportation of coal throughout the following decade, and a potential necessity to import more than 100 MTPA of coal by 2013 in a situation where household supply does not stay aware of interest.

After the important distinguishing proof of last-mile rail extends is embraced and venture practicality studies are directed to distinguish general financial aspects and feasibility crevice financing prerequisites, the project ought to expect to proactively make particular ventures for every connection, assemble every applicable partner, drive execution and consistently screen execution.

Mode costs in India are higher than in the US

ESTIMATES

US cents per ton-km (PPP adjusted)^{1,2}, 2007



¹ PPP adjustment refers to adjustment for Purchasing Power Parity by Industry sector. This is as per World Bank publication on Global Purchasing Power Parities and real expenditures, which takes into account share of labour in different industries over and above the country PPP

² Includes handling costs, as well as indirect costs (e.g., higher inventory, theft, damage, transaction costs). Direct transportation costs based on representative sample of movements in India and comparable movements in US

SOURCE: Industry Interviews; DG Shipping; Indian Railways; Bureau of Transportation Statistics US; McKinsey

Table 3.1- Comparison of cost between India & US.

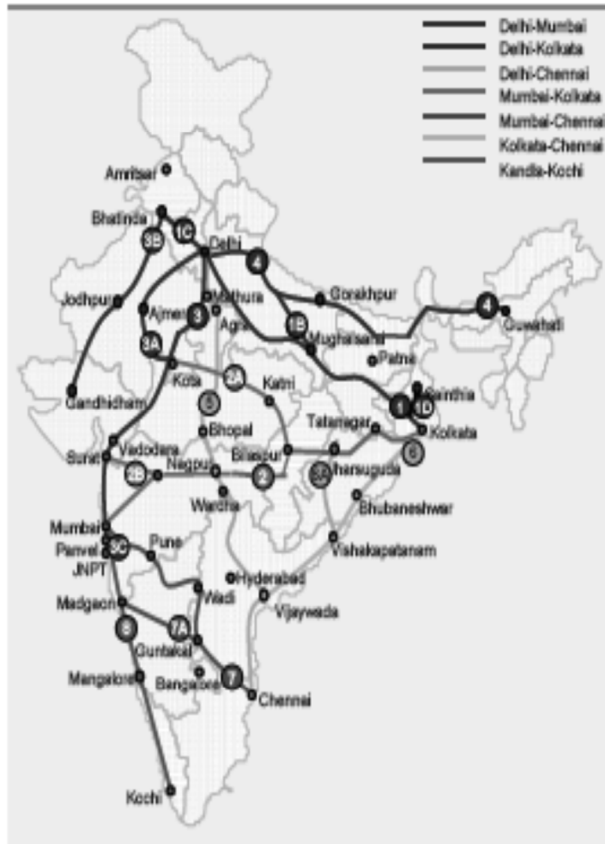
5.2: Strengthening coastal freight corridors:

This alludes to fortifying the West drift – Kandla to Kochi – and East drift – Kolkata to Chennai – waterfront cargo halls. Putting resources into these halls will enlarge scale and enhance the financial matters for beachfront transportation, making it an appealing different option for different modes. A beachfront cargo passage project could satisfy three destinations: First, enhance last mile street and rail integration to and from ports through more prominent contribution of government offices in charge of building and overseeing port base. Two, increment industry mindfulness on the practicality of waterfront delivery for cargo by running crusades that highlight the practicality of particular courses on both the East and West Coasts for non-mass and break-mass products (e.g., sustenance grains, manures, bond sacks, limestone furthermore, marble, and autos) and support state-possessed organizations to utilize seaside shipping. At long last, support advancement of a transshipment center on the West drift to give feeder administration opportunities along the coast and henceforth guarantee higher usage through backhaul cargo freight business.

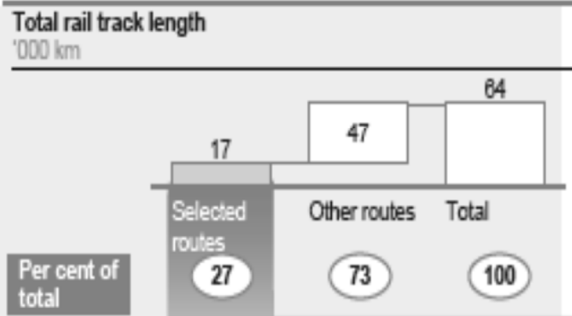


Major rail links in the high-density corridors

Major rail links between high-traffic routes



Rail links along selected routes account for ~27% of total length of Indian Railways



| R. No. | Route | Length km | Estimated traffic mn ton-km ¹ |
|--------|-------------------------|-----------|--|
| 1 | Delhi-Howrah | 1,444 | 43,500 |
| 1B | Ghaziabad-Mughalsarai | 735 | 5,630 |
| 1C | Delhi-Bhatinda | 284 | 5,300 |
| 1D | Andal-Sainthia | 73 | 550 |
| 2 | Howrah-Mumbai | 1,988 | 45,850 |
| 2A | Bilaspur-Kota | 884 | 15,800 |
| 2B | Surat-Jalgaon | 311 | 3,310 |
| 3 | Delhi-Mumbai | 1,371 | 34,580 |
| 3A | Delhi-Chittorgarh | 876 | 4,670 |
| 3B | Gandhidham-Bhatinda | 1,208 | 5,440 |
| 3C | Parvel-JNPT | 50 | 300 |
| 4 | Delhi-Guwahati | 1,484 | 14,100 |
| 5 | Delhi-Chennai | 2,045 | 44,510 |
| 6 | Howrah-Chennai | 1,003 | 13,780 |
| 6A | Jharsuguda-Vizianagaram | 484 | 4,380 |
| 7 | Mumbai-Chennai | 1,223 | 13,670 |
| 7A | Guntakal-Madgaon | 407 | 4,020 |
| 8 | Mumbai-Kochi | 1,107 | 3,920 |

1 Estimated for 2007

SOURCE: Indian Railways Web site; McKinsey

Table 3.2 - Major rail links in India.

5.3: Enabling better equipment and setting common standards:

Utilization of unrivaled hardware e.g., bigger trucks and higher tare load rail line wagons, and regular models to help between modular transport guarantees consistency in the sorts of compartments, beds and cranes utilized. Further, supporting examination organizations, for example, a Road Examination Institute could help grow better quality street development material and innovation to support development while at the same time diminishing expenses. The plan for such a project could be centered around two key measures: One, meet all partners and adjust on normal models for hardware including compartments and beds, and standard development modules. Two, support selection of something beyond effective hardware like bigger trucks and productive rail wagons by conveying advantages to end clients, giving access to financing and urging the business to supply better gear to logistics clients.

The execution of the above projects as a component of the NILP will have numerous suggestions and open doors for the private part including client commercial enterprises, foundation designers, EPC organizations, hardware and innovation suppliers and logistics administration suppliers,

5.4: GOVERNANCE CHANGES NEEDED AT THE HIGHEST LEVEL TO DEVELOP THE POLICY AND ENSURE IMPLEMENTATION

Creating and executing different activities as a feature of the adjusted modular methodology will oblige an incorporated approach over different partners at the focal and state level. The level of coordination needed is great, as adding to India's logistics foundation is the obligation of various state and focal government units and framework advancement offices. The approach itself can be created in a way like the Integrated Energy Policy i.e., through a proper board. Such a board of trustees ought to incorporate delegate from the concerned services and offices (e.g., NHAI, Indian Railways, Waterways Power), partners crosswise over services (e.g., Ministry of Roads, Ports, Railways, Money, Aviation) and from the private part (e.g., client businesses, engineers and logistics suppliers). The legislature has as of late set up the High Level National Transport Improvement Policy Committee that could satisfy this part. Receiving and actualizing an incorporated logistics approach will require an engaged Group of Ministers, the Cabinet Committee on Infrastructure, the Prime Minister's Office or an comparable focal body at the largest amount to assume responsibility. While the arrangement execution will be completed by services in the middle and states, such a body ought to guarantee an incorporated, composed, auspicious and adaptable way to deal with framework advancement.

Independently, to guarantee rapid execution, well-working base usage "war rooms" ought to be set up for high-need undertakings at different levels to give basic data, debottleneck and quicken execution of tasks, under nodal and executing organizations like NHAI, and in addition at the inside with the Cabinet Panel on Infrastructure.

5.5 ESTIMATING CONCENTRATION ON CONNECTORS

It has been built in Exhibit 1.9 that development in cargo activity is related to development in GDP. This relationship has been utilized to gauge the offer of cargo activity that streams on the connectors inside a state. Given that these areas represent 65 every penny of the Gross domestic product of the nation, this suggests that they represent near to 65 every penny of the movement stream in the nation. As the connectors distinguished are on street, the offer of general cargo activity they speak to is 58 every penny. Nonetheless, not this movement goes through the connectors, as some of it straight forwardly plays on passages. Taking into account an extrapolation of the base up evaluation of eight states, between a third and 66% of the movement streams on the connectors. This means 130 million ton-km or around 10 every penny of the general cargo movement in the nation going on the connectors.

CHAPTER 6

CONCLUSION

Indian Railways' arrangement to set up the Logistics Corporation of India – a proposed one-stop answer for every one of its logistics needs – might soon get approval of the Union Cabinet.

Logistics concentrates on dealing with the exchange of merchandise from purpose of birthplace to purpose of utilization. Specialists contend that the Rs.9000 crore logistics industry in India, which is at present developing at more than 5 every penny, holds colossal potential and the Railways has much to pick up from this endeavor.

Be that as it may, the desire of the Railways to graduate from a mass item supplier to a full logistics supplier, while a venture in the right course, requests a change in the disposition of the national transporter in the matter of working with the private division. Permit some space for adaptability and straightforwardness in strategy making and the private players will be quick to partake as accomplices, particularly when a unimportant 1 every penny of the logistics business as of now falls in the sorted out segment.

The proposition is to begin the Logistics Corporation as a joint endeavor or an open private association over 28 urban areas where the activity volume is more than two million tons a year. The logistics organization will utilize a blended system of streets and rail. The lion's share offer will be held by the private player, who will create distribution centers and deal with the whole operations. The Railways' commitment to the value will be its property assets in key ranges in the 28 urban communities.

An incorporated logistics organization has been hotly anticipated in India. While the business in the US and Europe proceeded onward from being just operation-centered logistics supplier to inventory network chief in the 1970s, the Indian logistics industry has slacked. The Railways' part has been constrained to being a supplier of mass things with no dedication to time-bound conveyance. Industry players term this as 'exceedingly amateurish'. "Recognizing the impediments of our current cargo operations is one motivation behind why we are enthusiastic about a logistics company," says D P Pande, part movement, Railway Board. "As in nations like the US, where trucks can be stacked on wagons and after that stacked off on streets for the last mile, a comparative set-up is the thing that India anticipates."

This, obviously, would not be the first endeavor by the Railways to infuse advancement into logistics. It had trod the course before in 2007 when it permitted private support in compartment

operations. The Konkan Railways' Roll-on Roll-off, or RORO, plan (in which trucks are stacked on wagons and offloaded for last mile), has met with sensible achievement. Also, the Railways has set up the Central Railside Warehouse Company to oversee distribution centers crosswise over India. "Anyway, says J P Batra, previous executive of the Railway Board, "each of these endeavors still needs combination and there is a need to move past holder operations. The private players have dependably demonstrated enthusiasm for adding to the logistics territory with the assistance of the Railways." Logistics in India The requirement for logistics administrations is developing quickly in South Asia, which is quick rising as an assembling base for organizations In India, the logistics business is very thought, with 20 every penny of the players taking 90 every penny of the incomes, as indicated by an Indian Institute of Management-Calcutta think about Globally, the logistics business is evaluated to be worth \$3.5 trillion. The United States is the biggest business sector Complex assessment, different grants, high rate of administration levy are among the barriers for the business in India.

There are a few advantages to setting up a coordinated logistics organization. Aside from recuperating movement lost to street the Railways' offer has dropped to 33 every penny from 90 every penny in the 1950s notwithstanding its cargo rate being lower than that for street transport), a logistics organization would differentiate income for the Railway through benefit offering or by demanding haulage charges. And afterward, as Vishwas Udgirkar, senior executive, Deloitte India, brings up, several sections of land of Railways land the nation over, undermined by infringement, could likewise be effectively monetised.

Such an advancement would likewise help hold cost of products under check. As indicated by a study done by the Indian Institute of Management-Calcutta, the yearly logistics cost for a nation changes somewhere around 9 and 20 every penny of GDP. For India, this figure is evaluated to be 14 every penny. Conversely, in the US it is 9 every penny. Which implies there is degree for the expense to be contained in India to underneath 10 every penny through better incorporation and arranging.

Specialists contend that setting up a logistic organization would help spare expenses as well as energize the assembling segment by upgrading cargo conveying limit. Different abnormal state councils, similar to the one headed by Rakesh Mohan, have highlighted the requirement for the Railways to assume a much greater part in boosting the assembling segment. The Railways, in any case, must improve its relationship with the private segment, damaged as it is by a current doubt over bureaucratic obstacles and undecided strategies. "We can consider such ventures if the Railways plainly sets out the goals, has separate workplaces and decreases bureaucratic deferrals," says Chander Agarwal, Joint Managing Director, Transport Corporation of India, which is one of the private administrators for the Container Corporation of India. "The business obliges a long haul engagement and can work effectively just if the strategies are clear."

Sachin Bhanushali, president, Gateway Rail Freight, another private administrator for the Container Corporation of India, is likewise intrigued however favors alert. He says at present the

private players are seen as contenders as opposed to potential accomplices. "We are quick to take part in value in a few urban communities," says Bhanushali, however includes that the Railways will need to demonstrate that it is speculator well disposed.

The private area stands to pick up on the off chance that it accomplices the Railways in the logistics venture. Worldwide studies have demonstrated that outsourcing inventory network administration is a financially savvy answer for privately owned businesses. Be that as it may, in India privately owned businesses outsource around 10 every penny of their logistics work contrasted with 80 every penny in the US on account of an absence of trust in the nature of administration. The Railways' entrance into the segment and permitting private administrators to utilize a blend of street and rail transport could give the obliged driving force.

However, there are a few obstacles in the method for accomplishing this. In spite of the fact that 100 every penny remote direct venture is allowed in logistics, comprehensively the business is stamped by high speculations and low returns. "This will remain constant for India principally due to high fuel expense," says Agarwal.

Alternate obstacles to development could originate from the perplexing and differing duty administrations, poor foundation and the gagged rail system with restricted cargo conveying limit. Studies demonstrate that street transport, which makes up more than 60 every penny of local transportation, constitutes only 1.4 every penny of the aggregate street system.

In this connection, the achievement of the Logistics Corporation will depend all alone procedure, as well as on the advancement made by key foundation undertakings like the Delhi-Mumbai Industrial Corridor and the Dedicated Freight Corridor

CHAPTER 7

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