

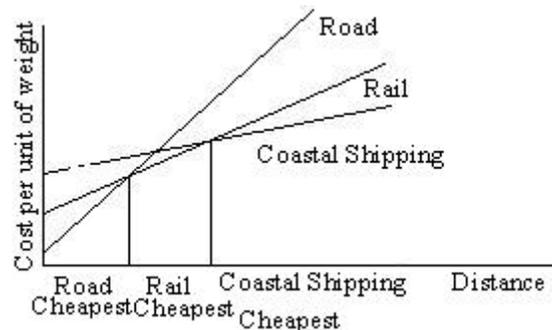
Multi Modal Logistics Parks: A Key Factor for Economic Development of a Country

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1. Introduction

Transportation plays a key role for the socio-economic development of a country. The pace economic growth is largely influenced by the efficiency of transportation system as most economic activities are possible only if transport is available to make them so. In social-economic development, transportation being an integral part of the production and marketing chain is an indispensable input in the pre-harvest and post-harvest operations. The complex functions of this chain start from carrying various inputs like in agriculture seeds, farm equipments, labourers, fertilizers, pesticides and in industry limestone, iron ore, different chemicals and services etc., from the sources of supply to yards, assembling the final produce at the central locations of the farm or at the other appropriate nearer places for its further processing, moving the goods to local market or local store within the same village or to the wholesale market located at another village/town and from there to the godowns and finally to the ultimate consumption places. Poor and inefficient transport facilities hinder both the quality and quantity of the product and limit the marketability of final produce.

Multimodalism refers to transportation of goods b/w two points by more than one mode of transport. This could be by road-rail, road-rail-coastal or any other combination. The distance over which the goods have to be transported is an important consideration because the characteristics of the line-haul charges and terminal charges vary widely from mode to mode. The following figure illustrates, the inter-section of vertical axis indicates the terminal charge for each of the three modes of transport and the slope of the lines gives a rough impression of the relationship b/w line-haul cost & distance.



In general, road transport is the cheapest mode of transport over short distance, railway is cheapest over medium a long distance and water transport is cheapest for very long distance. Obviously the multimodal system would work only if it is economical to the user and it would be economical if there is efficiency in operations.

Multimodal Logistic Park would help a user to take care of issues including efficient interface arrangements; goods warehouse facility, quick documentation arrangements and customs offices when import & export is involved.

2. Multi Modal Logistics Parks:

Multimodal Logistic Park as the name suggest is one centralized place for all types' transportation activities and value added services needed by exporters and local traders for shipment their goods. It also works as an interlinking point for all modes of transport at one specific place.

Multi-Modal Logistics Park can defined as it provides the all type of transportation facilities at a palace for the end user or defined as a rail, road based inter-modal traffic handling facilitation complex comprising container terminals, bulk/break- bulk cargo terminals, warehouses, banking and office space and facilities for mechanized handling, inter-modal transfers, sorting/grading, cold chain, aggregation / desegregations etc. to handle freight traffic.

Dr. T. Nobbel defined MMLP is a system which have logistical expertise centre for a region, at least two modes of transport, especially roadway and railway, value creation at the interface between regional and long-distance transport, industrial development, combined use of the facilities and services and targeted exploitation of synergy potentials. Under the draft policy the ministry proposes to have three types of logistic parks Large Multimodal Logistics Parks (LMLPs): Set up on more than 300 acres, Medium sized Multimodal Logistics Parks (MMLPs): Developed on 50-300 acres and Small Multimodal Logistics Parks (SMLPs): Covering Less then 30 acres. While all three categories will generally have multi-user facilities, the small and medium sized parks could also be set up for handling dedicated needs of major rail freight owners.

As the region is more geared for international as well as intra-regional exchange, a well functioning integrated transport network needs to be constructed to secure efficient flows of freight. For which major function of multi modal logistic hub, basically rail based, inter-modal traffic handling facility is storage & warehousing (Open and closed warehouses for different products), handling, processing, domestic transportation and international transportation. While major functionalities are warehouse: uses for handling export cargo as well as domestic cargo for further distribution, ICD: custom clearance & bonded warehouse, rail siding: dedicated leased lines and common user lines (including Ro-Ro operations), car Terminals: distribution to dealers, collection and feeding in concerned region and port: concerned with rail and road transportation.

3. Multimodal Logistics Park - Global Scenario:

Global market become so competitive that, there is an ever increasing demand and need for logistics and supply chain management which, could meet the goals of cost reduction, time saving and service enhancement. As effective logistics management can provide tremendous competitive advantage in the global market, logistics is now a strategic variable: a value added process which ensures credibility of product, non wastage of product / commodities, punctuality, time saving in pick, pack and delivery of product.

Multi modal logistics parks are very popular in western & other developed countries due to its obvious advantages over the single mode of transport. To meet the growing demand effectively at the best possible cost, various countries started creating multi modal logistics park in eighties & nineties. The Multi modal logistics park which is very popular, the Dallas Logistics Hub in Kansas City of North America which is developed by the Allen Group of which estimated economic impact of \$68.5 billion. Northwest Ohio Logistics Park in US emerged as an international transportation, logistics, and distribution center. The region is endowed with strategic geography and the convergence of major highway, rail, sea, air, and pipeline transportation assets. The Seagate Logistic Park is being constructed on the industrial area Plassendale in the port of Oostende, Belgium, accessible by rail, road & waterways. Argusa Logistics S.A. which owns the development rights to Alianza Multi-Modal Logistics Park in Buenos Aires which is the one of the largest city of Argentina. Xiamen in China as a major multi-modal logistics hub which is served by rail, road & air transport.

The following table shows mode wise freight transport in different countries. Russia and China, however, have the first and third highest land areas in the world, respectively, and long distances are often required for freight transport. Relatively to rail, India relies heavily on trucks for freight transportation.

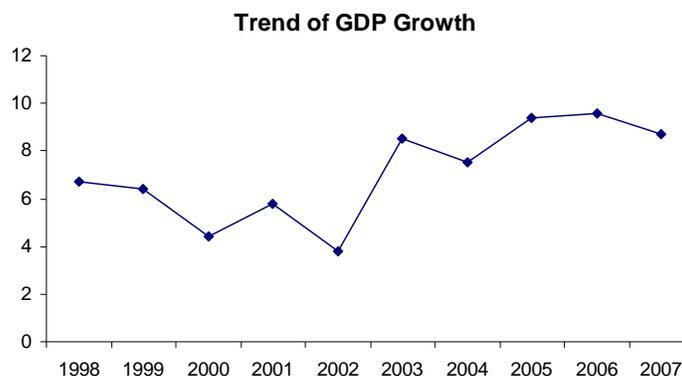
TKM					
(1 000 Million tkm)					
Country	Road	Rail \$	Waterways \$\$	Air	Oil pipelines
USA**	1,890	2,705	486	9	854
EU\$\$\$	1927	452	141	3	129
SA		110			
Russia*	216.2	1951	63.7		
China##	71	1725		6	
Brazil*		36			
Japan#	352	23			
India(&)	706	508	89.08	0.3	105
\$ Russia and China for the year 2006 and USA , SA, Brazil and India for the year 2005 (WORLD BANK'S RAILWAYS DATABASE)					
**air for the year 2002 and other modes for the year 2006 (U.S. Department of Transportation)					
\$\$\$ source: European Commission (2007)					
(&) TTSS					
* International Transport Forum for road & Waterways(2008)					
# International Transport Forum for road & Waterways(2008)					
## WORLD BANK'S DATABASE					

Though multi modal logistics park is comparatively new, but to sustain economy of the country and get a common village in globalize and liberalize world it is very necessities to adopt MMLP system over the single mode of transport for their economic globalization, agile manufacturing, speed-to-market delivery, and supply chain management, demand for inter-modal transportation services. To meet the growing demand effectively at the best possible cost, various countries started creating multi modal logistics park.

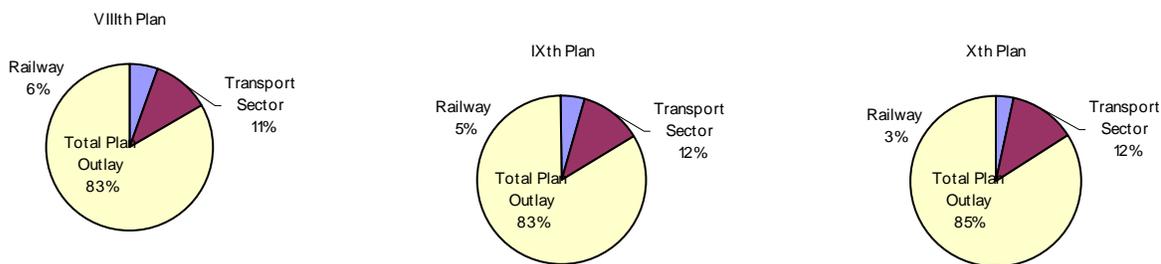
4. Multimodal Logistics Park - Indian Scenario:

Governments have been focusing on improving the management and efficiency of the transport sector. Governments are now recognizing the value of integrated logistics to domestic companies in improving their profit performance. Integrated logistics is generally a new concept to overcome all the above limitations in Asia and other parts of the world. It is recognized that in utilizing logistics to create value, domestic firms will also improve their international competitiveness. This is critical in underpinning a country's planned future economic growth. Rapid development of the logistics industry improves the quality and structure of the national economy. In order to accelerate the development of efficient multimodal transport and logistics operations, governments working with the private sector on capacity building in multimodal transport operation, management and operation of container terminals.

The economy of India is the twelfth largest economy in the world by nominal value and the fourth largest by purchasing power parity (PPP). The country began to experience rapid economic growth, as markets opened for international competition and investment. The GDP has been growing between 7% and 9% over the last 6 years. According to a report compiled by the Confederation of Indian Industries (CII) the unprecedented growth is holistic and contributed by all sectors such as industries, agriculture and services.



The growth rate in terms of GDP is shown in the above graph which clearly shows that the economy of the nation is growing with the excellent rate. It is worth noted that after the recession period in 2009, the economy of the India has recovered quite well as compared to the other nation of the world like USA & other European countries. Hence, it can be observe that, after the liberalization of the economy, the country is able to sustain the growth in terms of GDP to the desired level. It is estimated that India's GDP shall grow four times by the year 2020. It is a well known fact that, a good infrastructure growth is necessary for all around development of the country. The government of India has also realized the importance of infrastructural developments to remain competitive. The various five year plans by the Planning Commission of India also lays importance to the growth on the transport scenario of the country. This is reflecting in the increase in the outlay for the growth of the sector which is shown in the table below. It is necessary that infrastructure policy should be so developed so as to make the transport sector more efficient as well as to decrease the transportation cost.



National Five Year Plan (in crores)				
Sectors	Transport Sector	Transport Growth in %	Total Plan Outlay	Plan Outlay Growth in %
Vth Plan	10,117	-	59,979	-
VIth Plan	13,962	38	109,292	82.2
VIIth Plan	29,548	111.6	218,729	100.1
VIIIth Plan	65,173	120.6	485,457	121.9
IXth Plan	117,563	80.4	813,998	67.7
Xth Plan	225,977	92.2	1,525,639	87.4

Source: I R Year Book 06-07

Concept of multimodal Logistics parks is relatively new in the country. Despite the fact that the country has the second largest network of roads (3.83 million km), the second largest rail network (63,000 km), 128 airports, 13 major ports, 1 corporate port and about 200 non-major ports(intermediate & small ports) but, this infrastructure counts for little in terms of quality. The cost of transport of goods (per unit) is still very high as compare to the other developed countries. The industry has attracted only limited private investments, that too more recently following the privatization and the direct investments of the private players. As a result, the Indian logistics industry accounts for a mere 2% (\$100 billion) of the \$5,000-billion global logistics industry and it is largely very fragmented currently. the industry is hampered by high transaction costs, more time taken in processing exim containers (12-13 days compared to 3-5 days in France and Denmark), excess documentation (an average 11 documents compared to 2-3 in France and Singapore), and high cost of handling exim containers. India ranks 47th in the World Bank logistics performance index out of 155 countries in the year 2010. Nearly 94% of the logistics and distribution requirement is dominated by a large number of small fleet owners (5-10 trucks) and these accounts for 80% of the revenues. Even the freight forwarding segment of the industry is dominated by small time customs brokers and clearance agents. The logistics costs, which includes transportation, warehousing,

packaging, holding and inventory accounts for nearly 13% of India's GDP which is very high when compared to developed countries such as Japan and USA.

5. Logistic Challenges in India:

There are some ground level challenges that can be faced. Some of these requiring resolutions are as follows:

- a) Trade performance and economic growth: Increase in organized retail sector, FMCG, textiles, consumer durables sector, auto and auto components (Auto Logistics) and India's share of global trade.
- b) Focus on Supply Chain management: Increased usage of 3PL, Warehousing / storage companies by traders, manufacturers & EXIM cargo ensuring just in time delivery to the customer and reduced time for movement of goods.
- c) Government thrust on Infrastructure Development: Indian Railways investment of Rs. 100,000 cr. over the next 5 years for dedicated freight corridor (N-S & E-W), improved port connectivity and PPP for warehousing and storage facilities on vacant RLDA land.
- d) Congestion of the land transport accesses to ports, resulting from retention in ports of certain container handling/processing activities, such as container stuffing/stripping and customs inspection
- e) Poor rail (and sometimes road) access to ports, often resulting in extra container or Cargo handling
- f) Poor coordination of rail and road loading/unloading activities in ports
- g) Institutional blockages to the free flow of transit vehicles and cargo in the hinterland
- h) Incompatible customs and immigration procedures on either side of land borders
- i) Lack of a single transport authority document for door-to-door consignments involving more than one mode; and
- j) A fragmented approach to railway tariff-setting in international transport corridors, putting rail at a competitive disadvantage with other transport modes and encouraging the use of less efficient modes.

6. Methodology to development of a logistic hub:

To development of a logistic hub, the study needs an in depth assessment of the nature of commodity consumption, production and movement. Based on collection of selected primary and secondary data, a flow chart of the study methodology is given in Figure 1. The first step would be identification of the catchment area. The catchment of area would depend on the industries, economic statistics, upcoming industries, infrastructure development activities and O-D streams and of the study area.

The first step to develop a logistic park is the estimation of current traffic and the future projections for it. Base year origin-destination (O-D) flows will be built up for the base year based on the survey. The data will be supplemented by information collected from the districts, from state government published data, central data bases and private agencies. This will provide the basis for projections of future traffic that would move to and from the catchment area.

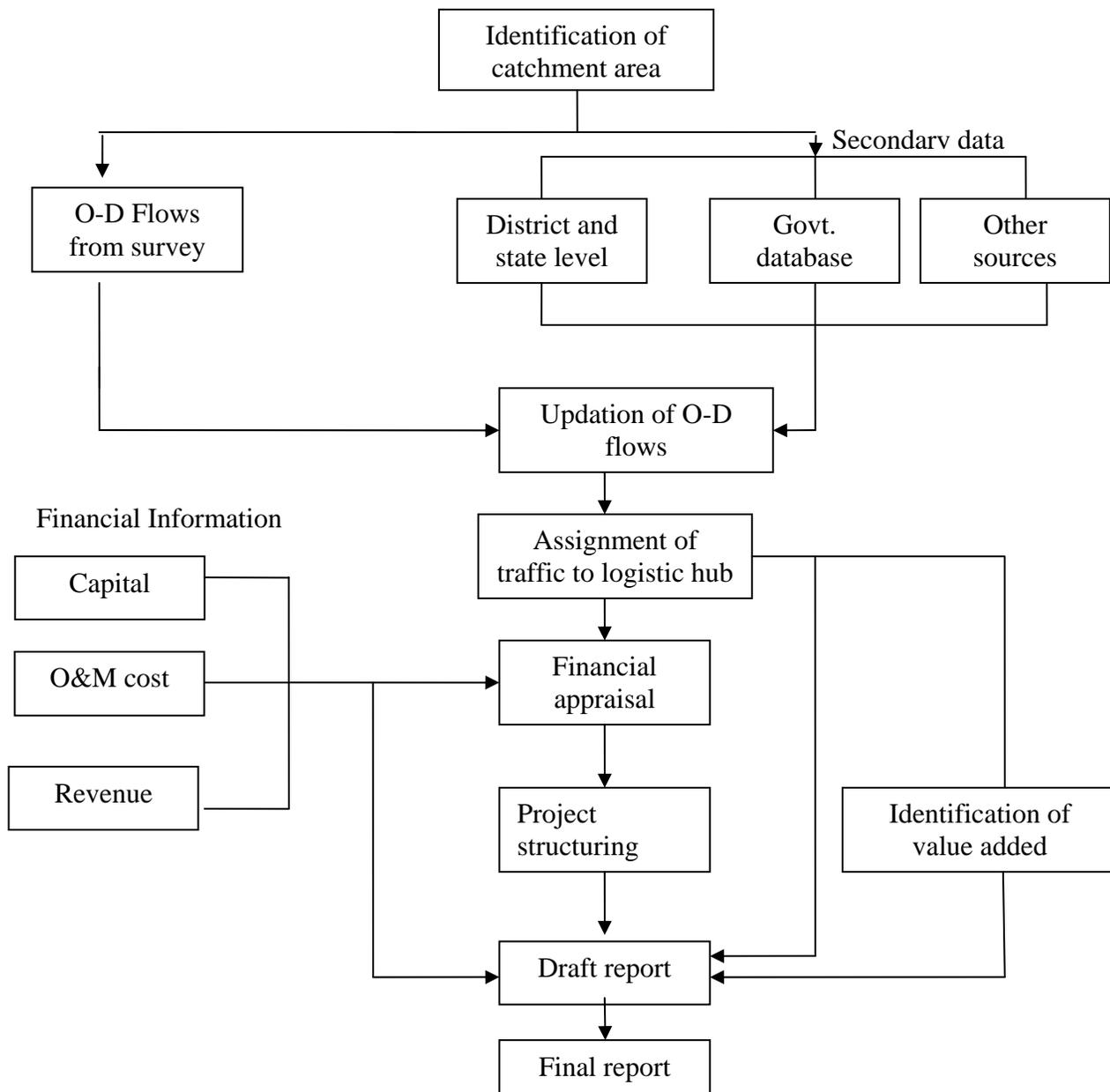
The secondary data to be collected would include:

- (a) Existing industrial activity and the projected industrial hubs coming in the study area.
- (b) Basic economic statistics of the region such as domestic product, agricultural output, population etc
- (c) Major ongoing industrial projects, both in public and private sector, in the Region.
- (d) Major infrastructure development projects in the study area both public and private.

After the traffic projections are made the competition will be analysed and the cargo likely to come to the logistic hub will be assessed. This will involve assessment of the existing terminals and the future infrastructure developments in the region.

Based on the traffic capital expenditure, O&M expenditure and revenue streams will be assessed. The revenue sources would include; freight, handling, warehousing, and revenue from value added activities like repacking etc. The financial estimates will be use based on data available and existing operations.

Figure 1: Flow Chart for Developing Business Plan for a Logistic Hub



7. Benefits of Multimodal Logistics Park:

The biggest beneficiary of this service would be the government and the country as a whole. After liberalization, the country's economy has grown at very good rate. Our GDP figures, over the years, are also reflecting the same growth story. It is also a very relevant fact that with the healthy rate of development & overall economic growth, the transport sector of the country also grew at good pace. But the transportation and logistics cost in the country are still very high if we compare it with the developed countries of the world France, USA, Denmark etc. We take more time in processing of EXIM containers, documentation, handling of cargo etc. By developing MMLPs, the government can bring in a sea change in the way the business is handling currently. MMLPs can also bring many benefits to the government. These can be summarized below:

- 7.1 Direct Revenues:** As a multimodal logistics park developing agency, the government will be entitled to collect the usage charges by the perspective customers of this service. Some of the revenue sources from the MMLP are:
- Rail terminal/ access charges for the use of the terminal facilities by the logistics providers or container operators.
 - Rental Charges for the space which has been leased/ rented by various users of the MMLP.
 - Rental charges of the use of Warehousing facilities/ office space and other facilities that the MMLP developer will provide within the logistics park.
 - Terminal handling charges for the use of handling equipments (cranes, forklifts and other heavy machinery) that the logistics provider will use at the park.
 - There are other miscellaneous earnings that the MLP developer will earn as a result of advertisement, leasing/ rental of residential properties and other value added services provided in the
 - The value added services can act as a major business driver in the Indian logistics market. Development of logistics systems attached with ports in Singapore and Rotterdam are the examples. Value added services that bring competitive advantages to the companies would be widely accepted and will be a strong revenue stream.

7.2 Indirect Benefits: According to the recent study done by RITES Ltd, the nation is currently loosing approx Rs 40000cr due to improper modal choice. This can be due to the following reason:

- Convenience
- Non availability of other mode
- Cheaper for the operator

The government is spending a huge amount in the development of the transport sector especially the road sector. Moreover, repair and maintenance work is also incurring thousands of crores. It is worth mentioning that apart from these costs, government is also giving thousands of crores as subsidy on the POL products. Now due to the wrong modal choice, these costs are goes on increasing. The wrong modal choice can be reflected by huge difference in the average lead by road of different commodities & the ideal break even distance (BED) of the same. It means the commodities which should have be ideally shifted to other mode especially rail is still moving by road for the longer distance of travel.

The development of the Multimodal Parks can be of great help in reducing the said costs for the country. This is because the MMLPs will push for the right choice for of the modes as it gives the right balance of all the modes and services at one place. In other words, MMLP will promote the optimal modal choice by the operators. Thus the indirect benefits can be summarized as below:

- Helps in the balanced growth of all the modes of transport
- Helps in optimal modal choice
- Helps in proper utilization on assets like railways or other modes of transport.
- To garner full benefits of MMLP, it motivates the government to create more freight corridors and integration of multimodal transport network.

7.3 Other Socio-economic Benefits: Transport sector play a vital role just not only in the movement of goods from the manufactures to the end users, but also in the life of the common people. It directly and indirectly affects the general life. By promoting the MMLPs in the country, the government can bring in sea change in the life of the common man & the economy both local & nation economies. Some of the socio-economies benefits which can be occurred by the MMLP are listed below:

- MMLP will create the direct jobs at the local level and thus bringing the economic stability in the life of people.
- It can help in shifting the goods movement by road to rail & thus helps in pollution control which will beneficial to the environment. This is more so important when the whole world is trying to reduce the global warming.
- It can do wonders in the upliftment of the local economy as well, as it can promote the growth of other type of business which are not directly related to the MMLPs. Thus it can also create indirect job opportunities for the people.
- As it also promotes the development of more freight corridors, thus it helps in the economic development of even secondary Project Influence Area (PIA). Thus the radius of area which these MMLPs positively influence will be much more.

7.4 For the Logistics operators & general industries: For the multimodal parks to succeed it is necessary that logistics operators & the industrial units should use it at

the first place. For this, there is a great need to make these types of facilities more lucrative for the perspective users. Fortunately, around the world these types of MMLPs is giving so many direct & indirect benefits to the users that the respective government is establishing more and more multimodal logistics park around the countries. Some of the benefits are mentioned below:

- 7.4.1 Cost Saving:** MMLPs can help in saving of cost in transportation. In other words these services help in the reduction of costs which are incurred in the transportation of goods. This is possible because of use of right modal choice for the movement.
- 7.4.2 Reduced Transit Time:** One of the main features of MMLP is that it reduces the transit time of the goods. Thus reducing the inventory cost both for logistics operators as well as the for the ultimate user of the transport mode.
- 7.4.3 Scope of Additional Business:** Due to the reduced transit time, MMLPs can enable the logistics operators to look more business or addition business and thus enabling them in profit maximization.
- 7.4.4 Discount for Manufacturers:** As MMLPs allow the logistics operators to look for additional business, the manufactures & end the users (including exporters & importers) can demand for the concession in the charges for the transportation of their goods by the logistics operators.
- 7.4.5 Proper Utilization of Assets:** It helps in the proper utilization of the assets as the transit time is less and the goods vehicles and the other hardware are free to use for the other business. Thus the per unit cost of the transportation of goods can be reduced considerably.
- 7.4.6 Processing & packaging units:** As the MML Parks are designed to provide processing & packaging units and food processing units along with various value added services, the same can be used by the manufacture for reducing the cost of transport. For example, manufacturer can bring in its commodity in bulk and can re-package it for the end user. Same process can be used for importing or exporting finished products.
- 7.4.7 Benefits of Price Mechanism:** One of the main benefits of MMLPs are that it can help the manufactures, exporters & importers to take benefits of price mechanism. This can be possible due to the presence of cold storages, warehouses, go-downs, open stockings yards etc. Here the companies can store there product so that they can sell it in the market at appropriate time thus having the better price of their goods.

7.5 Miscellaneous Benefits: In addition of the above mentioned benefits, MMLP can ease the way of doing business. This can happen due the following factors:

- Single window clearance for.
- Greater Industrialization.
- Multi-modal logistics is certain to bring down the logistics cost and time by 20%-30%.
- Greater use of environment-friendly transport modes
- Enable city planners to better manage area development around strategically located site.

Thus, it can be said that Multimodal Logistics Parks just not only bring in all around development in the economy but it can also act as a profit center for all the parties involved. It not only facilitates cost savings, provide greater access to resources, manage funds better, reduce inventory and transaction costs but also share risks and align growth strategy with the users. It can enhance the volume of rail freight in the overall transport chain of the country with complete solutions to help companies reduce both the cost and time of transporting goods. More over it can propose the concept of reliability, security, and speed in doing business more forcefully. Here it is worth noted that if the government wants to involve the private companies in the development of the MMLPs in the country than the companies can able to reap the benefits of MMLP by collecting the direct revenues from the users thus it can also be a very good business proposition for all. Multi-modal logistics parks can act as hubs for providing end-to-end solutions for the supply-chain management of industrial customers.

8. Tips for Reducing Logistics Costs:

- Understand the true costs of sourcing overseas.
- Focus on eliminating the variability from transit times.
- Tariff engineering.
- Informed decision-making.
- Automate compliance processes.
- Satisfaction and the avoidance of fines.
- Control your express shipping costs.
- Planes, trains and automobiles.
- Be aware of non-tariff trade barriers.

9. Conclusion:

- In an emerging economy such as India, MMLP will provide the requested logistical capacities to utilise rail transportation and ensure long lasting and sustainable economic growth
- MMLP are an indispensable part of industrial infrastructure development. They reduce logistics costs and guarantee continuous and stable supply chains
- Integration of container, bulk and warehousing services with linkage to road, rail and ocean-/air-freight offers one stop shopping to logistics customers configuring their supply chains.

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