RESEARCH PROJECT ON

<u>"ROAD TRANSPORTATION AND RAIL</u> TRANSPORTATION, COMPARISION ON FEASIBILITY"

FOR THE PARTIAL FULFILMENT OF THE REQUIREMENT

FOR THE AWARD OF

BACHELOR OF BUSINESS ADMINISTRATION

(Logistics & Supply Chain Management)

By

RITESH KUMAR

Enrollment No: 18021010098

Admission No: 18SLAM1010007

Under The Guidance Of

Prof. ASHOK SHARMA



School Of Business

2018-2021

Certificate

This is to certify that the project report 'ROAD TRANSPORTATION AND RAIL TRANSPORTATION, COMPARISION ON FEASIBILITY, has

been preparedby Mr. Ritesh kumar under my supervision and guidance.

The project report is submitted towards the partial fulfilment of 3rd Year, Full time Bachelor of Business Administration.

Prof. ASHOK SHARMA

Declaration

I, Ritesh Kumar having Enrolment No.18021010098, student of School of Business, Galgotias University, Greater Noida, hereby declare that the project report on "ROAD TRANSPORTATION AND RAIL

TRANSPORTATION, COMPARISION ON

FEASIBILITY" is an original and authenticated work done by me.

I further declare that it has not been submitted elsewhere by any other person in any of the institutes for the award of any degree or diploma.

Ritesh Kumar

Acknowledgement

First and foremost, I would like to thank to my supervisor of this project, Prof. ASHOK SHARMA for the valuable guidance and advice. He inspired me greatly to work in this project. His willingness to motivate me contributed tremendomely to my project. I also would like to thank his for showing me some example that related to the topic of my project. Besides, I would like to thank the authority of Galgotias University for providing me with a good environment and facilities to complete this project report. Finally, an honourable mention goes to my families and friends for their understandings and supports on me in completing this project. Without helps of the particular that mentioned above, I would face many difficulties while doing this project.

TABLE OF CONTENTS

| Abstract | 7 |
|--------------------------------------|-------|
| Objective | 8 |
| Transport | 9 |
| Mode of Transport | 10-14 |
| Road Transport | 15-24 |
| Rail Transport | 25-35 |
| Comparision | 36-40 |
| Contribution to GDP | 41 |
| Freight Movement Traffic | 42 |
| Reflection of Freight Traffic | 43 |
| Conclusion | 44 |
| Bibliography | 45 |



ABSTRACT

The objective of this study was to investigate and compare the transport feasibility of road and rail transport. Reliability, flexibility, visibility, rates and total transport time were evaluated for each mode of transport. The impact of the carbon emissions was also considered and the option of performance based standard vehicles investigated

During the period 2000 to 2003, rail was the dominant mode of transport. However from 2004 onwards, due to the diminishing service levels and the high tariff structures of rail transport, road became the preferred mode of transport. The results of the survey conducted for the purposes of this study showed that although road transport outperformed rail transport, rail transport scored significantly higher than road transport as a cost-effective mode of transportation. Rail transport was shown to be a far less carbon intensive mode of transport than road transport, while there were substantial cost savings and benefits from performance based standard vehicles.



- The general objective of this study was to examine comparision on feasibility between road transport and rail transport
- 2. To examine the Transportation of Goods.
- 3. To identify measures to be taken to Transportation Goods faster and safe.
- 4. To determine the transport costs of using road and rail on a rand per ton basis.
- 5. To investigate the transport options available.
- 6. To examine Comparision between Road Transport and Rail Transport.

<u>TRANSPORT</u>

Transport (commonly used in the U.K.), or **transportation** (used in the U.S.), is the movement of humans, animals and goods from one location to another. In other words, the action of transport is defined as a particular movement of an organism or thing from a point A (a place in space) to a point B.

Modes of transport include air, land (rail and road), water, cable, pipeline and space.

Transport infrastructure consists of the fixed installations, including roads, railways, airways, waterways, canals and pipelin es and terminals such as airports, railway stations, bus stations, warehouses, trucking terminals, refueling depots (including fueling docks and fuel stations) and seaports. Terminals may be used both for interchange of passengers and cargo and for maintenance. Vehicles traveling on these networks may include automobiles, bicycles, Buses, trains, trucks, helicopters, watercraft, spacecraft and aircraft.

Operations deal with the way the vehicles are operated, and the procedures set for this purpose, including financing, legalities, and policies. In the transport industry, operations and ownership of infrastructure can be either public or private, depending on the country and mode.

Modes of Transport

A mode of transport is a solution that makes use of a particular type of vehicle, infrastructure, and operation. The transport of a person or of cargo may involve one mode or several of the modes, with the latter case being called intermodal or multimodal transport. Each mode has its own advantages and disadvantages, and will be chosen on the basis of cost, capability, and route.

- 1. Human-Powered
- 2. Animal-Powered
- 3. Air
- 4. Land
 - 4 .A Rail
 - 4.B Road
- 5. Water
- 6. Other Modes



1.Human-powered

Human-powered transport, a form of sustainable transport, is the transport of people and/or goods using human muscle-power, in the form of walking, running and swimming. Modern technology has allowed machines to enhance human power.

2. Animal-powered

Animal-powered transport is the use of working animals for the movement of people and commodities. Humans may ride some of the animals directly, use them as pack animals for carrying goods, or harness them, alone or in teams, to pull sleds or wheeled vehicles.

3. Air

A fixed-wing aircraft, commonly called airplane, is a heavier-than-air craft where movement of the air in relation to the wings is used to generate lift. The term is used to distinguish this from rotary-wing aircraft, where the movement of the lift surfaces relative to the air generates lift. A gyroplane is both fixed-wing and rotary wing. Fixedwing aircraft range from small trainers and recreational aircraft to large airliners and military cargo aircraft.

4. Land

Land transport covers all land-based transport systems that provide for the movement of people, goods and services. Land transport plays a vital role in linking communities to each other. Land transport is a key factor in urban planning. It consists of 2 kinds, Rail and road

Rail

Rail transport is where a train runs along a set of two parallel steel rails, known as a railway or railroad. The rails are anchored perpendicular to ties (or sleepers) of timber, concrete or steel, to maintain a consistent distance apart, or gauge.

Road

A road is an identifiable route, way or path between two or more places. Roads are typically smoothed, paved, or otherwise prepared to allow easy travel; though they need not be, and historically many roads were simply recognizable routes without any formal construction or maintenance. In urban areas, roads may pass through a city or village and be named as streets, serving a dual function as urban space easement and route.

5. Water

Water transport is movement by means of a watercraft-such as a barge, boat, ship or sailboat—over a body of water, such as a sea, ocean, lake, canal or river. The need for buoyancy is common to watercraft, making the hull a dominant aspect of its construction, maintenance and appearance.

6.Other modes

Pipeline transport sends goods through a pipe; most commonly liquid and gases are sent, but pneumatic tubes can also send solid capsules using compressed air. For liquids/gases, any chemically stable liquid or gas can be sent through a pipeline. Short-distance systems exist for sewage, slurry, water and beer, while long-distance networks are used for petroleum and natural gas. For Example: Trans-Alaska Pipeline For crude oil.

ROAD TRANSPORT

Road transport means transportation of goods and personnel from one place to the other on roads. Road is a route between two destinations, which has been either paved or worked on to enable transportation by way of motorised and non-motorised carriages. There are many advantages of road transport in comparison to other means of transport. The investment required in road transport is very less compared to other modes of transport such as railways and air transport. The cost of construction, operating cost and maintaining roads is cheaper than that of the railways.

Characteristics

- Less Time Consuming for Short Distances. Another feature of road network is that when one has to travel for short distance then this is the fastest means of transportation because in case of other modes of transportation like railways or airways one has to go railway station or airport which takes a lot of time but when it comes to roads one can reach the destination directly without any wastage of time.
- Dependent on Weather. Roads are dependent on weather conditions, hence in case of floods, it is the road network which gets affected first or for that matter in case of landslides, roads become completely inaccessible. Hence in simple words, roads are most vulnerable to vagaries of weather.
- Omnipresent. The first and foremost characteristic of road transportation is that they are omnipresent implying that they are present in every corner of the country unlike other means of transport like railways or air transport which are not found everywhere.

- Complements other Modes of Transports. Roads complement other modes of transport because whether you travel by train or travel by airplane you have to use roads for traveling from your home to the railway station or airports. In simple words, it does not matter whether you travel by road for 1 mile or 10 miles but the fact is that without using roads you cannot use other modes of transport.
- Economical for Government. As far as government is concerned it is easier for government to build roads than building other modes of transportation because whether its airports or railways track or sea network all require considerable time as well as money on the part of the government and hence given a choice government will always prefer to build road rather than building infrastructure for other means of transport.
- Emergencies and Perishable Goods. In case of medical emergencies and when one has to transport perishable goods from one place to another than road transport are not ideal rather air route is the best option when one is talking about medical emergencies as well as transporting perishable goods.

Advantages of Road Transport

1. Less Investment:

Roads need less capital than the railways. Laying of railway line needs much capital than road. So it is cheaper.

2. Door to Door Service:

Railways have the drawback that they cannot go to each village while road transport provides door to door service. So it is more beneficial.

3. Flexibility in Service:

Unlike railways, the road transport provides flexible service to men and materials.

4. Useful for Small Distances:

While railways are useful in long distances, road transport is useful in small distances.

5. Complementary to Rail Transport:

Road transport is helpful to rail transport. People reach railway station taking the help of road transport so it provides feeder service to rail transport.

6. Personal Service:

Rail transport is managed by Govt. alone while road transport has private and public carriers. So there is completion in road transport. Even people have their own vehicles. So it is also a kind of personal service.

7. Helpful in Production of Perishable Goods:

Road transport is helpful in production of perishable goods as it facilitates the distribution of perishable goods from point of production to point of consumption.

8. Beneficial to Industries:

Industries which are situated away from railway links, the road transport helps them a lot. It facilitates the mobility of men and materials for these industries.

7. Loading and unloading of goods can be done more quickly.

8. When compared to all other modes of transport, packing expenses are the lowest in the case of road transport.

9. The overhead expenses are also less in the case of road transport. Rail transport, for example, requires the construction of railway stations, erection of signals and so on.

Disadvantages of Road Transport

1. Frequent Accidents:

Road transport system is dotted with frequent accidents. According to an estimate, there are large number of deaths due to road accidents. So it is not safer mode of transport.

2. Inadequate Roads:

Most of the roads are in bad shape and are inadequate. There are only 34 km long roads per 100 sq. km area in India while in Japan 270 km roads per 100 sq. km.

3. Heavy Taxes:

There is heavy tax burden on motor transport in India. Tax burden per motor vehicle in India is Rs. 3500 while in America it is Rs. 860.

4. Poor Maintenance of Roads:

Roads are not maintained properly in India. Less than 0.1 percent of national income is spent on the maintenance of roads in India, while in Japan it is 3 percent of the national income.

5. Rising Cost of Petrol and Diesel:

Due to high prices of petroleum products and diesel, operational costs of road transport are rising and making the mode of transport more costlier.

6. Unsuitable for Long Distances and Bulky Goods:

Road transport is unsuitable for long distances as it is uncomfortable as compared to railways. It is also not suitable for bulky goods.

SWOT Analysis of Road Transport

S- Strengths

- Good Road Network
- Developed Truck Industry
- Flexible Management Of Truck
- Simple Small Investment
- Free Infrastructure

W-Weaknesses

- High Unitary cost
- Modern, larger truck require modern supporting infrasture
- Relatively high maintenance costs for road
- Old truck fleet

O- Opportunities

- Potential to increase efficiency
- Change in tariffs technically relatively simple
- Improved regulation can improve quality of service even without significant investment.

T- Threats

- Outdated Infrastrasture requires significant investment
- Tariffs and operations creates obstacles to private sector investment .
- High Competition

<u>How to transport goods through trucks?</u>

There are generally two system of transportation of goods, divided on the basis of their quantity.

- Part Load Transportation (Goods transportation in sharing) – Under this system, the goods are collected and aggregated in a warehouse in the source city and then transported in a truck which follows the predecided route according to the cities in which the loaded goods is are to be delivered. The goods are then unloaded in a warehouse and delivered to the receiver with loading rickshaws. Freights are generally calculated per kilogram or per box. Per unit freight is higher than Full Truck Load Transportation rates.
- Full Truck Load Transportation When a complete truck is allocated for transportation of your good only, it is known as Full Truck Load Transportation. The perunit freight is cheaper than any other mode of transportation and continue to reduce as the total weight increases.

Legal formalities and documents required in the transportation of goods

With the new GST system, the legal formalities in the transportation of good has been simplified.

- In the case of commercial goods, you need delivery challan or tax invoice and Eway bill. Eway is not required in some cases. Check out at <u>Indiafilings.</u> if it is required in transportation of your goods.
- In the case of second-hand goods, goods sent for own use or consumption and household goods shifting, a legal proof that the goods are owned by you is required.

<u>Procedure to transport goods</u> <u>through trucks</u>

- 1. Find a reliable, efficient and trusted transporter who can transport your goods effectively at best rates.
- After you give confirmation, a vehicle is sent to your location to pick up the goods. Generally it's your responsibility to arrange labors to load the goods in the

truck.Transporter provides you an option to opy-out of this and let Transporter team arrange for the loading.

- 3. Then you need to prepare Eway bill and tax invoice and give it to the driver Payment is generally made at this time, the percentage of advance amount varies from transporter to transporter but generally ranges between 50% to 90%.
- 4. Good are transported and delivered to the delivery point Zmentioned address. remaining amount is paid to the transporter.

RAIL TRANSPORT

Rail transport is also known as train transport. It is a means of transport, on vehicles which run on tracks (rails or railroads). It is one of the most important, commonly used and very cost effective modes of commuting and goods carriage over long, as well as, short distances. Since this system runs on metal (usually steel) rails and wheels, it has an inherent benefit of lesser frictional resistance which helps attach more load in terms of wagons or carriages. This system is known as a train. Usually, trains are powered by an engine locomotive running on electricity or on diesel. Complex signaling systems are utilised if there are multiple route networks. Rail transport is also one of the fastest modes of land transport.

Characteristics

- Public Utility Service: Railways provide an essential service to the public. It being a public utility service, requires protection and investments by government.
- Monopoly: Railways have monopoly in India. The rail transport is managed by the Railways Department of the Central Government. No private operator is allowed to enter this transport sector
- Huge Investments: The railways require huge investments for purchase of land, laying of tracks, constructing railway stations and sheds, buying automobiles, etc. No single individual can afford to make all these investments.
- Privileges: The railways require special privileges to provide efficient transport service. Railways' require special property rights for purchase of land, construction of bridges and railway lines.

- Special Rate Fixation: The railways fix separate rate for passengers and goods traffic. The same rates are applicable to all persons and all areas of the country. Rail services are available to all members or the public on equal terms.
- Non-transferability:Once the railway lines are laid down then these tracks cannot be used for any other purpose. So railway services are non- transferable.

Advantages of Rail Transport

1. Employment:

Railways are an important source of employment in India. Lakhs of skilled and unskilled people are employed in operating the railway. It also creates many opportunities of employment.

2. Encouragement to Tourism:

The connectivity of Railways to various tourist spots gives encouragement to tourism. Railways sell circular tickets to the tourists to -remote tourism.

3. Helpful during Calamities:

During natural calamities railways help the stranded persons to reach their destinations and these are helpful during famines by carrying food grains from surplus to affected areas.

4. Social Importance:

Railways here tied the people in on string. They have shortened the distance and developed the outlook of people.

5. Strategic Importance:

These are useful for internal security of country and also carry the defence material to various locations during external threat.

6. Help in Internal Trade:

By connecting various areas of the country railways have made internal trade convenient. They carry goods and passengers to various places easily.

7. Development of Agriculture:

Railways have commercialised agriculture. Now farmers do not produce for self consumption only but also for sale in the market.

8. Growth of Markets:

Railways have increased the size of markets. Bulky goods can easily be transported by Railways.

9. Railways will have to strictly adhere to the time schedule. This avoids delay.

10. As Railways are being managed by the Government in India, the tariff charged for transporting goods is determined only by the Railway Ministry. The rates, therefore, are standardized.

Disadvantages of Rail Transport

1. Railway Accidents:

The incidence of railway accidents in our country is greater as compared to other countries of the world. Accident occurs due to the errors and negligence of the employees.

2. Attack on Railways:

The Indian Railways had to suffer a heavy loss of crores of rupees. The railways are attacked during the time of disturbances and violences that arise in any part of the country.

3. Outdated Technology:

The technology used in railways is quite outdated. It needs to be modernised.

4. Problem of Replacement:

Railway Engines, wagons and other equipment's are quite old and these require replacement. It is a huge expenditure.

5. Problem of laying Double Line:

Most of the railway lines are single lines. It creates great inconvenience to railway organisation and passengers.

6. Travel without Tickets:

In India large number of passengers travel without tickets. Indian railways have to bear extra loss of about 5 crore every year on account of travelling without tickets.

7. Not Door to Door Service:

Railways do not provide door to door service like road transport.

SWOT Analysis of Rail Transport

S- Strengths

- Large capacities and higher payload of containers.
- Reduce operational and External costs of intermodal transport on long distance.
- Economical
- Mass Transportation

W-Weaknesses

- Poor connectivity
- Advance Booking
- Relatively high maintenance costs
- Lack of Security

O- Opportunities

- Potential to increase efficiency
- Expanding Network
- Public Private Ownership

T- Threats

- Better Connectivity of Roads
- Political Unrest
- Technical Malfunction

Procedure of Sending Goods by Rail

The following procedure is adopted while transporting goods through railways:

1. To Make a Choice between a Goods Train and a Passenger Train

- 2. Packing and Marking
- 3. Sending the Goods to the Railway Station
- 4. Consignment or Forwarding Note
- 5. Booking the Goods and Obtaining the Railway Receipt
- 6. Sending in Railway Receipt to the Consignee
- 7. Taking Delivery of Goods
- 8. Indemnity Bond.

Step 1. To Make a Choice between a Goods Train and a Passenger Train:

The first step in the process of transporting goods by rail is to determine whether the goods are to be transported by a goods train or by a passenger train. A goods train is used for heavy and bulky goods. A passenger train is used for perishable goods or light articles. Generally, goods are sent through goods train.

Step 2. Packing and Marking:

The goods are to be properly packed before they are transported. The goods may be packed in wooden cases, gunny bags, tin containers, bales, etc. to provide protection to the goods. On each package, distinct mark must be stenciled. In case of breakable goods instructions as 'Handle with Care', 'Glass with Care', etc., should also be mentioned on the packages.

Step 3. Sending the Goods to the Railway Station:

After having packed and marked, the goods are sent to railway station for transporting to the destination.

Step 4. Consignment or Forwarding Note:

The consignor (sender of the goods) is required to fill in a printed form which is available from the office of the railways. This form is called a 'consignment note' in case of a goods train and a 'forwarding note' in case of a passenger train. All terms and conditions on which the railway agrees to carry goods are printed on the back of this form.

The consignor is required to fill in the following information in such a note:

(i) Name and address of the consignor (sender)

- (ii) Name and address of the consignee (receiver)
- (iii) Description of goods
- (iv) Number of packages
- (v) Weight of goods
- (vi) Marks

(vii) Destination (name of that station where goods are to be sent)

(viii) Freight paid or Freight to pay

(ix) Owner's risk or Railway risk

The note is to be signed by the consignor.

Step 5. Booking the Goods and Obtaining the Railway Receipt:

As soon as the consignor hands over the packed goods along with the forwarding or consignment note to the authorities at the forwarding station, he gets the Railway Receipt (R/R) from the railway office.

The railway receipt contains the following details:

(i) Name of the consignor.

(ii) Name of the consignee.

(iii) Brief description of the goods.

(iv) Name of the forwarding station.

(v) Station or destination.

(vi) Freight charges (paid or to pay).

Purposes of Railway Receipt: It serves the following purposes:

(i) It is a receipt of goods.

(ii) It is a written contract between the sender of the goods and railways.

(iii) It is a 'document of title' to the goods. The owner of the 'Railway Receipt' is supposed to be the owner of goods.

Step 6. Sending in Railway Receipt to the Consignee:

As it is a document of title to the goods, the consignor sends this receipt to the consignee. In case the R/R is 'SELF', the consignor should endorse it by putting his signature on the back of the receipt.

Step 7. Taking Delivery of Goods:

The consignee can take the delivery of goods by presenting the R/R. If the delivery of the goods is not taken within a fixed time, a penalty called 'Demurrage' is charged by railway authorities to the consignee.

Step 8. Indemnity Bond (Taking Delivery of Goods if R/R is Lost):

If the R/R is lost, the consignee can take the delivery of the goods consigned by depositing an 'indemnity bond' duly signed by him, his surety and two witnesses. An indemnity bond is an agreement between the consignee and the railway authorities that if somebody else makes a claim in respect of the goods so delivered, he will indemnify the railway for any payment made by it

<u>Comparison between</u>

Roadways and Railways

I have discussed some basic points of comparison between roadways and railways. According to utility, the transportation of people and goods for short distances can be speedily and easily done be highways, whereas for long distances, transportation by railway tracks are safe, convenient and economical.

Construction of route:

In roadways, these routes consist of suitable pavement of specified width provided usually with shoulders on either side.

In railways, the routes consist of pair of steel rails which are laid parallel to each other on sleepers at fixed distance apart.

Suitability to traffic:

In roadways, routes are meant for movement of different types, of traffic such as *buses, trucks, scooters, rickshaws, cycles, pedestrians* etc.

The railway routes are meant only for movement of trains.

Width of right-of-way:

The roadway routes require more width of right-of-way.

The railway routes require less width of right-of-way.

Starting and destinations:

In roadways, starting and destination points of traffic are not fixed.

In railways, starting and destination points of trains are always fixed.

Right of entry:

In roadways, the right of entry is free to all vehicles because their movements are not according to any schedule.

In railways, the right of entry is not free to all railway vehicles because their movements are always according to schedule.

Strength of route:

The required strength of roadways is less.

The required strength of railway tracks is more.

Elasticity:

The roadway routes do not require an elastic structure since they are not to withstand impacts of heavy wheel loads.

The railway routes require an elastic structure to withstand impact of heavy wheel loads.

Gradients and curves:

In roadways, the routes can be constructed with steep gradients and sharp curves. Thus, route length in their case is less.

In railways, these routes cannot be constructed with steep gradients and flat curves. Thus, route length in their case is more.

Tractive resistance:

The tractive resistance of roadway routes is high (5 to 6 times the tractive resistance in case of railway).

The tractive resistance of railway routes is low (1/5th to 1/6th the tractive resistance in case of roadways).

Load handling capacity:

The load handling capacity of road vehicles is less and that too at low speeds.

Load handling capacity of railway vehicles is more and that too at high speeds.

Requirement of turning devices:

In roadways, no special turning devices are constructed for turning vehicles on these routes.

In railways, special turning devices in the form of points and crossings are constructed for turning vehicles on these routes.

Operational control devices:

In roadways, no special operational control devices in the form of signaling and interlocking are required on these routes for safe and efficient movement of vehicles.

In railways, special operational control devices in the form of signaling and interlocking are required on these routes for safe and efficient movements of trains as per schedule.

Suitability to transportation of people and goods:

Transportation of people and light goods for short distances(upto 500 km) is convenient and cheap by roadway routes.

Transport of people and heavy goods like *raw materials*, coal, ores, etc. for long distance or manufacturing concerns is convenient and cheap by railway routes.

Adaptability to type and size of goods:

All types and sizes of goods cannot be handled by road vehicles.

Almost all types and sizes of goods can be handled by the trains.

Suitability for hilly area:

Roadway vehicles are more suitable for hilly area.

Railway vehicles are less suitable for hilly area.

Employment potential:

Roadways have less employment potential.

Railways have high employment potential.

Rate of accidents:

In roadways, the rate of accidents is high.

In railways, the rate of accidents is less.

Construction and maintenance cost:

The construction and maintenance cost of roadway vehicles is less.

In case of railway vehicles, the cost is more.

<u> Road Vs. Rail Transport – Their</u> <u>Contribution To Indian Economy</u>

The freight industry has been growing at the rate of 8.5% per annum. The logistics sector has a majour role to play in increasing India's GDP,by contributing 6.5% in 2012-13,Which has grown grom 6% in 2001-02. This is due to the increase in road transportation to 4.9% from 3.9% within the same duration. On the contrary, railways show the reduction in their GDP share from 1.2% in 2001-02 to 0.9% in 2012-2013.

Due to the large number of privately-held road transport companies, there is a fierce competition between them, Which has led to the reduction in shipping costs. While railways being operated by government, minimal rise and fall in prices have been noticed.



<u>Freight Movement Traffic</u>

Today, railways and roadways are considered the most crucial modes of transportation. The rails being the major medium initially, road transportation has dominated the industry over the past few years. While the railway traffic share in 1950-51 was tremendous 80%, roadways managed to take over 65% in 2011-12. Even though Indian Railways transports nearly one billion tons of goods every year, which is a considerably a high number, railway system achieved growth of only 1% in 2015-16 as compared to 4-4.5% in the past recent years.

The major causes for the shrinkage of this percentage are expensive fares, limited capacities and extreme competition. And, therefore, road transportation succeeded to overtake railways in the last couple decades. Also, railways lag behind when it comes to providing satisfactory customer service, where the construction of new highways have opened possibilities of doorstep service, which further boosted the demand for roadway freight movements.

<u>Reflection of Freight Traffic</u>

National Transport Development Policy Committee predicts that the projection of freight movements by road vs. rail transportation would be 50:50 of 2031-32 as compared to present scenario of 65:35 in 2017. These calculations are based the assumptions that the growth rate is 1.2 times the growth rate of GDP.

There is an assumption of 15% increase in railway transportation within the next 15 years, which has been focused to reduce environmental pollution and encourage green transportation. This will impel logistics industry to take up the rails and waters as more eco-friendly transportation modes.



Conclusion

When you compare rail And road transport in India, statistics point out that road transport is preferable by businesses for obvious reasons. In case the shipment is for longer distances, rail goods transport is always preferred over road transport. Hence, you have healthy competition in the transport sector.

When we compare Road Transport and Rail Transport both have there own prons and cons but when we compare on the basic of feasibility then Road Transport have extra Advantages beacause

- It is **much faster and more reliable** as it is least affected by weather conditions and traffic jams.
- Road transportation is **available 24 hours a day** and is often **more affordable** than other methods of transportation.
- Shipping specialty services are not uncommon in the trucking industry either. Whether you are shipping dry freight; frozen, fresh, or refrigerated; heavy or oversized, there are an array of companies available to you.

BIBLIOGRAPHY

- 1. http://statisticstimes.com/economy/sectorwise-gdp-contribution-ofindia.php
- 2. https://economictimes.indiatimes.com/news/economy/infrastructure/t ransport-sector-targets-2-contribution-to-gdp-nitin-gadkari/articleshow/49999400.cms
- 3. https://www.yourarticlelibrary.com/railways/railways-characteristicssuitability-and-other-details/42136
- 4. www.researchgate.net/figure
- 5. Wikipedia
- 6. WWW.Google.Com