ASSESSMENT OF TRANSPORTATION SECTOR(GOODS ROAD TRANSPORT) FOR NAGPUR METROPOLITAN REGION

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ABSTRACT

The purpose of the is to study and assess various players that have a role in the transportation sector(goods transport).The dependency of factors in the freight rates and also assess the feasibility of Nagpur as Transportation hub(road) Transport.Various survey such as Truck trip purpose,Truck Trip Frequency,Truck operator survey, commodity survey etc obatain a clear market picture of the truck industry that has inadequate data base in which 85% of the industry is in private hands.the obtaining result predicted various players in terms of various model of there working culture of the industry and economic impact of using Nagpur as a transportation hub as was also aseessed by its existing services .Also a comparision analysis of various European countries with india as per the various laws related to road transport where done. The results obtained tries to show clear picture of various.The result obtained made clear revelation that the truck industry need serious regulation regarding freight rate fixation,tariff fixations,data base ,driver orientation and other industry aspect.the need of hour is also to make a bridge between govt official and such large private players so that the commodity price thata rise due to transportation can be handled and significanty changes can bring better safety and proper handling of goods.

Keywords: Freight Rates,Truck Operators,BTKM,Transportaion Cost

I INTRODUCTION

The rapidly growthing Indian economy will require rapid transport of goods and passenger ,with the twelve working plan of road transport figures predicting a 1391 BTKM goods transfer in the coming year 2015-17.the need of hour is to make such make corridor feasibile and asses the existing services served by the industry and improve the flaws therein at earliest as possible so as to make travel,heathlier,safer,economical,faster .the truck industry in entirely in private hand and no relevant and relaiable data base can be found at the recent dates due to poor communication and improper methods.about 85% of the truck industry is in private hand and only 15% of the transport have proper data structure comprising of various govt agencies such as TCIL,Container corporation of india.it becomes important to assess (commercial transportation system)which may have agencies that are on the supply side and as well as Mediators therin and Receivers at the Receiving end. Also after the deregulations of Diesel the freight rates have soured up and dow n every now and then making the commodity

rate to fluctuate in the market. Therefore it is now Important to check feasibility of various group-B other cities than those cities that are already are transport hub such as (Mumbai,Chennai,Kolkata,etc)which have potential as a transportation hub with limited services so as ,Nagpur being a important metro city situated at centre of India also the geographical center of India.have major potential of becoming a (cargo hub).project already underway for govt. Of Maharashtra. Nagpur having all the major Metro cities such as Mumbai,Chennai,New Delhi,Kolkata all at the marginal equal distance of 1000-1200 km .Due to these peculiarity also the city also has major 18% work share in road transport sector boosting it roles for becoming a major Transportation hub..The Question then arises is that are we ready with the services and facilties that may require right from commercial vehicle in use till the various traffic features ?This was the objective of the project done .Various survey were done at prime location in the vicinity of the Nagpur City.

II LITERATURE REVIEW

From the past research papers published P.Sarkar(1) in which critical appraisal of New Delhi was analysed and future predictions were given. World bank (2)has also studied the road sector in India here all Data prevailing where compared to its solutions were referred. Also AITD(3) has taken the research of understanding the trucking Operations and its solution.S.Sriraman summarised the various competitveness for Mumbai metropolitian region so as to seek the industry Scenario. MORTH(4) has assessed and predicted the freight and Passenger rates for future Coarse of time..the basic assumption of BTKM and freight capacity was utilised. J allen(9)Developed a Relationship between the Road freight, Transport Costs and Urban Form. And its assessed data was referred for making equations in this paper. Browne M.(11) has Also proposed the relationship between freight costs and Urban form in which various spatial data and validation was analysed.UMTC(12),Comprehensive Mobility Plan ,the project management consultants were givento task to initiate CMP for Nagpur, in which the Feasibilty Analysis for various Truck Traffic survey in the vicinity of the city was evaluated. On Same Lines the survey was intiatlized for the project|.

III METHDOLOGY

3.1) Truck Operator Survey

3.1.1) Field Survey

Field survey on various major truck operating Roads were done also manually and reliable data was taken and result obtained were as follows

Sr No.	Features	Description(%)
1	Vehicle Owners	26
2	Truck Operators	12
3	Agents(Booking)	36
4	Broker	26

3. 2) Truck Trip Survey

Truck trip survey on major road connecting Nagpur city where done and the average on various survey of 100 commercial vehicle and there percentage wise distribution was obtained on data collected and interviewed from truck operator .

Table 1. Truck Trip Survey

SR No.	Location	Loadng (%)	Unloading(%)	Others (%)
1	Katol Road(SH248)	46	42	12
2	Bhandara Road(NH-7)	65	35	10
3	Wardha Road(NH-7)	46	53	1
4	Hingna Road(SH255)	45	52	3
5	Amravati raod(NH-6)	44	55	1
6	Jabalpur Road(NH7)	65	34	1

3.3) Truck Commodity Survey

The truck entering and exiting the city have various commodity carriage as city has a good mineral deposit as well Vegetables ,Food grains,Fisheries and etc goods usage

Sr no.s	Commodity	Features(%)
1	Foods Grains	44
2	Industrial Material	33
3	Stone Coal	19
4	Fisheries	4

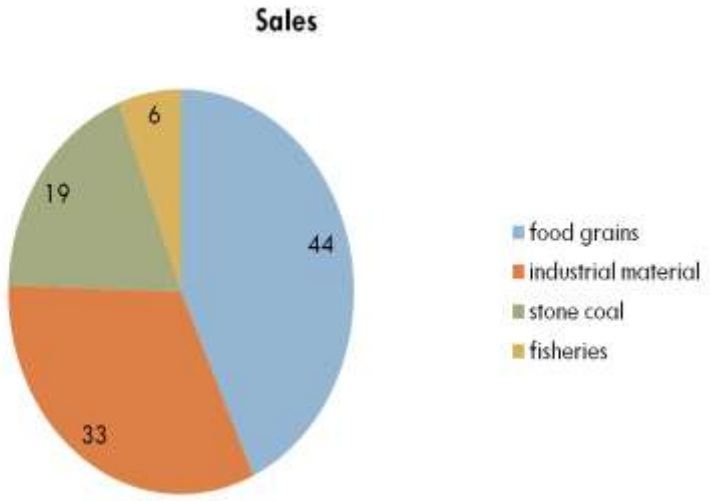


Fig 1. Various Commodity Survey

3.4) Frequency In Truck Trip Purpose

Frequency of truck in terms of accountability for trips made daily,Alternate day,weekly,Monthly ,etc were assesed by fold survey method.the objective of the survey is to have the availaibilty of truck in terms of no.s and percentage that may be available for carrying goods in future purpose.this tends to explain the entry and exit of various commercial vehicles

TABLE 2: Showing Frequency in Truck Trip Purpose

Sr no.	Daily(%)	Alternate (%)	Weekly(%)	Monthly (%0	Others9 %)
Katol Road(SH248)	30	11	26	32	1
Bhandara Road(NH-7)	34	4	41	17	4
Wardha Road(NH-7)	43	17	24	16	0
Hingna Road(SH255)	53	20	21	6	0
Amravati raod(NH-6)	45	6	30	17	2
Jabalpur Road(NH7)	33	45	12	8	2

3.5) Ownership Pattern of Tuck Operator Survey

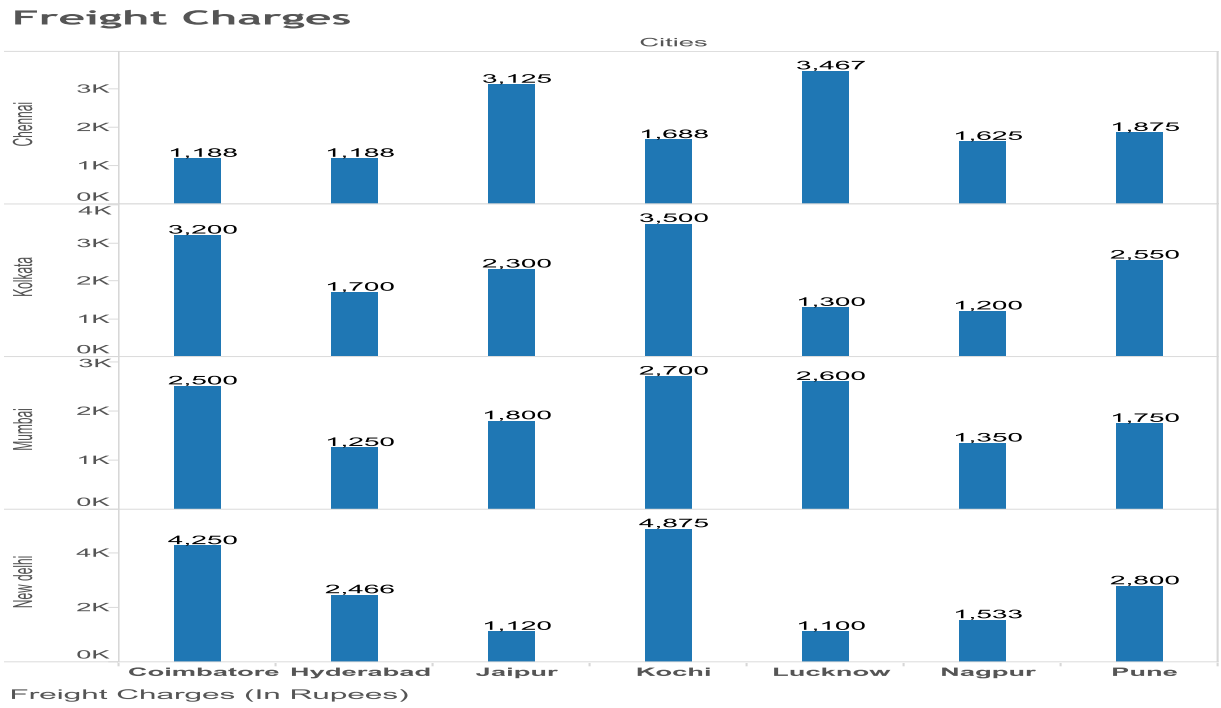
Table 3 :Showing Ownership Pattern

Features	Ownership pattern
Single vehicle owner	45%
2-5	35%
5-9	11%
more than 9	09%

3.6) Freight Rates

The Freight rates has significant impacts on the above survey performed.therefore the comparative analysis of freight rates with Metro cities in Rs per Tonne were obtained.showing major difference

Fig:Showing various freight rates between important Cities

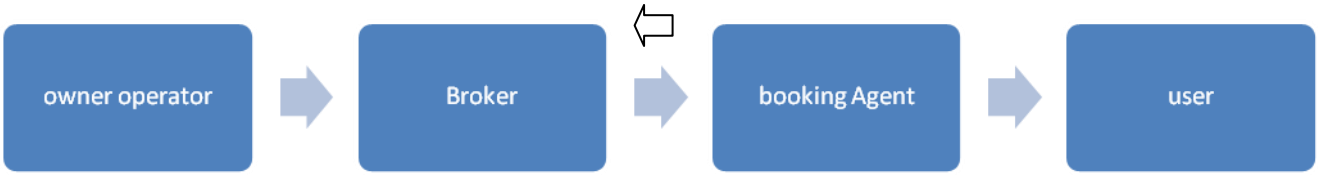


IV INTREPRETATION OF RESULT

The following points can be intrepreted from the survey preformed.

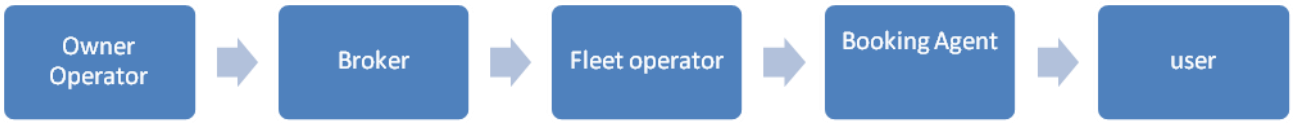
1)The city geographcal location is favourable in terms of setting up transportation as the no.s of vehicle entering the city on a daily basis i.e predicting daily busines more than 50%2

2)The ownership pattern predicts split pattern and the model that the city falls due to commercial market structrue is mixed state ,it is as follows



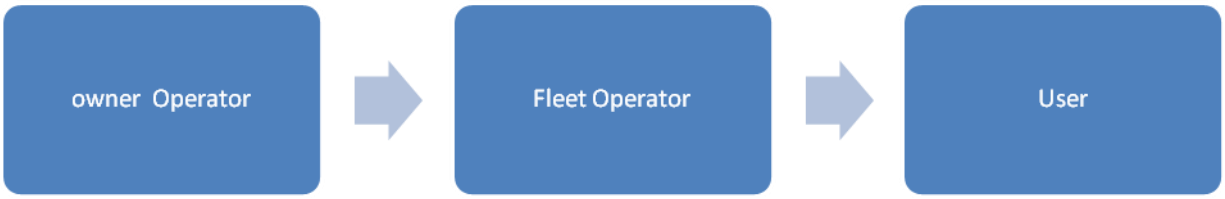
Model 1

3)The market structure also has model 2 for various north –south corridor i.New Delhi-Nagpur,Madurai-Nagpur etc



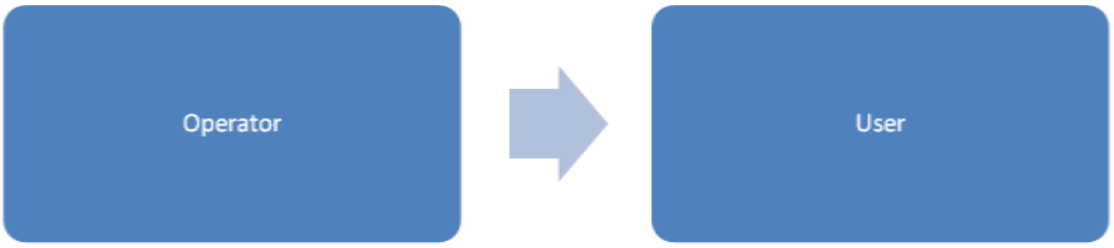
Model 2

4)The Model 3 intrepreted while conducting survey were can be called one of the practial and optimum which is



Model 3

5)The model 4 is the one which is supported for small cities and esser distance with direct contact between the operator and the user



Model 4

6)The model 5 is also suitabke for Gr B or cities with Inermediate cities therein the freight corridor.also in thi model broker which acts as a intermediate person book the commercial vehicles and takes his commission.

Model 5

Taking a few example showing various north-south as well as East west corridor,the Analysis of various frieght rate and distance with the surveyed model governing the freight rate and its effect on the distance

Table 2. Mumbai-kolkata freight corridor

Distance In km	Avg Freight rate respect to model 1 as per survey	Avg Freight rate respect to model 2 as per survey
166	450	500
412	600	700
560	700	800
700	1100	1100
850	1200	1350
993	1400	1500
1083	1500	1550
1126	1600	1700
1618	2200	2400
1833	2500	2800
2000	2900	3200

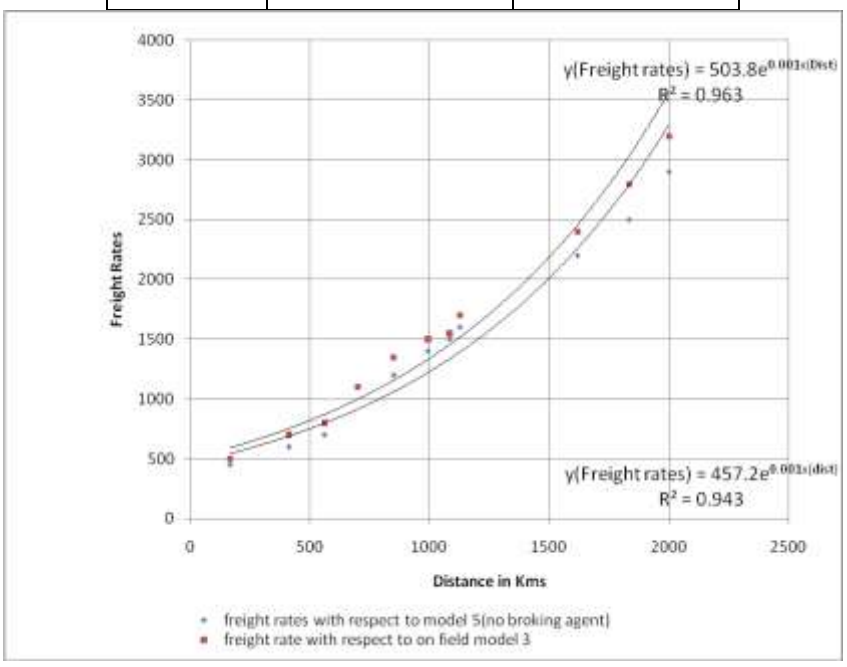


Fig.Relationship Between Freight Rate and Distance for Mumbai Kolkatta Corridor

Table 3 Nagpur-Madurai freight rates vs distance with model 5 as function

Distance	Avg Freight Rates due to Model 5
200	500
501	700
735	900
1090	1100
1292	1500
1525	2000

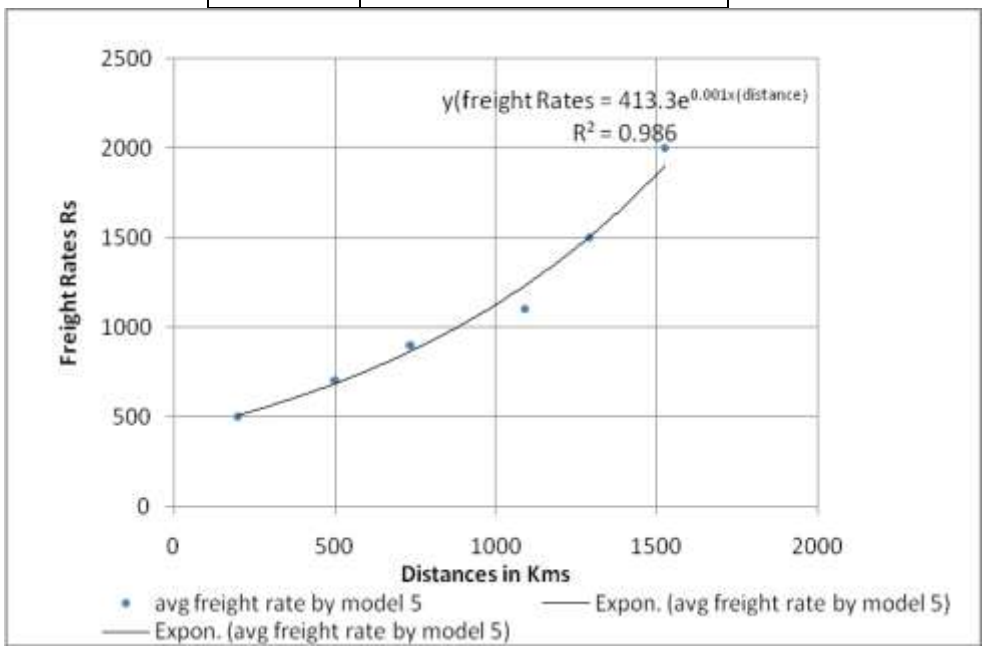


Fig: Nagpur-Madurai Freight –Distance Relationship graph

V **RESULT and CONCLUSION**

The variation of freight rates with the distance can calculated by the equation generated.With the variation of various Transport Model .The differentiation in the profitabilty and no.s of players in it the variability constantly increases and decreases.in East-West Corridor under the model 3 which was surveyed ,the freight rate constant was more and therefore we need to pay more for Rs per tonne for varyng distance.Whereas in North-South corridor the freight rate is compartively les than the the transport model has less transport structure involved in it..The study also suggests that the Transport player involve in the market for Major A and Minor cities have the model which flctuate the freight rates. Booking agents virtually dominate in east –west corridor and also share the market freight rate surge due to transport economic condition.The survey also depicts the various ownership pattern for nagpur city where the ownership pattern is like mumbai city i.e high rate of vehicle owner which predicts growth rate in transportation industry.Also the various freight rates obtained by

field survey survey depicts as balanaced freight rates for Nagpur City as compared to various metropolitian city.Also the survey shows that the purpose for various commercial vehicle in the city i.e with a adequate loading-unloading rate .it can be concluded that the city has features high rate of having a major transporation hub as well as logistics hub.Due to this scattered data base and reliability the market structure model was concluded for nagpur city dominated by booking and brokers even after having truck owners in large numbers.

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