

A STUDY ON CHALLENGES FACED BY LORRY DRIVER'S

Submitted in partial fulfilment of the requirements for the award of

Master of Business Administration

by

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SCHOOL OF MANAGEMENT STUDIES

SATHYABAMA

**INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY)**

**Accredited with Grade "A" by NAAC | 12B Status by UGC | Approved by AICTE
Jeppiaar Nagar, RAJIV GANDHI SALAI, CHENNAI - 600 119**



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BONAFIDE CERTIFICATE

This is to certify that this Project Report is the bonafide work of **RAJA.R (40410136)** who carried out the project entitled "**A STUDY ON CHALLENGES FACED BY LORRY DRIVER'S**" under my supervision from September 2021 to October 2021.

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ABSTRACT

Limited research has addressed the issue of truckdrivers and their performance regarding highway safety in terms of reduced number of crashes per driver. The primary purpose of this study was to determine how tractor trailer truck drivers' job performance could be improved while at the same time ensuring increased revenue for the transportation companies employing them. The target population for this study comprised of tractor-trailer truck drivers employed by a leading transportation company in the United States. The data used in the study included demographic, human capital, compensation and workplace variables. The results of this study should be useful to several individuals, organizations and the entire U. S. economy. The transportation companies should benefit by knowing the factors that predict good job performance for the drivers. This should assist management in designing work conditions or other activities that promote good performance in terms of reduced crashes and improved productivity of the drivers.

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CHAPTER-1

INTRODUCTION

1.1 INTRODUCTION:

After Agriculture the Sector which has generated maximum employment in India is the Transport Sector. Truck drivers play major role in our transportation system. The truck drivers drive miles and miles in all the weathers to ensure that the goods consigned reach us in specified time. But these drivers live a very miserable life. They don't have their fixed time for their food, sleep and rest. It is rightly said that the truck is their home which provides them shelter when they are on the road: they sleep in it, under it, and even on top of it. The truck drivers spend many days on highways and they remain away from home and family for a long duration. At times they take risk to run the trucks with the mechanical faults. They usually have the mentality to finish one load and then go for repairing the truck.

Another problem is faced due to police. The police also take advantage of miserable condition of truck drivers. The police look at truck driver in suspicion and search out reason to take money from them. Truck drivers also face the health issues. The truck drivers usually drive in nights and to stay alert they chew tobacco. They do not worry about what their job is doing to their health:

Mostly truck drivers are illiterate. So, they also face money problems. They are not paid on monthly basis. They are paid money as per trip. They work on traditional basis of cost evaluation to put their rates below the rate of competitors. This leads to huge loss to the truckers as they do not acquire the freight rate in proportion to the operating cost. These are the above problems which transporters/truck drivers are facing regularly. So, proper steps should be taken to improve their life. Education and awareness are two important weapons which help in the improvement of their life. Viewing the problems of truck drivers, TruckSuvidha around, the task looks tiny. TruckSuvicha, your perfect relocation partner, makes your overseas relocation a pleasant experience. Once you experience our services you will not think of anyone else but Trucksuvidha brings the solution to make the life of truck drivers easy and more comfortable. TruckSuvidha helps the truck drivers by providing them work all the times and eliminating their idle time. It indirectly helps them in earning good amount of money. In this way, truck drivers plan their work accordingly

and also find time to go to their home and meet their family. TruckSuvidha helps truck drivers in removing their confusion of where they can get the work. TruckSuvidha also provides truck driver a knowledge which protects them from being cheated by transporters. They also get fair rates for their services.

The transport sector is the backbone of the Indian economy. Between the two main modes of transport, i.e., road and rail, road transport controls 90% of passenger traffic and 67% of freight in the country.¹ Truck drivers play a significant role in transporting India's freight. The unorganised nature of trucking prohibits drivers from getting their due share compared to other industrial counterparts. Additionally, there is a shortage of truck drivers in India. There are 20 lakh truck drivers at present and the driver to truck ratio is below 750 per 1000.² This means approximately 25% to 30% of India's trucks lie idle at any given point of time and those employed in the sector are overworked. Long trips are the norm and drivers work irregular shifts without relief on long hauls. Truck drivers often undergo harsh working conditions, health issues and unscheduled working hours that contribute to road crashes and fatalities. Trucks fall under the heavy goods vehicle category. The Motor Vehicles Act describes heavy goods vehicle as "any goods carriage the gross vehicle weight of which, or tractor or a road-roller the unladen weight of either of which, exceeds 12,000 kilograms." As per the Ministry of Transport and Highways (MoRTH) data, in the category of impacting vehicles, truck/lorry has the third highest share (12.3%) of total crashes.⁴ It caused 57,441 crashes, 23,868 deaths and 51,166 injuries in 2018. Among road-user categories, truck/lorry makes up the third highest share of deaths at 10%, claiming 15,150 lives in 2018.

Regard to road safety, overloaded trucks or those with unsecured loads are a hazard to other vehicles and road users. Overloaded vehicles account for a share of 10.1% of total crashes, 11.9% of total killed and 10% of total injuries (MoRTH Report, 2018). Additionally, trucks with loads protruding/ hanging pose a serious safety hazard. An analysis of media reports of 663 road crashes involving trucks was undertaken from 2016 to 2019. This data reveals that 40% of crashes take place due to trucks' head on collision with other vehicles, whereas 16% of crashes occur due to rear end collisions with trucks. Further, data of 302 crashes (where type of road was mentioned), reveals that most crashes take place on National Highways (29.6%) compared to State Highways (2.6%).

Our nation has 90 lakh trucks that carry freight worth over USD 150 billion annually. It provides direct employment to 20 crore people. In other

words, close to 1 in every 100 Indians is associated with the trucking business. These gallant people assure continuity of FOL supply in the icy outposts of Ladakh, continuity of water supply in the arid areas of Maharashtra and cement bags in the infrastructure project site-locations. They drive through rain and shine to ensure that groceries reach our markets on time and make sure that inputs reach factories on time.

Last-mile delivery costs account to close to 30% of total shipment costs in India. And, a fair amount of it can be reduced. Assuming that 12% of a commodity's cost is its logistics cost, and, we manage to shrink this by 2%, the cost of the commodity can reduce by 2%. Extended to the entire country's produce and our entire nation's last-mile delivery system, this cost-reduction could increase demand for products by 2% and our GDP could increase by 2%. Although wishful and exaggerated, this is the promise last-mile delivery holds. The success of our Make in India initiative rests on our truckers' ability to deliver on their promises – both implicit as well as explicit. But, what about the promises we made to our truckers Implicit as well as explicit! How many research articles have been published on trucker's work-life balance many truck drivers and cleaners are medically covered many truck drivers work no more than 9 hours per day many truck-drivers enjoy work-life balance Close to 92% of the trucks plying in our country are controlled by unorganized players. How many policy guidelines have been pushed to bring them into the organized fold, so that they get better wages and service conditions The market is rife with players who undercut one another to operate trucks. many of us have got down together to address truck-availability issues at a national level The COVID epidemic has exposed the evils of spot-markets and the damage they cause to businesses. many of us have found time to discuss and debate this issue

1.2 HISTORY OF ROAD TRANSPORTATION

The first methods of road transport were horses, oxen or even humans carrying goods over dirt tracks that often-followed game trail. The Persians later built a network of Royal roads across their empire.

With the advent of the Roman empire, there was a need for armies to be able to travel quickly from one region to another, and the roads that existed were often muddy, which greatly delayed the movement of large masses of troops. To resolve this issue, the Romans built solid and lasting roads. The Roman Roads used deep roadbeds of crushed

stone as an underlying layer to ensure that they kept dry, as the water would flow out from the crushed stone, instead of becoming mud in clay soils. The Islamic Caliphate later built tar-paved roads in Baghdad

From the 17th century, road transport throughout the Ashanti Empire was maintained via a network of well-kept roads that connected the Ashanti mainland with the Niger river and other trade cities. After significant road construction undertaken by the kingdom of Dahomey, toll roads were established with the function of collecting yearly taxes based on the goods carried by the people of Dahomey and their occupation. As states developed and became richer, especially with the Renaissance, new roads and bridges began to be built, often based on Roman designs. Although there were attempts to rediscover Roman methods, there was little useful innovation in road building before the 18th century.

Starting in the early 18th century, the British Parliament began to pass a series of acts that gave the local justices powers to erect toll-gates on the roads, in exchange for professional upkeep. The toll-gate erected at Wade's Mill became the first effective toll-gate in England. The first scheme that had trustees who were not justices was established through a Turnpike Act in 1707, for a section of the London-Chester road between Foothill and Stony_Stafford. The basic principle was that the trustees would manage resources from the several parishes through which the highway passed, augment this with tolls from users from outside the parishes and apply the whole to the maintenance of the main highway. This became the pattern for the turnpiking of a growing number of highways, sought by those who wished to improve flow of commerce through their part of a county.

The quality of early turnpike roads was varied. Although turnpiking did result in some improvement to each highway, the technologies used to deal with geological features, drainage, and the effects of weather were all in their infancy. Road construction improved slowly, initially through the efforts of individual surveyors such as John Metcalf in Yorkshire in the 1760s. British turnpike builders began to realize the importance of selecting clean stones for surfacing while excluding vegetable material and clay, resulting in more durable roads.

Today, roadways are primarily asphalt or concrete. Both are based on McAdam's concept of stone aggregate in a binder, asphalt cement or Portland cement respectively. Asphalt is known as a flexible pavement, one which slowly will "flow" under the pounding of traffic. Concrete is a rigid pavement, which can take heavier loads but is more expensive and

requires more carefully prepared subbase. So, generally, major roads are concrete and local roads are asphalt. Concrete roads are often covered with a thin layer of asphalt to create a wearing surface.

Modern pavements are designed for heavier vehicle loads and faster speeds, requiring thicker slabs and deeper subbase. Subbase is the layer or successive layers of stone, gravel and sand supporting the pavement. It is needed to spread out the slab load bearing on the underlying soil and to conduct away any water getting under the slabs. Water will undermine a pavement over time, so much of pavement and pavement joint design are meant to minimize the amount of water getting and staying under the slabs.

Shoulders are also an integral part of highway design. They are multipurpose; they can provide a margin of side clearance, a refuge for incapacitated vehicles, an emergency lane, and parking space. They also serve a design purpose, and that is to prevent water from percolating into the soil near the main pavement's edge. Shoulder pavement is designed to a lower standard than the pavement in the travelled way and won't hold up as well to traffic, so driving on the shoulder is generally prohibited.

Pavement technology is still evolving, albeit in not easily noticed increments. For instance, chemical additives in the pavement mix make the pavement more weather resistant, grooving and other surface treatments improve resistance to skidding and hydroplaning, and joint seals which were once tar are now made of low maintenance neoprene.

1.3 ADVANTAGES OF ROAD TRANSPORTATION

1.Less Capital Expense:

There are many advantages to road transport services when compared to other modes of transport. When you look at the capital required for road transport, it is very less than the other means of transport like air, water or rail. Even the charge for constructing, maintaining and operating roads is very less than that of railways and air transport.

2.Door to Door Service:

The unmatched benefit of road transport is that it gives door to door service for all the freight deliveries. Road transport is the only extensive system that gives transportation to the final destination. When you compare this to a rail or air transport where you need to make a delivery to the transportation terminal and get into the rail or plane after completion of several security checks. Later after reaching another terminal you have to take another mode of road transport to reach your place of destination. Also, these

transportation terminals are usually not inaccessible areas as compared to road transport. With road transport, you can just load the items from your place, drive and unload it right at your required destination.

3. Service in Remote Areas:

Road transport is best applicable for transporting goods to and from remote areas that are not connected by other means like rail, air or water transports. The trade-off for goods between cities and small villages happens majorly via road transport.

4. Flexibility:

Road transport possesses has a huge benefit from other modes of transport, that is the flexibility which it provides. The routes and timings can be altered easily and quickly according to individual needs without much problem.

5. Suitable for Short Distance:

Road transport provides a faster and less costly means of transporting goods over short distances. Other modes of transport like water, air or rail may incur delays in transit of goods with loading and reloading required in multiple locations. In road transport than it can be loaded directly into a single vehicle and later transported directly to the final destination.

6. Lesser Risk of Damage in Transit:

As the multiple instances of loading and reloading are negated, there would be very little chance of harm to the transported goods. Hence road transport is best suited for transporting delicate goods that have more possibility of being damaged during numerous stages of loading and unloading.

7. Packing charges saved:

The procedure of packing the goods in road transport is very minimal while compared to other means of transport, where they would need to ensure safety for multiple loading and unloading process.

8. Rapid Speed:

If you need to transport goods with short notice, then road transport is much preferred that rail or water transport. With the other transports, it requires extra time to book the goods and taking their delivery.

9. Less total cost:

With road transport, you will not only need only less investment to start with but the capital for operating and maintenance is relatively less. When you consider all the costs of multiple loading and unloading, packaging, etc. the overall cost of road transport will be less.

10. Initiating own road service:

Another benefit of road transport is that if you have frequent delivery of your products or any other business-related items, then you can start your road services by your private vehicles, according to your capital investments. This will help to deliver the products without any delay regularly. Road transports also have provisions to use any type of vehicle like private cars, public buses, sharing vehicles, two-wheelers, etc. This will meet the needs of different kinds of services.

11. Connecting other Modes of Transport:

Even if air or rail transports may be used for long-distance transports, the end destinations in both the starting and end phase require the use of road transport. It acts as a connecting link to other modes of transport.

1.4 DISADVANTAGES OF ROAD TRANSPORTATION

1. Accident rate

Road transport has the highest accident rate, but the sector is reducing it by investing heavily in safety, renewing fleets and training drivers.

2. Less load capacity

Even modern mega-trucks, with a capacity of about 60 tons, are much more limited than a ship, a train, or a plane. This makes it much more cost-effective to use another alternative for shipping large quantities of goods

3. Traffic restrictions

Traffic jams, especially on access to cities and industrial estates, can lead to delays in delivery. However, professionals are increasingly relying on technological assistants to anticipate these incidents and choose alternative routes.

4.Trucks should not fuel-efficient:

The most significant disadvantage of trucks is its fuel economy. They consume more fuel since their engines are bigger and the nature of work where it was designed for is relatively heavy.

Nevertheless, there are trucks which are geared up with more fuel-environment friendly 4-cylinder engines and this may very well be a good choice if you are after for a truck with good fuel economy. The only problem with a four-cylinder-powered truck is that it will not be capable of providing the efficiency that the model with larger engines might offer.

5.Trucks have limited house for passengers:

Another disadvantage of a truck is the number of passengers that it can accommodate. Though, bigger trucks could allow as much as 5 passengers, the legroom and the shoulder room should not ample to provide comfort for the car occupants.

6.Exceeds the Limit Prescribed

Now, there is another most serious disadvantage of the truck transportation services, which is that when goods are transported to another state, the wheels of the truck have to be in a certain size which sometimes exceeds the limit prescribed, and that will be bad for the goods contained in it.

7. Poor state of the vehicles

The Indian logistics industry focuses primarily on the returns and not so much on the quality of the method. The goal is to transport the most amount of cargo in the most cost-effective way. This invariably shifts the focus from the driver's comfort and the care required to maintain the vehicles. In many cases, vehicles are over used and hardly maintained in their prime condition. The bad condition of the Indian roadways only accelerates the depreciation of the vehicles involved

8. The Indian Roadways

The Indian roadway network is over 90,000 kilometres. This number is just inclusive of the National Highways. Despite its vast nature, the real-life conditions of the roads are far from satisfactory. A lot of the state roadways are in worse conditions in comparison. These roads would hardly be deemed as comfortable for driving, especially for truck drivers. The bad state of affairs often results in delays and inconveniences caused during transit. In worse cases, these would also lead to unfortunate accidents.

9. Security and Theft

High value cargo is transported across the nation on a daily basis. Not every part of the country is safe and there are certain routes which are deemed more dangerous than the others. This could be due to the local crime syndicates that target cargo vehicles during transit and rob them of the valuables. Such incidents are very unfortunate and can pose to be highly dangerous for the truck drivers. Additionally, this is also a great loss to the logistics company and the clients.

10. On-Ground Problems with Authority

During inter-state transit, the truck drivers are expected to be well acquainted with all required documentation and paperwork. The state checkpoints are usually where the authorities stop all cargo vehicles and do thorough checks. In such cases, it is not uncommon for the authorities to harass the drivers. Different states have different laws regarding cargo transits. Authorities often use this to their advantage since the drivers are left to their own devices by their employers to deal with such scenarios. Corruption being very prevalent in our country does not help the cargo drivers who are already struggling to make ends meet.

1.5 INDUSTRY PROFILE

The Trucking industry has been fulfilling the need for cargo transportation. The spatial spread of the street arrangement (highways and other roads), its quality, and access have a significant role to play.

Today, more than 65% of the nation's cargo is being shipped on trucks, and this emphatically affirms the modular move of load transportation from rail to the street.

The trucking industry has entered quickly into the market through a wide scope of administrative measures. The truck population in India is developing at a pace of 15% every year, taking the present number to more than 2,000 trucks for every million populaces. In India, the trucking industry is a noteworthy player in load development, contributing 55% of the ton-km attribute.

These sterling outcomes are regardless of street limit in India being extremely low; the majority of the National Highways have two paths or less, and blockage on streets represents a significant challenge with more than 25% of the majority of India's National Highways being clogged. The trucking industry is the most significant connection that encourages profitability and aggressive proficiency, prompting fast financial improvement of the nation through its contribution to the economy.

The Top 10 Truck Manufacturers in India:

- Tata Motors.
- Ashok Leyland.
- Mahindra
- Eicher Motors.
- Asia Motor Works.
- Hindustan Motors.
- Force Motors.
- Bharat Benz
- Volvo Trucks
- Swaraj Mazda – SML ISUZU

The above list are the companies which manufacture load trucks all over the India and other countries from these company most of the drivers choose tata motors, Ashok Leyland, Mahindra & Eicher motors as their preferred company

1.6 OBJECTIVES OF THE STUDY

Primary Objectives

- To study the barrier's faced lorry driver's while distribution of goods.

Secondary objective:

- To know the other state official behavior towards them.
- To know the satisfaction level of lorry drivers.
- To understand the procedure while crossing the state entry exit borders.

1.7 NEED FOR THE STUDY

The need for this study is to identify the problems in lorry transportation. This study on lorry drivers will get to know the benefits of AITWA all over India. Road Transportation is a main pillar for distribution of goods to customer it is necessary to resolve the problem behind it, to have an effective transportation. by this study we can understand the relationship between the drivers and the traffic police & highway police, Many thief have been happened mostly in other states where police are not bothering about other state drivers.

1.8 SCOPE FOR THE STUDY

- This study will help to bring an awareness on AITWA's welfare which is allotted to lorry driver's
- It is an opportunity for lorry drivers to overcome their pain and problems faced while driving.
- The result of the study helps lorry drivers to know about the healthcare benefits provided by the association (AITWA).
- By this study we can know about the government official's behaviour on field.
- Expecting changes in Companies priority towards lorry drivers.

CHAPTER-2

LITERATURE REVIEW

2.1 REVIEW OF LITERATURE

- (Goel 2014) treated the truck scheduling problem to assess the impact of the Hours-of-service regulations changes on operational costs and road safety. A new simulation – based method was proposed to solve this problem. The results indicate that additional costs and monetized road safety benefits are on the same order of magnitude for all regulatory options and, for some sets of instances, the monetized road safety benefits are above the additional operational cost
- (Wen et al. 2011) examined the vehicle routing and driver scheduling problem within Danish Crown at Danmark, putting emphasis on the necessity to reduce the total delivery costs. The results of the Multilevel Variable Neighbourhood Search meta-heuristic suggested to solve this problem showed that this program is general and can be applied to solve other routing problems.
- L. Kok et al. 2010) studied the vehicle routing problem whose prime target is to determine a set of routes and their scheduling to satisfy all demands and associated time windows with minimum total costs for the planning horizon. To solve this problem, a Vehicle Departure time Optimization (VDO) with Dynamic Programming was proposed. The results showed an important minimization of the duty duration.
- Lal & Craig, (2001) in a review discusses the concepts of fatigue and provide a summary on psychophysiological associations with driver fatigue. The review also identified anxiety and mood states as factors that may possibly affect driver fatigue. Furthermore, personality and temperament may also influence fatigue
- In USA federal regulation limits interstate truck drivers to 10 hours of driving after an 8-hour off-duty period. The need for enforcing these limits is supported by research showing that long driving hours is a risk factor for tracto-trailer crashes (Hertz,1991).

- On a more general level, job satisfaction was linked to turnover in a study by Kalnbach and Lantz (1997), such that new truck drivers who had remained with the company for four months and reported greater job satisfaction were also more committed to the organization and less likely to have contemplated quitting. For most occupations, four months' tenure may be considered a premature point at which to assess job satisfaction; however, in an industry that suffers from annual turnover at the rate that trucking does, this was probably not an unreasonable timeline.
- Ketabi et al., 2011. Existing research has identified factors contributing to traffic accidents using quantitative approaches; qualitative research studies are needed to enhance understanding of this complex social phenomenon.
- ozkan, Lajunen, Chliaoutakis, Parker, & Summala, 2006. Therefore, to bridge the present research gap and better understand the study phenomenon, this study used an inductive qualitative approach to explicate Iranian truck drivers' understanding and experiences regarding the factors influencing traffic accidents.

CHAPTER-3

RESEARCH METHODOLOGY

3.1 RESEARCH METHODOLOGY

3.2 RESEARCH DESIGN

The Research design used in this is descriptive research design. Descriptive research design is a scientific method which involves observing and describing the behavior of a subject without influencing it in any way. The main characteristic of this method is that the researcher has no control of variables; he can report only what has happened or what is happening.

3.3 SOURCE OF DATA

PRIMARY DATA

Questionnaire method have been used as a tool for a data collection in this research.

SECONDARY DATA

Secondary data means data that are already available i.e., they refer to data which has already been collected and analyzed by someone else. The secondary data for the study was collected from book, company websites, magazines and other sources.

3.4 SAMPLE SIZE

The research was conducted on the basis of lorry transportation platforms and the population of research is 200.

3.5 SAMPLING TECHNIQUE

In this study, Simple Random Sampling was used for selecting the samples from the population of lorry drivers.

3.6 PERIOD OF STUDY

The period of study is Three months from December 2021 to March 2022.

3.7 AREA OF STUDY

This study covers the area around Chennai

3.8 STRUCTURE OF QUESTIONNAIRE

The questionnaire consists of totally 25 questions. The questionnaire is formed using five important variables. It includes three demographic questions. It includes multiple choice questions, Likert scaling questions.

3.9 ANALYTICAL TOOLS

The following are the statistical tools used in the study

1. Chi square.
2. Annova.
3. Paired T-test.

CHAPTER-4

DATA ANALYSIS AND INTERPRETATION

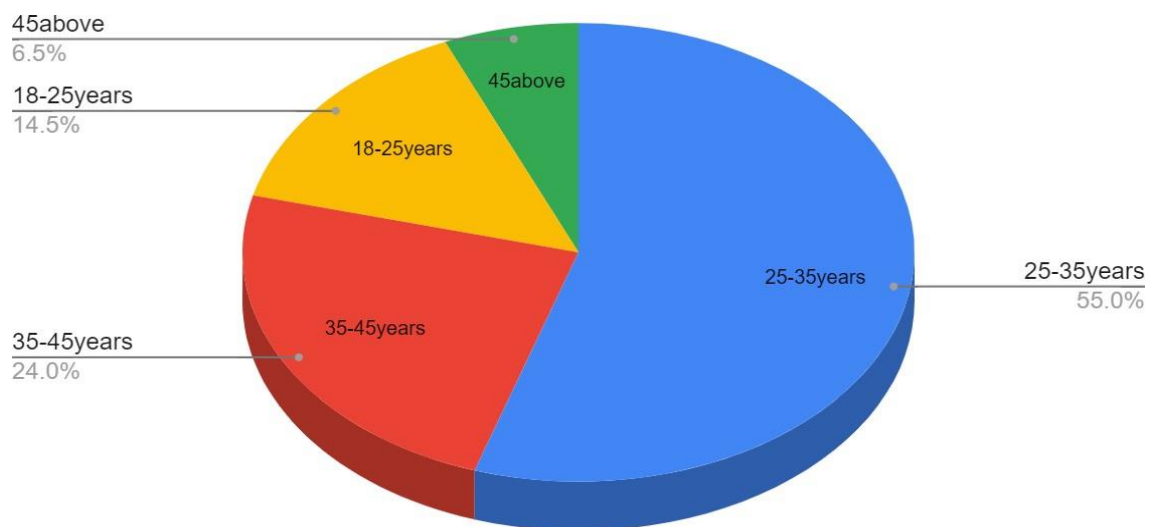
4.1 PERCENTAGE ANALYSIS

TABLE 4.1.1 Age of the respondents.

Particulars	No. of. Respondent	Percentage of Respondent
18-25	29	14.5%
25-35	110	55%
35-45	48	24%
45above	13	6.5%
total	200	100%

Source: primary data

CHART 4.1.1 Age of the respondents.



INTERPRETATION

From the above table it is observed, 14.5% of the respondents are 18-25years, 55% of them are 25-35years, 24% of them are 35-45 years, 6.5% of them are 45 above.

INTERFACE

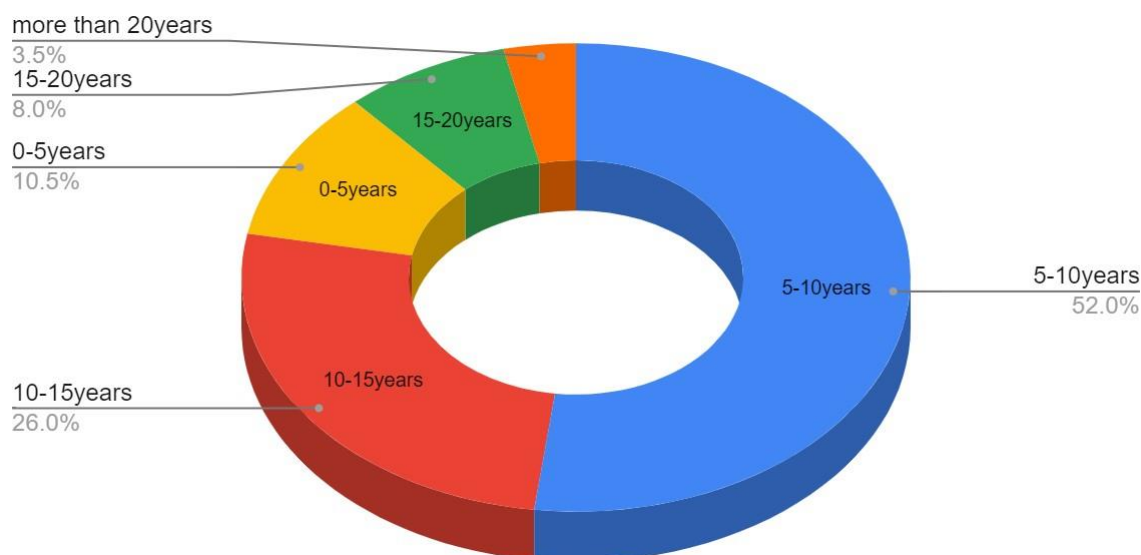
majority of the respondents are between the age group of 25-35 years.

TABLE 4.1.2 Experience as a driver.

Particulars	No. of. Respondent	Percentage of Respondent
0-5years	21	10.5%
5-10years	104	52%
10-15years	52	26%
15-20years	16	8%
more than 20years	7	3.5%
Total	200	100%

Source: primary data

CHART 4.1.2 Experience as a driver.



INTERPRETATION

From the above table shows that the response, 10.5% of them has 0-5years of experience, 52% of them has 5-10 years, 26% of them has 10-15years, 8% of them has 15-20years, 3.5% of them has more than 20 years of experience.

INTERFACE

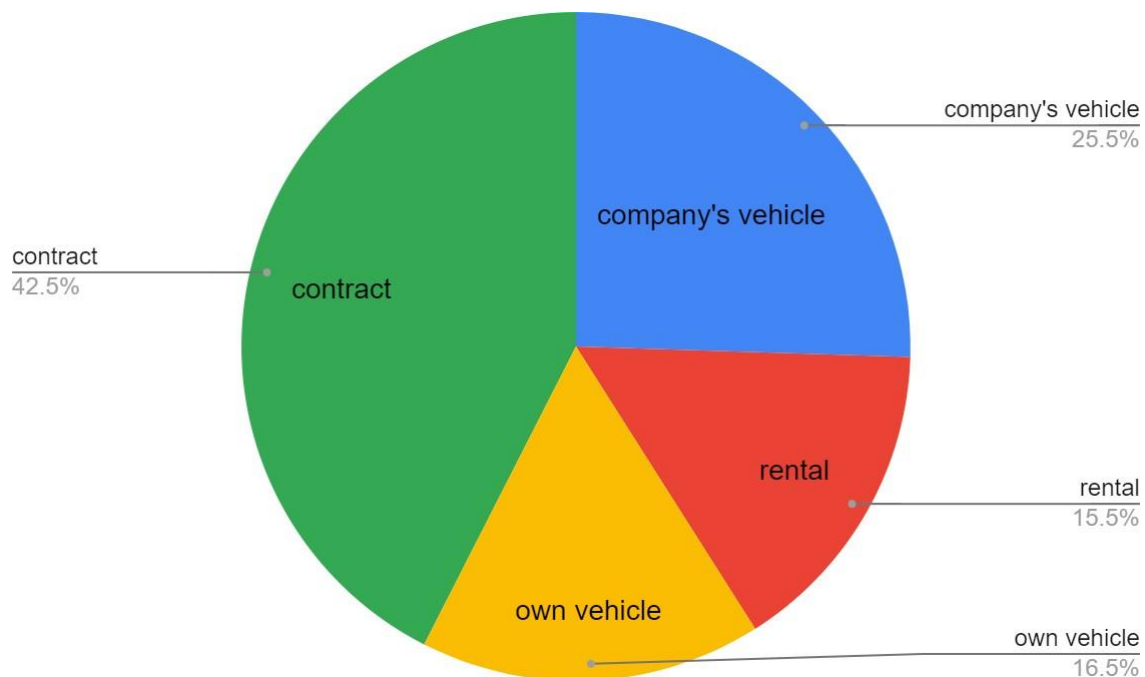
Majority of the respondents have 5-10 years of experience in driving heavy load vehicle.

TABLE 4.1.3 vehicle ownership of driver's lorry.

Particulars	No. of. Respondent	Percentage of Respondent
Own vehicle	33	16.5%
Contract	85	42.5%
Company vehicle	51	25.5%
Rental	31	15.5%
total	200	100%

Source: primary data

CHART 4.1.3 vehicle ownership of driver's lorry.



INTERPRETATION

From the above table, 16.5% of them have own vehicle, 42.5% of them have made a contract of the vehicle, 25.5% of them use company's vehicle, 15.5% of them use rental vehicle.

INTERFACE

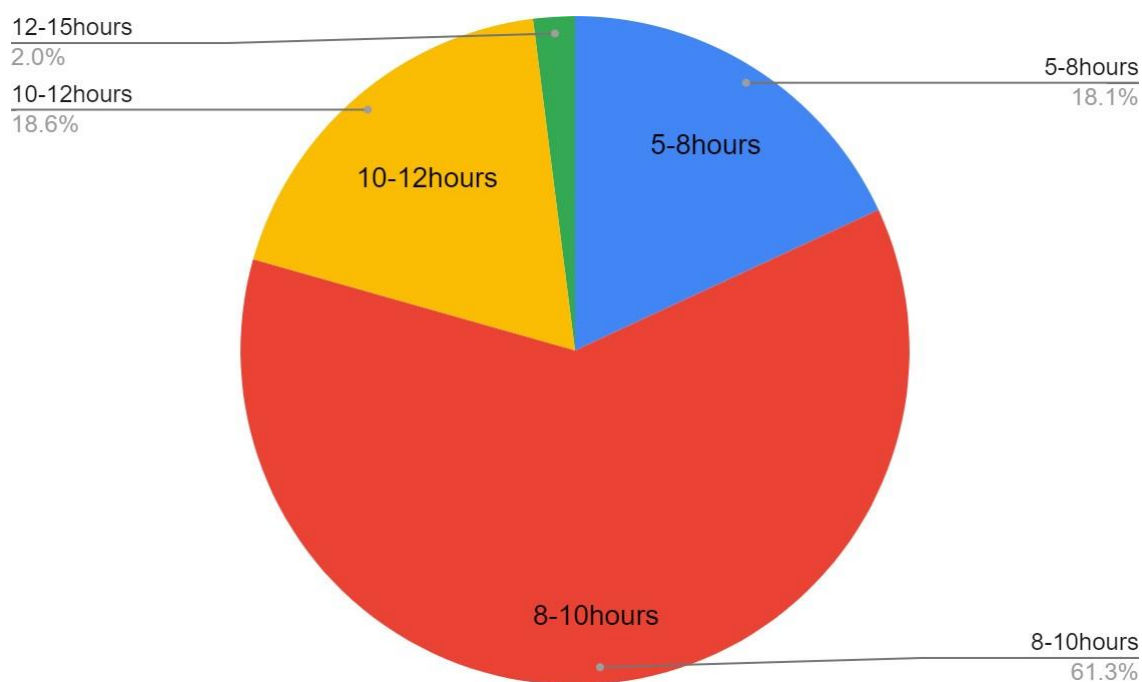
Majority of 42.5% of the respondents have made a contract with lorry transportation company by paying in monthly basis.

TABLE 4.1.4 how many hours will you drive in a day.

Particulars	No. of. Respondent	Percentage of Respondent
5-8hrs	36	18.1%
8-10hrs	122	61.3%
10-12hrs	37	18.6%
12-15hrs	4	2%
Total	199	100%

Source: Primary data

CHART 4.1.4 how many hours will you drive in a day.



INTERPRETATION

From the above table & chart, 18.1% of them will drive 5-8hrs per day, 61.3% of the drivers will drive 8-10hrs per day in rotational basis with the co-driver, 18.6% of them will driver 10-12hrs per day, finally only 2% of the total respondents will drive 12-15hrs a day.

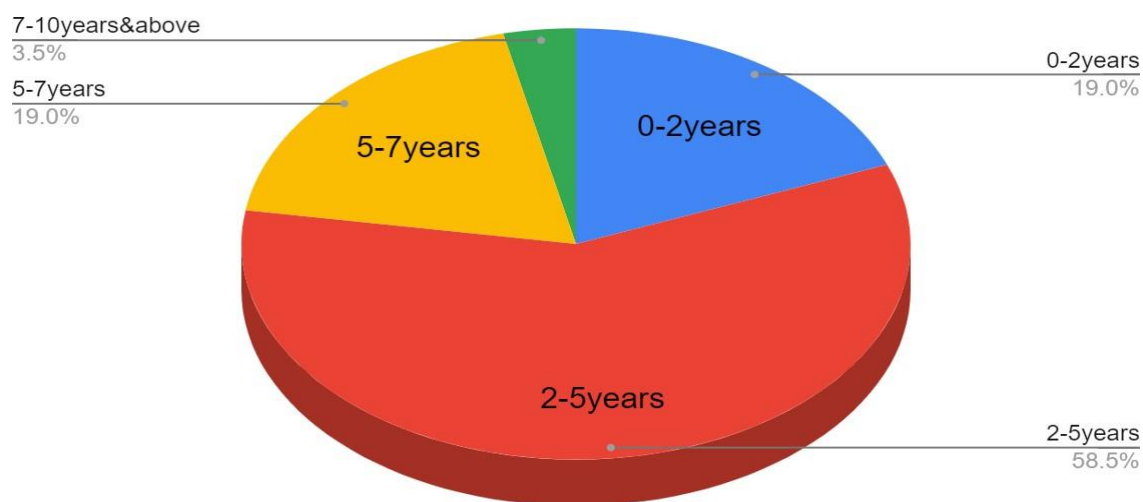
INTERFACE

Majority of 61.3% of drivers will drive 8-10hrs a day by the help of the co-driver in rotational basis.

TABLE 4.1.5 Experience as a cleaner.

Particulars	No. of. Respondent	Percentage of Respondent
0-2yrs	38	19%
2-5yrs	117	58.5%
5-7yrs	38	19%
7-10yrs&above	7	3.5%
Total	200	100%

Source: Primary data

CHART 4.1.5 Experience as a cleaner.

INTERPRETATION

From the above table, 19% of the total respondents have 0-2yrs of experience as a cleaner, 58.5% of them have 2-5yrs of experience as a cleaner, 19% of them have 5-7yrs of experience as a cleaner, only 3.5% of them have 7-10yrs of experience as a cleaner.

INTERFACE

Majority of 58.5% drivers have 2-5yrs of cleaner experience where they learned to maintain a lorry or a vehicle.

TABLE 4.1.6 Ratings of their own vehicle's maintenance by them.

Particulars	No. of. Respondent	Percentage of Respondent
1	1	0.5%

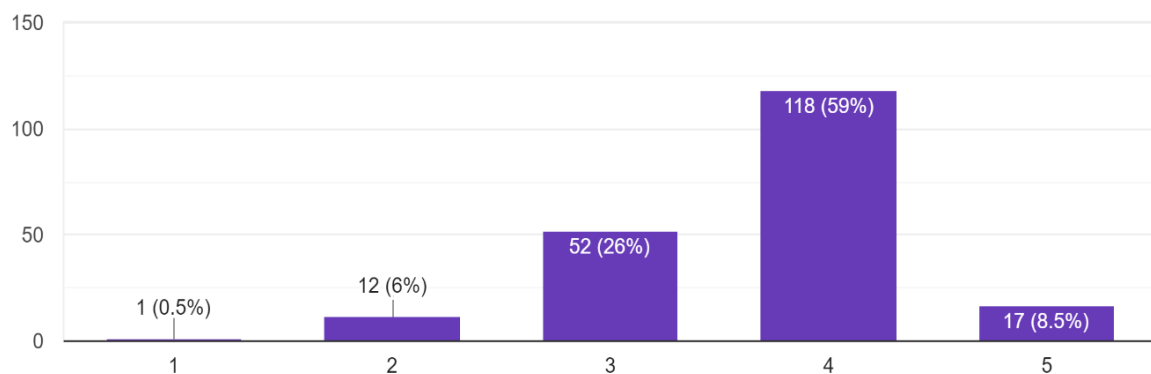
2	12	6%
3	52	26%
4	118	59%
5	17	8.5%
Total	200	100%

Source: Primary data

CHART 4.1.6 Ratings of their own vehicle's maintenance by them.

how would you rate your vehicles maintenance?

200 responses



INTERPRETATION

From the above table, 0.5% of the respondents have rated their vehicle maintenance as 1 which is extremely bad, 6% of them have rated 2 for their vehicle maintenance, 26% of them rated 3 for their vehicle, 59% of them have rated 4 to their vehicle condition, 8.5% of them rated 5 out of five to their vehicle which is extremely good.

INTERFACE

Majority of 58.5% drivers have 2-5yrs of cleaner experience where they learned to maintain a lorry or a vehicle.

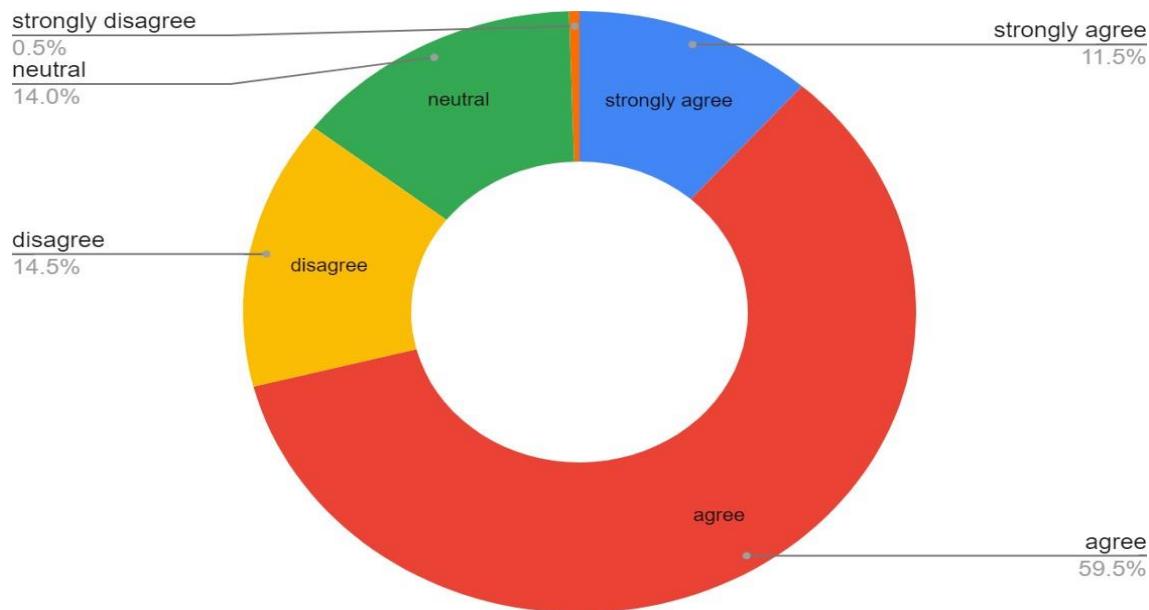
TABLE 4.1.7 Persecution of diesel rate hike will make a bigger impact in future.

Particulars	No. of. Respondent	Percentage of Respondent
Strongly agree	23	11.5%
Agree	119	59.5%
Neutral	28	14%
Disagree	29	14.5%
Strongly Disagree	1	0.5%

Total	200	100%
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Source: Primary data

CHART 4.1.7 Persecution of diesel rate hike will make a bigger impact in future.



INTERPRETATION

From the above table, 11.5% of the total respondents have strongly agree that diesel price hike will make a bigger impact on transportation business, 59.5% of them have agree that diesel rate will make a impact, 14% of them have a neutral opinion on this statement, 14.5% of them have disagree that diesel price will not make a impact as it's a economy growth, 0.5% of them strongly disagree diesel price will never make a bigger impact in transportation business.

INTERFACE

Majority of 59.5% of the total respondents have agree that diesel price hike will make a bigger impact in lorry transportation business.

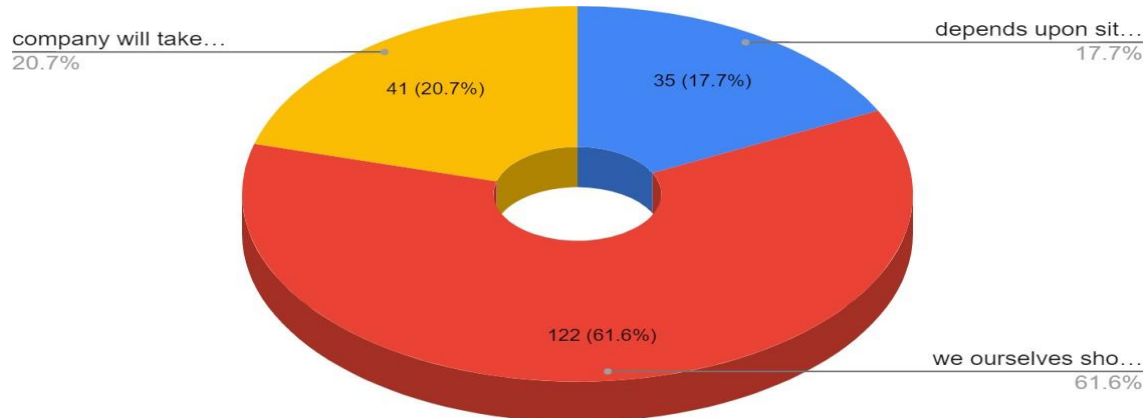
TABLE 4.1.8 Responsibility for accident occurs while goods transportation.

Particulars	No. of. Respondent	Percentage of Respondent
company will take responsible for both	41	20.7%
We ourselves should take responsibility	122	61.6%
depends upon situation	35	17.7%

Total	198	100%
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Source: Primary data

CHART 4.1.8 Responsibility for accident occurs while goods transportation.



INTERPRETATION

From the above table, 20.7% of the total respondents have said that its company will take responsible for both, 61.6% of them they themselves will be the responsible person, 20.7% of them said depends upon situation.

INTERFACE

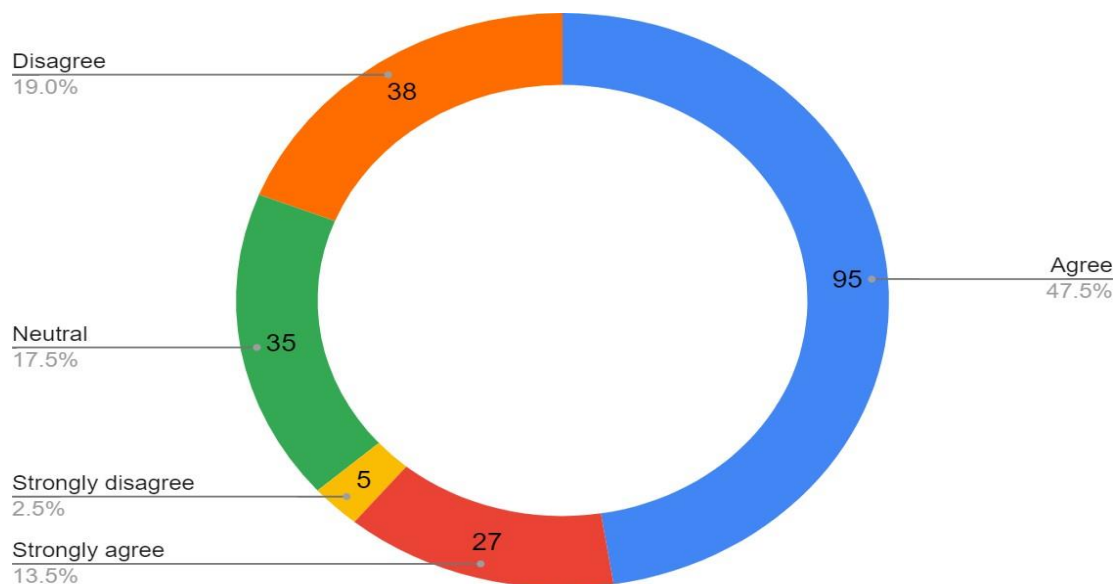
Majority of 61.6% of the total respondents have stated that there are responsible for the accident are incident occurs while transporting goods.

TABLE 4.1.9 Language barrier in different state borders.

Particulars	No. of. Respondent	Percentage of Respondent
Strongly agree	27	13.5%
Agree	95	47.5%
Neutral	35	17.5%
Disagree	38	19%
Strongly disagree	5	2.5%
Total	200	100%

Source: Primary data

CHART 4.1.9 Language barrier in different state borders.



INTERPRETATION

From the above table and chart, 13.5% of them strongly agree that language is a biggest barrier while crossing borders, 47.5% agree that language is a biggest barrier in other states, 17.5% of them have a neutral opinion in this statement, 19% of them disagree that language is not a biggest barrier in other states, 2.5% of them strongly disagree that language is not a bigger barrier while crossing state borders.

INTREFACE

Majority of 47.5% of them have agreed that language is a biggest challenge while crossing state borders.

TABLE 4.1.10 Rating for highway police department in their personal experience.

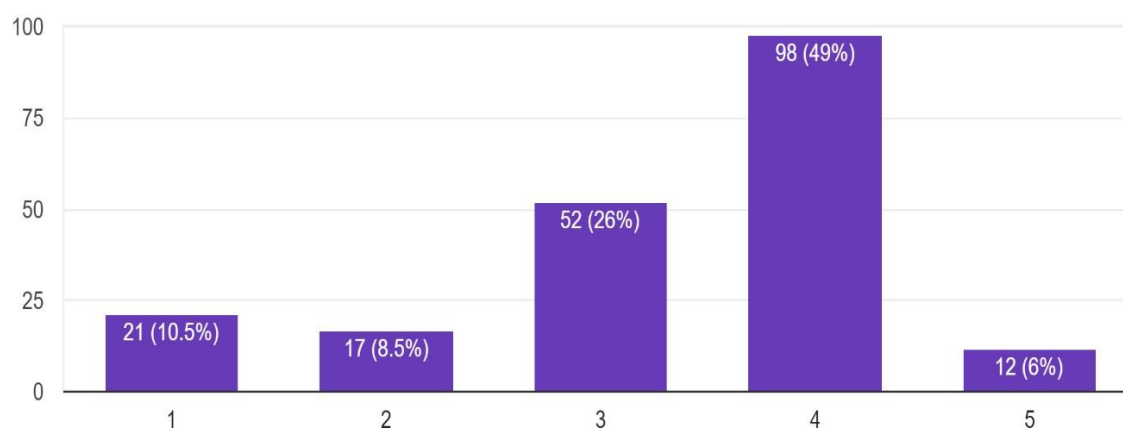
Particulars	No. of. Respondent	Percentage of Respondent
1	21	10.5%
2	17	8.5%
3	52	26%
4	98	49%
5	12	6%
Total	200	100%

Source: Primary data

CHART 4.1.10 Rating for highway department in their personal experience.

how would you rate national highway department in your personal experience?

200 responses



INTERPRETATION

From the above table, 10.5% of the total respondents have rated 1 from their personal experience, 8.5% of them have rated 2 for the highway department, 26% of them have rated 3 as their preferred choice of option, 49% of them have rated 4 on their own experience with highway department, 6% of the total respondents have rated 5 for them.

INTERFACE

Majority of 49% of the total respondents have rated 4 for the highway department which is denoted as good experience with them.

TABLE 4.1.11 Rating for traffic police in their personal experience.

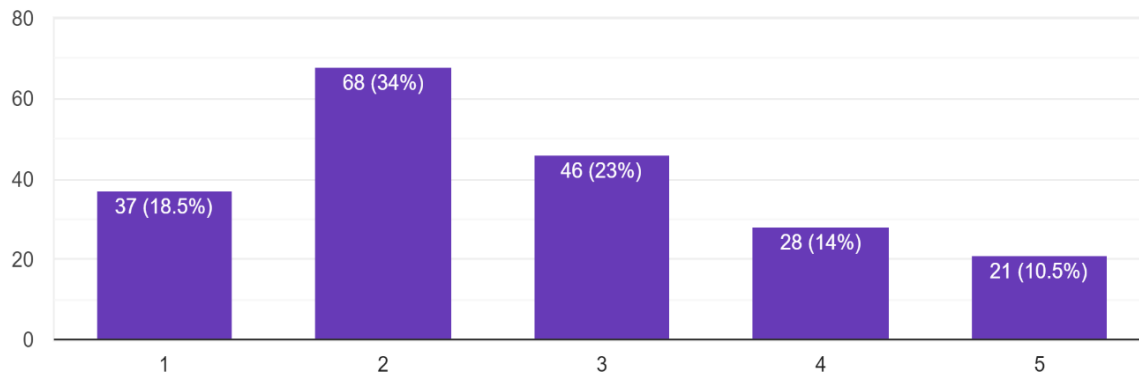
Particulars	No. of. Respondent	Percentage of Respondent
1	37	18.5%
2	68	34%
3	46	23%
4	28	14%
5	21	10.5%
total	200	100%

Source: Primary data

CHART 4.1.11 Rating for police officers in their personal experience.

rate your personal experience with traffic police officers?

200 responses



INTERPRETATION

From the above table and chart, 18.5% of them have rated 1 on their personal experience with police department, 34% of them have rated 2 on their own experience, 23% of the total respondent have rated 3 for the police department, 14% of them have rated 4 as their personal opinion about police department, 10.5% of the respondents have rated 5 out of 5 for the police department.

INTERFACE

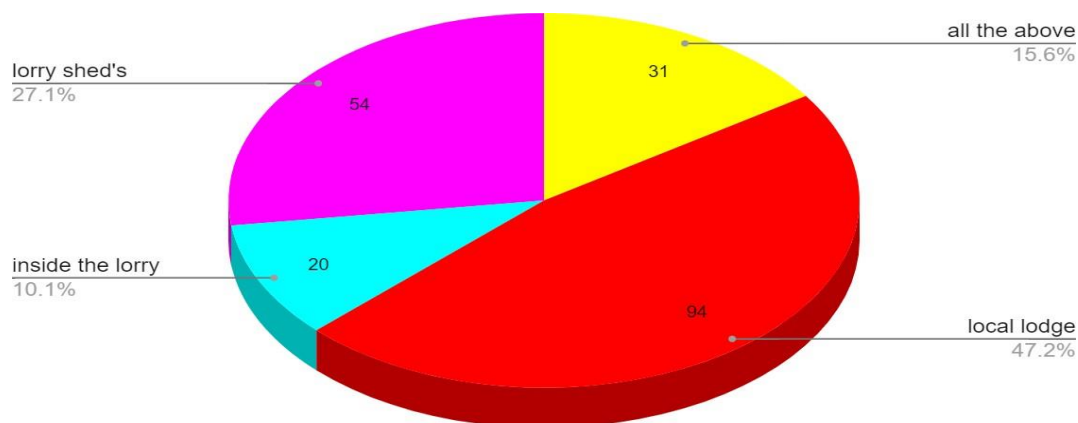
Majority of 34% of the total respondents have rated 2 as their personal experience with police department where 2 is denoted as bad experience.

TABLE 4.1.12 In this current situation different state may have sudden lockdown in that case where will you stay.

Particulars	No. of. Respondent	Percentage of Respondent
Inside the lorry	20	10.1%
local lodge	94	47.2%
lorry shed's	54	27.1%
All the above	31	15.6%
Total	199	100%

Source: Primary data

CHART 4.1.12 In this current situation different state may have sudden lockdown in that case where will you stay.



INTERPRETATION

From the above table, 10.1% of the total respondent have said they will stay inside the lorry itself, 47.2% of them will stay at local lodge, 27.1% of them will stay at lorry shed's, 15.6% of them have will stay all the above places mentioned they never had a choice.

INTERFACE

Majority of 47.2% of the total respondents have said that they will mostly stay at local lodge and dormitory.

TABLE 4.1.13 Deliver a goods to north India how much you spend from your earnings to maintenance for that round delivery alone.

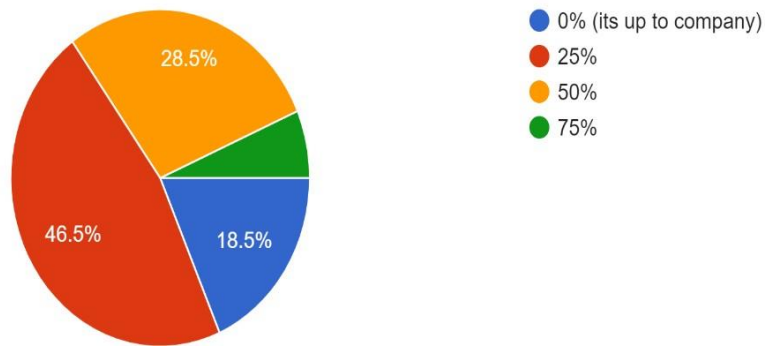
Particulars	No. of. Respondent	Percentage of Respondent
0% (it's upto company)	37	18.5%
25%	93	46.5%
50%	57	28.5%
75%	13	6.5%
Total	200	100%

Source: Primary data

CHART 4.1.13 Deliver a goods to north India how much you spend from your earnings to maintenance for that round delivery alone.

if you deliver a goods to north India how much you spend from your earnings to maintenance for that round delivery alone ?

200 responses



INTERPRETATION

From the above chart and table, 18.5% of them will never spend their earnings on maintenance, 46.5% of the respondents have spent 25% of their earnings, 28.5% of them spent 50% of their earnings, 6.5% of them have spent 75% of their earnings.

INTERFACE

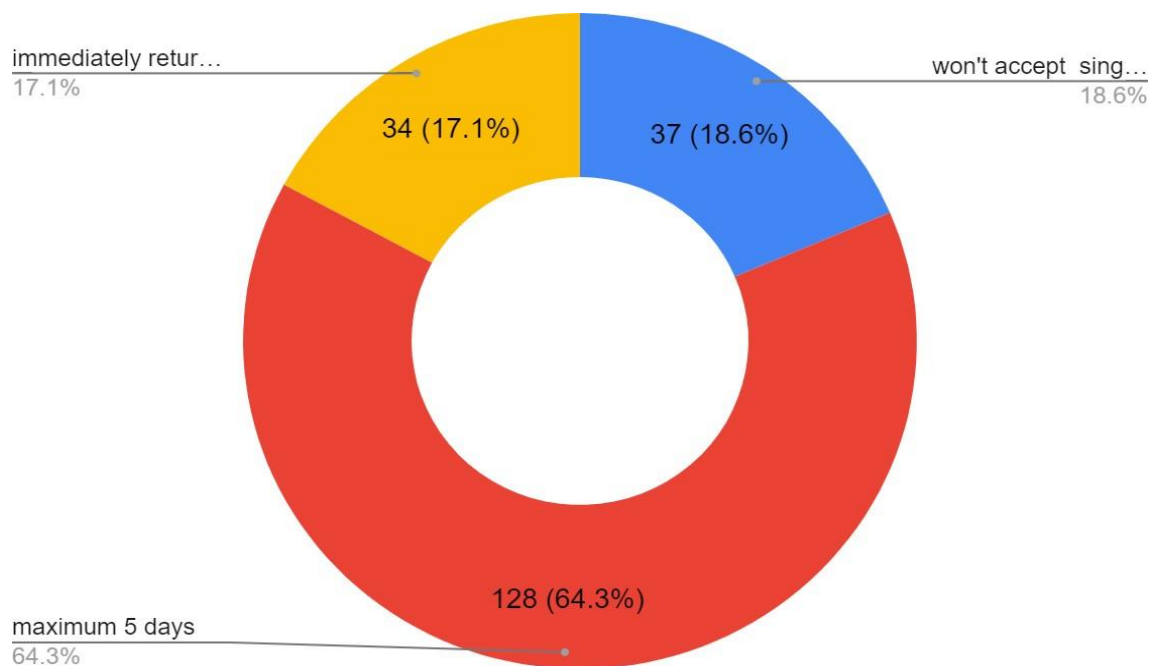
Majority of 46.5% of the total respondents have stated that they will spend 25% of their total earnings for that round trip.

TABLE 4.1.14 delivering to other states how many days will you wait in the same state to get another order to your state.

Particulars	No. of. Respondent	Percentage of Respondent
Won't accept single orders	37	18.6%
Maximum 5days	128	64.3%
Immediately return to home town	34	17.1%
Total	199	100%

Source: Primary data

CHART 4.1.14 delivering to other states how many days will you wait in the same state to get another order to your state.



INTERPRETATION

From the above table, 18.6% of them will not accept single orders as they wait for return order also, 64.4% of them stated that they will stay maximum of 5 days in that particular state, 17.1% of them will return immediately to their home town.

INTERFACE

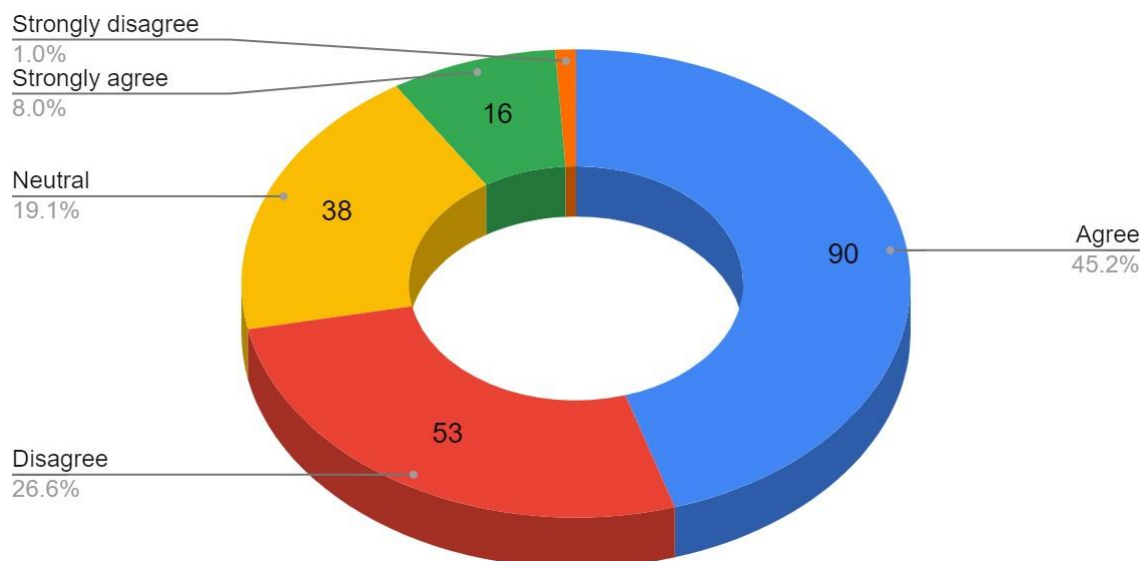
Majority of 64.4% of the total respondents will stay there for a maximum of 5 days in the same city for the next order.

TABLE 4.1.15 perception on state/national permit cost is high.

Particulars	No. of. Respondent	Percentage of Respondent
Strongly agree	16	8%
Agree	90	45.2%
Neutral	38	19.1%
Disagree	53	26.65%
Strongly disagree	2	1%
Total	199	100%
Particulars	No. of. Respondent	Percentage of Respondent

Source: Primary data

CHART 4.1.15 perception on state/national permit cost is high.



INTREPRETATION

From the above table,8% of them have strongly agree that permit cost is too high,45.2% of them agree that permit cost is high,19.1% have neutral opinion in this statement,26.6% of them disagree that permit rate is normal cost,1% of them have strongly disagree that rate of permit is not too high.

INTERFACE

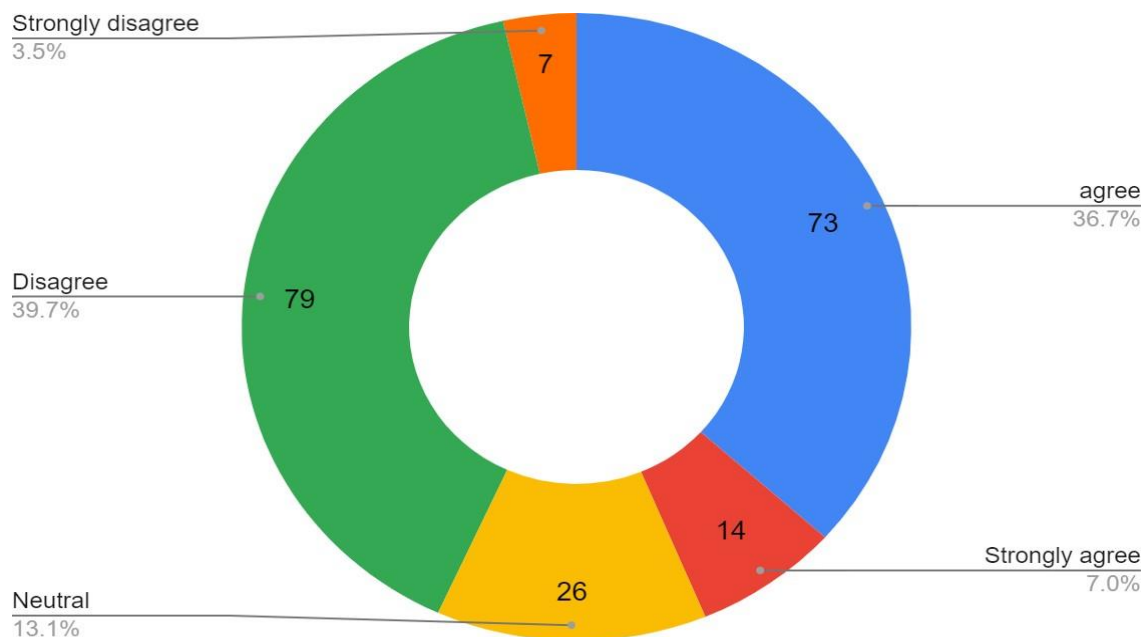
Majority of 45.2% of the total respondent have agree that permit is too high for transportation.

TABLE 4.1.16 Gas station will they allow you to use restroom and drinking water.

Particulars	No. of. Respondent	Percentage of Respondent
Strongly agree	14	7%
Agree	73	36.7%
Neutral	26	13.1%
Disagree	79	39.7%
Strongly disagree	7	3.5%
Total	199	100%

Source: Primary data

CHART 4.1.16 Gas station will they allow you to use restroom and drinking water.



INTERPRETATION

From the above table, 7% of them have strongly agree that gas station will allow them to drink water and use restrooms, 36.7% of them have agree that fuel station will allow them to use these things. 13.1% of them have a neutral opinion with this statement, 39.7% of them have disagree that fuel stations will never allow lorry drivers to use their toilet and drinking water, 3.5% of them have strongly disagree that fuel station will not allow for these activities.

INTERFACE

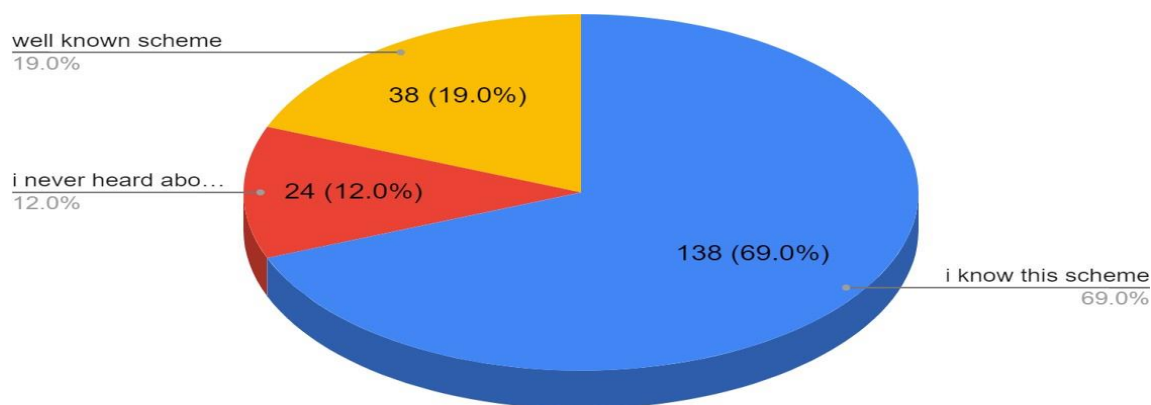
Majority of 39.7% of the total respondents have disagree that fuel stations will not allow lorry drivers to use their toilet and drinking water and stated as they are asked to pay for the usage.

TABLE 4.1.17 'Ayushman Bharat – Pradhan Mantri Jan Arogya Yojana' have you heard about this scheme.

Particulars	No. of. Respondent	Percentage of Respondent
Well known scheme	38	19%
I know this scheme	138	69%
I never heard about it	24	12%
Total	200	100%

Source: Primary data

CHART 4.1.17 'Ayushman Bharat – Pradhan Mantri Jan Arogya Yojana' have you heard about this scheme.



INTERPRETATION

From the above table, 19% of them said that it's a well known scheme, 69% of them just heard about this scheme before, 12% of them never heard about this scheme.

INTERFACE

Majority of 69% of the total respondents have just heard about this scheme in their day-to-day life.

TABLE 4.1.18 Rating for benefits of 'Ayushman Bharat – Pradhan Mantri Jan Arogya Yojana' (PM-JAY) scheme.

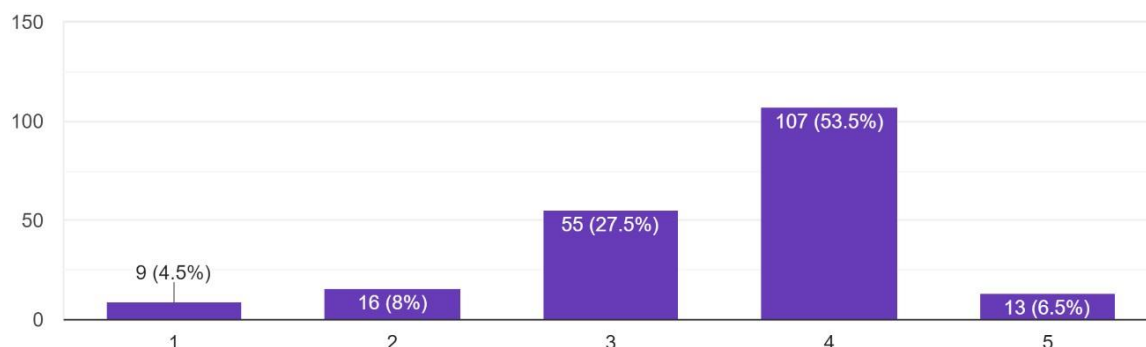
Particulars	No. of. Respondent	Percentage of Respondent
1	9	4.5%
2	16	8%
3	55	27.5%
4	107	53.5%
5	13	6.5%
Total	200	100%

Source: Primary data

CHART 4.1.18 Rating for benefits of 'Ayushman Bharat – Pradhan Mantri Jan Arogya Yojana' (PM-JAY) scheme.

how would you rate the benefits of 'Ayushman Bharat – Pradhan Mantri Jan Arogya Yojana'(PM-JAY) scheme.?

200 responses



INTERPRETATION

From the above table,4.5% of them have rated 1 for the benefits of this scheme,8% of them have rated 2 for this scheme,27.5% of them have rated 3 for this scheme,53.5% of them rated 4 for this scheme's benefit,6.5% of them have rated 5 out of 5 for this scheme.

INTERFACE

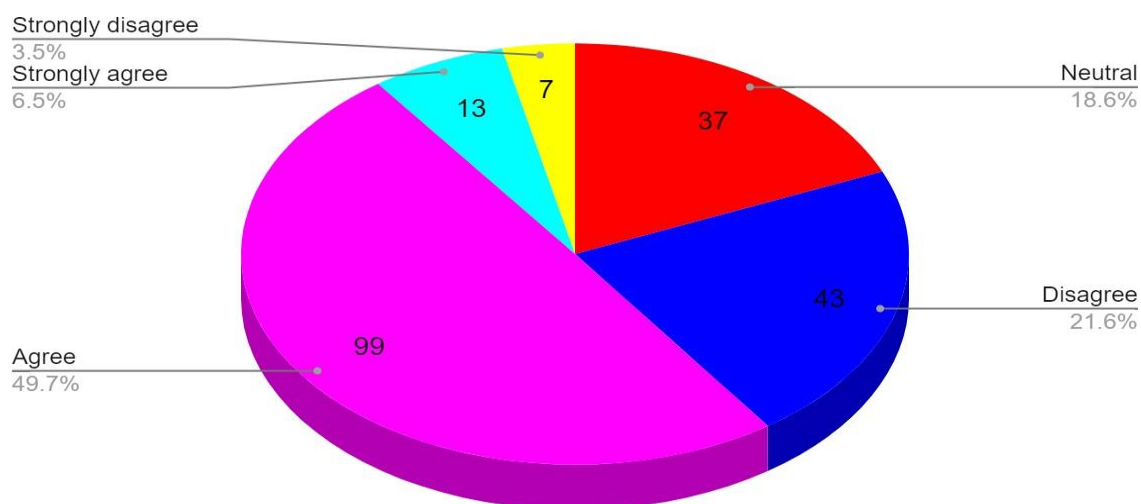
Majority of 53.5% of the total respondents have rated 4 for the benefits of this 'Ayushman Bharat – Pradhan Mantri Jan Arogya Yojana'(PM-JAY) scheme. Where 4 is denoted as good rating.

TABLE 4.1.19 Invention of electric truck can be the future in transportation industry.

Particulars	No. of. Respondent	Percentage of Respondent
Strongly agree	13	6.5%
Agree	99	49.7%
Neutral	33	16.5%
Disagree	63	31.5%
Strongly disagree	7	3.5%
Total	199	100%

Source: Primary data

CHART 4.1.19 Invention of electric truck can be the future in transportation industry.



INTERPRETATION

From the above observation, 6.5% of them have strongly agree that invention of electric truck is the future of transportation, 49.7% of them have agree that it will be the future of transportation industry, 18.6% of them have a neutral opinion on this statement, 21.6% of them have disagree the statement as its has not been used so far, they never know the drawbacks in it, 3.5% of them have strongly disagree that its not the future of transportation.

INTERFACE

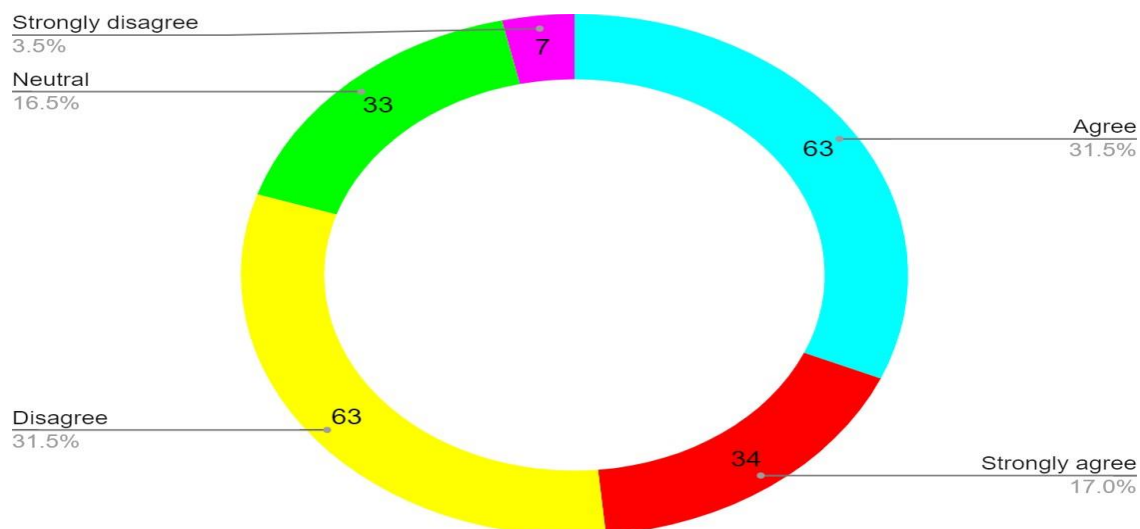
Majority of 49.7% of the total respondents have agree that invention of electric trucks may be the future of transportation industry.

TABLE 4.1.20 Drivers pay some amount in the entry and exit of state borders.

Particulars	No. of. Respondent	Percentage of Respondent
Strongly agree	34	17%
Agree	63	31.5%
Neutral	33	16.5%
Disagree	63	31.5%
Strongly disagree	7	3.5%
Total	200	100%

Source: Primary data

CHART 4.1.20 Drivers pay some amount in the entry and exit of state borders.



INTERPRETATION

From the above table and chart, 17% of them have strongly agree that they have paid certain amount in state entry and exit borders, 31.5% of them agree that its true, 16.5% of them have a neutral opinion on this statement, 31.5% of them have disagree that they have not paid such amount, 3.5% of them have strongly disagree that they never paid before in other states.

INTERFACE

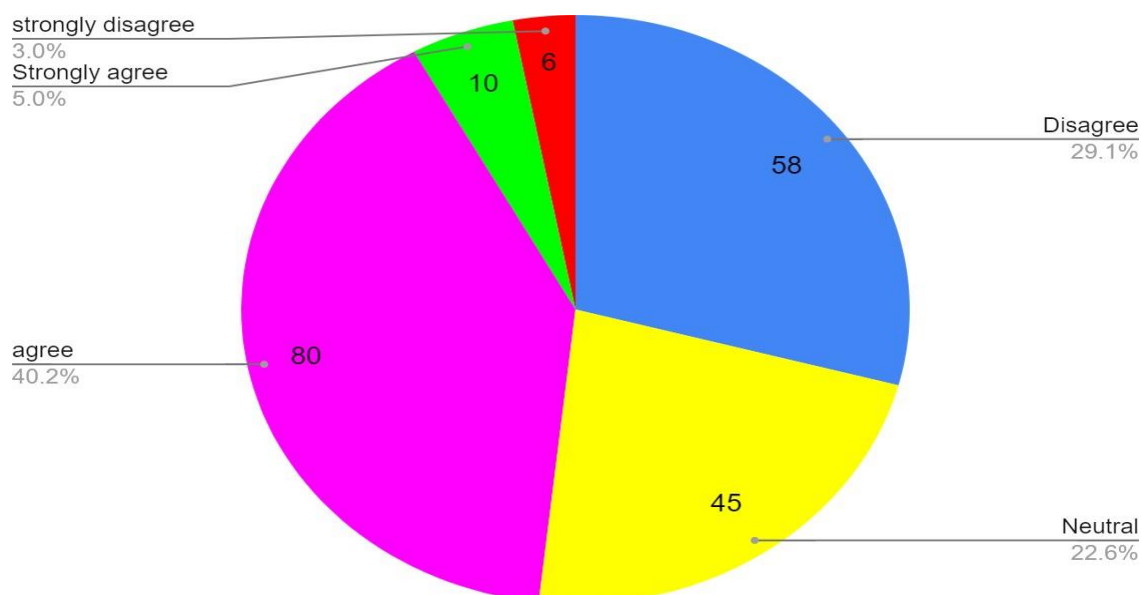
Majority of both 31.5% for agree & 31.5% for disagree have shared their experience by stating some may pay and some may not pay which is according to time and place where the caught.

TABLE 4.1.21 Affected in any issues like theft, local gang war, strike in particular area, etc. will local police support you to sort it out.

Particulars	No. of. Respondent	Percentage of Respondent
Strongly agree	10	5%
Agree	80	40.2%
Neutral	45	22.6%
Disagree	58	29.1%
Strongly disagree	6	3%
Total	199	100%

Source: Primary data

CHART 4.1.21 Affected in any issues like theft, local gang war, strike in particular area, etc. will local police support you to sort it out.



INTERPRETATION

From the above table, 5% of them have strongly agree that local police will help them out of it, 40.2% of them have agree the same, 22.6% of them have a neutral opinion as they were affected by both, 29.1% of them have disagree that police will never help them out of the situation, 3% of them strongly disagree that police officers will never care about them in any circumstances.

INTERFACE

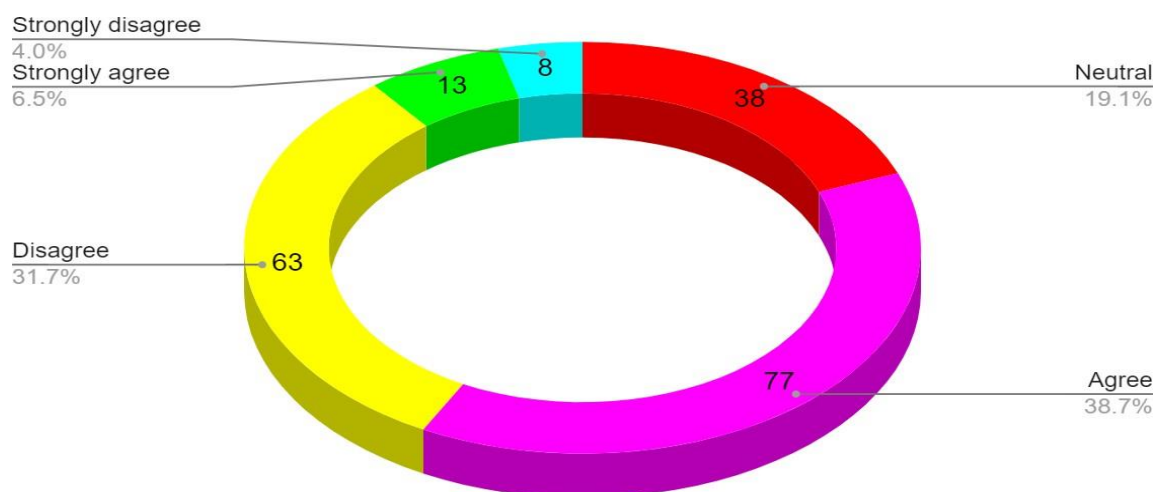
Majority of 40.2% of the total respondents have agree that local police will help them out if there is any incident happens like theft, local gang war, strike in particular area, etc.

TABLE 4.1.22 Are you getting the reasonable income in your job.

Particulars	No. of. Respondent	Percentage of Respondent
Strongly agree	13	6.5%
Agree	77	38.7%
Neutral	38	19.1%
Disagree	63	31.7%
Strongly disagree	8	4%
Total	199	100%

Source: Primary data

CHART 4.1.22 Are you getting the reasonable income in your job.



INTERPRETATION

From the above table, 6.5% of them have strongly agree that they are getting reasonable amount of income on their job, 38.7% of them have agree that they are getting reasonable income, 19.1% of them have neutral opinion with this statement, 31.7% of them have disagree that they are not getting enough income in this job, 4% of them have strongly disagree that they are not getting enough income for their hard work.

INTERFACE

Majority of 38.7% of them have agree that they are getting enough income on their job.

TABLE 4.1.23 Rating for the road safety measures which is taken by government.

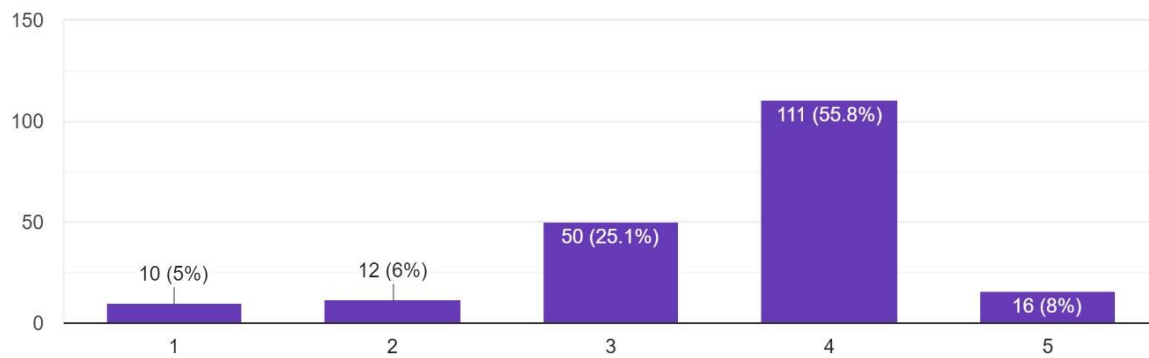
Particulars	No. of. Respondent	Percentage of Respondent
1	10	5%
2	12	6%
3	50	25.1%
4	111	55.8%
5	16	8%
Total	199	100%

Source: Primary data

CHART 4.1.23 Rating for the road safety measures which is taken by government.

how would you rate the road safety measures which is taken by government?

199 responses



INTERPRETATION

From the above observation, 5% of them have rated 1 for the road safety measures of government, 6% of them have rated 2 for the road safety measures, 25.1% of them have rated 3 for the road safety, 55.8% of them have rated 4 for the road safety, 8% of them have rated 5 for the road safety of the government.

INTERFACE

Majority of 38.7% of them have agreed that they are getting enough income on their job.

4.2 CHI SQUARE

4.2.1 CHI SQUARE TEST

The Chi-Square test is the widely used non-parametric statistical test that describes the magnitude of discrepancy between the observed data and the data expected to be obtained with a specific hypothesis.

HYPOTHESIS

1. Null Hypothesis H_0 : There is no significant with years of experience of the lorry drivers and vehicle ownership.
2. Alternate Hypothesis H_1 : There is a significant with years of experience of the lorry drivers and vehicle ownership.

Case Processing Summary

	Valid		Cases Missing		Total	
	N	Percent	N	Percent	N	Percent
Experience as a driver * vehicle ownership	200	100.0%	0	0.0%	200	100.0%

Experience as a driver * vehicle ownership Crosstabulation

Count

		vehicle ownership				Total
		company's vehicle	contract	own vehicle	rental	
Experience as a driver	0-5years	13	7	0	1	21
	10-15years	9	19	13	11	52
	15-20years	0	8	3	5	16
	5-10years	28	48	14	14	104
	more than 20years	1	3	3	0	7
Total		51	85	33	31	200

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	34.059 ^a	12	.001
Likelihood Ratio	38.534	12	.000
N of Valid Cases	200		

a. 9 cells (45.0%) have expected count less than 5. The minimum expected count is 1.09.

Symmetric Measures

		Value	Approximate Significance
Nominal by Nominal	Phi	.413	.001
	Cramer's V	.238	.001
N of Valid Cases		200	

INTERFERENCE

p-value (.001) less than 0.05 (typically ≤ 0.05) is statistically significant. It indicates strong evidence against the null hypothesis, as there is less than a 5% probability the null is correct (and the results are random). Therefore, we reject the null hypothesis, and accept the alternative hypothesis.

4.3 ANOVA

4.3.1 ANOVA TEST

The Anova test is the widely used non-parametric statistical test that describes the magnitude of discrepancy the observed data to be obtained with a specific hypothesis.

HYPOTHESIS

1. Null Hypothesis H0: There is no significant with rating for the vehicle maintenance
2. Alternate Hypothesis H1: There is a significant with rating for the vehicle maintenance

Descriptive

how would you rate your vehicles maintenance?

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
1	37	3.84	.727	.120	3.60	4.08	2	5
2	68	3.53	.634	.077	3.38	3.68	2	5
3	46	3.80	.719	.106	3.59	4.02	1	5
4	28	3.43	.742	.140	3.14	3.72	2	5
5	21	4.05	.865	.189	3.65	4.44	2	5
Total	200	3.69	.733	.052	3.59	3.79	1	5

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
how would you rate your vehicles maintenance?	Based on Mean	.670	4	195	.613

Based on Median	1.021	4	195	.398
Based on Median and with adjusted df	1.021	4	181.615	.398
Based on trimmed mean	.929	4	195	.448

ANOVA

how would you rate your vehicles maintenance?

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	7.763	4	1.941	3.822	.005
Within Groups	99.017	195	.508		
Total	106.780	199			

Robust Tests of Equality of Means

how would you rate your vehicles maintenance?

	Statistic ^a	df1	df2	Sig.
Welch	3.379	4	73.120	.014
Brown-Forsythe	3.472	4	123.772	.010

a. Asymptotically F distributed.

INTERFERENCE

p-value (.448) less than 0.05 (typically ≤ 0.05) is statistically significant. It indicates strong evidence against the null hypothesis, as there is less than a 5% probability the null is correct (and the results are random). Therefore, we reject the null hypothesis, and accept the alternative hypothesis.

CHAPTER-5

FINDINGS, SUGGESTIONS, CONCLUSION

5.1 FINDINGS

- Majority of the respondents are between the age group of 25-35 years.
- Majority of the respondents have 5-10 years of experience in driving heavy load vehicle.
- Majority of 42.5% of the respondents have made a contract with lorry transportation company by paying in monthly basis.
- Majority of 61.3% of drivers will drive 8-10hrs a day by the help of the co-driver in rotational basis.
- Majority of 58.5% drivers have 2-5yrs of cleaner experience where they learned to maintain a lorry or a vehicle.
- Majority of 58.5% drivers have 2-5yrs of cleaner experience where they learned to maintain a lorry or a vehicle.
- Majority of 59.5% of the total respondents have agree that diesel price hike will make a bigger impact in lorry transportation business.
- Majority of 61.6% of the total respondents have stated that there are responsible for the accident are incident occurs while transporting goods.
- Majority of 47.5% of them have agreed that language is a biggest challenge while crossing state borders.
- Majority of 49% of the total respondents have rated 4 for the highway department which is denoted as good experience with them.
- Majority of 34% of the total respondents have rated 2 as their personal experience with police department where 2 is denoted as bad experience.
- Majority of 47.2% of the total respondents have said that they will mostly stay at local lodge and dormitory.
- Majority of 46.5% of the total respondents have stated that they will spent 25% of their total earnings for that round trip.
- Majority of 64.4% of the total respondents will stay there for a maximum of 5 days in the same city for the next order.
- Majority of 45.2% of the total respondent have agree that permit is too high for transportation.

- Majority of 39.7% of the total respondents have disagree that fuel stations will not allow lorry drivers to use their toilet and drinking water and stated as they are asked to pay for the usage.
- Majority of 69% of the total respondents have just heard about this scheme in their day-to-day life.
- Majority of 53.5% of the total respondents have rated 4 for the benefits of this 'Ayushman Bharat – Pradhan Mantri Jan Arogya Yojana'(PM-JAY) scheme. Where 4 is denoted as good rating.
- Majority of 49.7% of the total respondents have agree that invention of electric trucks may be the future of transportation industry.
- Majority of both 31.5% for agree & 31.5% for disagree have shared their experience by stating some may pay and some may not pay which is according to time and place where the caught.
- Majority of 40.2% of the total respondents have agree that local police will help them out if there is any incident happens like theft, local gang war, strike in particular area, etc.
- Majority of 38.7% of them have agree that they are getting enough income on their job.
- Majority of 38.7% of them have agree that they are getting enough income on their job.

5.2 SUGGESTION

All the lorry drivers are commonly having similar issues like police officers' aggression towards them, climate changes, theft, accident etc... are the issues faced by them in their day-to-day life as a suggestion they should follow government rules and regulation. Getting a better knowledge about what is happening in society and keeping well maintained vehicle to reduce accident the driver has to check the owner's manual before entering into a job. And the most important thing is to the company is to educate the drivers with the road safety laws so that there won't be any violation of rules and risk of accident and they should have a regular job card by the company so they will get orders regularly to get a active income.

5.3 LIMITATION OF THE STUDY

- No study is complete, however good it may be, and every study has some limitations.

- Some of the limitations which I may face in this study are as follows:
- The study will be restricted to the lorry drivers in Chennai
- Since the simple random sampling technique will be adopted in the study, hence, it may not be the representative of the universe.
- The respondents (some) may provide biased information/views due to their personal issues in transportation industry.

5.4 CONCLUSION

The truck driver is more important than the goods being transported. Continuing study of the health hazards associated with the truck driving profession is important to reduce down time, but more importantly, to prevent permanent injuries, debilitating illnesses, workers' compensation claims, and road accidents. NIOSH in its report of 2003-2006 has presented relevant statistics to show the rising cases of truck driver injuries and illnesses. Truck drivers consistently sustain more nonfatal occupational injuries and illnesses than the majority of the occupations. Recent evidence suggests that driver health, including sleepiness, fatigue, and inattention affects performance, as measured by the risk of being in a fatal crash (Bunn, 2005). From the literatures reviewed, there is a general conclusion that truck drivers are still exposed to risks caused by prolong driving, such as fatigue and whole-body vibration. These risk factors have been implicated in most of the studies as the cause of the following common health problems of truck drivers: (a) Hypertension, cardiovascular disease and stroke, (b) Musculoskeletal disorders, (c) Higher risk of lung cancer, (d) Obesity, and (f) sleep disorders and psychological distress. It is expected that elimination of the risk factors will greatly safeguard truck drivers and improve the quality of the services they render. Based on the articles reviewed in this thesis, and the physiological mechanisms behind the various health related issues associated with truck drivers, the following set of suggestions have been developed to improve the general occupational condition of long-haul truck drivers. The suggestion set should help policy makers, schedulers and truck drivers to reduce the stress levels of the occupation and improve the health status of truck. Constant motivation, vocational training, continuous education and social vaccine are key to upgrade long distance truck drivers.

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A STUDY ON CHALLENGES FACED BYLORRY

DRIVER'S

RAJA.R

* Required

1. Name *

2. Age *

Mark only one oval.

☐ 18-25years

☐ 25-35years

☐ 35-45years

☐ 45above

3. mobile no

4. Experience as a driver

Mark only one oval.

☐ 0-5years

☐ 5-10years

☐ 10-15years

☐ 15-20years

☐ more than 20years

5. vehicle ownership

Mark only one oval.

- ☐ own vehicle
- ☐ contract
- ☐ company's vehicle
- ☐ rental

6. how many hours will you drive in a day?

Mark only one oval.

- ☐ 5-8hours
- ☐ 8-10hours
- ☐ 10-12hours
- ☐ 12-15hours

7. at the beginning of your carrier how many year you have worked as a cleaner?

Mark only one oval.

- ☐ 0-2years
- ☐ 2-5years
- ☐ 5-7years
- ☐ 7-10years&above

8. how would you rate your vehicles maintenance?

Mark only one oval.

	1	2	3	4	5	
very bad	☐	☐	☐	☐	☐	very good

9. do you think diesel rate hike will make a bigger impact in future?

Mark only one oval.

- ☐ strongly agree
- ☐ agree
- ☐ neutral
- ☐ disagree
- ☐ strongly disagree

10. if an accident occurs who will be responsible for the incident. either which is loss of life or damage of goods?

Mark only one oval.

- ☐ company will take responsible for both
- ☐ we ourselves should take responsibility
- ☐ depends upon situation

11. while driving through different state borders do you think language is the biggest barrier then other issues?

Mark only one oval.

- ☐ Strongly agree
- ☐ Agree
- ☐ Neutral
- ☐ Disagree
- ☐ Strongly disagree

12. how would you rate national highway department in your personal experience?

Mark only one oval.

	1	2	3	4	5	
very bad	☐	☐	☐	☐	☐	excellent

13. rate your personal experience with traffic police officers?

Mark only one oval.

	1	2	3	4	5
Rude	☐	☐	☐	☐	☐
kind					

14. In this current situation different state may have sudden lockdown in that case where will you stay?

Mark only one oval.

- ☐ inside the lorry
- ☐ local lodge
- ☐ lorry shed's
- ☐ all the above

15. if you deliver a goods to north India how much you spend from your earnings to maintenance for that round delivery alone?

Mark only one oval.

- ☐ 0% (its up to company)
- ☐ 25%
- ☐ 50%
- ☐ 75%

16. if you're delivering to other states how many days will you wait in the same state to get another order to your state?

Mark only one oval.

- ☐ won't accept single order's
- ☐ maximum 5 days
- ☐ immediately return to home town

17. do you think state/national permit cost is too high?

Mark only one oval.

- ☐ Strongly agree
- ☐ Agree
- ☐ Neutral
- ☐ Disagree
- ☐ Strongly disagree

18. in gas station will they allow you to use restroom and drinking water?

Mark only one oval.

- ☐ Strongly agree
- ☐ Agree
- ☐ Neutral
- ☐ Disagree
- ☐ Strongly disagree

19. 'Ayushman Bharat – Pradhan Mantri Jan Arogya Yojana' have you heard about this scheme?

Mark only one oval.

- ☐ well known scheme
- ☐ i know this scheme
- ☐ i never heard about this scheme

20. how would you rate the benefits of 'Ayushman Bharat – Pradhan Mantri Jan Arogya Yojana'(PM-JAY) scheme.?

Mark only one oval.

	1	2	3	4	5	
useless scheme	☐	☐	☐	☐	☐	very useful scheme

21. do you think invention of electric truck can be the future in transportation industry?

Mark only one oval.

- ☐ Strongly agree
- ☐ Agree
- ☐ Neutral
- ☐ Disagree
- ☐ Strongly disagree

22. do you pay some amount in the entry and exit of state border's?

Mark only one oval.

- ☐ Strongly agree
- ☐ Agree
- ☐ Neutral
- ☐ Disagree
- ☐ Strongly disagree

- Mark only one oval.

24. are you getting the reasonable income in your job?

Mark only one oval.

☐ Strongly agree

☐ Agree

☐ Neutral

☐ Disagree

☐ Strongly disagree

25. how would you rate the road safety measures which is taken by government?

Mark only one oval.

ANNEXURE 2 -Article

A STUDY ON CHALLENGES FACED BY LORRY DRIVER'S

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ABSTRACT

Limited research has addressed the issue of truckdrivers and their performance regarding highway safety in terms of reduced number of crashes per driver. The primary purpose of this study was to determine how tractor trailer truck drivers' job performance could be improved while at the same time ensuring increased revenue for the transportation companies employing them. The target population for this study comprised of tractor-trailer truck drivers employed by a leading transportation company in the United States. The data used in the study included demographic, human capital, compensation and workplace variables. The results of this study should be useful to several individuals, organizations and the entire U. S. economy. The transportation companies should benefit by knowing the factors that predict good job performance for the drivers. This should assist management in designing work conditions or other activities that promote good performance in terms of reduced crashes and improved productivity of the drivers.

1.INTRODUCTION

After Agriculture the Sector which has generated maximum employment in India is the

Transport Sector. Truck drivers play major role in our transportation system. The truck drivers drive miles and miles in all the weathers to ensure that the goods consigned reach us in specified time. But these drivers live a very miserable life. They don't have their fixed time for their food. sleep and rest. It is rightly said that the truck is their home which provides them shelter when they are on the road: they sleep in it, under it, and even on top of it. The truck drivers spend many days on highways and they remain away from home and family for a long duration. At times they take risk to run the trucks with the mechanical faults. They usually have the mentality to finish one load and then go for repairing the truck. Another problem is faced due to police. The police also take advantage of miserable condition of truck drivers. The police look at truck driver in suspicion and search out reason to take money from them. Truck drivers also face the health issues. The truck drivers usually drive in nights and to stay alert they chew tobacco. They do not worry about what their job is doing to their health

1.2 HISTORY OF ROAD TRANSPORTATION

The first methods of road transport were horses, oxen or even humans carrying goods over dirt tracks that often-followed game trail.

The Persians later built a network of Royal roads across their empire.

With the advent of the Roman empire, there was a need for armies to be able to travel quickly from one region to another, and the roads that existed

were often muddy, which greatly delayed the movement of large masses of troops. To resolve this issue, the Romans built solid and lasting roads. The Roman Roads used deep roadbeds of crushed stone as an underlying layer to ensure that they kept dry, as the water would flow out from the crushed stone, instead of becoming mud in clay soils. The Islamic Caliphate later built tar-paved roads in Baghdad.

2. REVIEW OF LITERATURE

- (Goel 2014) treated the truck scheduling problem to assess the impact of the Hours-of-service regulations changes on operational costs and road safety. A new simulation – based method was proposed to solve this problem. The results indicate that additional costs and monetized road safety benefits are on the same order of magnitude for all regulatory options and, for some sets of instances, the monetized road safety benefits are above the additional operational cost
- (Wen et al. 2011) examined the vehicle routing and driver scheduling problem within Danish Crown at Danmark, putting emphasis on the necessity to reduce the total delivery costs. The results of the Multilevel Variable Neighbourhood Search meta-heuristic suggested to solve this problem showed that this program is general and can be applied to solve other routing problems.
- L. Kok et al. 2010) studied the vehicle routing problem whose prime target is to determine a set of routes and their scheduling to satisfy all demands and associated time windows with minimum total costs for the planning horizon. To solve this problem, a Vehicle Departure time Optimization (VDO) with Dynamic Programming was proposed. The results showed an important minimization of the duty duration.
- Lal & Craig, (2001) in a review discusses the concepts of fatigue and provide a summary on psychophysiological associations with driver fatigue. The review also identified anxiety and mood states as factors that may possibly affect driver fatigue. Furthermore, personality and temperament may also influence fatigue
- In USA federal regulation limits interstate truck drivers to 10 hours of driving after an 8-hour off-duty period. The need for enforcing these limits is supported by research showing that long driving hours is a risk factor for tractor-trailer crashes (Hertz,1991).
- On a more general level, job satisfaction was linked to turnover in a study by Kalnbach and Lantz (1997), such that new truck drivers who had remained with the company for four months and reported greater job satisfaction were also more committed to the organization and less likely to have contemplated quitting. For most occupations, four months' tenure may be considered a premature point at which to assess job satisfaction; however, in an industry that suffers from annual turnover

at the rate that trucking does, this was probably not an unreasonable timeline.

- Ketabi et al., 2011. Existing research has identified factors contributing to traffic accidents using quantitative approaches; qualitative research studies are needed to enhance understanding of this complex social phenomenon.
- ozkan, Lajunen, Chliaoutakis, Parker, & Summala, 2006. Therefore, to bridge the present research gap and better understand the study phenomenon, this study used an inductive qualitative approach to explicate Iranian truck drivers' understanding and experiences regarding the factors influencing traffic accidents.

OBJECTIVES OF THE STUDY

- To study the barrier's faced lorry drivers while distribution of goods.
- To know the other state official behavior towards them.
- To know the satisfaction level of lorry drivers.
- To understand the procedure while crossing the state entry exit borders.

3. METHODOLOGY:

The present paper is based on descriptive and exploratory research. It is descriptive in the sense that proper description has been made regarding the study on challenges faced by lorry drivers. The present study is based on secondary data and the various secondary sources includes books, newspapers, magazines, journals, websites etc.

RESEARCH DESIGN

The Research design used in this is descriptive research design. Descriptive research design is a scientific method which involves observing and describing the behavior of a subject without influencing it in any way. The main characteristic of this method is that the researcher has no control of variables; he can report only what has happened or what is happening.

PERCENTAGE ANALYSIS

Research questions are always answered with a descriptive statistic: generally, either percentage or mean. Percentage is appropriate when it is important to know how many of the participants gave a particular answer. Generally, percentage is reported when the responses have discrete categories.

STRUCTURE OF QUESTIONNAIRE

The questionnaire consists of totally 25 questions. The questionnaire is formed using five important variables. It includes three demographic questions. It includes multiple choice questions, Likert scaling questions.

DATA ANALYSIS

TABLE 1: Experience as a driver.

Particulars	No. of Respondent	Percentage of Respondent
0-5years	21	10.5%
5-10years	104	52%
10-15years	52	26%
15-20years	16	8%

more than 20years	7	3.5%
Total	200	100%

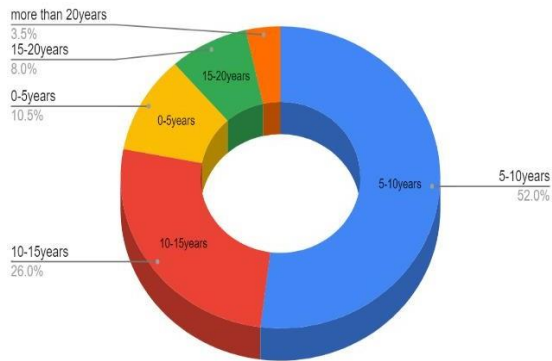


TABLE 2: vehicle ownership of driver's lorry.

Particulars	No. of Respondent	Percentage of Respondent
Own vehicle	33	16.5%
Contract	85	42.5%
Company vehicle	51	25.5%
Rental	31	15.5%
total	200	100%

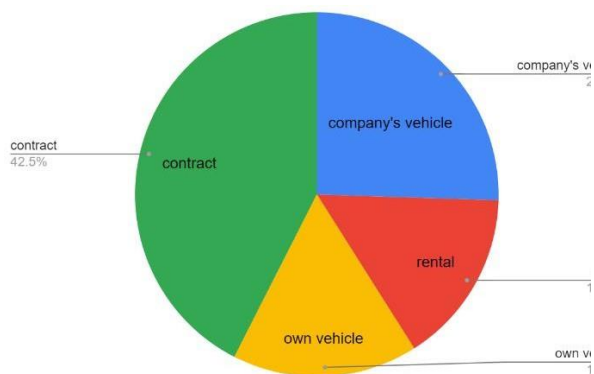


TABLE 3: Experience as a cleaner.

Particulars	No. of Respondent	Percentage of Respondent
0-2yrs	38	19%
2-5yrs	117	58.5%
5-7yrs	38	19%
7-10yrs&above	7	3.5%
Total	200	100%

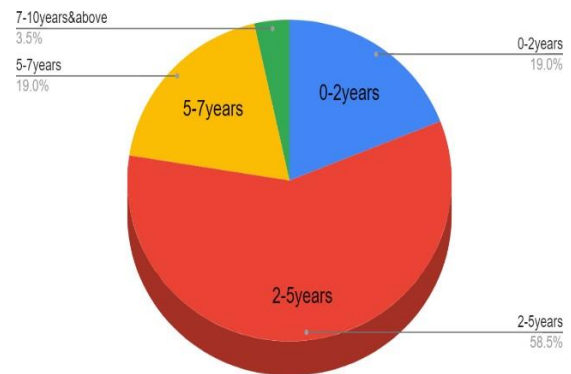


TABLE 4: Responsibility for accident occurs while goods transportation.

Particulars	No. of Respondent	Percentage of Respondent
company will take responsible for both	41	20.7%
We ourselves should take responsibility	122	61.6%

depends upon situation	35	17.7%
Total	198	100%

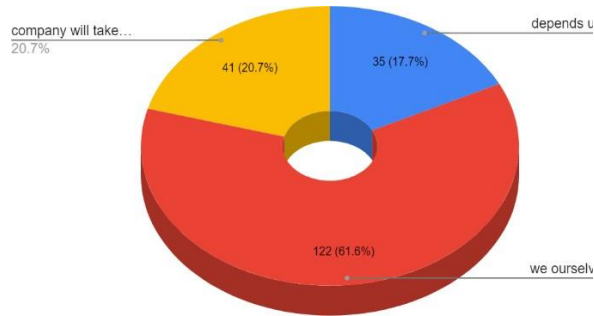


TABLE 5: Language barrier in different state borders.

Particulars	No. of Respondent	Percentage of Respondent
Strongly agree	27	13.5%
Agree	95	47.5%
Neutral	35	17.5%
Disagree	38	19%
Strongly disagree	5	2.5%
Total	200	100%

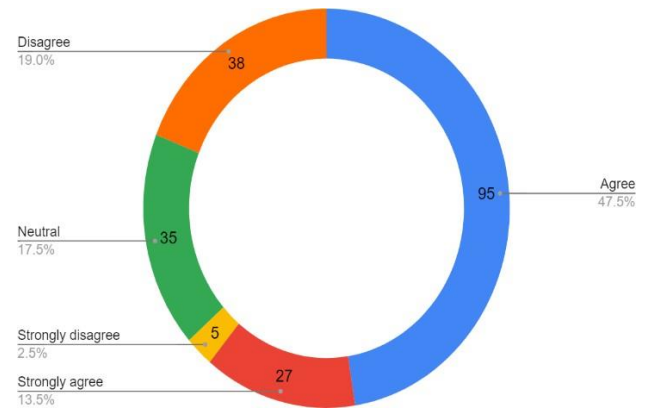


TABLE 6: In this current situation different state may have sudden lockdown in that case where will you stay.

Particulars	No. of Respondent	Percentage of Respondent
Inside the lorry	20	10.1%
local lodge	94	47.2%
lorry shed's	54	27.1%
All the above	31	15.6%
Total	199	100%

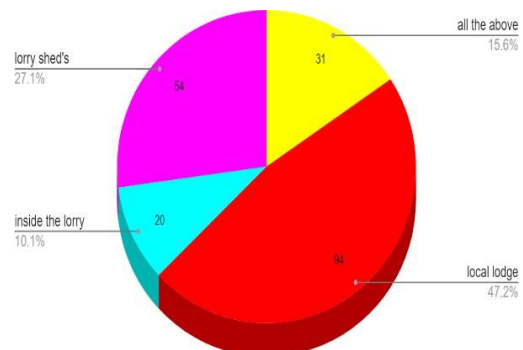
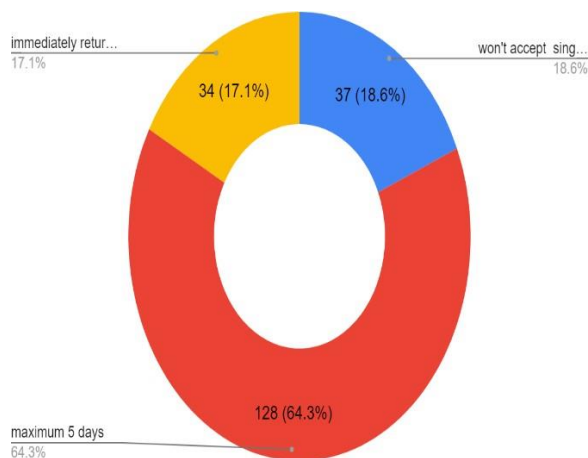


TABLE 7: delivering to other states how many days will you wait in the same state to get another order to your state.

Particulars	No. of Respondent	Percentage of Respondent
Won't accept single orders	37	18.6%
Maximum 5days	128	64.3%
Immediately return to home town	34	17.1%
Total	199	100%



STATISTICAL ANALYSIS:

CHISQUARE:

- Null Hypothesis H0:** There is no significant with years of experience of the lorry drivers and vehicle ownership.
- Alternate Hypothesis H1:** There is a significant with years of experience of the lorry drivers and vehicle ownership.

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Experience as a driver * vehicle ownership	200	100.0%	0	0.0%	200	100.0%

Experience as a driver * vehicle ownership Crosstabulation

Count

		vehicle ownership				Total
		company's vehicle	contract	own vehicle	rental	
Experience as a driver	0-5years	13	7	0	1	21
	10-15years	9	19	13	11	52
	15-20years	0	8	3	5	16
	5-10years	28	48	14	14	104
	more than 20years	1	3	3	0	7
Total		51	85	33	31	200

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	34.059 ^a	12	.001
Likelihood Ratio	38.534	12	.000
N of Valid Cases	200		

a. 9 cells (45.0%) have expected count less than 5. The

minimum expected count is 1.09.

Symmetric Measures

		Value	Approximate Significance
Nominal by Nominal	Phi	.413	.001
	Cramer's V	.238	.001
N of Valid Cases		200	

FINDINGS

- Majority of the respondents have 5-10 years of experience in driving heavy load vehicle
- Majority of 42.5% of the respondents have made a contract with lorry transportation company by paying in monthly basis.
- Majority of 58.5% drivers have 2-5yrs of cleaner experience where they learned to maintain a lorry or a vehicle.
- Majority of 61.6% of the total respondents have stated that there are responsible for the accident are incident occurs while transporting goods.
- Majority of 47.5% of them have agreed that language is a biggest challenge while crossing state borders.
- Majority of 47.2% of the total respondents have said that they will mostly stay at local lodge and dormitory.
- Majority of 64.4% of the total respondents will stay there for a maximum of 5 days in the same city for the next order.

CONCLUSION

The truck driver is more important than the goods being transported. Continuing study of the health hazards associated with the truck driving profession is important to reduce down time, but more importantly, to prevent permanent injuries, debilitating illnesses, workers' compensation claims, and road accidents. NIOSH in its report of 2003-2006 has presented relevant statistics to show the rising cases of truck driver injuries and illnesses. Truck drivers consistently sustain more nonfatal occupational injuries and illnesses than the majority of the occupations. The suggestion set should help policy makers, schedulers and truck drivers to reduce the stress levels of the occupation and improve the health status of truck. Constant motivation, vocational training, continuous education and social vaccine are key to upgrade long distance truck drivers.

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