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**BHARATA MATA  
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**DEPARTMENT OF ECONOMICS**

**A ECONOMIC STUDY OF CNG AUTO  
RICKSHAW DRIVERS IN ERANAKULAM**

Dissertation Submitted to Mahatma Gandhi University  
In partial fulfilment of the Requirements for the Award of Degree  
Bachelor of Arts (Economics)

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**2023**

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CERTIFICATE

This certifies that Nandana Sundaran, Aswani K G, Akhila Mol T. completed the dissertation "A ECONOMIC STUDY OF CNG AUTO RICKSHAW DRIVERS IN ERANAKULAM " under the supervision and guidance of their mentors. This fulfills a portion of the requirements needed to be awarded a Bachelor of Arts (Economics) degree from Mahatma Gandhi University.

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## **DECLARATION**

Under the supervision and guidance of Dr.Lt. NITHIN THOMAS, we, NANDANA SUNDARAN, ASWANI KG, AKHILA MOL T, thus declare that the thesis entitled "A ECONOMIC STUDY OF CNG AUTO RICKSHAW DRIVERS IN ERANAKULAM" is a genuine record of our independent study work. Furthermore, we affirm that this thesis has never before been submitted for consideration for a degree, certificate, associateship, or other title of a like kind.

NANDANA SUNDARAN  
ASWANI KG  
AKHILA MOL T

Place: Thrikakkara

Date:

## **ACKNOWLEDGEMENT**

In this endeavour i have received a great deal of support and guidance from different quarters. First and foremost , i would like to thank the almighty for blessing me with the patience and strenght to complete this study.

We are greatfull to Dr Lt Nithin Thomas head of the deparmentof Economics for his timely advice and guidance during the course of the study.

We wish to acknowledge the help provide by the librarian of Bharata Mata College.

We are Especially like to thank the CNG autorickshaw drivers in Eranakulam district for their valuable insights into the working condition of the CNG autorickshow drivers .I like to express my sincere gratitude to the CNG autorickshow drivers eranakulam. For their willingness to participate in this project .

We are also thankfull to my family and friends for their support and encouragement during the entire duration of the project .

THRIKAKKARA

NANDANA SUNDARAN  
ASWANI K G  
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## **ABSTRACT**

The purpose of this research is to investigate the socioeconomic circumstances faced by CNG auto rickshaw drivers in Ernakulam District. The lifestyles of CNG auto rickshaw drivers are a distinct subset of Indian society that have received little attention from scholars. This study aims to comprehend the ways in which social and economic factors—such as job and economic insecurity, infrastructural improvements, technology breakthroughs, and other environmental factors—affect CNG auto rickshaw drivers. This study will specifically look at how these variables interact to influence the experiences of the drivers of CNG auto rickshaws. The outcomes of this study will provide insight into the issues influencing the lives of CNG auto rickshaw drivers, and will be used to guide policy measures that attempt to better the lives of this vulnerable population. Quantitative data collection will also be part of the study to better understand the demographics of the drivers. The results of this study will help to clarify the social and economic circumstances of CNG auto rickshaw drivers. The study will look at the social networks of drivers of CNG autorickshaws and how important they are to the community's economy. The study will also look at how the cng auto rickshaw drivers have adjusted to the city's shifting social and economic landscape. The livelihoods of CNG auto rickshaw drivers have been significantly impacted by the arrival of uber taxi and other public transit options. This research will examine the opportunities and difficulties faced by CNG auto rickshaw drivers as well as the sociological ramifications of these changes in their life.

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# CHAPTER-1

## INTRODUCTION

Our lives are fundamentally impacted by transportation since it enables us to move around and access goods and services. It is among the most important components of a society's infrastructure and economic growth. Moving people, products, and services from one place to another is known as transportation. It is essential to the social, cultural, and economic advancement of any nation or community. It makes it easier for companies and industries to grow, links people to employment and educational possibilities, and fosters a feeling of community. In India, transportation is an essential part of the economy, employing millions of people and facilitating the easy flow of products and services between states and cities. In many regions of the world, auto rickshaws, also referred to as tuk-tuks, are a widespread mode of transportation. They are very well-known in Indian cities and towns. The purpose of this study is to assess the socioeconomic circumstances of CNG auto rickshaw drivers in Ernakulam district located in the Kerala state of southern India. The study will specifically concentrate on the drivers' experiences with poverty, their sources of income, and their navigation of the legal and regulatory landscape within the CNG auto rickshaw industry. Finally, the study will examine how the CNG auto rickshaw sector affects the regional economy and how much it contributes to its growth.

Ernakulam District came into being in 1958 April 1 by incorporating Kanayannoor, Kochi, Kunnathunadu, Aluva and Paroor Taluks. Deliberation for hours held at the Kerala Fine Arts Hall in 1957 and attended by a host of political, social and media activists was instrumental in the formation of the District.

The etymology of the term 'Ernakulam' is linked to different sources, either temple-oriented or mythological. Komattil Achutha Menon attributes the origin of the word from a type of mud called 'Erangiyal'. Lord Siva was addressed in Chennai as 'Erayanar' in the past. In Kerala too, this was followed and it later came to be known as 'Ernakulam'. Ebanubathootha who travelled along the Kerala coast between AD 1342 and AD 1347 did not even make a casual reference to Kochi. The name 'Kochi' is a combination of two terms, Koch & Azhi (small river-mouth).

Indian autorickshaw drivers lead distinct lifestyles. They put in a full day's work and make enough money to support their family. CNG AutoRickshaw drivers make money by transporting passengers to their destinations while maintaining a humble demeanor. Since they are unable to own a rickshaw on their own, they either rent one for the rickshaw's owner or obtain a bank loan to purchase one. Every day of the week, drivers work. The money needed for its consummation does not equal the hard labor put in by the rickshaw drivers. People try to pay them less most of the time. CNG Auto rickshaw drivers work hard and take on more customers in a day because they seek easy money. Their modest existence consists of waiting for passengers while standing by a road crossroads. In addition to offering door-to-door services, CNG auto rickshaws serve as feeder modes for public transit, with train travelers typically use them to get to the station.

The drivers of CNG autorickshaws encounter numerous challenges during their lives. Upon closer inspection, it is evident that the living conditions of CNG auto rickshaw drivers are subpar. Their wages are unpredictable, making it impossible for them to sustain a standard of living. The money people make determines the kind of life they lead. The majority of drivers are from lower socioeconomic classes, including BPL.

An CNG auto driver has a lot of responsibilities at work. In addition to being in charge of everyone's safety and punctuality, the job also calls for a great degree of focus and awareness. The cost of fuel and replacement parts is rising, insurance premiums are rising, Uber is a popular online ride-sharing service among younger people, and the number of people using private vehicles is rising, all of which are contributing to the difficult times faced by Kerala's CNG auto rickshaw drivers. Despite their repeated complaints to the public authorities, drivers—many of whom are male—do not have sufficient access to restroom facilities. The rising expense of maintenance caused many drivers to hunt for other employment. The scarcity of space and congestion in locations such as beach road make it rare for the traffic police to issue fines for parking in no-parking areas. These drivers are more susceptible to illness since they do not have enough space to dwell, access to clean water, adequate sanitation, or hygienic living conditions. This can result in missed workdays and additional costs associated with receiving medical care in order to return to work. Each of these three variables—living, working, and health—has an

immediate bearing on a person's daily existence. Against this context, data on important variables related to the living circumstances of CNG auto rickshaw drivers were investigated. The presence of the necessities in a driver's home is a sign of a comfortable and healthful lifestyle. In a typical or middle-class home, the essential utilities include water, electricity, a toilet, a kitchen, a store, and a functional sewer system. However, these accommodations do not meet the needs of drivers, and even if some of them did have this basic convenience at home, it is not qualitative in nature. These drivers of CNG autorickshaws were not covered by any health or medical benefits in the event of illness or accidents at work. Aside from this, a large number of these auto rickshaw drivers are not eligible for the public distribution system (PDS), free education, or other government welfare programs because they are unaware of them or do not have the necessary paperwork to claim them. In India, auto rickshaws are an essential component of public transportation. For those who cannot afford to take a taxi or other forms of transportation, they are the go-to method of transportation since they are affordable, practical, and easily accessible. However, unfavorable working conditions, discrimination, and exploitation are commonplace for CNG auto rickshaw drivers. In India, auto rickshaws are an essential component of public transportation. For individuals who cannot afford to take a taxi, they are frequently the preferred form of transportation because they are affordable and convenient. However, discrimination, exploitation, and unjust working conditions are commonplace for CNG autorickshaw drivers. The purpose of this study is to comprehend the socioeconomic variables affecting the experiences and means of subsistence for cng autorickshaw drivers in Ernakulam, Kerala. This study will investigate the socio-economic dynamics of autorickshaw drivers' occupation, including their working conditions, pay, and relationships with consumers and local authorities, through conducting surveys and interviews with them. The research will also look at how the greater socioeconomic context of Ernakulam, Kerala, particularly the social and economic systems that influence autorickshaw drivers' livelihoods, affects their experiences. The main reason to choose cng auto rickshaw is pollution and its fuel cost. The study's conclusions and their consequences for decision-makers and other transportation industry stakeholders will be covered in the last section. An cng autorickshaw is a popular

three-wheeled public transportation vehicle in several regions of India. The goal of this project is to comprehend the psychological and socioeconomic characteristics of the CNG autorickshaw drivers in Ernakulam, Kerala. A combination of qualitative and quantitative research methodologies will be used. The purpose of this research is to investigate the sociocultural, political, and economic elements that influence the lives of CNG autorickshaw drivers in Ernakulam. The social networks of the drivers, the economic environment in which they operate, the effects of governmental regulations, and their opinions on both their place of employment and the neighborhood will all be specifically examined in this research. The results of this study could influence social service and policy initiatives aimed at enhancing the quality of life for CNG autorickshaw drivers in Ernakulam.

## **SIGNIFICANCE OF STUDY**

The sociological investigation of CNG auto-rickshaw drivers in Ernakulam is noteworthy due to its ability to offer significant insights into the lifestyles, working conditions, and daily challenges of these laborers. Understanding the local economy, the working market's dynamics, and the effects of growing automation on the sector can all be beneficial. Important details about the CNG autorickshaw drivers' contributions to the community, the impact of their presence on local culture, and the environmental effects of their employment may also be found in the report. The research on CNG auto rickshaw drivers on Ernakulam is noteworthy because it sheds insight on the socioeconomic factors that influence these laborers' life. Drivers of CNG autorickshaws are typically viewed as being at the bottom end of the socioeconomic scale and are frequently taken advantage of. This research can offer valuable insight into the socioeconomic environment of Ernakulam and beyond, as well as aid to clarify the challenges and opportunities that these drivers face. Additionally, it can serve to inform decisions about policy that improve CNG auto rikshaw drivers' standard of living and lessen their susceptibility to exploitation. In a different sense, the study of CNG autorickshaw drivers in Ernakulam is important. First of all, it presents a unique perspective on the lives



and working circumstances of Eranakulam CNG autorickshaw drivers, which may have an impact on the region's general socioeconomic and cultural dynamics. It can also provide an insight into the many systems and procedures that influence the way CNG autorickshaw drivers live their everyday lives, including the way their customers approach them, the likelihood that CNG autorickshaw services will be available in the region, and the sources of money they rely on. Lastly, the study can offer insightful perspectives on the drivers' and their families' socioeconomic backgrounds and the range of difficulties they encounter on a daily basis.

## **CHAPTER-3**

### **REVIEW OF LITERATURE**

The most noticeable mode of transportation in Eranakulam is driving an auto-rickshaw, and they contribute significantly to the local economy. The CNG auto-rickshaw business is distinct in that it operates mostly informally, lacks organization, and is subject to few laws and safety requirements. This increases the industry's vulnerability and makes it harder for drivers to earn a consistent living. According to studies, the majority of CNG auto-rickshaw drivers in Eranakulam are illiterate and frequently receive pay that is less than the minimum wage. Low salaries and a lack of education might result in unfavorable working conditions, such as dangerous routes and lengthy hours. Furthermore, a large number of drivers operate vehicles without insurance, making them susceptible to dangers like accidents.

Numerous studies have examined the socioeconomic circumstances of CNG auto-rickshaw drivers in Eranakulam; the majority of these studies have concentrated on the drivers' earnings, employment prospects, and working environments. In many parts of the world, the auto rickshaw, often known as a tuk-tuk, is a three-wheeled vehicle that is used for public transportation. The goal of this study is to look into the socioeconomic traits of the drivers of auto-rickshaws, or tuk-tuks, in Eranakulam, India. It seeks to comprehend their everyday lives, socioeconomic circumstances, and the impact of their jobs on them. Additionally, the study will look at the different difficulties they encounter and how they handle them.

There isn't much written about CNG auto-rickshaw drivers in India. Until now, very little research has been conducted on the socioeconomic characteristics of CNG auto rickshaw drivers in India. There have been a few studies carried out in other states, but they have mostly examined the financial benefits of operating an CNG auto-rickshaw. The socioeconomic features of CNG auto-rickshaw drivers in Eranakulam, India, will be the focus of the current study.

Gopinath, A.D., Balakrishnan, M., and Venu, P. (2006). "Sociological Study of Autorickshaw

Drivers in Kerala." *International Journal of Applied Sciences and Engineering*, 3(2): This study looks at the socioeconomic characteristics of autorickshaw drivers in Kerala and investigates the relationship between socioeconomic variables and the drivers' level of job satisfaction. The study blended quantitative and qualitative methods for data collection, employing in-depth interviews and a standardized questionnaire. The research reveals that most autorickshaw drivers are middle-aged, married, illiterate men who depend on their families for financial support. The results

also show a relationship between job satisfaction and the socioeconomic characteristics of the drivers.

Nair, S. (2011). "Autorickshaw Drivers in Kerala: A Study of Their Social, Economic and Working Conditions." *International Journal of Social Science and Development*, 2(3): This article looks closely at the social, economic, and working conditions of autorickshaw drivers in Kerala, India. The poll looks at the socioeconomic status, employment conditions, and general quality of life of drivers. The study focuses on how various demographic factors, such as age, gender, and wealth, impact the drivers' ability to make a living. The survey also examines the drivers' job satisfaction and the impact of government laws on their industry. The poll indicates that although autorickshaw drivers in Kerala earn a respectable salary on average, their employment is not always stable. The survey also shows that while gender has little bearing on earnings, age and experience have a considerable impact on income. Ultimately, the study concludes that although government regulation has increased driving safety, it has also had a detrimental impact on drivers' incomes.

Mukherjee, A., & Rao, V. (2015). *Autorickshaw Drivers in Kerala: A Socio-Economic Study*.

*International Journal of Sociology and Social Policy*, 35(7/8), 481-496.

This study's primary focus is the socioeconomic profile of Kerala's autorickshaw drivers. It is based on real data collected from a survey of 100 autorickshaw drivers in the Ernakulam region between December 2013 and April 2014. As to the research, the autorickshaw drivers were predominantly from lower socioeconomic levels and were mostly migrants from other states. The report also revealed that the autorickshaw drivers have low levels of education, little money, and few job prospects. The study concluded that autorickshaw drivers face a number of difficulties due to their low financial resources and lack of access to financial institutions.

Thiruvathukal, A. (2018). *Autorickshaw Drivers in Kerala: An Exploratory Study*. *International Journal of Social Science Studies*, 6(2),

This study explored the socio-economic and psychological characteristics of autorickshaw drivers.

Unnikrishnan, P. (2012). *Auto rickshaw Drivers in Kerala: A Sociological Study*. *International Journal of Humanities and Social Science*, 2(13),

This study looks into the socioeconomic conditions of auto rickshaw drivers in Kerala. The study employed observations, interviews, and secondary data analysis. The results indicated that the majority of auto rickshaw drivers were from lower socioeconomic origins, had no formal education, and had limited experience in the industry. The poll also found that the drivers' access to financial services was limited and that they lacked the skills and knowledge necessary to manage their money sensibly. The study also found that because of their low compensation and irregular work hours, which put them at a disadvantage in the labor market, the drivers were vulnerable to exploitation by their employers. The study's conclusion identified a few challenges and issues that need to be addressed to improve life and working condition of auto rickshaw driver in Kerala

Kumar, B. (2017). Autorickshaw Drivers in Kerala: A Study of Socio-Economic Profile and Work Conditions. *Indian Journal of Applied Research*, 7(2), 11-13.

studied the working settings and socioeconomic backgrounds of these drivers. It examined the socioeconomic profile-building components of their upbringing, such as their educational attainment, family history, financial situation, and other characteristic groups. In addition to examining their compensation, working conditions, and type of employment, the evaluation also examined the health and safety risks associated with operating an autorickshaw. The assessment also examined the potential for improved working conditions in the auto-rickshaw sector and the impact of this industry on the regional economy. The investigation concluded that there is space for improvement in the industry's compensation, safety, and health, and that driving autorickshaws provides a significant source of income for many families in Kerala.

Kishore, P., & Sudhakar, P. (2020). Auto rickshaw Drivers in Kerala: A Study on Socio-Economic Characteristics and Working Conditions. *International Journal of Social Sciences and Humanities Research*, 8(3),

This study used a combination of qualitative and quantitative methods to examine the socio-economic characteristics and working conditions of auto-rickshaw drivers in Kerala.

Sreenivasan, S. (2016). Autorickshaw Drivers in Kerala: An Analysis of Social Exclusion and Marginalization. *Indian Journal of Sociology*, 41(3), 477-491.

This article examines the social exclusion and marginalization of autorickshaw drivers in Kerala, India. The author uses a qualitative approach to explore.

Thomas, R., & Dutta, P. (2020). Auto-rickshaw drivers in Kochi, India: A sociological study. *International Journal of Social Sciences and Humanities Research*, 8(1),

Using both qualitative and quantitative methods, this study examined the socioeconomic characteristics and working circumstances of Kochi's autorickshaw drivers. The majority of drivers, according to the research, had limited professional possibilities, low socioeconomic status, and less education. The survey also found that drivers faced a wide range of problems, including poor working conditions, erratic finances, and a lack of job security.

Farzana chowdhury (2018) A Study on CNG Driven Auto Rickshaw Service in Some Selected Locations on the Street of Dhaka City.

One of the study's specific goals is to learn more about the situation of the CNG-driven auto rickshaw service in Dhaka. A survey has been conducted from a few chosen Dhaka Kakrail places to Mirpur-2 Commerce College Road. To determine the issues people have when traveling this route in a CNG auto rickshaw, a review of the literature has been conducted. The CNG auto rickshaw meter, CNG auto rickshaw rent, reasons for raising the CNG rent, and raising the CNG auto rickshaw rate in comparison to other modes of transportation have all received attention. Field surveys are used to gather data, and the survey area's address, location, and date are all recorded. GPS is used to determine the latitude and longitude (Google Earth). Nine areas, ranging from Kakrail to Mirpur-2 Commerce College Road, have been the focus of the survey. Kakrail, Mouchak, Farmgate, Taltola, Kazipara, Banglamotor, Panthapath, Mirpur-1, and Mirpur-2 Commerce Colleges. The three primary topics of the questionnaire's preparation were (a) the inhabitants' perception of the problem, (b) their knowledge of the problems' sources, and (c) their suggestions for resolving the reported problems. Ultimately, a few suggestions have been made to enhance the service.

Drivers of CNG auto rickshaws are a common form of transportation in many Indian cities and towns. They are frequently perceived as working in an unofficial, uncontrolled industry with poor pay and little job security. They are common, reasonably priced, and frequently the main form of transportation for a large number of people. Since its introduction into Indian society in the early 20th century, the auto rickshaw has developed into a significant feature of the country's environment. With an emphasis on their socio-sociological research of auto rickshaw drivers, they have been the topic of numerous studies in recent years. In addition to being more convenient than taxis, auto rickshaws allow you to go around without relying on the public transit system. For many households, CNG auto rickshaw drivers are their only source of income. They are frequently perceived as working in an unofficial,

uncontrolled industry with poor pay and little job security. The history and development of the CNG auto rickshaw in India will be examined in this study, starting with the horse-drawn cart and continuing to the powered three-wheelers of today. The study will look at how CNG auto rickshaws affect urban life and transportation, as well as how they help low-income residents find work. The initiative will also examine the problems and existing conditions facing the automotive industry. In recent years, a great deal of research has been conducted on them, focusing on their socioeconomic circumstances, working conditions, and the effects of legislation and regulation. We examine the literature on CNG auto rickshaw drivers in Ernakulam, Kerala, in this study of the literature.

## **CHAPTER-3**

### **METHODOLOGY**

The logical and methodical process of analyzing phenomena that is designed to enable the acquisition of trustworthy knowledge is known as methodology. It is a methodical, step-by-step process used to address the issue being researched. The methodology describes the steps taken in the study to gather data and make observations. The philosophy guiding the research process is known as methodology. This contains the presumptions and assumptions that support the research and provide guidelines for the standards that the researchers employ to evaluate the data and draw conclusions. The methodology employed in this study is very significant. This chapter provides a brief overview of the study's major goals, definitions of key terms, variables, methodologies, procedures, and instruments utilized in data collecting and analysis, as well as the study's significance.

Objectives:

1. To analyze the economic challenges faced by CNG auto-rickshaw drivers
2. To examine the factors contributing to initial investment costs, operational expenses, and income stability for CNG auto-rickshaw drivers.
3. To investigate the competitive pressures and regulatory compliance issues that influence the economic viability of CNG auto-rickshaws.
4. To explore the accessibility and availability of CNG refueling infrastructure and its effects on driver time and expenses.
5. To evaluate the maintenance and repair costs associated with CNG auto-rickshaw vehicles and their implications for driver finances.

#### **CLARIFICATION OF CONCEPT**

In this study cng auto rickshaw drivers refers to those who drive CNG auto rickshaw within Ernakulam

#### **VARIABLE**

Independent variables: Age, religion, marital status, income, education, native place. Dependent variable: level of satisfaction of autorickshaw drivers.

#### **UNIVERSE AND SAMPLE**

Universe: All the cng auto rickshaw drivers in Ernakulam were selected for the study.

Sample: The sample consist of 100 auto drivers in Ernakulam.

#### **SAMPLING METHOD**

In this study simple random sampling method was used to select the required sample for study.

## TOOL OF DATA COLLECTION

In this study interview method is used as the tool of data collection. Effective research methodology establishes the structure and framework for conducting research. This study investigates the social and economic situations of CNG auto rickshaw drivers in Ernakulam. Researchers have largely disregarded the lives of CNG auto rickshaw drivers, a unique subset of the Indian population. This study aims to explore the impact of social and economic issues on CNG auto rickshaw drivers in Ernakulam, including employment instability, infrastructure development, technology breakthroughs, and environmental factors. This study will explore how these factors impact the experiences of CNG auto rickshaw drivers in Ernakulam. The article will discuss the issues they encounter at work, such as job security, income volatility, workplace risks, infrastructure developments, and technological advancements. Finally, the article will discuss how they deal with problems and their income plans.



## **CHAPTER-4**

### **DATA ANALYSIS AND INTERPRETATION**

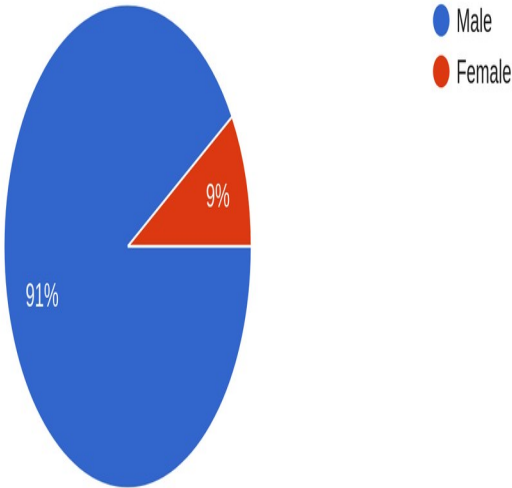
An integral part of research is data analysis and interpretation. The purpose of the research is to characterize and elucidate the social dynamics among cng auto rickshaw drivers in Eranakulam, Kerala. This will involve a look at the social, cultural, and economic elements that influence the day-to-day activities of the CNG autorickshaw drivers in Eranakulam. It will examine the interactions these drivers have with clients, their families, and their co-workers, as well as their perspectives on their jobs. It will also look at the difficulties people have at work, such as unstable income, little job security, risks at work, infrastructure improvements, and other technical breakthroughs. At Last , it will look at how they handle these difficulties and the methods they employ to support themselves. This project chapter's data analysis and interpretation will help readers gain a better grasp of the social dynamics among CNG auto rickshaw driver in Eranakulam.

**TABLE 4.1**  
**FREQUENCY PERCENTAGE OF THE RESPONDENTS**

GENDER	FREQUENCY	PERCENTAGE
MALE	91	91.0%
FEMALE	9	9.0%

Gender

100 responses

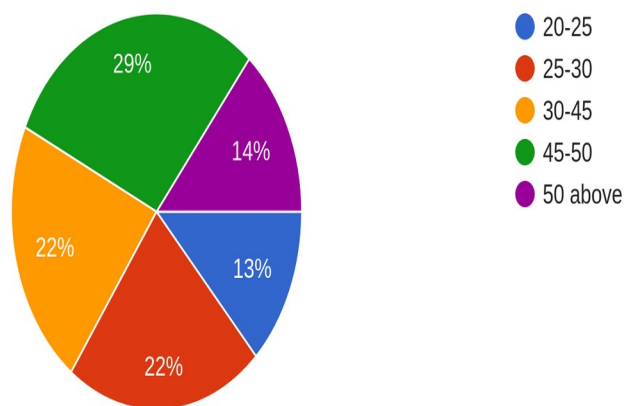


The above data shows that the 91% male and 9% of female respondents.

**TABLE 4.2**  
**AGE CLASSIFICATION OF THE RESPONDENTS**

AGE OF THE CNG AUTO DRIVERS	FREQUENCY	PERCENTAGE
20-25	13	13.0
25-30	22	22.0
30-45	22	22.0
45-50	29	29.0
50 above	14	14.0
TOTAL	100	100.0

Age  
100 responses

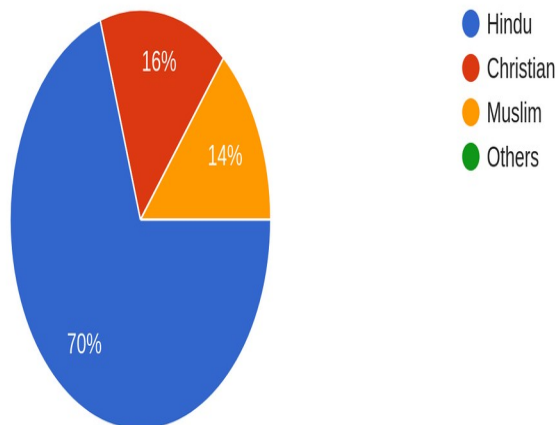


From the above figure 4.2 the category that the highest percentage of respondents is 45-50 with (29%), following by 25-30 with (22%), 30-45 with (22%) 20-25(13%) and 50 above(14%). This indicate that the most of the respondents are middle adulthood.

**TABLE 4.3**  
**RELIGION OF THE RESPONDENTS**

RELIGION	FREQUENCY	PERCENTAGE
HINDU	60	60.0
MUSLIM	14	14.0
CHRISTIAN	16	16.0
TOTAL	100	100.0

Religion  
100 responses

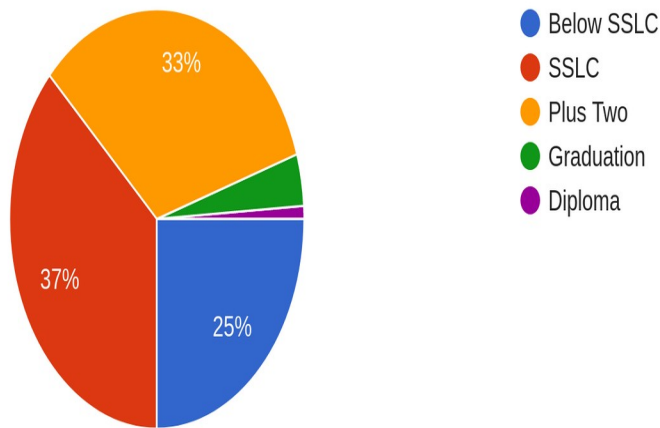


From the figure 4.3 (70%) are Hindu respondents, (16%) are Christians and (14%) are Muslims.

**TABLE 4.4**  
**EDUCATIONAL QUALIFICATION OF THE RESPONDENTS**

EDUCATION	FREQUENCY	PERCENTAGE
BELOW SSLC	25	25.0
SSLC	37	37.0
PLUS TWO	33	33.0
GRADUATION	4	4.0
DIPLOMA	1	1.0
TOTAL	100	100.0

Educational Qualification  
 100 responses

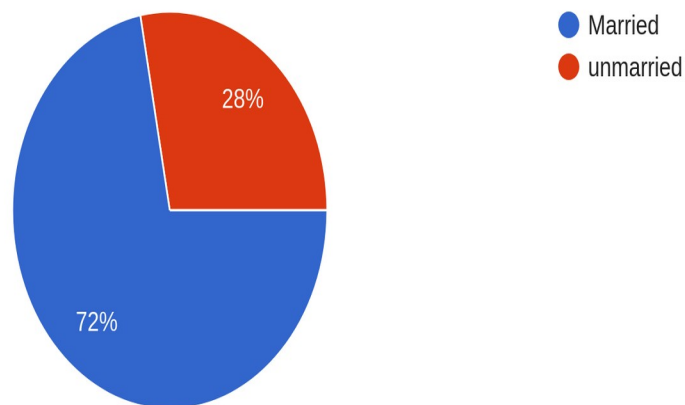


The above figure 4.4 shows that (37%) of the respondents are SSLC, (25%) are below SSLC, (33%) are plus two, (4%) are graduate and (1%) are Diploma.

**TABLE 4.5**  
**MARITAL STATUS OF THE RESPONDENTS**

MARITAL STATUS	FREQUENCY	PERCENTAGE
MARRIED	72	72.0
UNMARRIED	28	28.0
TOTAL	100	100.0

Marital Status  
100 responses



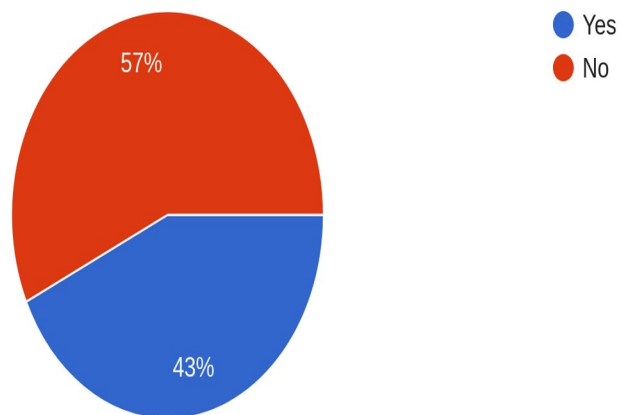
The above figure (4.5) shows that the majority of the respondents (72%) are married and 28% are unmarried.

**TABLE 4.6  
BASED ON THE MEMBERSHIP IN UNION OF THE RESPONDENTS**

ARE YOU A MEMBER OF A TRADE UNION	FREQUENCY	PERCENTAGE
YES		
NO		
TOTAL		

Are you a member of a trade union

100 responses



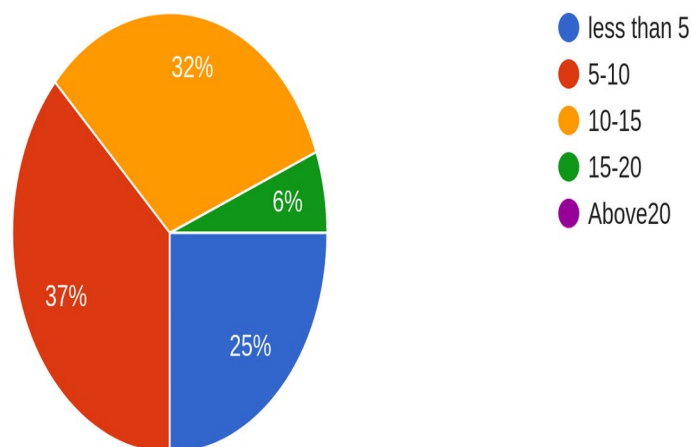
The above table illustrates the membership that the auto drivers have (43%) of the auto drivers have union membership and (57%) of the auto drivers do not have membership. This suggests that trade unionism is Shortly influential and has a light presence in the workplace.

**TABLE 4.7**  
**BASED ON THE WORK EXPERIENCE OF THE RESPONDENTS**

WORK EXPERIENCE	FREQUENCY	PERCENTAGE
LESS THAN 5	25	25.0
5-10	37	37.0
10-15	32	32.0
15-20	6	6.0
20ABOVE	0	0.0
TOTAL	100	100.0

How many years have you been driving Auto rickshaw

100 responses



The above table 4.7 shows (37%) of auto drivers have 5–10-year work experience, (32%) of auto drivers have 10-15-year work experience, (25%) of auto drivers have below Less than 5year work experience and (6%) of auto drivers have 15-20-year work experience.

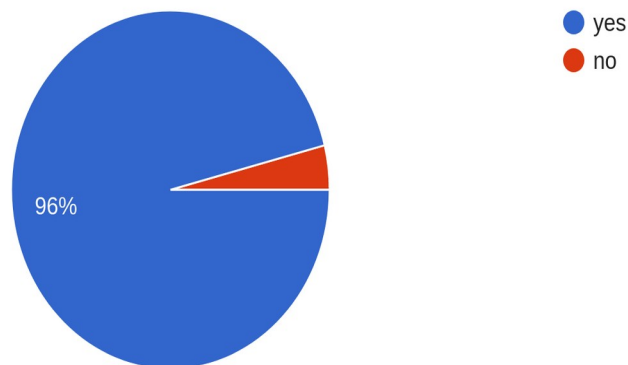


**TABLE 4.8**  
**BASED ON AUTO OWNERSHIP OF THE RESPONDENTS**

DO YOU OWN THE AUTO RICKSHAW YOU DRIVE	FREQUENCY	PERCENTAGE
YES	96	96.0
NO	4	4.0
TOTAL	100	100.0

Do you own the auto rickshaw you drive

100 responses



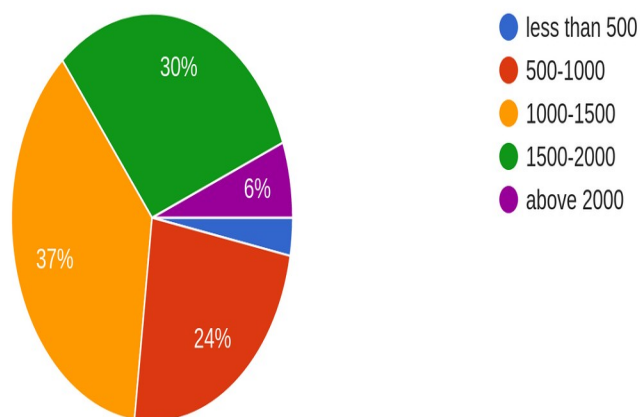
From the above table show that (96%) of respondents have their own auto rickshaw. They can able to purchase an auto rickshaw or apply for a loan to purchase one.

**TABLE 4.9**  
**CURRENT AVERAGE INCOME OF THE RESPONDENTS**

WHAT IS THE CURRENT AVERAGE INCOME IN A DAY	FREQUENCY	PERCENTAGE
LESS THAN 500	3	3.0
500-1000	24	24.0
1000-1500	37	37.0
1500-2000	30	30.0
ABOVE 2000	6	6.0
TOTAL	100	100.0

What is the current average income in a day

100 responses

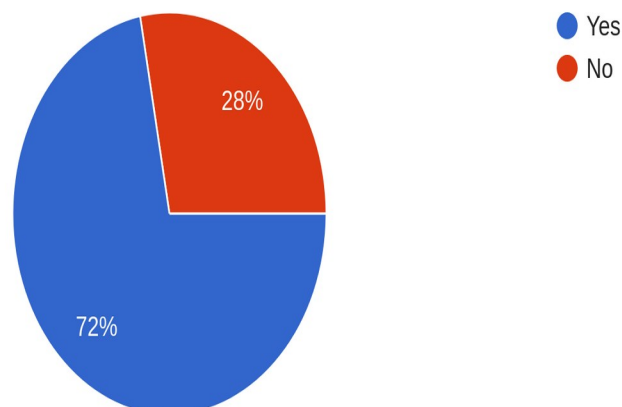


The study shows that the (37%) of the respondents were earning 1000-1500 in a day. (6%) of respondents were earning above 2000 in a day. It shows that the respondent's income is not permanent one. It may differ according to the taken by the driver or on the customer frequency.

**TABLE 4.10  
BASED ON LOANS OF THE RESPONDENTS**

HAVE YOU TAKEN ANY BANK LOAN TO BUY THIS AUTO	FREQUENCY	PERCENTAGE
YES	72	72.0
NO	28	28.0
TOTAL	100	100.0

Have you taken any bank loan to buy this auto  
100 responses

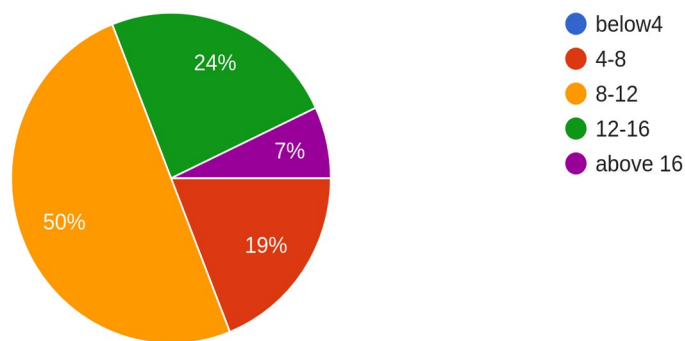


From the above table 4.10 shows that (72%) of the respondents taken loans for buy CNG auto rickshaw and still they are following the interest of the loans. Only (28%) of the respondents did not taken any loans for buyCNG auto rickshaw. It indicating that they are likely facing financial constraints and are in need of additional funds to purchase the vehicle. This could be due to a lack of savings or other financial resources, or could be indicative of a larger problem with access to capital in the region.

**TABLE 4.11  
BASED ON WORKING HOURS OF THE RESPONDENTS**

HOW MANY HOURS IN A DAY DO YOU NORMALLY WORK	FREQUENCY	
LESS THAN 4	0	0.0
4-8	19	19.0
8-12	50	50.0
12-16	24	24.0
16ABOVE	7	7.0
TOTAL	100	100.0

How many hours in a day do you normally work  
100 responses



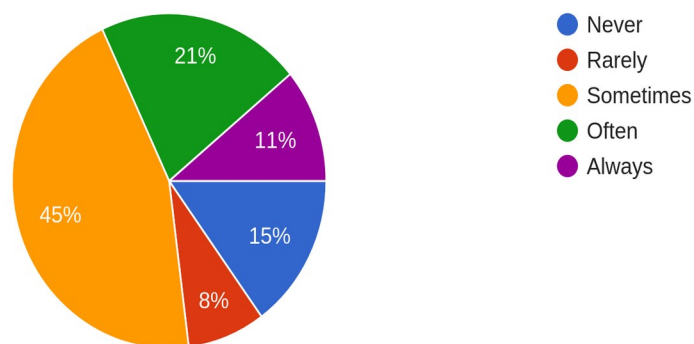
From the above table 4.11, show that the majority of the respondents work 8-12 hours (50%) in a day, (24%) respondents belong to more than 12 hours in a day, (19%) of the respondents work 4-8 hours in a day and (7%) of the respondents works above 16 hours in a day.

**TABLE 4.12**  
**MISS OUT ANY QUALITY TIME OF THE RESPONDENTS**

DO YOU EVER MISS OUT ANY QUALITY OF TIME WITH YOUR FAMILY BECAUSE OF WORK	FREQUENCY	PERCENTAGE
NEVER	15	15.0
RARELY	8	8.0
SOMETIMES	45	45.0
OFTEN	21	21.0
ALWAYS	11	11.0
TOTAL	100	100.0

Do you ever miss out any quality time with your family or your friends because of work?

100 responses

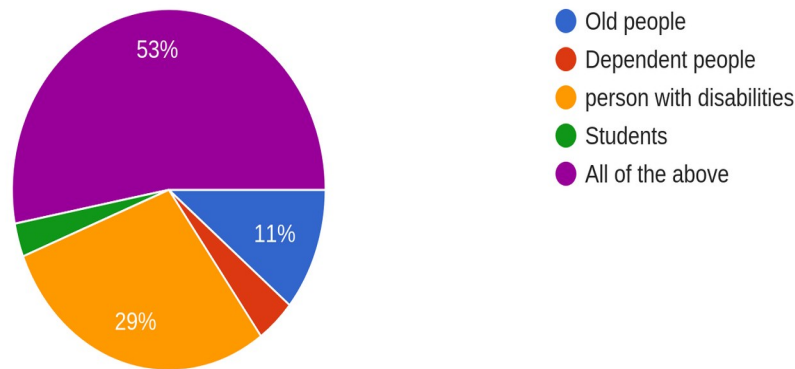


From the above figure 4.12, it is found that the majority of the respondents (45%) sometimes miss out their quality time with their family or friends.

**TABLE 4.13  
BASED ON CARETAKING OF THE RESPONDENTS**

DO YOU TAKE CARE OF	FREQUENCY	PERCENTAGE
OLDER PEOPLE	11	11.0
DEPENDENT PEOPLE	4	4.0
PERSON WITH DISABILITIES	29	29.0
STUDENT	3	3.0
ALL OF THE ABOVE	53	53.0
TOTAL	100	100.0

Do you take care of?  
100 responses

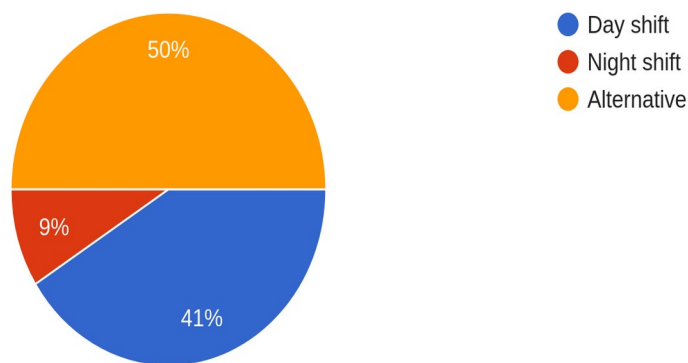


From the above figure 4.13, it is found that the majority of the participants (53%) old people, dependent people, person with disabilities, students, (29%) are take care person with disabilities, (11%) are old people and (3%) and (4%) are students and old people.

**Table 4.14**  
**WORK SHIFTS OF THE RESPONDENTS**

DO YOU WORK IN SHIFTS	FREQUENCY	PERCENTAGE
DAY	41	41.0
NIGHT	9	9.0
ALTERNATIVE	50	50.0
TOTAL	100	100.0

Do you work in shifts?  
 100 responses



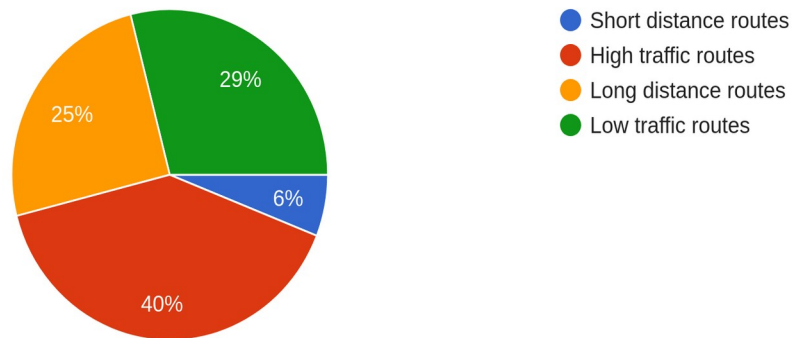
From the above figure 4.14, it is found that the majority of the participants (50%) alternatively work in shifts and (41%) of the respondents belong to day shift and only (9%) work in night shift.

**TABLE 4.15  
BASED ON ROUTES OF THE RESPONDENTS**

WHAT ARE THE MOST COMMONLY USED ROUTES?	FREQUENCY	PERCENTAGE
SHORT DISTANCE ROUTES	6	6.0
HIGH TRAFFIC ROUTES	40	40.0
LONG DISTANCE	25	25.0
LOW TRAFFIC ROUTES	29	29.0
TOTAL	100	100.0

What are the most commonly used routes?

100 responses



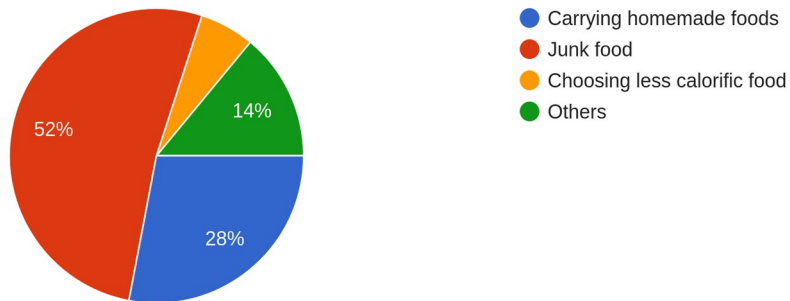
From the above figure 4.15, it is found that the majority of the participants (40%) most commonly used high traffic distance routes.



**TABLE 4.16**  
**FOOD PREFERENCE OF THE RSPONDENTS**

WHAT IS YOUR PREFERANCE FOR FOOD	FREQUENCY	PERCENTAGE
CARRYING HOMEMADE FOODS	28	28.0
JUNK FOODS	52	52.0
CHOOSING LESS CALORIFIC FOOD	6	6.0
OTHERS	14	14.0
TOTAL	100	100.0

What is your preference for foods?  
 100 responses



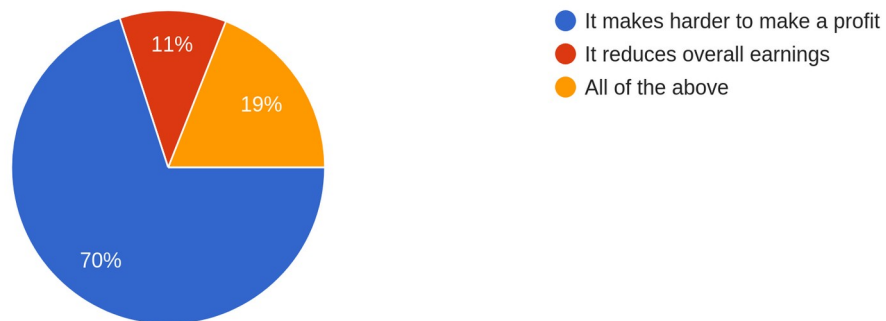
From the above figure 4.16, it's found that the majority of the respondents (52%) preferring junk foods.

**TABLE 4.17**  
**BASED ON COST OF INCOME AFFECTED THE RESPONDENTS**

HOW HAS THE COST OF FUEL AFFECT YPUR INCOME	FREQUNECY	PERCENTAGE
IT MAKES HARDER TO MAKE PROFIT	70	70.0
IT REDUCE OVERALL EARNINGS	11	11.0
ALL OF THE ABOVE	19	19.0
TOTAL	100	100.0

How has the cost of fuel affect your income?

100 responses

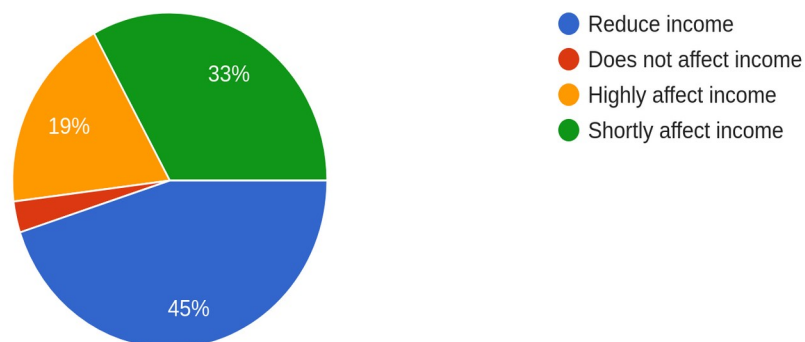


The figure depicts that around (70%) of the respondents reported increased cost of fuel as the main problem they face since it makes harder to earn profit.

**TABLE 4.18**  
**MAINTAINCE AND REPAIR COST**

HOW HAS MAINTENANCE AND REPAIR COST AFFECTED	FREQUENCY	PERCENTAGE
REDUCE INCOME	45	45.0
DOESNOT AFFECT INCOME	3	3.0
HIGHLY AFFECT INCOME	19	19.0
SHORTLY AFFECT INCOME	33	33.0
TITAL	100	100.0

How has Maintenance and repair cost affected ?  
100 responses

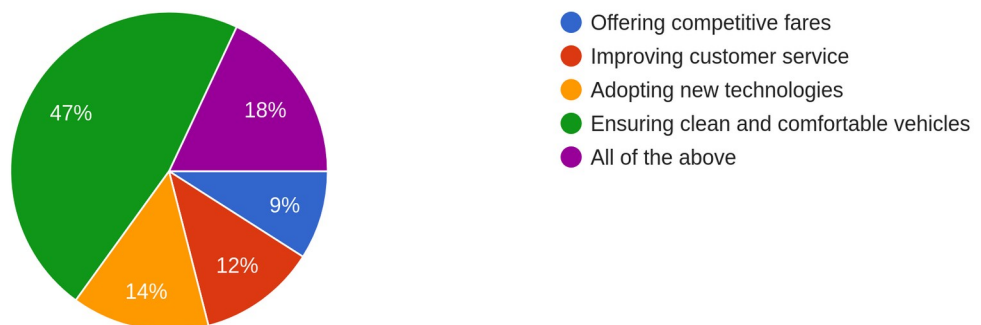


From the above figure 45% have maintenance and repair cost reduce their income and 33% have shortly affect income

**TABLE 4.19**  
**BASED ON ADJUSTMENT OF THE RESPONDENTS ON WORK**

HOW DO YOU ADJUST TO THE PRESENCE OF APP BAESD CAB SERVICES	FREQUENCY	PERCENTAGE
OFFERING COMPETATIVE FARES	9	9.0
IMPROVING CUSTOMER SERVICE	12	12.0
ADOPTING NEW TECHNOLOGIES	14	14.0
ENSURING CLEAN AND COMFORTABLE VEHICLES	47	47.0
ALL OF THE ABOVE	18	18.0
TOTAL	100	100.0

How do you adjust to the presence of app-based cab services?  
 100 responses



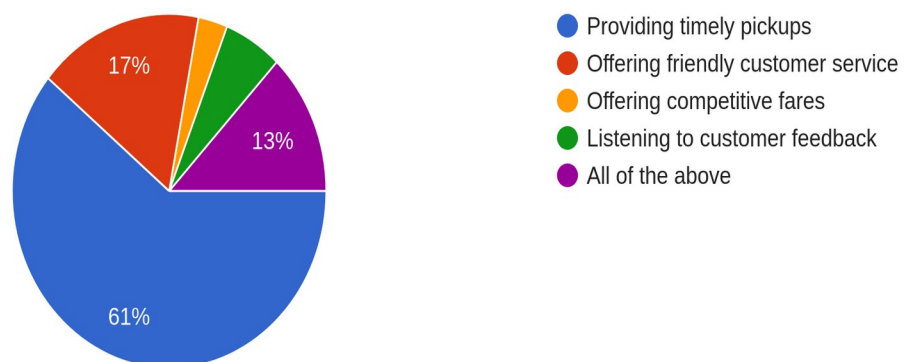
From the above figure 47% are ensuring clean and comfortable vehicles.

**TABLE 4.20**  
**CUSTOMER SATISFACTION OF THE RESPONDENTS**

HOW DO YOU ENSURE CUSTOMER SATISFACTION TO REMAIN COMPETATIVE	FREQUENCY	PERCENTAGE
PROVIDING TIMELY PICKUPS	61	61.0
OFFERING FRIENDLY CUSTOMER SERVICES	17	17.0
OFFERING COMPETATIVE FARES	3	3.0
LISTENING TO CUSTOMER FEEDBACK	6	6.0
ALL OF THE ABOVE	13	13.0
TOTAL	100	100.0

How do you ensure customer satisfaction to remain competitive?

100 responses



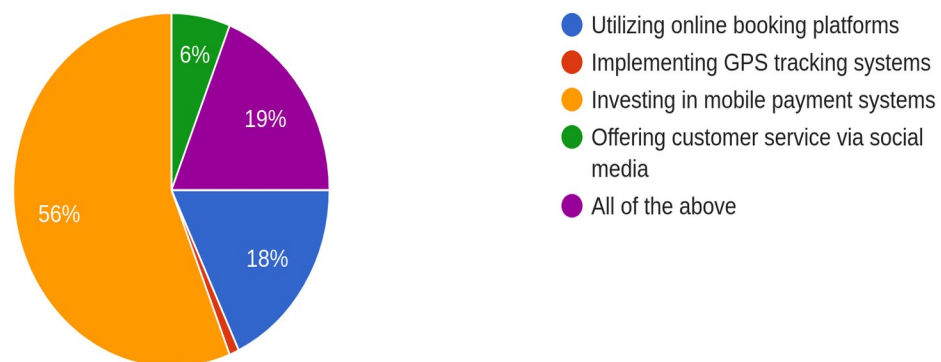
From the above figure 4.20, it is found that the majority of the respondents (61%) are ensure customer satisfactin through providing timely pickups

**TABLE 4.21**  
**TECHNOLOGIES IMPLEMENTED OF THE RESPONDENTS**

WHAT TECHNOLOGIES HAVE YOU IMPLEMENTED TO STAY COMPETITIVE	FREQUENCY	PERCENTAGE
UTILIZING ONLINE BOOKING PLATFORMS	18	18.0
IMPLEMENTING GPS TRACKING SYSTEM	1	1.0
INVESTING IN MOBILE PAYMENT SYSTEM	56	56.0
OFFERING CUSTOMER SERVICE VIA SOCIAL MEDIA	6	6.0
ALL OF THE ABOVE	19	19.0
TOTAL	100	100.0

What technologies have you implemented to stay competitive?

100 responses



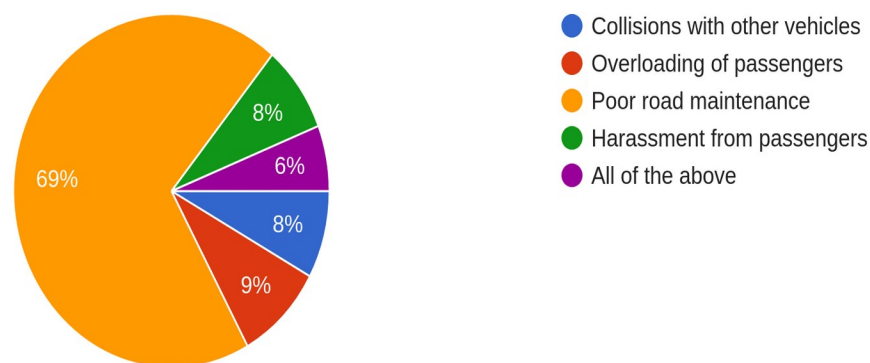
From the above figure 4.21, it is found that the majority of the respondents (56%) are implemented investing mobile payment to stay competitive.

**TABLE 4.22  
BASED ON RISK OF THE RESPONDENTS**

WHAT ARE THE BIGGEST RISK YOU FACE IN YOUR JOB AS AN CNG AUTO RICKSAW DRIVER	FREQUENCY	PERCENTAGE
COLLISION WITH OTHER VEHICLES	8	8.0
OVERLOADING OF PASSENGERS	9	9.0
POOR ROAD MAINTENANCE	69	69.0
HARASSMENT FROM PASSANGER	8	8.0
ALL OF THE ABOVE	6	6.0
TOTAL	100	100.0

What are the biggest risks you face in your job as an CNG auto rickshaw driver

100 responses



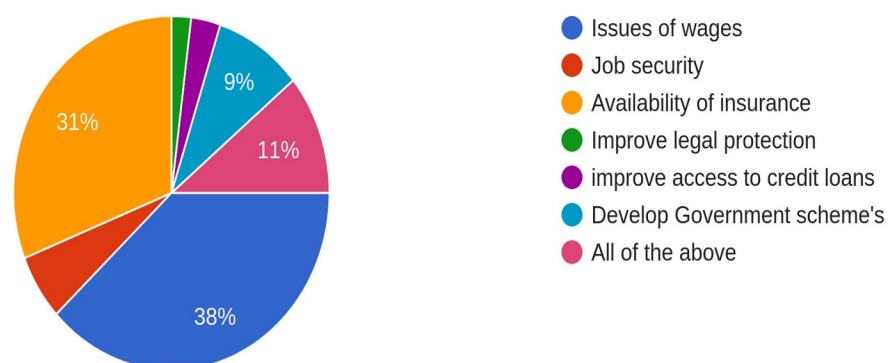
From the above figure 4.22, it is found that the majority of the respondents (69%) are facing biggest risk is poor road maintenance in rural area.

**TABLE 4.23**  
**ISSUES OF THE RESPONDENTS**

WHAT ISSUES DO YOU THINK NEED TO BE ADDRESSED CONCERNING CNG AUTO RICKSHAW DRIVING?	FREQUENCY	PERCENTAGE
ISSUES OF WAGES	38	38.0
JOB SECURITY	6	6.0
AVAILABILITY OF INSURANCE	31	31.0
IMPROVE LEGAL PROTECTION	2	2.0
IMPROVE ACCESS TO CREDIT LOAN	3	3.0
DEVELOP GOVERNMENT SCHEMES	9	9.0
ALL OF THE ABOVE	11	11.0
TOTAL	100	100.0

What issues do you think need to be addressed concerning auto rickshaw driving?

100 responses



From the above figure 4.23, it is found that the majority of the respondents (96%) are needs to beaddressed issues of wages.



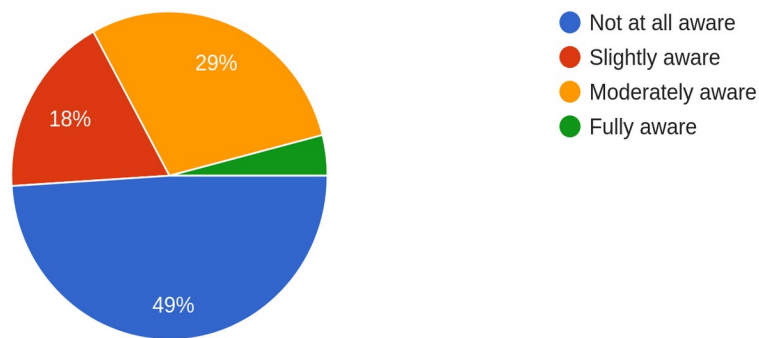


**TABLE 4.24**  
**AWARE OF THE WELFARE MEASURES OF THE RESPONDENTS**

TO WHAT EXTENT ARE YOU AWARE OF THE WELFARE MEASURES PROVIDED BY THE GOVERNMENT AND NGOS FOR CNG AUTO RICKSHAW DRIVERS	FREQUENCY	PERCENTAGE
NOT AT ALL AWARE	49	49.0
SLIGHTLY AWARE	18	18.0
MODERATELY AWARE	29	29.0
FULLY AWARE	4	4.0
TOTAL	100	100.0

To what extent are you aware of the welfare measures provided by the government and NGOs for auto rickshaw drivers

100 responses



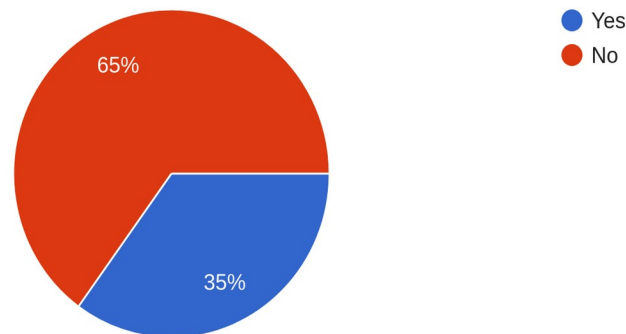
From the above figure 4.24, it is found that the majority of the respondents (49%) are not at all aware about the welfare measures provided by the government and NGOs for CNG auto rickshaw drivers in Eranakulam.

**TABLE 4.25  
BASED ON INSURANCE POLICIES OF THE RESPONDENTS**

DO YOU KNOW OF ANY INSURANCE POLICIES,PENSION PLANS OR HEALTH CARES SCHEMES AVAILABLE FOR CNG AUTO RICKSHAW DRIVERS	FREQUENCY	PERCENTAGE
YES	35	35.0
NO	65	65.0
TOTAL	100	100.0

Do you know of any insurance policies, pension plans or health care schemes available for auto rickshaw drivers?

100 responses



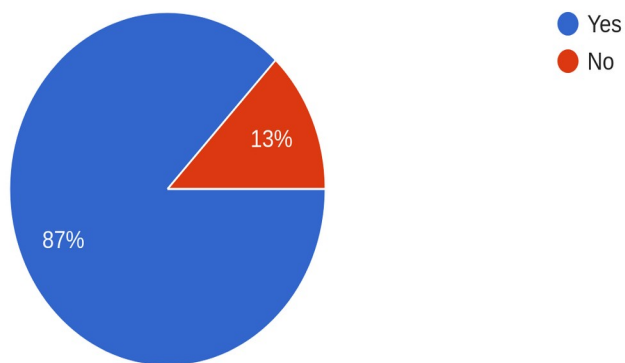
From the above figure 4.25, it is found that the majority of the respondents (65%) are not aware about the availability of insurance policies, pensions and other health care schemes for CNG auto rickshaw drivers in Ernakulam

**TABLE 4.26**  
**BASED ON GETS URBAN ROUTES OF THE RESPONDENTS**

DO YOU GET MORE ROUTES TO THE URBAN AREA	FREQUENCY	PERCENTAGE
YES	87	87.0
NO	13	13.0
TOTAL	100	100.0

Do you get more routes to the urban area?

100 responses

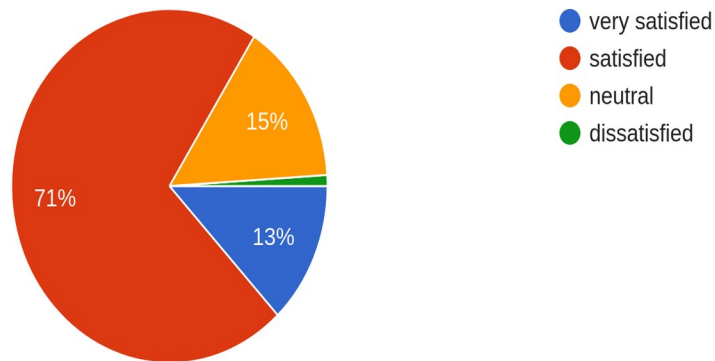


**TABLE 4.27**  
**LEVEL OF SATISFACTION OF THE RESPONDENTS**

HOW DO YOU RATE YOUR LEVEL OF SATISFACTION	FREQUENCY	PERCETANGE
VERY SATISFIED	13	13.0
SATISFIED	71	71.0
NEUTRAL	15	15.0
DISATISFIED	1	1.0
TOTAL	100	100.0

How do you rate your level of satisfaction with your job?

100 responses

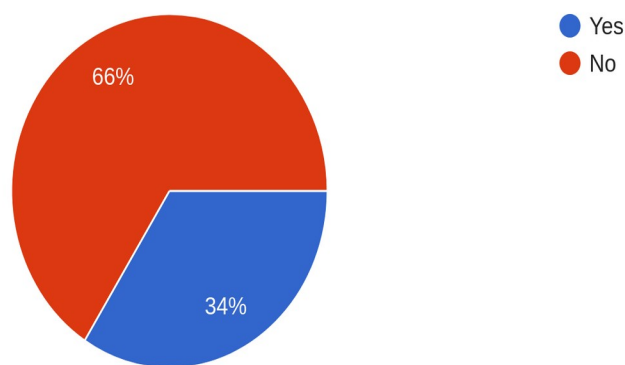


From the above figure 4.27, it is fund that the majority of the respondent's (71%) are satisfied with their job.

**TABLE 4.28**  
**DIESEL STATUS OF THE RESPONDENTS**

ARE YOU DRIVING A DIESEL AUTO RICKSHAW	FREQUENCY	PERCENTAGE
YES	34	34.0
NO	66	66.0
TOTAL	100	100.0

Are you driving a diesel auto rickshaw?  
 100 responses



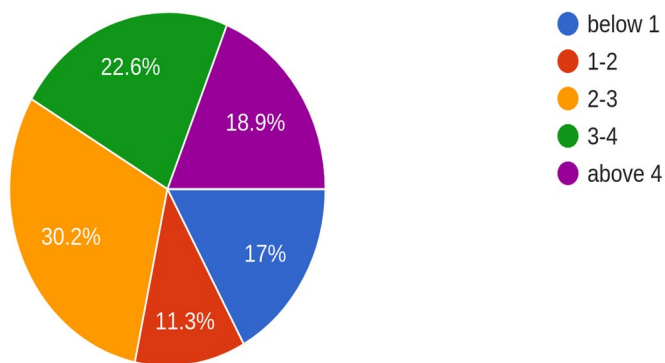
From the above figure 4.29, it is found that the majority of the respondent's (66%) didn't use diesel auto rickshaw. Only (34%) of the respondents use diesel. The primary reason for the preferring diesel is cost of fuel. It is sustainable approach.

**TABLE 4.29**  
**YEARS**

IF YES, HOW MANY YEARS	FREQUENCY	PERCENTAGE
BELOW 1	17	17.0
1-2	11.3	11.3
2-3	30.2	30.2
3-4	22.6	22.6
ABOVE 4	18.9	18.9
TOTAL	100	100.0

If yes, how many years?

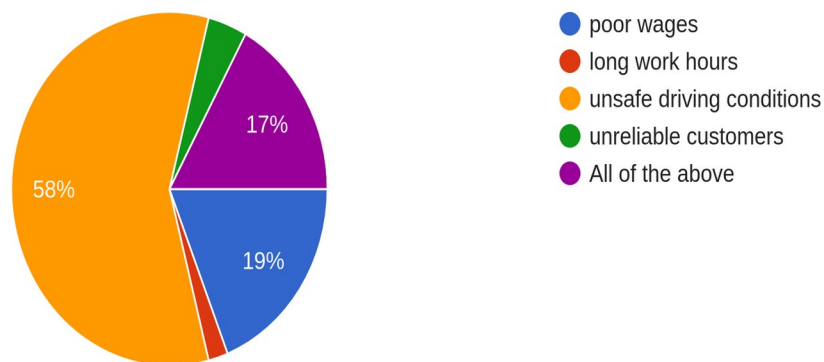
53 responses



**TABLE 4.30**  
**CHALLENGES OF THE RESPONDENTS**

WHAT CHALLENGES HAVE YOU FACED AS AN CNG AUTO DRIVER	FREQUENCY	PERCENTAGE
POOR WAGES	19	19.0
LONG WORK HOURS	2	2.0
UNSAFE DRIVING CONDITIONS	58	58.0
UNRELIABLE CUSTOMERS	4	4.0
ALL OF THE ABOVE	17	17.0
TOTAL	100	100.0

What challenges have you faced as an cng auto driver?  
100 responses



From the above figure 4.30, it is found that the majority of the respondents (58%) are facing unsafe driving conditions as an CNG auto driver.

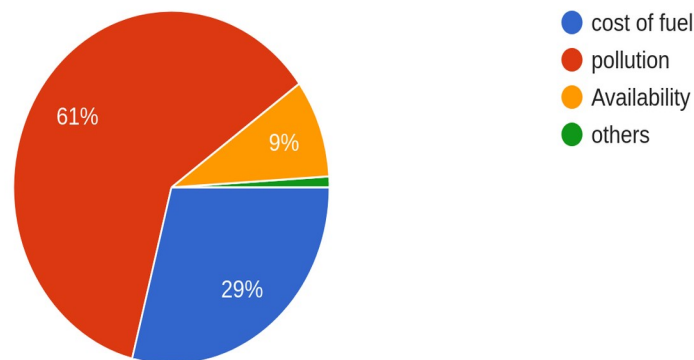


**TABLE 4.31**  
**PRIMARY REASON FOR YOU PREFERRING CNG**

WHAT ARE THE PRIMARY REASON FOR YOU PREFERRING CNG	FREQUENCY	PERCENTAGE
COST OF FUEL	29	29.0
POLLUTION	61	61.0
AVAILABILITY	9	9.0
OTHERS	1	1.0
TOTAL	100.0	100.0

What are the primary reasons for you preferring CNG?

100 responses



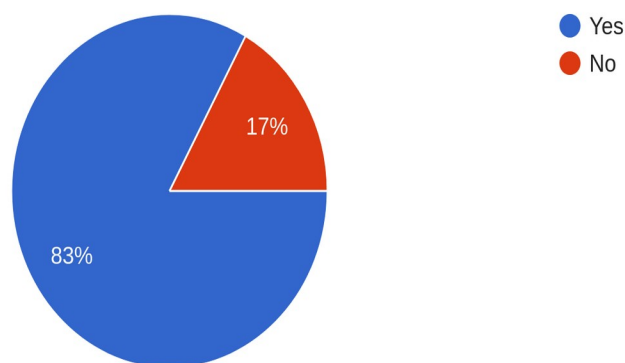
In the figure 4.31 shows majority 61% preferring cng because of pollution.

**TABLE 4.32**  
**CNG MORE RELIABLE COMPARED TO OTHER FUEL**

DO YOU FIND CNG MORE RELIBLE COMPARED TO OTHER FUELS	FREQUENCY	PERCENTAGE
YES	83	83.0
NO	17	7.0
TOTAL	100	100.0

Do you find CNG more reliable compared to other fuels?

100 responses



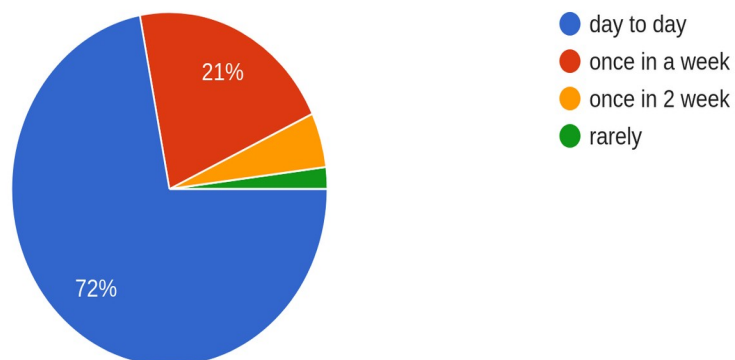
The figure 4.32 shows the (83%) CNG is more reliable than others.

**TABLE 4.33**  
**REFILLING OF GAS**

HOW FREQUENTLY DO YOU HAVE TO FILL CNG	FREQUENCY	PERCENTAGE
DAY TO DAY	72	72.0
ONCE IN A WEEK	21	21.0
ONCE IN 2 WEEK	5	5.0
RARELY	2	2.0
TOTAL	100	100.0

How frequently do you have to refill CNG?

100 responses



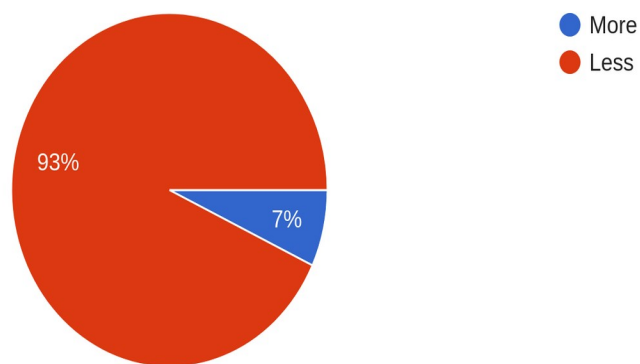
In the figure shows 72% are refilling CNG day to day life.

**TABLE 4.34**  
**REFILLING STATIONS**

AVAILABILITY OF CNG REFUELING STATIONS	FREQUENCY	PERCENTAGE
YES	93	93.0
NO	7	7.0
TOTAL	100	100.0

Availability of CNG refueling stations.

100 responses



In the figure shows the majority of the respondents (93%) are less availability of cng refueling stations.

## **CHAPTER – 5**

### **FINDINGS AND CONCLUSION**

Indian autorickshaw drivers lead distinct lifestyles. An essential component of Indian public transportation are auto rickshaws. For individuals who cannot afford to take a taxi, they are frequently the preferred form of transportation because they are affordable and convenient. However, unfavorable working conditions, discrimination, and exploitation are commonplace for autorickshaw drivers. They put in a full day's work and make enough money to support their family. By escorting clients to their destination, rickshaw drivers earn money through their hard effort and modest demeanor. The study will look at ways to upgrade and modify the CNG auto rickshaw to better suit the requirements of contemporary cities.

According to the study's findings, the majority of Eranakulam's auto rickshaw drivers are between the ages of 30 and 45. They have little schooling and are mostly from poor socioeconomic backgrounds. Most CNG auto rickshaw drivers have been in the business for between 10 and 19 years, and some have been there for as long as 10 years. The majority of them labor 8 to 12 hours a day and make between Rs. 1000 and Rs. 15000 on average. The survey found that although CNG auto rickshaw drivers are generally happy with their jobs, their pay is not as high as it could be, since the number of customers was declining daily. Private transportation is owned by a larger population. They consider the position to be unstable. The majority of responders consistently discovered substitute works. The drivers of CNG autorickshaws do not always make money. Depending on the frequency of customers, it could vary. According to this data analysis, most respondents are prepared to take out a loan in order to pay for the purchase of an CNG autorickshaw, indicating that they have a significant financial commitment to the transaction. This suggests that the respondents are prepared to assume the financial risk involved in taking out a loan and have a strong need for the rickshaw.

In general, factories with better working conditions and higher worker protection levels had lower union membership rates. In the factories questioned, workers viewed trade unions as an invaluable source of protection and support not available for everyone. They were frequently the primary source of knowledge and guidance for employees, especially with regard to workplace safety and labor rights. This suggests that the respondents' lives are significantly impacted by trade unions. In addition to providing legal support, collective bargaining and representation, and other perks like healthcare and pensions, trade unions offer a wide range of services and advantages. They also give employees a platform to talk about and resolve concerns about their pay and working conditions. This shows that having a trade union can enable

employees to more effectively defend their rights and interests. It also suggests that trade unions can support improved pay and working conditions by encouraging a sense of camaraderie and solidarity among employees.

The price of fuel can significantly affect the research's conclusions. The amount of money drivers may make, the amount they must charge clients to turn a profit, and their level of job satisfaction are all directly impacted by fuel prices. Drivers may have to charge more for their services if gasoline prices are high, which could result in fewer clients and worse job satisfaction. Moreover, drivers may have to put in more hours at work in order to make the same amount of money as a result of the rising prices, which would stress them out at work. On the other hand, drivers can experience an increase in customers, work satisfaction, and earnings if gasoline costs are low.

The main goal of the study should be to comprehend how drivers of CNG auto rickshaws are adjusting to the existence of app-based taxi services. It is important to find out how CNG auto rickshaw drivers view the competition, how they are handling it, and what tactics they are employing to stay ahead of the pack. The study should also examine the financial effects of app-based taxi services on auto rickshaw drivers and the adjustments they have had to make to their business strategies to stay in business. The social ramifications of app-based taxi services should also be taken into account in the research, including the increasing sense of insecurity among auto rickshaw drivers and the effect of the shifting labor market on their means of subsistence. An extensive summary of the social, economic, and psychological effects of app-based taxi services on auto rickshaw drivers in Eranakulam should be given by the findings and conclusion.

the government and non-governmental organizations' assistance programs for auto rickshaw drivers in Eranakulam. However, it seems plausible that these welfare measures exist in light of the project's findings and conclusions. According to the results of this sociological study, most CNG auto rickshaw drivers in Eranakulam are aware of some of the social programs that are accessible to them, like retirement benefits and health insurance. On the other hand, less is known about other crucial welfare programs like financial aid and subsidies. The project's findings may demonstrate the need for greater welfare programs for CNG auto rickshaw drivers, including better pay, more access to healthcare, and better working conditions.

In conclusion, it is evident that the absence of competition among other transportation options, particularly the growth of the Eranakulam infrastructure, presents challenges for the drivers of CNG auto rickshaws operating in the Eranakulam. Based on my research, I've discovered that less individuals are choosing to travel by CNG auto rickshaw, which is causing the number of drivers to decline daily. The competition that CNG autorickshaw drivers must deal with is the primary obstacle to the project's

improved bus service to city findings and conclusion. As a result, less individuals are using CNG autorickshaw services because bus transportation is more effective and less expensive. Drivers of CNG autorickshaws now face less competition for passengers, which lowers their pay. Furthermore, because buses can travel farther, they may pick up passengers from farther away, requiring autorickshaw drivers to travel farther in order to reach passengers.