



# Income Pattern Of E-Rickshaw Drivers Of Raipur: A Socio-Economic Analysis

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**Abstract:** This paper analyses the income patterns, operational costs, and socio-economic status of e-rickshaw drivers in Raipur, Chhattisgarh. Based on primary survey of 100 drivers using a structured questionnaire, the study examines demographic profiles, ownership models, and income patterns. The findings reveal that while e-rickshaws have provided a vital source of employment for the urban poor (migrants and daily wage labourers), the drivers face significant financial stress. A majority of drivers (65%) operate on a rental model, significantly reducing their net savings. The average daily revenue ranges between ₹800–₹1,200, but after deducting operational costs and heavy rental/EMI obligations, the net daily disposable income remains low.

**Keywords:** E-rickshaw drivers, socio-economic status, income patterns, Raipur, job opportunities, urban transportation

## I. INTRODUCTION

### 1.1. Background and Context

Electric auto-rickshaws (e-rickshaws) play a crucial role in transportation in India, especially in smaller and middle size cities like Raipur. E-rickshaws provides more cheaper and environment friendly alternative for travelling also helps in creating job opportunities for weaker section of society and semi-skilled people. The shift from traditional auto-rickshaws to e-rickshaw has significant increase in driver incomes, who drives e-rickshaw in Raipur earning 20% to 40% more than traditional auto-rickshaw drivers. The increasing use of e-rickshaws shows bigger changes in urban transport and economic empowerment. Raipur is growing continuously and it needed a last mile connectivity, the need is fulfilled by e-rickshaw by offering lower cost and increased income opportunity. The economic advantages for e-rickshaw drivers in Raipur is the main reason for success of e-rickshaws. The increased income makes. In traditional auto rickshaws, large portion of drivers income were used in fuel, but the shift towards e-rickshaws required low cost for charging which makes drivers and their families more financial stable. However, the major challenges faced by e-rickshaw drivers in Raipur is, the increasing competition is lowering the individuals earning and high battery replacement and maintenance cost uses their lifetime savings, and this needs to be addressed by policy - makers for making their economic conditions stable. E-rickshaws can grow exponentially and improve lives of many people in Raipur if multiple factors affecting can be dealt positively like continuous government subsidies, helps in getting easy loans, and creating infrastructure for charging infrastructure and educate drivers about financial literacy.

## 1.2. Problem Statement

There is no empirical study on the income patterns and socioeconomic circumstances of e-rickshaw drivers in Raipur, despite their clear financial advantages. It is essential to understand the financial issues, employment difficulties, and livelihood security of this workforce for:

- Designing targeted social protection schemes
- Identifying barriers to sustainable income generation
- Supporting driver welfare and economic stability

## 1.3. Research Objectives

This study aims to:

- i. Examine the demographic and occupational profiles of e-rickshaw drivers in Raipur
- ii. Analyse daily and monthly income patterns across different driver categories
- iii. Identify factors influencing income variation (vehicle ownership, working hours, experience)

## II. LITERATURE REVIEW

1. (*Sharma, 2025*) This study examines the growth of e-rickshaws and its importance in Raipur district with the objective of finding technological gaps and infrastructural gaps, and its impact on the society and economy. The study also tries to find the problems and difficulties faced by e-rickshaw in Raipur. The study shows that e-rickshaws have the potential to reduce the pollution caused in transportation sector and income of the driver can be also improve with e-rickshaws when compared to traditional rickshaws. E-rickshaw adoption is still facing many challenges such as shortage of charging stations, and regulatory compliance. Battery replacement is an very expensive, and lack of maintenance service available. The study recommends that to grow e-rickshaw usage, governments can develop proper regulatory policies and desirable subsidies, more charging infrastructure should develop, and public awareness of e-rickshaw can increase usage. Integration with ride-sharing apps may also boost ease of use. These steps can help e-rickshaws become a reliable element of urban transport.

2. *The Chhattisgarh State Electric Vehicle Policy of, 2022* This policy is a five-year initiative started to promote the Chhattisgarh as a leader of electric vehicle manufacturer and adoption. The policy focuses on reducing pollution, building stronger EV system, and made the target that 15% of all new vehicle registrations will be of electric vehicles by 2027. The policy provides suggestions for financial assistance such as SGST refunds, full road tax exemption for first two years, and purchase incentives like subsidies. It suggest partnerships between the government and private sector for increased EV adoption, along with subsidies, and develop large network of charging stations. A State Electric Vehicle Development Corporation and a Steering Committee has responsibilities for policy adoption. To help sustainable growth, the policy focuses on importance of battery recycling system, encourage research on electric vehicles, improvement of skills, and boost local production.

3. (*Dr. Raisul Bari, 2021*) This study assesses the socio-economic status and health of E-rickshaw drivers in Malda, West Bengal. The study show that above 23.45% of e-rickshaws drivers are struggling with debt of loan, while 51.23% e-rickshaws driver earns between ₹501 and ₹1000 per day. They suffer from health problems. 16.97% suffer from back pain, and 36.11% suffer from respiratory disease due to continue sitting posture and regular exposure to pollution. The majority of drivers belongs to lower-middle-class families who lives in substandard place. E-rickshaws provides affordable and environmental friendly transportation system, but they have major drawbacks like accidents, and higher maintenance costs. To increase the livelihood of drivers' and operational efficiency of e-rickshaws, the study suggests government-subsidized loans, e-rickshaws stations, charging stations, and safety devices.

## III. RESEARCH METHODOLOGY

This study employs a mixed-methods quantitative survey design, utilising structured questionnaires to collect data from e-rickshaw drivers focusing on demographic profile, occupation details, income and expenses details in Raipur. The research combines descriptive statistical analysis with comparative exploration of income variation across different driver, size of sample is 100 e-rickshaw drivers of Raipur city specially including the zone railway station, Jaistambh Chowk, Pandri, Bhatagaon Bus station, Telibandha and

Tatiband, Chhattisgarh and purposive and random sampling from active e-rickshaw drivers operating in Raipur for a minimum of 3 months, and data is collected from face to face interview.

#### IV. FINDINGS AND ANALYSIS

Based on the survey of 100 e-rickshaw drivers in Raipur:

##### 1. Demographic Profile of Respondents

###### 1.1. Age Distribution:

Table 1.1: Frequency of the age of the respondents

Age Group (Years)	No. of Drivers
18-25 years	12
25-35 years	42
35-45 years	28
45-55 years	14
Above 55 years	4
<b>Total</b>	<b>100</b>

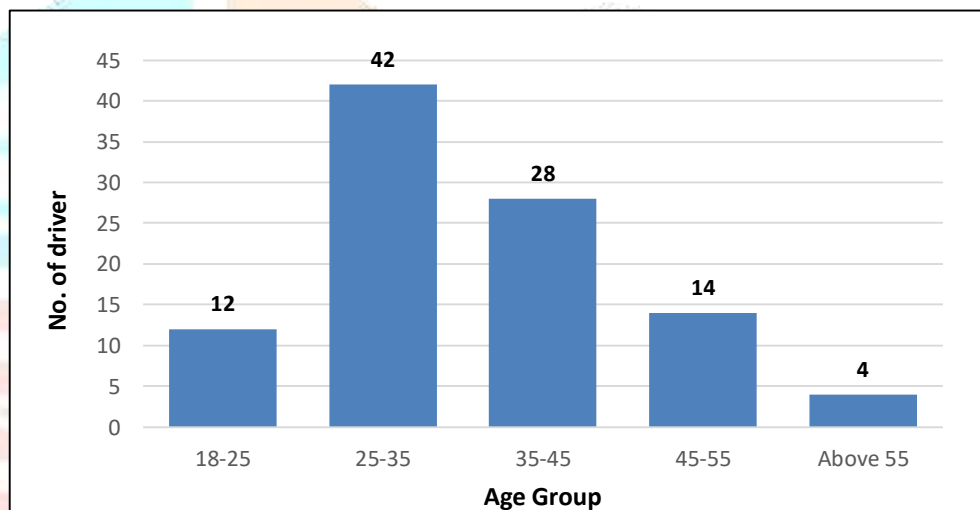


Figure 1.1: Age of the respondents

Table 1.1 and Figure 1.1 indicates the age distribution of respondents, shows that most of the young age group (25- 35 years) 42% works as a driver of e-rickshaws with fewer portion of old age group belongs to above 55 years.

###### 1.2. Residential Status:

Table 1.2: Frequency of the Residential status of the respondents

Residence	No. of Drivers
Raipur local	44
Other District (CG)	40
Other State	16
<b>Total</b>	<b>100</b>

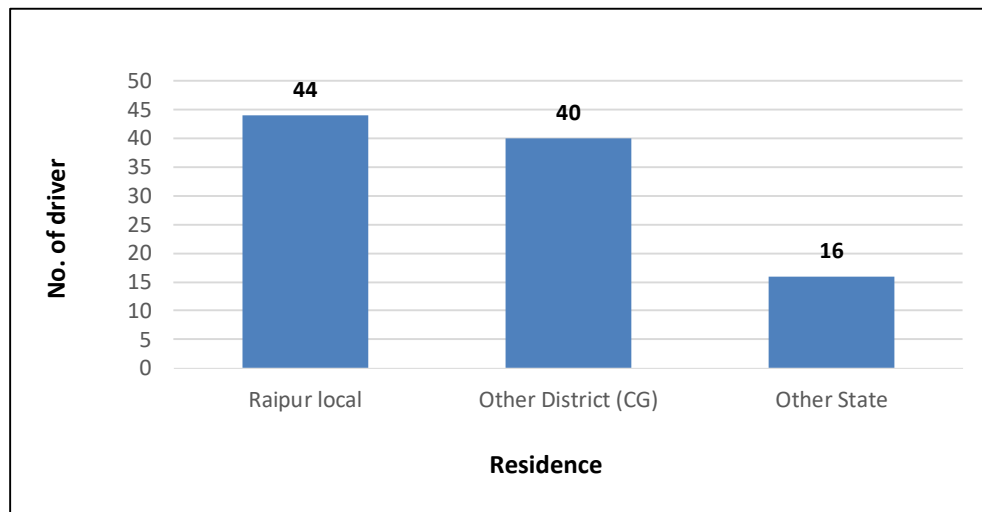


Figure 1.2: Residential status of the respondents

Table 1.2 and figure 1.2 indicates the residential status of E-rickshaws driver. Most of the driver 44% are local residents of Raipur, others belong to outside the Raipur district 40% migrated in search of livelihood opportunity, and few 16% belongs to other states migrated, and working as e-rickshaw's driver.

### 1.3. Educational Background:

Table 1.3: Frequency of the Educational Background of Respondents

Education	No. of Drivers
Illiterate	18
Primary (1-5)	34
Middle (6-8)	26
Secondary (9-10)	16
Higher Secondary and above (above 10th)	6
<b>Total</b>	<b>100</b>

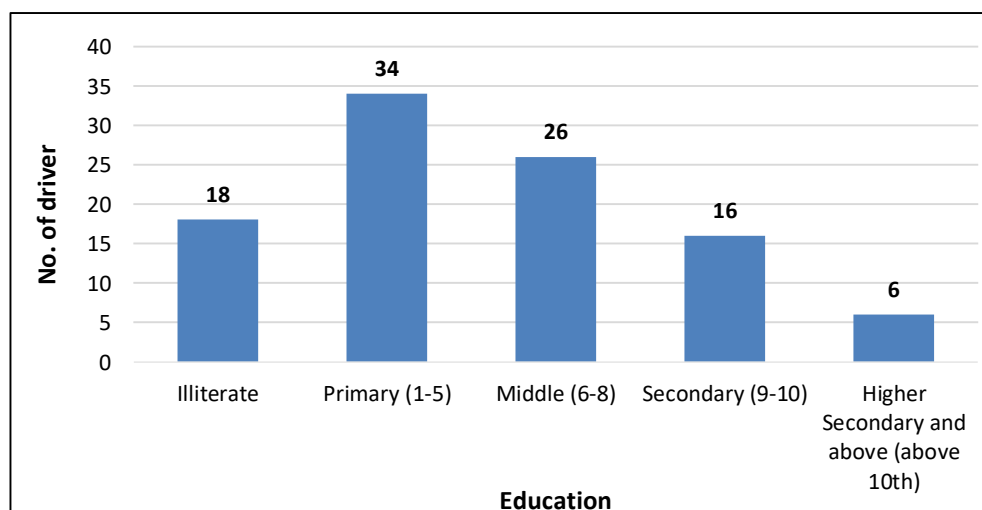


Figure 1.3: Educational Background of respondents

Table 1.3 and figure 1.3 shows that most of the e-rickshaws drivers' education level is primary level (1<sup>st</sup> to 5<sup>th</sup> standards) which is 34% and 26% of drivers belongs to middle class education level. Higher secondary and above this education level 6%, less likely to become e-rickshaw drivers, and this indicate that no formal education is required for driving e-rickshaw.

#### 1.4. Previous Occupation:

Table 1.4: Frequency of Previous Occupation of Respondents

Occupation	No. of Drivers
Daily wages labour	46
Auto/Cycle rickshaw Driver	11
Self-Employment	12
Agriculture	24
Unemployed	7
<b>Total</b>	<b>100</b>

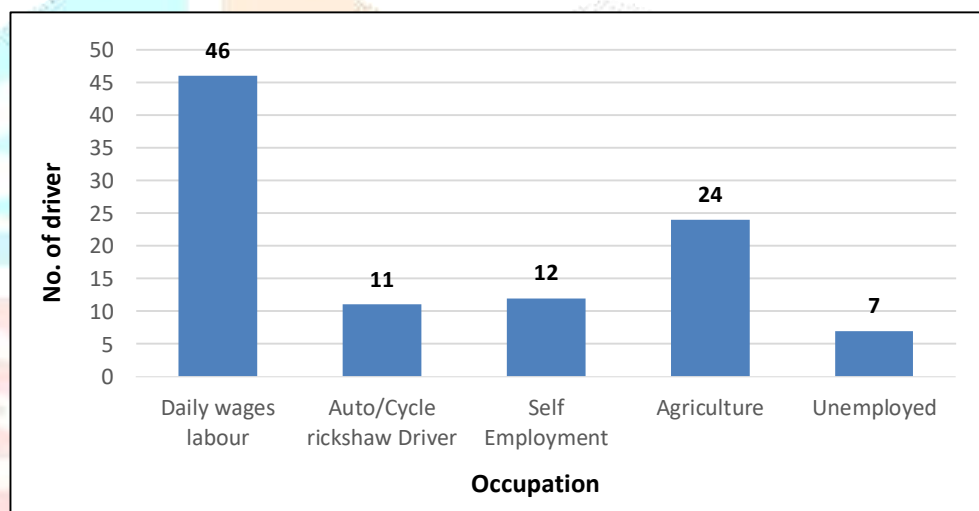


Figure 1.4: Previous Occupation of Respondents

Table 1.4 and figure 1.4 shows that majority of casual daily wages labors 46% shifted from their old occupation. 11% of e-rickshaw drivers are previously auto rickshaw or cycle rickshaw driver, 12% were self-employed, large shift from agriculture sectors 24 % were also noticed, and unemployed 7% choses to become e-rickshaw driver.

## 2. Occupational Characteristics of Respondents

### 2.1. Vehicle Ownership Type:

Table 2.1: Frequency of Vehicle Ownership Type of Respondents

Type	No. of Drivers
Self-Owned (Cash)	42
Self-Owned (EMI)	38
Rented	20
<b>Total</b>	<b>100</b>

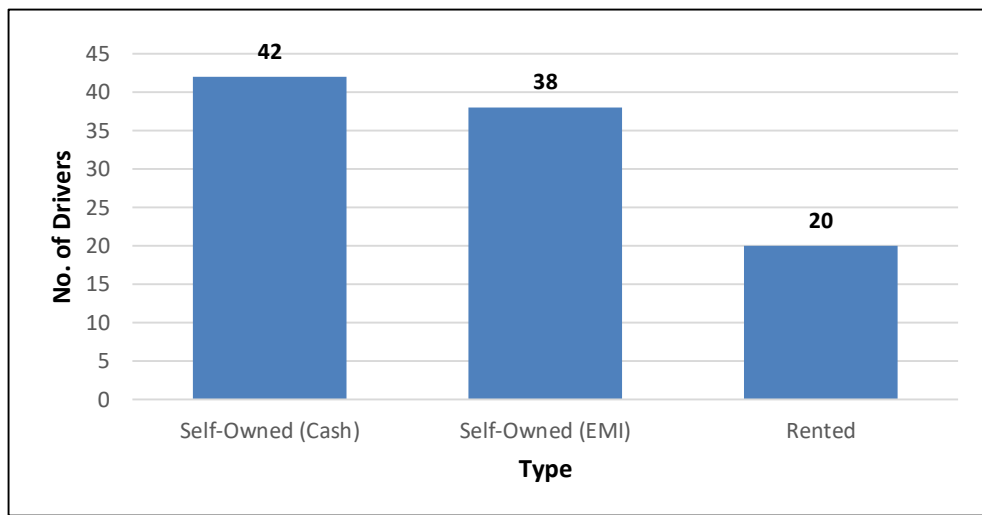


Figure 2.1: Vehicle Ownership type of Respondents

Table 2.1 and figure 2.1 indicated that majority maximum of e-rickshaw driver of Raipur own their- on e-rickshaw which is 80%, amongst then 42% purchased through cash and 38% borrowed loans and purchased e-rickshaw and still paying EMIs, and 20% of e-rickshaw drivers brought on rent and paying daily or monthly rent.

## 2.2. Average Daily Working Hours:

Table 2.2: Frequency of Average Daily Working Hours of Respondents

Hours	No. of Drivers
Below 6 hours	10
6 to 8 hours	40
8 to 10 hours	34
Above 10 hours	16
<b>Total</b>	<b>100</b>

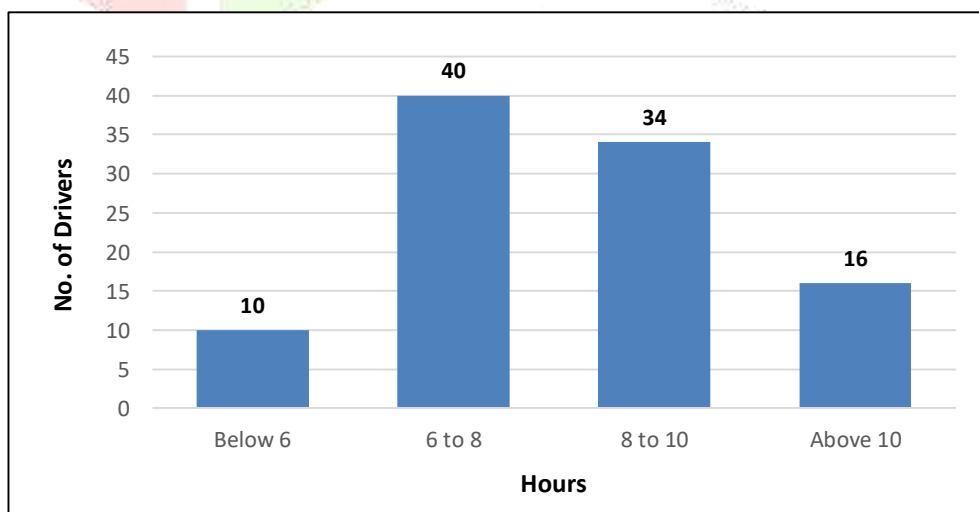


Figure 2.2: Average Daily Working Hours of Respondents

Table 2.2 and figure 2.2 shows that majority of e-rickshaw drivers 75%, work 6-10 hours daily, indicates hard labor daily. Extended working hours above 10 hours worked by 16% shows that drivers trying to maximize income through their additional labor hours.

### 2.3. Working Experience:

Table 2.3: Frequency of Working Experience of Respondents

Years	No. of Drivers
Below 1 years	14
1 to 3 years	38
3 to 5 years	29
Above 5 years	19
<b>Total</b>	<b>100</b>

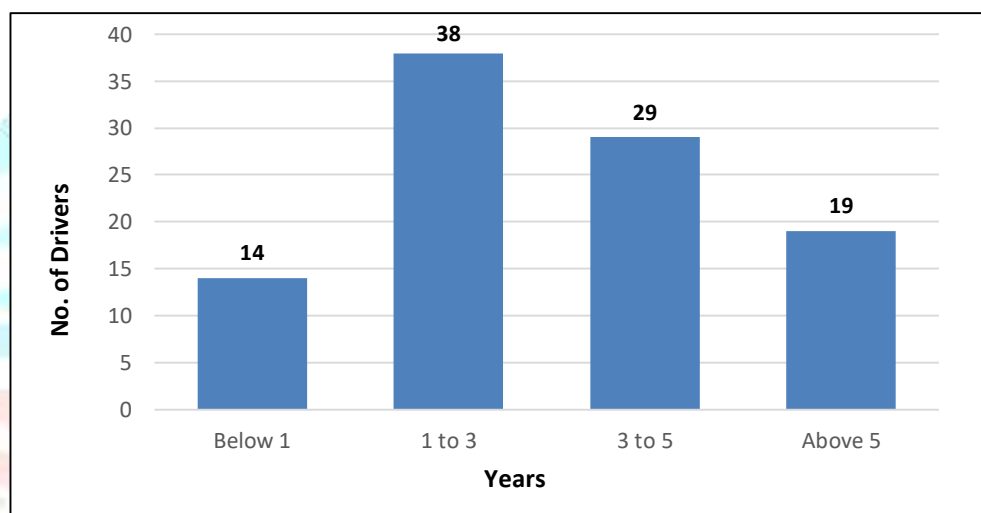


Figure 2.3 Working Experience of Respondents

Table 2.3 and figure 2.3 shows a little portion 20% of new drivers having less than 1 year working experience, reflects easy entry of new workers and growth of the sectors. However, 48% possess above 3 years' of working experience, indicating a stability of drivers' occupation and regular reasonable income.

### 3. Income Analysis

#### 3.1. Daily Income Patterns

##### Average Daily Revenue (Gross Earnings):

Table 3.1: Frequency of Average Daily Revenue (Gross Earnings) of Respondents

Income in ₹	No. of Drivers
Below 600	9
600-800	33
800-1000	39
Above 1000	19
<b>Total</b>	<b>100</b>

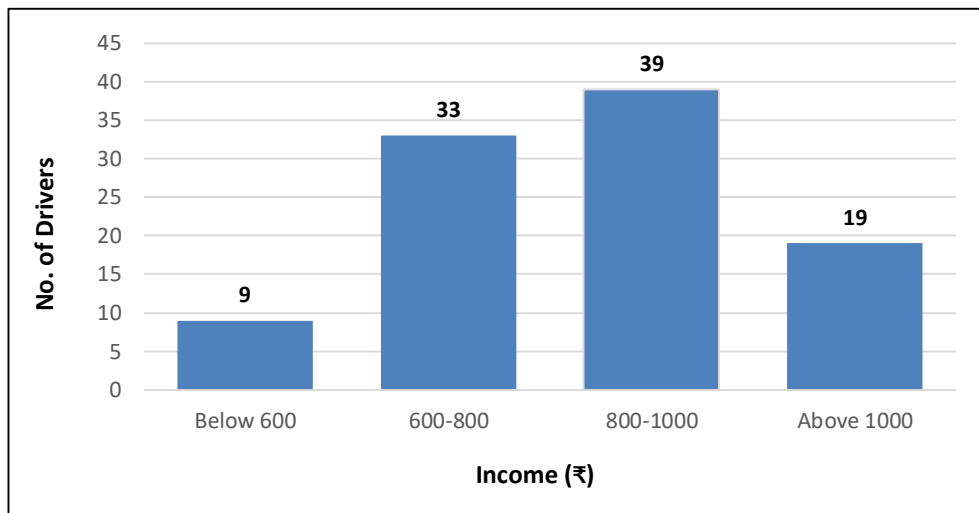


Figure 3.1: Average Daily Revenue (Gross Earnings) of Respondents

Table 3.1 and figure 3.1 show that average daily revenue (gross earnings) of 91% e-rickshaw drivers earns more than ₹ 600 and only 9% e-rickshaw drivers earns less than ₹ 600. This daily revenue may be varied because of working hours, route coverage, location of operation, day of week (higher on weekdays), seasonal variations (lower during monsoon, higher in festive seasons).

### 3.2. Average Daily Expenses:

Table 3.2: Frequency of Average Daily Expenses of Respondents

Expenses in ₹	No. of Drivers
Below 200	8
200-300	16
300-400	63
Above 400	13
<b>Total</b>	<b>100</b>

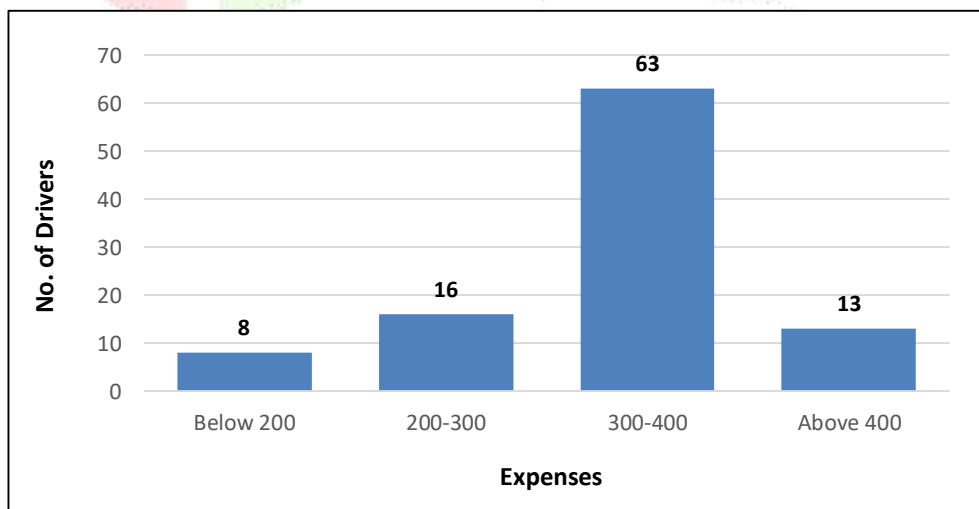


Figure 3.2: Average Daily Expenses of Respondents

Table 3.2 and figure 3.2 indicates that majority of 63% e-rickshaw drivers' average daily expenses is between ₹300-400, including monthly rent or EMI, charging cost and other small expenses, 13% of drivers' daily expenses is more than ₹400 indicates some fines or legal charges, and 24 % of drivers requires below ₹300 indicates operational efficiency and better operational management.

### 3.3.Savings and Financial Stability

#### Monthly Average Savings

Table 3.3: Distribution of Monthly Average Savings of Respondents

Savings in ₹	No. of Drivers
No Saving	15
Below 2000	28
2000-5000	41
Above 5000	16
<b>Total</b>	<b>100</b>

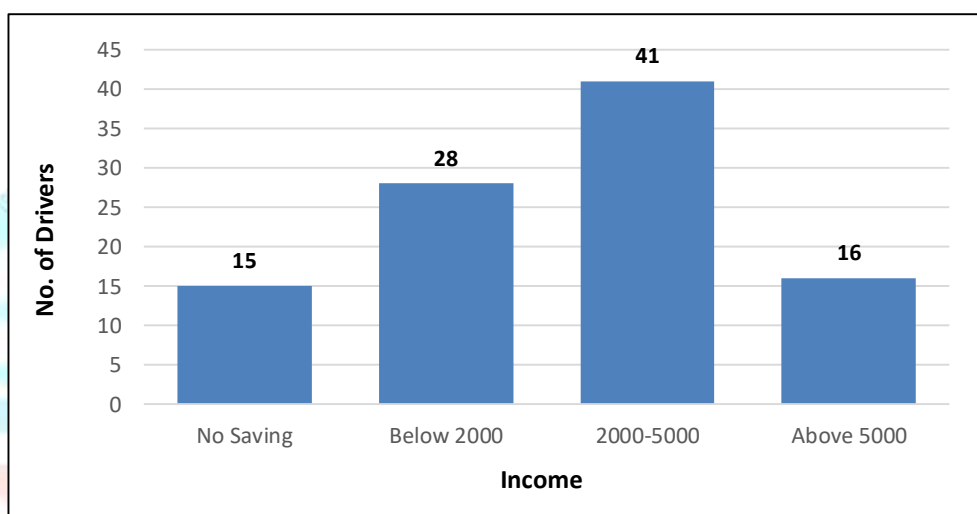


Figure 3.3: Monthly Average Savings of Respondents

Table 3.3 and figure 3.3 shows that 15% of drivers cannot save, spending income entirely on basic expenses and obligations. Majority of drivers 57% achieves to save monthly of more than ₹2,000 indicates little stability and helpful in livelihood. 28% of drivers can only save upto ₹2000.

#### V. SUMMARY

This socio-economic analysis of 100 e-rickshaw drivers in Raipur reveals that majority of e-rickshaws drivers' age belongs between 25 to 45 with smaller portion of above 55 years age. Most of the e-rickshaws drivers' education level is limited to primary and middle class shows less requirement of formal education in this sector. The mix population of driver is noticeable with approximately equal percentage of Raipur local and other district residents, also with 16 % migrated from other state in search of livelihood. This indicates the better and stable condition of e-rickshaw drivers' in Raipur region. Working experience has positive relationship with income and operational management of drivers. Self-owned vehicle drivers earns more income in compared to rented e-rickshaw drivers. Extended working hours generate proportionally higher income but lower working hours generates lesser income. Average daily income ranges from ₹600 to ₹1200 and expenses ₹200 to ₹400 show less savings in long term, and only sufficient for basic livelihood, sometimes unexpected expenses disturb daily lifestyle. 15% of drivers are unable to achieve monthly savings and less financial stability are noticed.

#### VI. LIMITATIONS OF STUDY

100 e-rickshaws drivers are selected at random from Raipur for generalization of whole city, only single period cross-sectional design is used, seasonal variation and long term trends cannot be relevant. Respondents' biasness can influence the study. There is absence of female drivers in respondents.

## VII. CONCLUSION

E-rickshaws is a one of the major sources of employment for informal workers in Raipur, and e-rickshaws drivers' earn stable and decent income. At same time, this sector generates very low income, very low savings, and high sensitivity in operation. Significant enhancement of the drivers living standard can be achieved only through a multi-stakeholder coordination intervention that covers government policy (formalization, social security, ownership facilitation), industry (fair rental terms, quality maintenance), and civil society (cooperatives, financial literacy, health services). Switching from diesel auto rickshaws to electric vehicles is a better initiative for environmental commitment, but a challenge to the drivers' livelihoods. The full potential of sustainable development can be used only if environmental upgrading also leads to better earnings and job security of the drivers and their families, not their exclusion due to more competition and lower profitability.

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