Challenges And Opportunities Of E-Rickshaw Pullers In The District Of Dhubri With Special Focus On Gauripur Town

Hasib Md Iqbal
Assistant Professor
Deptt of Economics
P. B.College,Gauripur

Abstract

Recently E-rickshaws have emerged most cheapest environment friendly mode of transportation system in all most all small town and cities of India. These three wheeler vehicles have gained much popularity among all section of people for its comfortableness and minimum fare is charged from the passenger. From last decades E-rickshaws are becoming one of the smallest travel modes and playing a vital role in mobility of passenger and goods,where other vehicle has not possible to reach the destination, for the passenger in small town like Dhubri and Gauripur. In coming days, E Rickshaws will become a very popular and highly accepted form of transportation system for the locality as alternative career option for unemployed individuals for rural as well as urban people of India. This paper tries to undertake a comprehensive study on the opportunity,challenges and safety measures to be taken for existing E Rickshaw of Dhubri and its adjacent Gauripur town with the help of the primary data obtained from the interview method with the E-rickshaw drivers,discussion held with the passenger, members of the E-rickshaws union and traffic police.

Key Words: E-rickshaw, Eco Friendly,Transportation,Passenger,Connectivity.

Introduction:

E-rickshaws have emerged as one of the most popular, convenient, and eco-friendly modes of local transportation system for any locality.E-rickshaws has been designed to carry up to four passengers, these battery-operated three-wheelers have become a ubiquitous sight across Indian states and other developing nations. In Assam's Dhubri district, especially in Gauripur Town, these vehicles—locally known as Toto or Tom-Tom have gained immense popularity as a cost-effective alternative to traditional pulled rickshaws and fuel-based auto-rickshaws.E-rickshaws provide an affordable and efficient means of transport for both passengers and goods,with some models capable of carrying up to 300 kg. Their low operational cost, less human effort and environment-friendly nature make them a preferred choice for short-distance commutes. This system significantly contributing to reducing vehicular related air pollution from the environment by replacing petrol- and diesel fuel options,which is also expensive and costly. However, the adoption of E-rickshaws comes with its share of challenges, including high maintenance costs and substantial initial investments. Given the increasing dependence on this mode of transport in Gauripur Town, which is a crucial hub within the bustling wholesale market ecosystem of Dhubri, this this study try to explores the challenges and opportunities faced by E-rickshaw pullers in this region.

Study Area :

Gauripur, located at 26.08°N latitude and 89.97°E longitude in the Indian state of Assam, is a small yet significant nestled town in the Dhubri district. With an average elevation of 26 meters (85 feet) above sea level, this town boasts a rich cultural heritage, robust transportation infrastructure, and a growing importance in regional connectivity. Geographical Overview Situated on the eastern bank of the Gadadhar River, Gauripur lies approximately 10 kilometers from Dhubri, the district headquarters. The town's strategic location is further enhanced by its proximity to the Rupsi Airport, adjacent to the village of Khudimari. A notable landmark is the Laokhowa Beel, a picturesque lake to the northwest and Matiabagh, a hilltop to the northeast where the historic Hawakhana Palace, constructed by the Zamindar of Gauripur, stands as a testament to its regal past. Across the Gadadhar River lies Asharikandi, a village of international acclaim for its terracotta artistry.

Demographics and Governance:

As of 2017, the estimated population of Gauripur Town Committee is approximately 33,800. The town is administratively divided into 4 wards, and it will be divided as12 wards in coming days. Elections has been conducted every five years. This structured governance ensures steady development and civic management, contributing to the town's steady progress.

Transportation and Connectivity:

Gauripur is exceptionally well-connected through multiple modes of transportation like railways, roadways, waterways, and airways. The Northeast Frontier Railway network serves the town with several key trains, including:

* DBB-GHY Express (Train No. 15601)

*Silghat Town Rajya Rani Express (Train No. 15417)

* Anand Vihar Terminal Special (Train No. 02525)

* Alipurduar Silghat Rajya Rani Express (Train No. 15418)

* New Bongaigaon Siliguri DEMU Special (Train No. 07526)

* Dhubri Siliguri DEMU Intercity Express (Train No. 75742)

* Kamakhya Special (Train No. 02526)

The Beparipatti Bus Stop, just 0.75 kilometers from the Gauripur Market, is the town's busiest transit hub. This bus station accommodates hundreds of vehicles, including tourist buses, Ultra Buses, and local transport, connecting Gauripur to Upper Assam,Middle Assam and parts of West Bengal such as Cooch Behar, Siliguri, Alipurduar, and Raiganj.

Emerging Role of E-Rickshaws:

With the town's extensive railway and roadway network, E-Rickshaws are gaining prominence as a preferred mode of transportation. These three-wheeled vehicles offer an affordable and efficient solution for short-distance travel, catering to both passengers and goods. Their ability to navigate narrow lanes and provide door-to-door service has made them indispensable in Gauripur's evolving transportation ecosystem.

Cultural and Economic Importance:

Gauripur's blend of historical landmarks, such as the Hawakhana Palace, and thriving local industries, like the terracotta craftsmanship of Asharikandi, contribute significantly to its cultural identity. The town's connectivity facilitates trade, tourism, and cultural exchange, cementing its role as a vital node in the region.

Objectives of the Study:

The current study aims to explore and analyze the role of e-rickshaw services in the transportation framework of Gauripur Town. The specific objectives are outlined below:

i. Assessing the Importance of E-Rickshaw Services

To evaluate the significance of e-rickshaw services in addressing transportation needs in both urban and rural contexts within Gauripur Town. This includes examining their role in providing last-mile connectivity and their impact on local mobility.

ii. Identifying Challenges and Future Prospects for E-Rickshaw Puller.

* To identify the challenges faced by e-rickshaw operators, including economic, social, and operational barriers.

* To assess the future opportunities and potential improvements that could enhance the livelihood and working conditions of e-rickshaw pullers.

iii. Investigating the Future Development and Potential of E- Rickshaw Services

* To explore the scope for future growth and expansion of e-rickshaw services in Gauripur.

* To analyze the potential for integrating e-rickshaws into the town's broader transportation network, ensuring sustainability and affordability for passengers and operators alike.

Methodology :

The methodology for this study combines both primary and secondary data collection methods. Primary data was gathered through direct interactions with e-rickshaw pullers,passengers, and traffic police, using structured questionnaires designed for this purpose. Random sampling was employed to ensure a representative sample of responses. Secondary data was sourced from relevant internet articles, research papers, and government publications, providing additional context on the subject. The questionnaires aimed to capture both qualitative and quantitative information regarding the challenges faced by e-rickshaw operators, passenger satisfaction and the perspectives of traffic authorities. Interviews and field observations further enriched the study, offering deeper insights into the integration of e-rickshaws into the local transport system and their economic viability. This mixed-method approach provides a well-rounded understanding of the role and future potential of e-rickshaw services in Gauripur.

RESULTS AND DISCUSSION:

The E-Rickshaw service in Gauripur Town is an important and evolving part of the transportation landscape. The town has experienced rapid growth, especially in terms of medical and diagnostic services, with numerous clinics, hospitals, and shopping centre emerging. This has led to an increase in population and a corresponding rise in transportation demands, placing pressure on existing urban transport systems. The introduction of E-Rickshaws in Gauripur about 11 years ago addressed this demand for alternative, efficient transportation, especially due to the inadequacy of traditional rickshaws and small public transport. Additionally, the rise in unemployment among educated youth in the region made the E-Rickshaw an appealing option for economic survival, as it provided a source of income for the unemployed, elderly, and other disadvantaged groups. The E-Rickshaw business was inspired by West Bengal, specifically from the Coochbehar district, and it became particularly prominent in Gauripur town, which was the first to introduce this mode of transportation in Assam. Over time, the use of E-Rickshaws spread across Assam, with various districts adopting different names for them,Toto in Dhubri, Kokrajhar, and Bongaigaon,Tom-Tom in Barpeta, Nalbari, Kamrup, and Nagaon,Pil-Pili in Guwahati, and Tut-Tuk in places like Dibrugarh, Sibsagar, and Jorhat.

The E-Rickshaw has become a widely accepted and essential mode of transportation, particularly in the fringe areas of urban centers.These vehicles do not follow fixed routes, but they typically concentrate in key areas of the town, including Gauripur Bazaar bus stand, Gauripur Railway Station, Beparipatti Bus Stand, and around several local landmarks, such as Gauripur Hospital Pvt Ltd, Pramathesh Baruah College, and Happy Convent School.

In summary, the rise of E-Rickshaw services in Gauripur has had a significant impact on the transportation system, addressing both the growing demand for affordable transport and providing a livelihood for the unemployed. This model has since spread across other parts of Assam, reflecting its success and sustainability in meeting local needs.

Findings & Results of E-Rickshaws in Gauripur Town:

i. E-Rickshaw Definition and Legal Framework: An E-rickshaw, as defined by the Motor Vehicles (Amendment) Ordinance, 2015, is a battery-powered three-wheeled vehicle with a power capacity not exceeding 4000 watts, designed to carry goods or passengers. It operates on a demand-responsive basis, without fixed routes, and has become the most significant mode of urban transport in Gauripur Town.

ii. Rapid Growth and Popularity: E-Rickshaws have emerged as the fastest-growing transit system in Gauripur. The absence of adequate alternative transportation has contributed to their popularity. They are affordable, efficient, and cater to both passengers and goods transport needs. The fare is relatively low, making it accessible for many people

iii. Service Area and Operational Patterns: E-Rickshaws operate not only within Gauripur but also from surrounding areas such as Chapgar, Fulkumari, Goi-Bazar, and others. These areas supply passengers to key locations in Gauripur, including hospitals, schools, railway stations, and markets.

During peak hours, E-Rickshaw pullers cater to a large number of passengers. Some even work at night, particularly around Gauripur Railway Station and bus stands, where there is less competition from other mode of transportation system.

iv. Night-Time Operations: Many E-Rickshaw pullers, such as Rajiv Jaman (who has been operating for 7 years), prefer to work at night. During this time, there are fewer E-Rickshaw pullers, and they can charge higher fares due to limited transport options. Notably, passengers from distant places such as Guwahati,Lakhimpur,Tejpur,Dibrugarh, Jorhat and other parts of North East Region, who arrive at the Gauripur Railway Station, often rely on E-Rickshaws to reach their own destinations.

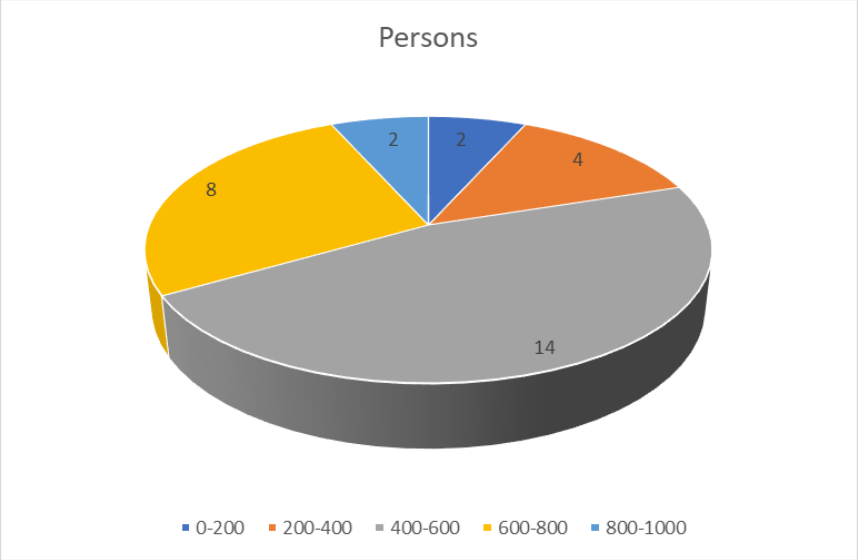
v. Key Benefits of E-Rickshaws:

* Environmentally Friendly: E-Rickshaws are non-polluting, noiseless, and environmentally friendly. They provide a smooth and comfortable journey for passengers, with luxurious seating and strong bodies.

* Demand-Responsive Service: E-Rickshaws offer flexible routes based on passenger demand, making them suitable for door-to-door services. They are also able to reach areas that conventional transport systems cannot access, filling a critical gap in the public transport supply.

* Affordable: E-Rickshaws are cost-effective, charging only Rs. 10 for short trips. For instance, a ride from Gauripur Market to Super Market or from Beparipatti to Gauripur Hospital or Baruapatti to P.B. College,the costs is same. This pricing makes it an attractive option for daily commuting.

Daily Income	Persons	in Degree
0-200	2	24
200-400	4	48
400-600	14	168
600-800	8	96
800-1000	2	24



Challenges Faced by E-Rickshaw Service in Gauripur Town:

i. Traffic Congestion: The growing number of E-Rickshaws, along with two-wheelers and four-wheelers, has led to severe traffic congestion in key areas such as Gauripur market, Beparipatti, Chowrangimore, and Narisamity. The increased number of E- Rickshaws is particularly problematic in areas with limited roadspace, exacerbating the traffic flow. Crowded spots like B.R. Road near Gauripur Market and Fashion Style in Gauripur Bazaar experience significant overcrowding, especially during peak times like Haat Bazaar days (Sunday and Wednesday). Without designated parking spaces, E-Rickshaws are often parked on the roadside, reducing available space for other vehicles, leading to further congestion. Additionally, festivals such as Durga Puja, Eid, and Christmas exacerbate this problem due to the influx of shoppers.

ii. Chances of Accidents: The uncontrolled number of unauthorized E-Rickshaws, coupled with traffic congestion and poor traffic control, increases the risk of accidents. Reckless driving by other vehicles, such as dumper trucks, buses, and two-wheelers, often leads to collisions with E-Rickshaws. These accidents can result in serious injuries or fatalities for E- Rickshaw pullers and passengers. The lack of accountability from the offending drivers, who often do not stop to assist, adds to the severity of the issue and causes financial strain on E-Rickshaw pullers families.

iii. Discourteous Behavior of E-Rickshaw Drivers: In some instances, E-Rickshaw drivers exhibit rude and discourteous behavior towards passengers, discoloration the image of the service. Such conduct negatively impacts the overall passenger experience, especially when some drivers display an inhuman attitude. This behavior affects not only the passengers but also the reputation of other, more polite E-Rickshaw pullers, leading to dissatisfaction within the community.

iv. Difficulty with High Elevation Routes: E-Rickshaws are not powerful enough to handle steep or elevated areas, which can pose a challenge for both the driver and passengers. In such areas, E-Rickshaw drivers may struggle to reach higher ground, leading to added stress on the vehicle and causing discomfort for passengers, who may even need to get off and walk in some cases.

v. Flood-Related Challenges: During the monsoon season, areas such as NS Road, Hari Sabha Road, Chowk Bazar, DD Road, and Kalibari in Dhubri town suffer from regular flooding. This significantly disrupts E-Rickshaw services, as the stagnant floodwaters make it difficult or impossible for drivers to travel from one area to another. This recurring issue during the rainy season severely impacts the livelihoods of E-Rickshaw pullers and the daily transportation of passengers.

Opportunities:

i. Affordability and Demand

E-rickshaws are a cost-effective option for passengers and goods transportation. With lower fares than auto-rickshaws, they cater to a diverse demographic, including daily commuters, students, and small-scale traders. In Gauripur, where thousands of people visit daily for business activities, the demand for short-distance transport is consistently high, offering a steady income stream for E-rickshaw operators.

ii. Eco-Friendly Solution

As a fuel-free mode of transport, E-rickshaws contribute to reducing carbon emissions and air pollution. This aligns with global efforts to combat climate change and makes E-rickshaws a sustainable alternative in regions like Dhubri, where environmental concerns are becoming increasingly significant.

iii. Employment Generation

E-rickshaws create job opportunities for many individuals, particularly those with limited educational qualifications or professional skills. In Gauripur, E-rickshaw driving has become a viable livelihood for unemployed youth and migrants seeking economic stability.

iv. Support for Local Businesses and Farmers

The ability of E-rickshaws to carry goods makes them invaluable to local businesses. They are widely used as carrier vans for transporting fresh vegetables and produce from nearby villages to local markets, ensuring a

seamless supply chain. This provides farmers and small traders with an affordable and efficient transportation option, boosting their income and reducing logistical challenges.

v. Multi-Functional Usage

E-rickshaws serve diverse roles beyond passenger transport. They are increasingly being used as:

***School Vans:** Safely transporting children to and from schools in small towns and rural areas, offering an affordable option for parents.

***Mobile Shops:** For individuals without fixed premises, E-rickshaws become movable shops. Vendors use them to sell items like Vegetable, clothing, groceries, or other household goods, bringing their products directly to customers home.

* **Food Vendors**: Many entrepreneurs operate E-rickshaws as food carts, selling snacks, beverages, and street food. This creates additional income opportunities, especially in busy areas like marketplaces or near schools.

vi. Reduced Fuel Dependency

With rising fuel prices, E-rickshaws offer a significant financial advantage by reducing dependency on diesel and petrol. Their battery-powered system is economical and well-suited for the local transportation needs of small towns like Gauripur.

vii. Economic Empowerment

For individuals with limited resources, E-rickshaws provide a low-barrier entry point into entrepreneurship. Drivers, vendors, and other users of E-rickshaws can gain financial independenceand improve their quality of life by utilizing these vehicles effectively.

Suggestions for Improving E-Rickshaw Service in Gauripur Town:

i. Integration into the Urban Transport System: E-Rickshaw service should be considered a vital component of the urban transport system in Gauripur. The Municipal Board should officially recognize its role and treat it as a legitimate and essential mode of transportation, rather than viewing it as a disruptive factor.

ii. Improvement in Service Quality and Safety: The quality of the E-Rickshaw service, particularly concerning safety, should be enhanced. Safety measures should be prioritized, including proper vehicle maintenance, the installation of safety features and the enforcement of driver behavior standards. Drivers should be trained to ensure that their attitude towards passengers is polite and respectful, fostering a more pleasant and secure travel experience for all.

iii. Control Over Non-Registered E-Rickshaws: The uncontrolled proliferation of non-registered E-Rickshaws should be addressed. The town authorities should enforce strict regulations on E-Rickshaw registration to ensure that only licensed vehicles operate, thereby reducing overcrowding and improving service quality.

iv. Route Regulation and Limited Number of E-Rickshaws: E-Rickshaw movement should be regulated more effectively within the town. Fixed routes should be established based on passenger demand and road capacity, and a limited number of E-Rickshaws should be permitted to operate along these routes. This would help reduce traffic congestion and ensure a more organized transport system.

v. Road Maintenance and Improvement: Narrow or poorly maintained roads should be repaired and properly maintained to facilitate smoother and safer travel for E-Rickshaws. Proper road conditions are essential for the safe operation of these vehicles and to ensure a comfortable ride for passengers.

vi. Improved Traffic Control System: The town's traffic management system needs to be more organized and scientifically managed to ensure smoother traffic flow. This includes the installation of more effective traffic signals, better coordination between different modes of transportation, and the enforcement of traffic rules to avoid bottlenecks and accidents.

vii. Designated Parking and Stand Locations: Designated parking areas or fixed stands should be established for E-Rickshaws to prevent them from gathering on the streets and obstructing traffic. Clear parking zones

would ensure that E-Rickshaws are parked in an organized manner and that road space remains available for other vehicles.

viii. Control During Peak Times and Festivals: During peak times, such as festivals (Durga Puja, Eid, Diwali, etc.), the movement of E-Rickshaws in crowded areas like Gauripur Bazar should be controlled more strictly. This would reduce congestion and ensure that traffic flow is not disrupted, particularly during high-traffic days.

Additional Suggestion: Government-Provided Loans for Aspiring E-Rickshaw Operators:

The government should consider providing accessible and low-interest loans to economically disadvantaged individuals who are interested in starting their own E-Rickshaw business. This would

support those who are unable to afford the upfront costs of purchasing an E-Rickshaw and provide them with an opportunity to earn a livelihood. Key points to consider:

i. Empowering the Underprivileged: Offering financial support through government loans would empower the poor, especially unemployed youth, to become entrepreneurs. This initiative could help improve their economic conditions by providing a sustainable source of income through operating E-Rickshaws.

ii. Low-Interest Loans: The government could set up a special loan scheme with low interest rates and flexible repayment terms, specifically for people looking to buy E-Rickshaws. This would make it easier for individuals from lower-income backgrounds to enter the market and become part of the transportation ecosystem.

iii. Subsidized Schemes: In addition to loans, the government could offer subsidies or grants for purchasing E-Rickshaws, making the initial investment more affordable for those in need. Such financial assistance would encourage more individuals to start their businesses, thus increasing the number of operators and creating more job opportunities.

iv. Training and Support: Along with the loan scheme, the government should also consider providing training programs for aspiring E-Rickshaw operators. These programs would help them learn the necessary skills to operate the vehicles efficiently, handle customers, and maintain the E-Rickshaws properly.

v. Boosting Employment: By providing these loans, the government can also help reduce unemployment in the region. As more individuals join the E-Rickshaw service, it would create a larger pool of workers, driving the local economy and enhancing the overall transport infrastructure.

Conclusion: The transportation system in India has long been rooted in the outdated models developed during the colonial era, which have not evolved sufficiently to meet the demands of modern urban growth (Jain and Khare, 2015). As a result, many urban centers in the country, including Gauripur, continue to face significant transport-related issues. The rapid urban development, coupled with increasing environmental concerns, has created an urgent need for eco-friendly and sustainable transportation options. In this context, E-Rickshaws, as bio-friendly and energy-efficient vehicles, hold great potential to serve the transportation needs of the towns like Gauripur in the near future. These vehicles, with their low environmental impact, can help address urban transport problems while providing an affordable and accessible means of transportation for the community. With proper planning, regulation, and management, E- Rickshaws can become an inseparable part of the urban transport system, alleviating the pressures on traditional modes of transportation. The inclusion of E-Rickshaws in the transport network of Gauripur could significantly contribute to solving the town's mobility challenges, reduce traffic congestion and also provide employment opportunities to local unemployed youth, especially those from underprivileged backgrounds. Ultimately, the integration of eco-friendly E-Rickshaws into the urban transport system would not only address transportation issues but also contribute to a cleaner, greener, and more sustainable urban environment in Gauripur.

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