EMERGENCE OF TRICYCLE POPULAR MEANS OF URBAN TRANSPORTATION AND ITS CONTRIBUTIONS IN ASABA METROPOLIS

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ABSTRACT

The rapid proliferation of tricycles (popularly known as "keke" or "keke napep") as a mode of urban transportation in Asaba Metropolis has brought about significant changes in the city's transportation landscape. While this mode of transportation has gained popularity among commuters and drivers alike, it has also raised several critical issues and challenges that warrant investigation. One of the primary problems associated with the emergence of tricycles in Asaba Metropolis is the exacerbation of traffic congestion. The increasing number of tricycles on the roads has led to concerns regarding traffic flow and road efficiency. With the surge in tricycle operations, there is a growing concern about safety on the roads. Issues such as accidents, reckless driving, and compliance with traffic regulations have come to the forefront. However, in its realization of the important role transportation plays in nation building that the Delta state government in 2008 introduced tricycle as a mode of urban transportation in Asaba metropolis. This study examines the growing concern in the use of tricycle (popularly known as Keke) as predominant means of urban transportation and its contribution in the Metropolis. Primary and secondary data were used and simple random sampling was also employed in selecting the respondents. A semi-structured interview was conducted with Tricycle registered Association. The study population was conducted with tricycle registered Association. The study population was 329 in which 120 were tricycle operator, 134 was passengers and 50 were regulatory agency personnel. The result reveals that almost 60% of the operators acquired their tricycle through a hire purchase and 72% have daily income 1100-3500 and in some occasions go beyond which cater for their daily needs and savings accordingly. The study further revealed that 87% of the tricycle operators considered tricycle operation as a good source of employment and sustenance of livelihood. It was also revealed that 59% of the traffic congestion and movement constrain on the road networks in the metropolis was caused by tricycle operations. Therefore, the study recommends that, Asaba Road Traffic Agency should intensify their operation on more congested flying route especially around the CBD to ease control and road traffic and regulations should be enforced. These will reduce constraints in movement and other associated social vices in the study area.

Keywords: Re-emergence, Tricycle, Urban Transportation and Asaba Metropolis
1.0 Introduction

The economic and financial sustainability of cities, whether in developed or developing countries, is closely intertwined with the functionality of their transportation systems. However, it is important to acknowledge that urban transportation systems in industrialized countries differ significantly from those in developing nations. Therefore, strategies implemented in developed countries to improve transportation systems may not be directly applicable or effective in developing countries, including those in sub-Saharan Africa (Osei-Kyei & Chan, 2016). The rapid growth of urban centers around the world has resulted in a surge in demand for efficient and sustainable transportation systems. In many cities, the prevailing mode of transportation, such as private cars or buses, has been unable to adequately address the challenges posed by increasing traffic congestion and limited road infrastructure (Andoh, 2014; Moreno, 2023). As a result, alternative modes of transport are being explored and reintroduced to meet the evolving needs of urban commuters. Consequently, there is a need to gather information that can be utilized to formulate appropriate and efficient urban transportation policies that are specifically relevant to the context of sub-Saharan Africa (Osula, 2002).

The emergence of tricycles as a popular means of urban transportation has garnered significant attention in recent years. In many cities around the world, tricycles have experienced a resurgence, challenging the dominance of traditional modes of transport such as cars and buses (Bahrami & Rigal, 2022). This shift can be attributed to various factors, including their affordability, availability, flexibility, and unique contributions to the urban transportation landscape (Ipingbemi & Adebayo, 2016). Tricycles offer a more cost-effective alternative, both for vehicle owners and passengers. They are relatively inexpensive to purchase, operate, and maintain, making them accessible to a wider range of commuters, including low-income individuals (Sietchiping et al., 2012).

The availability of tricycles also contributes to their growing popularity. Compared to other modes of transportation, tricycles are more easily accessible, especially in densely populated urban areas with limited road infrastructure. They can navigate through narrow streets and congested areas that larger vehicles may struggle to reach. This accessibility makes tricycles a convenient mode of transportation for short-distance travel, last-mile connectivity, and accessing areas where public transportation options are limited.

Moreover, the flexibility of tricycles adds to their appeal. Tricycles are versatile vehicles that can be adapted for various purposes. They can be used for both passenger transportation and small-scale cargo delivery, providing a multi-functional solution to urban transportation needs. This flexibility not only caters to the diverse demands of commuters but also creates economic opportunities for tricycle operators, who can utilize their vehicles for various income-generating activities beyond passenger transport (Sietchiping et al., 2012).

In terms of their contributions to the urban transportation landscape, tricycles have proven to be effective in mitigating traffic congestion. With their smaller size and maneuverability, they can navigate through congested roads more efficiently, reducing traffic bottlenecks and improving overall traffic flow. By alleviating congestion, tricycles help reduce travel...
time for commuters and contribute to a more efficient urban transportation system (Gumasing et al., 2022; Galyuon, 2019).

Furthermore, tricycles have demonstrated potential benefits in terms of environmental sustainability. As electric-powered tricycles become increasingly prevalent, they offer a greener alternative to conventional combustion engine vehicles. Electric tricycles produce lower emissions, reducing the overall carbon footprint associated with urban transportation. Their adoption can contribute to improved air quality, reduced noise pollution, and a more environmentally friendly urban environment.

Additionally, the emergence of tricycles has contributed to employment generation and economic empowerment, particularly in areas where formal job opportunities may be scarce (Ehebrecht et al., 2018). Tricycle operations have created job opportunities for vehicle owners, drivers, mechanics, and other support services. This has not only provided individuals with a means of livelihood but has also contributed to the local economy through increased spending power and entrepreneurship.

Therefore, the emergence of tricycles as a popular means of urban transportation is a significant trend that has brought about several contributions and advantages. Their affordability, availability, flexibility, ability to mitigate traffic congestion, potential for environmental sustainability, and role in job creation all make them a compelling mode of transportation in many urban areas. Understanding the factors driving their resurgence and their positive impact on urban transportation systems can inform policymakers and transportation authorities in effectively integrating tricycles into the broader urban mobility framework.

Through a comprehensive review of existing literature, statistical data, and interviews with key stakeholders, this study will provide valuable insights into the benefits and challenges associated with tricycles as a mode of urban transportation in Asaba Metropolis. By analyzing the current state of tricycle usage and its impact on the urban landscape, policymakers, urban planners, and transportation authorities can gain a better understanding of how to integrate tricycles into the broader urban transportation framework effectively.

This paper focuses on the re-emergence of tricycles as a popular means of urban transportation and their contributions in the context of Asaba Metropolis. Tricycles, commonly referred to as "trikes" or "keke" in some regions, are three-wheeled vehicles powered by a small gasoline or electric engine. Historically, tricycles were widely used for various purposes, including passenger transportation, but were gradually replaced by motorbikes, cars, and other modes of transport.

However, in recent years, tricycles have experienced a resurgence in popularity, particularly in urban areas facing transportation challenges (Moreno, 2023). Asaba Metropolis, the focus of this study, represents an interesting case where tricycles have gained significant traction as a viable mode of urban transportation. The unique geographical and socio-economic characteristics of Asaba, combined with its growing population, have led to an increased reliance on tricycles for daily commuting.

This paper aims to shed light on the factors contributing to the re-emergence of tricycles in Asaba Metropolis, as well as
the implications and contributions they have made to urban transportation in the region. It will delve into the socio-economic factors that have shaped the rise of tricycles, including affordability, availability, and flexibility. Additionally, it will explore the impact of tricycles on traffic congestion, environmental sustainability, employment generation, and overall mobility within the city. Furthermore, this paper aims to contribute to the growing body of knowledge surrounding the re-emergence of tricycles as a popular means of urban transportation in Asaba Metropolis. By understanding the factors that have facilitated their resurgence and assessing their contributions to the urban transportation landscape, we can gain valuable insights into how tricycles can be effectively harnessed to enhance the overall efficiency, sustainability, and accessibility of urban transportation systems in similar contexts.

2.0 Literature Review

Urban transportation in sub-Saharan Africa encompasses various aspects such as rapid population growth, accelerated urbanization, leading to increased vehicular activities, high rates of private car ownership, and inadequacies in public transportation networks. Additional factors include road conditions characterized by potholes and debris, widespread disregard for traffic laws including reckless driving, limited road infrastructure, poorly synchronized traffic signals, the presence of vendors and street traders on roadways, traffic checkpoints that disrupt the flow of traffic, and frequent accidents and vehicle breakdowns (Porter, 2014; Afukaar et al., 2019; Oviedo et al., 2022).

Sub-Saharan Africa currently experiences the highest population growth rate (PGR) among all global regions, standing at 3% (Mursheed et al., 2022). This rapid growth is accompanied by a significant influx of rural-to-urban migration, leading to the expansion of peripheral urban settlements and concentrated government economic programs in urban areas (Woltjer, 2014). As a result, urban population growth rates in the region surpass the overall PGR by a substantial margin (Schiavina et al., 2022). Sulemana et al., (2019) observed that although Africa has the lowest urbanization rate worldwide, it has the highest rate of urbanization. This rapid urbanization contributes to increased travel activities as more people and goods are transported within limited geographical spaces.

While the level of car ownership in developing countries remains relatively low, the annual growth rate of car ownership is substantial, primarily concentrated in urban areas. For instance, approximately 50% of private automobiles in Kenya are found in Nairobi, the capital city (Raje et al., 2018). Additionally, Ibitayo (2012) noted that private cars account for as much as 81% of vehicular traffic in Lagos. Notably, the growth rate of car ownership in urban sub-Saharan Africa is expected to continue due to factors such as convenience, comfort, safety, reliability, and the associated prestige or status linked to car ownership (Acheampong et al., 2023).

The roadways in urban areas of sub-Saharan Africa not only suffer from a significant lack of adequacy but also face poor maintenance, resulting in the presence of potholes and debris. These conditions compel motorists to exercise caution and slow down, consequently disrupting the flow of traffic (Dano et al., 2020). Furthermore, Wanjala (2020) highlights that the capacity of roadways and subsequent traffic flow are frequently compromised by vendors, hawkers, and

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street traders who occupy spaces designated for vehicles and pedestrians.

Another characteristic of urban transportation systems in sub-Saharan Africa is the prevalence of private vehicles, which often carry minimal passengers compared to commercial vehicles (Bruwer et al., 2023). For instance, van Vliet and Kinney (2007) found that in Nairobi, Kenya, private vehicles accounted for 64% of vehicular traffic but carried only 22% of the passengers, while commercial vehicles made up 36% of the vehicular volume but carried 78% of the city’s passengers.

Another significant element identified in past research pertaining to the study area involves conflicts over jurisdictional control between various traffic law enforcement agencies, traffic wardens, and traffic police (Ibitayo, 2012). Traffic wardens are employed by states to manage traffic on state roadways, while police are employed by the federal government with broader responsibilities. Conflicts and lack of cooperation often arise when both the police and traffic wardens work together at checkpoints. Furthermore, corruption allegations have been made against these law enforcement agencies, accusing them of accepting bribes from both private and commercial drivers under the guise of checking vehicle registration papers and enforcing traffic law violations (Ibitayo, 2012). The checkpoint activities themselves are often time-consuming, impeding the flow of traffic as all vehicles are required to come to a halt for these checks.

3.0 Study Area and Methodology

The study was conducted in Asaba metropolis, Delta State, Nigeria. Asaba metropolis was selected as the study area due to the introduction of tricycles as a mode of urban transportation by the Delta State government in 2008.

Primary data were collected through a semi-structured interview conducted with the Tricycle Registered Association. The interview aimed to gather information on various aspects related to tricycle operation and its impact on the metropolis. The interview questions were designed to obtain insights into tricycle acquisition methods, daily income of operators, and their perception of tricycle operation as a source of employment and livelihood.

Secondary data were collected from relevant sources such as government reports, academic articles, and statistical databases. These sources provided information on transportation policies, urban development plans, and existing studies related to tricycles and urban transportation.

The study population consisted of individuals associated with tricycle operations in Asaba metropolis. This population included tricycle operators, passengers, and regulatory agency personnel.

A total of 329 individuals were randomly sampled from two major junctions in Asaba (Koka Junction and Ibusa Junction). This sample was distributed as follows: 120 tricycle operators, 134 passengers, and 50 regulatory agency personnel. Simple random sampling was employed to select the respondents from the study population. This technique ensured that everyone in the population had an equal chance of being included in the sample, increasing the representativeness of the findings.

The collected data, both primary and secondary, were analyzed using appropriate statistical techniques. Descriptive statistics such as frequencies and percentages were calculated to summarize the data and determine key findings.
4.0 Results and Discussion

Table 1: Tricycle Acquisition:

<table>
<thead>
<tr>
<th>Result</th>
<th>Frequency</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>Acquired tricycle through hire purchase</td>
<td>72</td>
<td>60%</td>
</tr>
<tr>
<td>Acquired tricycle through other means</td>
<td>48</td>
<td>40%</td>
</tr>
<tr>
<td>Total</td>
<td>120</td>
<td>100%</td>
</tr>
</tbody>
</table>


The results indicate that the majority of tricycle operators in Asaba metropolis, accounting for 60% of the respondents, acquired their tricycles through hire purchase. Hire purchase is a financing method where the operator makes regular payments over time until the full cost of the tricycle is covered. This finding suggests that hire purchase arrangements are a popular option for individuals interested in becoming tricycle operators, potentially due to the relatively lower upfront cost compared to outright purchase.

On the other hand, 40% of the respondents reported acquiring their tricycles through other means. While the study does not provide specific details about these alternative methods, they could include options such as personal savings, loans from financial institutions, or assistance from family and friends. This finding indicates that there is a diversity of approaches to tricycle acquisition beyond hire purchase, highlighting the different financial circumstances and resources available to operators.

Table 2: Daily Income of Tricycle Operators:

<table>
<thead>
<tr>
<th>Income Range</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1100-3500</td>
<td>86</td>
<td>72%</td>
</tr>
<tr>
<td>Below 1100</td>
<td>22</td>
<td>18%</td>
</tr>
<tr>
<td>Above 3500</td>
<td>12</td>
<td>10%</td>
</tr>
<tr>
<td>Total</td>
<td>120</td>
<td>100%</td>
</tr>
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The results show the income range of tricycle operators in Asaba metropolis. According to the findings, the majority of tricycle operators, accounting for 72% of the respondents, have a daily income falling within the range of 1100-3500. This income range is considered moderate and indicates that a significant portion of tricycle operators earn enough to meet their daily needs and expenses.

Furthermore, 18% of the respondents reported having a daily income below 1100. This income category represents operators potentially facing challenges in meeting their basic needs and making ends meet. The study does not provide specific details about the reasons for this lower income range, but it could be influenced by factors such as the number of trips made per day, competition, or other economic factors.

On the other hand, 10% of the respondents reported having a daily income above 3500. This income range represents tricycle operators who earn a relatively higher income. These operators may experience better financial stability and
have the potential to save or invest a portion of their earnings.

The findings on income range highlight the diversity of income levels among tricycle operators in Asaba metropolis. The variation in income can be influenced by various factors, including the number of working hours, trip frequency, fares charged, and operating costs.

Understanding the income distribution among tricycle operators is important for policymakers and stakeholders to assess the economic conditions and financial well-being of this group. It can also help in identifying potential areas for intervention, such as providing training or resources to improve income-generating opportunities or implementing policies that support fair fares and income sustainability (Cahigas et al., 2022).

Table 3: Employment and Livelihood:

<table>
<thead>
<tr>
<th>Perception of Tricycle Operation as a Source of Employment and Sustenance of Livelihood</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Considered tricycle operation as a good source of employment and sustenance</td>
<td>104</td>
<td>87%</td>
</tr>
<tr>
<td>Did not consider tricycle operation as a good source of employment and sustenance</td>
<td>16</td>
<td>13%</td>
</tr>
<tr>
<td>Total</td>
<td>120</td>
<td>100%</td>
</tr>
</tbody>
</table>

*Source: Researcher’s Field Work, 2023.*

The results indicate that a significant majority, 87% of the respondents, considered tricycle operation as a good source of employment and sustenance of livelihood in Asaba metropolis. This finding highlights the positive perception of tricycle operation as a means of earning a living and supporting one's livelihood among the operators.

Tricycle operation offers employment opportunities for individuals who may not have access to formal employment or who seek flexible working arrangements. It allows individuals to become self-employed and generate income by providing transportation services to passengers. The fact that a high percentage of respondents perceive tricycle operation as a good source of employment indicates that it is viewed as a viable option for earning a living in the metropolis.

Furthermore, the positive perception of tricycle operation as a means of sustenance suggests that tricycle operators believe that their earnings from this occupation are sufficient to meet their daily needs and support their livelihoods. This perception can be influenced by factors such as the demand for transportation services, the fare structure, and the operators' ability to effectively manage their finances.

However, it is worth noting that 13% of the respondents did not consider tricycle operation as a good source of employment and sustenance. The study does not provide specific reasons for this perception, but it could be influenced by factors such as low income levels, competition, operational challenges, or personal circumstances.

Understanding the perception of tricycle operation as a source of employment and livelihood is important for policymakers, as it can inform decisions related to supporting and improving the tricycle industry (Cueto et al., 2022). It can help identify areas where interventions may be needed, such as providing training and capacity-building programs, improving...
working conditions, addressing income disparities, or implementing policies that enhance the overall sustainability of tricycle operation.

Traffic Congestion and Movement:

<table>
<thead>
<tr>
<th>Table 4: Impact of Tricycle Operations on Traffic Congestion and Movement</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tricycle operations caused congestion and movement constraints</td>
<td>109</td>
<td>59%</td>
</tr>
<tr>
<td>Tricycle operations did not cause significant congestion</td>
<td>75</td>
<td>41%</td>
</tr>
<tr>
<td>Total</td>
<td>184</td>
<td></td>
</tr>
</tbody>
</table>

*Source: Researcher’s Field Work, 2023*

The findings suggest that tricycle operations have a notable impact on traffic congestion and movement in Asaba metropolis. According to the study, 59% of the respondents (passengers and regulatory personnel) reported that tricycle operations caused congestion and movement constraints in the area.

Tricycles, being smaller in size compared to cars or buses, are often more maneuverable in congested urban areas. However, the high density of tricycles on the roads, especially during peak hours, can contribute to traffic congestion and hinder the smooth flow of vehicles. The findings imply that the presence and operations of tricycles have led to increased traffic congestion and constraints on movement in the metropolis.

On the other hand, 41% of the respondents did not perceive tricycle operations as causing significant congestion. This suggests that these respondents did not consider tricycles to be a major contributing factor to traffic congestion in Asaba metropolis. It is possible that these individuals attributed the congestion to other factors such as the overall volume of vehicles, road infrastructure, or other modes of transportation.

Understanding the impact of tricycle operations on traffic congestion is crucial for urban planning and transportation management (Cueto, 2022). Congestion not only affects the efficiency of transportation but also has broader implications for the environment, air quality, and overall quality of life for residents.

5.0 Discussion of Findings

The results indicate that a significant proportion of tricycle operators (approximately 60%) acquired their tricycles through hire purchase agreements. This suggests that many operators may not have had access to the necessary capital to purchase a tricycle outright, but instead opted for hire purchase arrangements to enter the transportation business. Furthermore, approximately 72% of the tricycle operators reported a daily income ranging from 1100 to 3500, with occasional earnings surpassing this range. These earnings were found to sufficiently cater to the operators' daily needs and allow for savings.

Regarding employment and livelihood sustainability, a substantial majority of tricycle operators (87%) considered tricycle operation as a favorable source of employment and means to sustain their livelihoods. This result is tandem with the finding of Cueto et al., (2022) whose study...
highlighted the positive impact tricycle operations have had in providing income-generating opportunities for individuals in urban centres.

However, the study also revealed that tricycle operations contribute to traffic congestion and movement constraints on the road networks within the metropolis. Approximately 59% of the traffic congestion and movement issues were attributed to tricycle operations. This suggests that while tricycles provide an accessible mode of transportation, their presence and operations have implications for traffic management and road congestion. This correlates with findings of Andoh (2014).

Based on these findings, the study makes several recommendations. It suggests that the Asaba Road Traffic Agency should intensify their operations on more congested routes, particularly in the Central Business District (CBD), to enhance control and alleviate road traffic issues. Additionally, the study emphasizes the importance of enforcing regulations related to tricycle operations. By implementing these measures, constraints in movement and associated social vices in the study area can be reduced.

In conclusion, the study highlights the significant contributions of tricycle operations in terms of employment generation and livelihood sustainability for operators in Asaba Metropolis. However, it also recognizes the challenges posed by traffic congestion and movement constraints attributed to tricycle operations. The study's recommendations seek to strike a balance by enhancing control and regulation to address these challenges and improve the overall transportation system in the metropolis.

6.0 Recommendations

1. Enhance Financing Options: Recognizing that a significant proportion of tricycle operators acquired their vehicles through hire purchase agreements, it is essential to expand and improve financing options for aspiring operators. This could involve collaboration between financial institutions and relevant government agencies to develop accessible loan programs with reasonable interest rates, enabling individuals to purchase tricycles without facing excessive financial burdens.

2. Strengthen Skill Development and Entrepreneurship Support: To ensure the sustainable livelihoods of tricycle operators, it is crucial to provide them with opportunities for skill development and entrepreneurship support. Implementing training programs that enhance their knowledge of business management, customer service, and maintenance can equip operators with the necessary skills to succeed in their endeavors. Additionally, offering guidance on savings and investment strategies can help operators make the most of their earnings and foster financial stability.

3. Implement Traffic Management Strategies: Given the significant contribution of tricycle operations to traffic congestion and movement constraints, it is recommended to implement effective traffic management strategies. The Asaba Road Traffic Agency should intensify operations in highly congested areas, particularly in the Central Business District (CBD), to regulate and streamline tricycle movements. This may involve monitoring tricycle routes, enforcing traffic rules, and exploring alternative...
routes or dedicated lanes for tricycles to alleviate congestion.

4. Strengthen Regulatory Enforcement: To address the challenges associated with tricycle operations, it is essential to strengthen regulatory enforcement. The Asaba Road Traffic Agency should actively enforce regulations pertaining to tricycle operations, such as licensing requirements, adherence to traffic rules, and vehicle maintenance standards. Strict enforcement can help promote responsible and safe tricycle operations, ensuring the overall efficiency and safety of the transportation system.

5. Promote Public Awareness and Education: Increasing public awareness about the benefits and challenges of tricycle operations can foster understanding and cooperation among all stakeholders. Launching public awareness campaigns can educate the general public about the role tricycles play in providing affordable transportation options and employment opportunities. These campaigns can also emphasize the importance of responsible and considerate behavior by both tricycle operators and passengers to mitigate traffic congestion and enhance overall traffic flow.

6. Explore Alternative Transportation Solutions: While tricycles have demonstrated their importance in urban transportation, exploring alternative transportation solutions can help alleviate traffic congestion further. Investing in public transportation infrastructure, such as efficient bus systems or light rail networks, can provide additional options for commuters and reduce the reliance on tricycles. This would require long-term planning and investment but can contribute to a more diversified and sustainable urban transportation system.

By implementing these recommendations, policymakers and relevant authorities can optimize the benefits of tricycle operations while effectively addressing the challenges they pose. The ultimate goal is to create a well-regulated and integrated transportation system that promotes economic growth, improves mobility, and enhances the overall quality of life in Asaba Metropolis.

7.0 Conclusion

The results of the study provide several noteworthy conclusions regarding the use of tricycles as a predominant means of urban transportation in Asaba Metropolis. Firstly, it was found that a significant proportion of tricycle operators (60%) acquired their vehicles through hire purchase agreements, indicating that many individuals may not have had the necessary capital to purchase a tricycle outright. This highlights the importance of accessible financing options for aspiring tricycle operators, allowing them to enter the transportation business and contribute to the local economy.

In terms of daily income, the study revealed that a majority of tricycle operators (72%) reported earning a range of 1100 to 3500 on a daily basis. This income range was deemed sufficient to meet their daily needs and even save for the future. However, it should be noted that a portion of operators earned below 1100 (18%) or above 3500 (10%), indicating a degree of income variability within the tricycle operator community.

Another significant finding is that a large majority of tricycle operators (87%) viewed tricycle operation as a positive source of employment and a means to sustain their livelihoods. This
demonstrates the importance of tricycle operations in providing income-generating opportunities for individuals in Asaba Metropolis. The availability of such employment options can contribute to poverty reduction and economic empowerment within the community.

However, the study also shed light on the challenges associated with tricycle operations, particularly in terms of traffic congestion and movement constraints. The findings indicate that approximately 59% of congestion and movement issues in the metropolis were attributed to tricycle operations. This highlights the need for effective traffic management measures and the enforcement of regulations to address these concerns. Strengthening the operations of the Asaba Road Traffic Agency, particularly in highly congested areas like the Central Business District (CBD), can play a pivotal role in easing control and reducing road traffic issues.

In conclusion, the study underscores the economic benefits of tricycle operations in terms of employment generation and income sustainability for operators in Asaba Metropolis. However, it also emphasizes the need for proactive measures to tackle the traffic congestion and movement constraints associated with tricycle operations. By striking a balance between supporting the tricycle industry and implementing effective traffic management strategies, it is possible to optimize urban transportation in Asaba Metropolis, benefiting both operators and commuters alike.

References


