



FACTORS INFLUENCING PATRONAGE OF E-HAILING TRANSPORT SERVICE IN ABEOKUTA METROPOLIS

Abdul-Rahman Taiwo Ajala

Department of Transport Planning and Management
The Federal Polytechnic, Ilaro, Ogun State, Nigeria
Email: abdulrahman.ajala@federalpolyilaro.edu.ng

Abstract

The traditional urban transport system is undergoing a paradigm shift with the influence of information and communication technology. E-hailing transport providers recently penetrate the Abeokuta metropolis, and within a short period of operations, the transport platform was short-down. This study aim at investigating the factors influencing the patronage of e-hailing transport service in the Abeokuta metropolis. A purposive sampling method yielded 186 completed questionnaires. A descriptive analysis of the data revealed that the e-hailing transport system upholds the quality of affordability, accessibility, and safety. The factors that influence the e-hailing system in Abeokuta were the feeling of security and safety, the high billing rate, and the regulatory requirement which affect patronage. The study concludes that e-hailing transport services need to focus on the safety and security of their operation while improving their pricing to make it more affordable and standardized. It recommends that regulation of the e-hailing service provider must include security monitoring and billing rate regulations, and while doing these they also need to create an enabling environment for more operators to open up the market.

Keywords: e-hailing, patronage, transport service.

Introduction

Widespread usage of mobile phones, especially Android, and the availability of the internet in most African cities is changing the way we do things. From shopping to education, social to entertainment, and transportation and logistics delivery of goods and services. Urban transport is witnessing a paradigm shift from traditional taxi and bus services to more sophisticated app-based transport services where individual commuters pre-arranged a transport service from home and also pay for the service via the use of mobile/computer-based apps (Lippke, 2020). This system of ride-booking is referred to in the literature (Dias et al., 2017; Ahmad, 2021) as ride-hailing or e-hailing.

Electronic car hailing has been on in most of the advanced society for several decades, the service providers are regarded as transport network companies (TNC). But recently many such companies surfaced in most African countries as e-hailing transport services providers, the common brand name are Uber, Bolt, Opay, etc. and they were found in most large cities such as Lagos, Abuja, Accra, Cape Town, etc. commuters have found it easier to ordered a ride and the e-hailing business has attracted patronage in all of these towns and cities over the short period of its introduction, because of the comparative advantage of providing door-to-door services where waiting time at the bus stop is eliminated.

The use and patronage of e-hailing across the globe are on the increase, several studies (Rayle et al., 2016; Dias et al., 2017) revealed that e-hailing has provided a new range of advantages that traditional taxi services have not. According to Rayle et al., (2016), e-hailing transport services provide speed, flexibility, and convenience transport services, while Dias et al., (2017) also added that affordability, convenience, and on-demand door-to-door services are the alternative service qualities provided by e-hailing transport in the urban areas which have influenced its patronage. Morgan, (2016) reported that e-hailing transport accounted for 4% of global miles travel in 2015, and he projected that by 2030 its contribution to mile travel will reach 26%. The e-hailing sub-sector of urban transport services has expanded so well within a few periods in Africa. The Vanguard newspaper, (August 2018) reported that the monthly passenger of Uber (an e-hailing provider company) hits 267,000 per month and that there is also an increase in the number of drivers of both the Uber and Bolt (e-hailing company) in the country to nine thousand and ten thousand respectively.

A study by Duy Quy et al., (2020) focuses on factors that influence customer loyalty towards e-hailing taxi services in Vietnam. The study revealed that the relationship between variables such as trustable, comfort, promotion, coupon redemption, and fare with passengers' preference and satisfaction towards e-hailing services was significant. Three factors were found to influence passenger satisfaction with e-hailing services, which include perceived benefits of the booking app, perceived sales promotion, and perceived service quality. In another similar study by Ahmad, (2021)



customer satisfaction with the e-hailing service was examined and three factors were found to influence customers perceived quality of transport services, these factors include, functionality, convenience, and physical environment quality. The work of Tang et al., (2019); Sikder, (2019); and Acheampong et al, (2020) have also shown that the commuters of ride-hailing transport services are people with a higher level of education, many of them occasionally users, who use ride-hailing for a few time in the month (Giddy, 2019; Alemi et al., 2018)

Ride-haling or e-haling in the reviewed articles has focused more on commuter satisfaction and characteristics of patronage, the factors considered in the studies measure the satisfaction of the commercial services, and factors such as trustable, comfort, promotion, and coupon redemption and fare with passengers' preference (Duy Quy et al., 2020), and functionality, convenience and physical environment quality (Ahmad, 2021). However, the service qualities of transport services focus on safety, convenience, comfort, affordability, accessibility, efficiency, comprehensiveness, etc. the National Transport Policy, 2010, stated these as the goal of transport, hence a good transport service is measured by these service qualities.

In 2019, the e-haling transport service was introduced in Abeokuta, one of the ancient cities in Ogun State, southwest Nigeria. The service provider, 'Opay' targeted motorcycle ride-hailing, where commuters can order a motorcycle ride to pick them up at their doorstep and deliver them to the destination of their choice. Within a few months of the e-haling motorcycle services, the whole city embraced the service. Many of the traditional commercial motorcycle riders had to give up on the traditional system of scouting for pillion riders and opted for Opay e-haling arrangements while many unemployed youths took up a hire-purchase agreement with the e-haling company to also take advantage of the high patronage of the services enjoy at the time. Ironically, before the close of the year, the patronage reduces, and subsequently Covid-19 and the need for social/physical distance restricted commercial motorcycle operations for some time in the year 2020. This study aim to examine the factors that influence e-haling transport service, by assessing patronage of motorcycle ride-haling in Abeokuta and assessing whether the shooting down of the ride-hailing services in the city was due to the inability of the transport platform to meet the transport service qualities such as accessibility (technology of the apps), safety and security of users, affordability, and other factors relating to culture and belief of the people.

Methodology and Study Area

Abeokuta is the capital city of Ogun state, Nigeria, located on the latitude $7^{\circ} 6' 00'' \text{ N} - 7^{\circ} 12' 00''$ and longitude $3^{\circ} 16' 00'' - 3^{\circ} 25' 3'' \text{ E}$. The population of 235,389 in the 2006 census (NPC, 2006) and the World Population Review (WPR) put the estimated population at 571,499 in 2023. Abeokuta is one of the ancient cities where the influence of colonial masters is still very evident, especially in the area of religion and education. The city has hundreds of high schools and about seven private and public tertiary institutions, developmental agencies, commercial banks, and shopping malls scattered around the city. The city serves as the administrative headquarters for the state as well as for two of the twenty local government area councils in the state, hence it is inhabited by a large number of civil servants and students.

Commercial activity in the city is very dense, the city accommodates over five large regional markets, attracting shoppers from every part of the state and within the city for a variety of household goods and daily needs. Some of the markets also serve as transport hubs for both inter and intra-city travel. Commuting within the city is largely by branded taxi up till early 2000 when commercial motorcycles begin to infiltrate the urban transport system. Since then commuters' preference for motorcycle rides has continued to grow because of the comparative advantage of providing fast, and accessible door-to-door transport service. Abeokuta witness an influx of commercial motorcycle riders in 2018, following the ban on commercial motorcycle operations in Lagos state. The government of Ogun state embrace the development and set its ministry to regulate the operations.

The research design is based on a questionnaire survey and focuses on the pillion rider, and motorcycle riders within Abeokuta, the item of the survey were sampled using a purposive sampling method targeted at five traffic nodes within the city, namely Panseke, Kuto, Lafenwa, Elega, and Asero. A total number of 186 questionnaires were completed by the research assistants who have been earlier trained. Out of the respondents, 132 were pillion riders while 54 are riders. Data collected were analyzed by descriptive statistics i.e. Tables, Crosstabulation, and Chats.

Data Presentation and Analysis

Data obtained from the survey were analyzed under three headings, the first, analysis of data on the background of the respondents, the second focus on the patronage of e-haling and the third analyze the factors that influence patronage and subsequent drop in patronage.



Background of the Respondents

Table 1 presents the background information of the respondents, 57.5% are male, 38.2 are female, and 4.3 prefer not to say their gender. There are more (32.2%) young adults of ages 19 – 25 years, less than 18 years accounted for 7.5%, and older ones of 55 years and above 10.2% of the respondents. While age brackets 26 – 35 years, 36 – 45 years, and 46 – 50 years accounted for 16.7%, 18.3%, and 15.1% respectively. The educational status of the respondent is also revealed in Table 1, graduates of ND, NCE, HND, and BSc. Accounted for 50.5%, secondary/High school accounted for 29%, and post-graduate level of education recorded 8.1% while those with no education and lower level of education (first school living/basic primary education) have 5.9% and 6.5 % respectively. The occupation status revealed that students are 23.2%, unemployed 4.8%, self-employed 16.7%, private employees accounted for 12.9%, civil servant/public servant 27.4%, and traders/farmers are 9.7% while 5.3% accounted for other qualifications.

Table 1: Background Information of the Respondents

Age	Frequency	Percentage
Less than 18 years	14	7.5
19 - 25 years	60	32.2
26 - 35 years	31	16.7
36 - 45 years	34	18.3
46 - 55 years	28	15.1
above 55years	19	10.2
Grand Total	186	100
Gender		
Female	71	38.2
Male	107	57.5
Prefer not to say	8	4.3
Grand Total	186	100
Highest Educational attainment		
None	11	5.9
Primary education	12	6.5
Secondary/High School	54	29.0
Graduate ND, NCE, HND, BSc.	94	50.5
Post-Graduate MSc., PhD	15	8.1
Grand Total	186	100
Occupational Status		
Student	43	23.2
Unemployed	9	4.8
Self-employed	31	16.7
Private Employee	24	12.9
Civil/Public Servant	51	27.4
Traders/Famers	18	9.7
Others	10	5.3
Grand Total	186	100

Source: Author’s Field Survey, 2023

Patronage of e-hailing transport service

Table 2 revealed the frequency of e-hailing transport service used, occasional users accounted for 40.3%, and those who rarely use the service are about 27% while regular users accounted for 27.4%. There are about 5.4% who never used an e-hailing transport service. E-hailing in Abeokuta is more of occasional users.



Table 2: Rate of Patronage of e-haling transport service

Rate of Patronage	Frequency	Percentage
Never	10	5.4
Occasionally	75	40.3
Rarely	50	26.9
Regularly	51	27.4
Grand Total	186	100

Source: Author’s Field Survey, 2023

Patronage by Gender

Table 3 revealed the patronage by gender, the result revealed that male is the major (17.7%) regular user of e-haling, and similar to occasional users (23.7%), and also rarely users are male 14%. This implies that males are more mobile than females’ gender.

Table 3; Patronage by Gender

Patronage	Gender			Grand Total
	Female	Male	Prefer Not To Say	
Never	5 (2.7%)	4 (2.2%)	1 (0.5%)	10 (5.4%)
Occasionally	28 (15%)	44 (23.7%)	3 (1.6%)	75 (40.3%)
Rarely	21 (11.3)	26 (14%)	3 (1.6%)	50 (26.9%)
Regularly	17 (9.1%)	33 (17.7%)	1 (0.5%)	51 (27.4%)
Grand Total	71 (38.1%)	107 (57.6%)	8 (4.3%)	186 (100%)

Source: Author’s Field Survey, 2023

Factors that influence the drop in the patronage of motorcycle e-haling in Abeokuta

Affordability of the e-haling transport service

Figure 1 shows the rating of affordability of the e-haling motorcycle service in Abeokuta, the large number of the respondents (52.7%) acknowledge that e-haling transport is affordable while 8.6% rated it highly affordable. Less than 40% rated unaffordable of which about 3.7% rated extremely unaffordable. This implies that about 62% considered e-haling transport affordable.

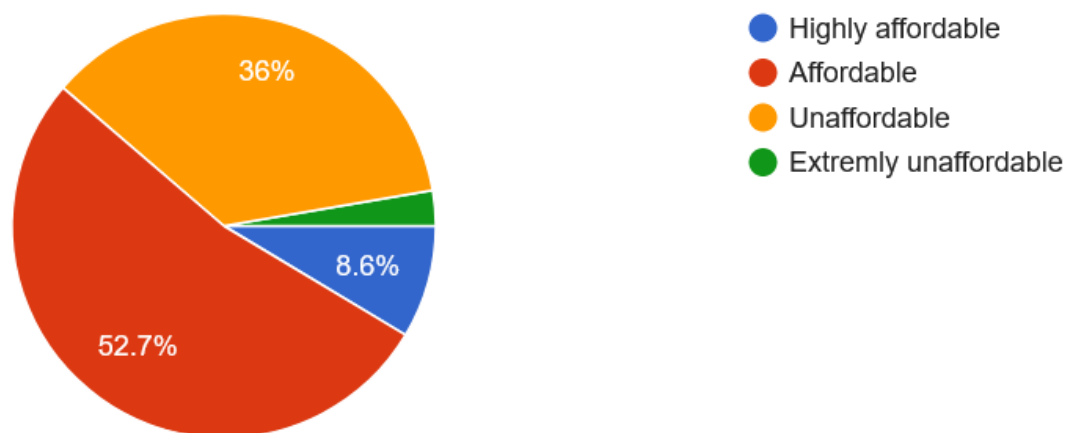


Figure 1: Rating of affordability of the e-haling service

Accessibility (Promptness) of the e-hailing transport service

The time lag between the call for a ride and the arrival time is used as the measure of accessibility in this study, the rating of accessibility is presented in Figure 2. Many of the respondents (59.7%) adjudged e-hailing transport services in Abeokuta have been very prompt, another 21% rated highly prompt while 15.1% recorded not prompt and 4.2% rated it as delayed. In summary, over 80% adjudged e-hailing has been very accessible to commuters.

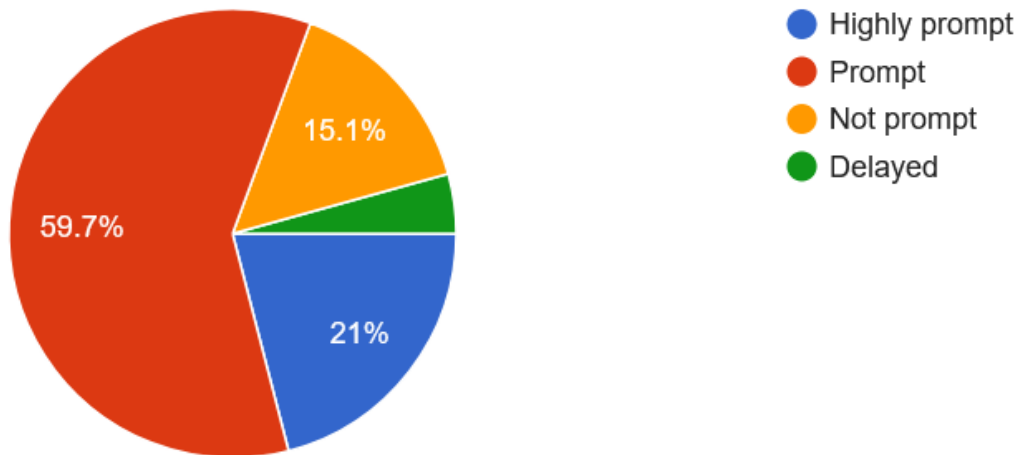
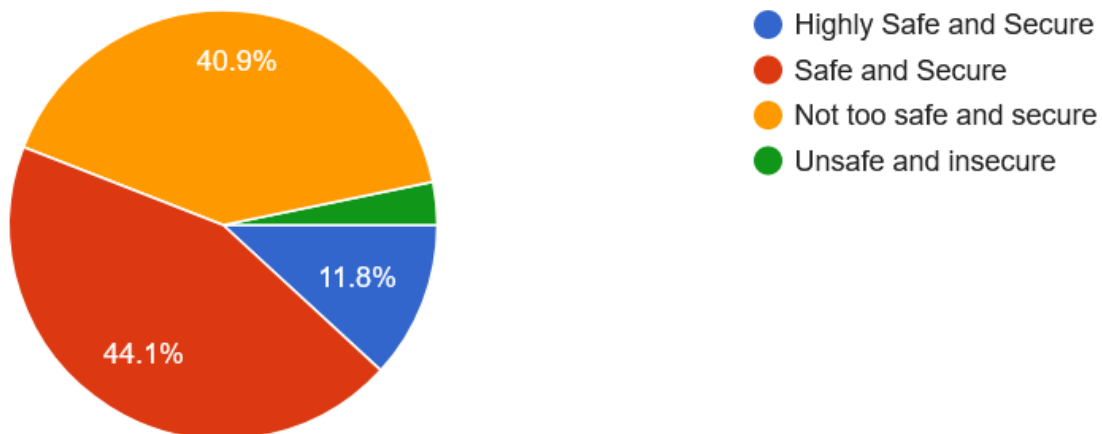


Figure 2: Rating of accessibility of e-hailing transport service in Abeokuta

Security of the e-haling service in Abeokuta

Security and safety is an important quality of transport services, the security and safety of the e-hailing transport services are rated in Figure 3, the operation of e-hailing was rated as safe and secure by 44.1%, and 11.8% rated highly safe and secure. Not too safe and secure and unsafe and insecure are rated as 40.9% and 3.2% respectively. This implies that on average (55.9%) e-hailing transport service is safe and secure.



Factors that influence reduced patronage of e-hailing transport service in Abeokuta

Table 5 revealed the factors that influence the reduction in patronage of e-hailing transport service in Abeokuta, the feeling of safety and security rated high at 30.1%, followed by the high billing rate (23.6), and regulatory requirement of the e-hailing provider accounted for 13.5%. Other factors include intimidation by traditional operators and their union (9.7%), internet failure (8.6%), and attitude of e-hailing operators accounted for 5.9% while cultural factors and others accounted for 4.5% each. This analysis suggests that the feeling of safety and security, the high billing rate,



and the influence of regulatory requirements were the major factors influencing the reduction in patronage of e-hailing services in Abeokuta.

Table 5: Factors That Influence Reduced Patronage of the E-Hailing Transport Service in Abeokuta

Factors	Frequency	Percentage
Attitude of Operators	11	5.9
Cultural Attachment	8	4.3
The Feeling of Safety and Security	56	30.1
High Billing Rate	44	23.6
Internet Failure	16	8.6
Intimidation by Traditional Public Transport Operators	18	9.7
Regulatory Requirements	25	13.5
Others	8	4.3
Grand Total	186	100

Source: Author's Field Survey, 2023

Conclusion and Recommendation

The findings of studies agreed with earlier studies (Giddy, 2019; Alemi et al., 2018) that the E-hailing transport service is patronized more by occasional users, people used it when they are in a locality where other modes cannot penetrate, and it's more patronized by male, and this may be because of the financial power of male which enables them to afford an android mobile phone. In line with other studies (Tang et al., (2019); Sikder, (2019); and Acheampong et al, (2020)), the result also shows that e-hailing is more patronized by the educated class. The assessment of the quality of the e-hailing transport service revealed that the majority (62%) of the users considered e-hailing transport as affordable, while over 80% adjudged e-hailing has been very accessible to commuters. Similarly, about average (55.9%) also allude to the fact that e-hailing transport service is safe and secure.

However, the majority still believe that the feeling of safety and security, the high billing rate, and the influence of regulatory requirements were the major factors influencing the reduction in patronage of e-hailing services in Abeokuta. The study concludes that e-hailing transport services need to focus on the safety and security of their operation while improving their pricing to make it more affordable and standardized. It is also recognized that the requirement of the regulatory agencies was creating hindrances to the operation of the service provider. However, the regulation of the e-hailing service provider must include security monitoring and billing rate regulations and while doing these they also need to create enabling environment for more operators to further open up the competition market which will in turn improve service quality.

Reference

- Acheampong, R. A., Siiba, A., Okyere, D. K., and Tuffour, J. P. (2020). Mobility on-demand: An empirical study of internet-based ride-hailing adoption factors, travel characteristics, and mode substitution effects. *Transportation Research Part C: Emerging Technologies*, 115, 102638.
- Ahmad Fadzil, M. (2021). *Factors influencing customer satisfaction using e-hailing services in Melaka*. Master's degree thesis, submitted to School of Business Management, Universiti Utara Malaysia.
- Alemi, F., Circella, G., Handy, S., and Mokhtarian, P. (2018). What influences travelers to use Uber? Exploring the factors affecting the adoption of on-demand ride services in California. *Travel Behaviour and Society*, 13, 88–104.
- Dias, F. F., Lavieri, P. S., Garikapati, V. M., Astroza, S., Pendyala, R. M., and Bhat, C. R. (2017). A behavioral choice model of the use of car-sharing and ride-sourcing services. *Transportation*, 44(6), 1307- 1323.
- Duy Quy N, Diep N. S., Phuong T. K. T., Diem-Trinh T. L., Lester W. J., (2020) Factors influencing customer's loyalty towards ride-hailing taxi services. A case study of Vietnam, *Transportation Research Part A: Policy and Practice*, Vol. 134, Pp. 96-112.



- Giddy, J. K. (2019). The influence of e-hailing apps on urban motilities in South Africa. *African Geographical Review*, 1–13.
- Lippke, by K. (2020). Public Acceptance and Adoption of Shared-Ride Services, In The Ride- Hailing Industry (Issue May).
- Morgan S. (2016). Shared mobility on the road of the future. Retrieved from <https://www.forbes.com/sites/morganstanley/2016/07/20/sharedmobility-on-the-road-of-the-future/#284ac64f1cae>.
- National population commission (NPC) (2006) 2006 Population *Census, Abuja: NPC*
- Olawole M. O. (2022) Ride-Hailing Services in Nigeria: Adoption, Insights, and Implications in *Transport Technology and Innovations in Nigeria: policy guide to a sustainable future*, eds. Farah B.S. & Odeleye J.A. NITT, Zaria, Nigeria.
- Rayle, L., Dai, D., Chan, N., Cervero, R., & Shaheen, S. (2016). Just a better taxi? A survey-based comparison of taxis, transit, and ride-sourcing services in San Francisco. *Transport Policy*, 45. <https://doi.org/10.1016/j.tranpol.2015.10.004>.
- Sikder, S. (2019). Who Uses Ride-Hailing Services in the United States? Transportation Research Record: *Journal of the Transportation Research Board*, Pp1-15.
- Tang, B. J., Li, X.-Y., Yu, B., and Wei, Y.-M. (2019). How app-based ride-hailing services influence travel behavior: An empirical study from China. *International Journal of Sustainable Transportation*, 1 – 15.
- Vanguard (2018) Uber-monthly-passenger-base-in-Nigeria-hits-267000 <https://www.vanguardngr.com/2018/08/uber-monthly-passengerbase-in-nigeria-hits-267000/Duy>.