E-Ticketing and Service Delivery of Road Transport Companies in Rivers State

Adejare, Olukayode Adegboyega
Post Graduate Student, School of Graduate Studies, University of Port Harcourt, Nigeria.

Ozuru Henry, Nmelisi
Professor of E-Marketing, Department of Marketing, Faculty of Management Science, University of Port Harcourt, Nigeria.
sylvacrown@yahoo.com

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Abstract
The study investigated the e-ticketing and service delivery of road transport companies in Rivers state. The study population comprises of passengers of the 12 road transport companies that have adopted e-ticketing in Rivers state. 20 passengers of the 12 road transport companies in Rivers state were purposively sampled which makes the sample size a total of two hundred and forty (240). Since the sample size was accessible, there was no need for sampling. Data were collected using questionnaire from the above sampled passengers of the road transport companies in Rivers State. Four research question and ten hypotheses were proposed and tested respectively at 0.05 level of confidence to achieve the study objectives. The collected data were analyzed using descriptive statistics (mean), while Spearman Rank Correlation Coefficient and Partial Correlation was used for the testing of the hypotheses. The findings established that there is a significant relationship between e-reservation, data security, user friendliness and service delivery of road transport companies in Rivers state. The study concludes that e-reservation, data security and user friendliness of e-ticketing platform can boost service delivery by offering timeliness of service, convenience and reliability. It was therefore recommended that Road transport should invest in technological infrastructure, provide multiple payment options and implement a feedback system.

Keywords: *E-ticketing, Service Delivery, E-reservation, Data Security, User friendliness*

INTRODUCTION

The concept of high service delivery has been an intriguing phrase in the business sector in the latter part of the twentieth century. One of the largest contributors to the Nigerian economy's labour force is the road transport sector. Every facet of Nigerian life is touched in some way by the nation's road carriers. In Nigeria, most people and goods are moved around via road. Owing to the fact that most rural areas are developing, there is an increasing demand for interstate road transport which shows high movement of people in the city which needs a fast transportation system. Ideally, this increase in demand brought about competition in the road transportation industry whereby the key players keep seeking for avenues to get more customers by improvinggon their service delivery through timeliness, responsiveness and reliability. However, it has been clear in recent years that

the service transport system is unable to meet the needs of the growing population. The transport service must grow in tandem with the rising number of passengers and develop novel, effective methods of meeting the needs of its customers

However, it has been observed that customers of many road transport companies are experiencing poor service delivery which is evident in timeliness, convenience and reliability of the transport companies. What could be the cause of this phenomenom?

Drawing from the service innovation theory (Toivonen & Tuominen, 2009), technology acceptance model (Davis, 1986) and theory of information security Bacharach (1989), we expect e-ticketing to influence the service delivery of Road Transport Companies In Rivers State. It is possible that e-ticketing through e-reservation, data security and user friendliness can be used to improve service delivery. Hence our interest is to investigate the relationship between e-ticketng and service delivery of road transport companies in Rivers State.

The specific objectives of the study includes:

i. Analyse how online booking relates with service delivery of Rivers State's transport firms.
ii. To get insight into how Rivers State's transport firms handle customer data security for service delivery.
iii. To compare the user-friendliness and service delivery of different road transport firms in Rivers State.

However, the remaining sections of this study are review of relevant literature (in which concepts were clarified, pillars of e-ticketing in road transportation were outlined and how it relates with service delivery were discussed), research methods, data analyses and results, discussion of findings, conclusion and recommendations.

LITERATURE REVIEW

Concept of E-Ticketing

The usage of Information Technologies (IT) in day-to-day operations is rapidly evolving in today's lifestyles. A survey of the literature exploring the many definitions of e-ticketing reveals attempts to explain the full scope of e-ticketing for both customers and businesses. E-ticketing is defined by Sorooshian, Onn, & Yeen (2013) as "a technique for keeping track of sales, usage tracking, and accounting for a passenger's transportation without the need for a physical 'value document." This description makes it obvious that an e-ticket is more than simply a paperless document for the passenger: it is a comprehensive architecture within the business that contains a wealth of information about the customer. "A paperless electronic document used for ticketing travelers, mostly in the commercial aviation industry," Alfawaer, Awni, & Al-Zoubi (2011) describe an e-ticket. Mezghani (2008) defines an e-ticketing system as a tool for implementing a pricing policy that takes into account operational, commercial, and social goals.

According to Lubeck and colleagues, e-tickets necessitate the development of a comprehensive technology platform that manages nearly every facet of the customer relationship within the company. As a result, e-origins ticketing's extend far beyond the customer interface.

With the use of e-ticketing, customers may request, book, pay for, and print their travel tickets online from any location in the globe without having to deal with the hassle of manual paperwork recording sales, tracking usage rates, and accounting for a passenger's transportation

Several approaches can be taken to actualize the idea of electronic tickets. However, a generic example of an application's use is as follows. To provide granular billing and customizable pricing systems with specific discounts, for instance, a client may choose to register himself when purchasing an e-ticket. When a passenger checks in and boards a transportation vehicle, their trip officially begins. The reader is installed in the car and is used for the check-in process. Upon verification, the reader sends the electronic ticket's unique identifier to the aircraft's central processing unit, which logs the passenger's boarding time, location, etc. When the consumer reaches their destination, they exit the transport vehicle and check out using the on-board reader.

Similar to the check-in scenario, the time, location, etc. are recorded once more, leading to the formation of the so-called travel record. The latter is subsequently relayed to the back-end system for processing, statistical analysis, and perhaps the implementation of personalised fare pricing systems and granular billing. As a result, all of the customer's transactions during the trip are recorded, processed, and ultimately added to the bill. It's important to keep in mind that, depending on how the system is built, the reader and the device that processes events afterward may be combined into a single unit called a terminal. Additionally, terminals may be installed not on the vehicle itself but rather at the stops (i.e., stationary terminals). Further, whether or not fare records are created is another consequence of the fare collection method chosen.

E-ticketing systems in the transportation industry are not just for making payments; they also handle a vast quantity of data that opens up a wide range of opportunities for improving the usability, efficiency, and regulation of public transportation.

E-Reservation

Bus ticket availability, purchase, and payment can all be handled digitally through the E-Reservation System (Asaad, Ayad, & Hayder, 2012). All authorised users at home or in the office can now access shared files and folders without the need for a network connection. According to Invaderzim (2011), E-Reservation System offers bus transportation system, a facility to reserved seats, cancellation of tickets and various forms of enquiries which demand an instant and quick reservation. Users can make reservations online through the system for whatever business need they may have. There is no requirement for users to download and install the programme, as it may be used straight on a webpage.

Data Security

Many customers have reported that security difficulties with online services, such as e-ticketing, are a major problem (Zhang, Prybutok & Huang, 2006). Customers will be less likely to make online purchases, according to Yang & Jun's (2008) argument, if they perceive security issues with e-services. Consumers' levels of trust are influenced by their perceptions of security (Yang & Jun, 2008). There is less chance that a customer will do business with an organization if there is no trust present in their relationship with the provider of their online services (Yang & Jun, 2008). Furthermore, according to Zhang and colleagues, security concerns have a negative impact on how satisfied customers are with e-services, necessitating the need for businesses to take precautions to protect consumer information.

Userfriendliness

User-friendliness, according to Babutsidze (2011), regulates the rate of skills training through learning. Rushinek & Rushinek (1986) evaluated a questionnaire and found that a quicker reaction time and a shorter learning period were critical to user satisfaction. Additionally, according to McGee et al. (2004), "traits" of usability may be modestly connected to aspects of enjoyment. Variables relating to familiarity and ease of use seem to be significant in studies looking at usability parameters influencing system attractiveness and technology uptake for older individuals. If a technology is useful to them and they believe the experience will be worthwhile and positive, older individuals are more likely to accept it (also see Hawthorne, 2011). Younger users demonstrated lower levels of anxiety and more favorable attitudes toward technology-based devices as compared to older persons (Czaja & Sharit, 1998; Chou & Hsiao, 2011).

Concept of Service Delivery

Service delivery is a business model in which a provider offers their services to a customer. Constant interaction between provider and customer while service is rendered and paid for is also mentioned. Providers of services essentially supply their customers with goods or capabilities that they themselves lack. Services can be thought of as anything from a task to a piece of technology to a body of information.

Meeting a user's expectations of a finished product is a specific objective of effective service delivery. Although the term "product" may be more commonly associated with a real or physical object, it also encompasses services. The link between a service-rendering company and customers is a direct interface of service delivery; the goal is to establish a satisfying relationship by matching expectations. Grönroos & Ravald (2011) assert that delivering high-quality services is an essential goal for service providers looking to add value to the lives of their respective clients. Many individuals seek out the services they require on a daily basis.

E-ticketing and Service delivery

Due to the conversion of traditional ticket purchasing techniques to electronic ones as a result of the development of information technology, which has taken over the road transportation industry, e-ticketing has become unavoidable. They obviously based their e-ticketing system on the airline business. Today's customers' impression of how well these sites deliver their services determines whether or not they are successful. Users will leave a website and look for other ways to satisfy their demands if they feel it lacks trustworthiness (Fogg, 2003). In the past, established firms with the resources to support and sell an information product were the only sources of information, according to Metzger (2007), who also notes that the costs of mass-scale information production and distribution limited the number of information sources.

Service to passengers, which is still primarily handled by human labor in Port Harcourt's public transportation system, is one of the things that piques the people's interest in it. Many workers in the public transit sector still exude an air of superiority, coldness, and indifference. Also, some bus drivers act inappropriately and shout at their passengers. Not to mention that this is a common occurrence in the field today: when people board the bus, they must pay the fare. This presents a

challenge when the bus is full, and when people pay large sums of money, the conductor is forced to offer refunds to customers, which can be time-consuming. Each traveler can access a variety of useful information, from schedule details to the price offered, with the help of the online ticket booking service.

METHODOLOGY

Research survey design was adopted for the purpose of this study. The population of the study comprised of passengers of the twelve (12) registered interstate road transport companies in Port Harcourt, Rivers state. The researcher purposively will administer twenty (20) copies of the questionnaire to customers of the interstate transport companies in Port Harcourt, Rivers State. The number of participants will be two hundred and forty (240). The two hundred and forty (240) respondents will represent the total customers of the transport companies and only give information/data on how the service delivery of the companies is as a result of e-ticketing. Since the study population could be reached, there will be no need for sampling. Breakdown of the study's population is given in the table below:

Table 3.1 List of Road Transport Companies in Rivers State that have adopted E-ticketing

S/N	TRANSPORT COMPANY	ADDRESS	E-TICKETING WEBSITE	No. of Passengers to sample
1	God is Good Motors (GIGM)	Genesis junction, off Aba road by Cocaine estate, Rumuagba, *Port Harcourt*	www.gigm.com	20
2	GU Okeke Motors (GUO)	*Along Aba road (at intersection with Lord Emmanuel Drive, b/w* Thermocool & Happy Bite), Opp Air Force Base, Port Harcourt	www.guotransport.com	20
3	Libra Motors	Plot 321 Stadium road,Rumuomasi by Benjack MTN Building, Port Harcourt	www.libmot.com	20
4	ABC transport	Eliozu Junction, East/West Road, *Port Harcourt, **Rivers***	https://www.abctransport.com	20
5	Ekeson Motors	172 Port Harcourt - Aba Expy	https://www.ekesons.com	20
6	Cross Country	180 Aba Road, By Water Lines, Umueme 500101, Port Harcourt, Rivers State, Rivers	https://www.crosscountry.ng/	20
7	Peace Mass Transit	*Aba Road, Oil Mill, By Eleme Junction*, beside Zenith Bank, Port Harcourt	www.pmt.ng	20
8	Akwa Ibom Transport Company (AKTC)	*323 Port Harcourt*-Aba Expressway, Eleme Junction, Pot Harcourt, Rivers State	https://www.aktc.com.ng	20

9	CHISCO Motors	Mile 1, 38 Ikwerre Rd, Diobu 500101, Port Harcourt, River	https://www.chiscotransport.com.ng	20
10	Young Shall Grow Motors	R295+4C8, Port Harcourt - Aba Expy, New GRA 500101, Port Harcourt, Rivers	https://www.ysgtransport.ng	20
11	Greener Line Motors	*Water Line House, Olu Obasanjo Road, Port Harcourt, Rivers*	https://www.greenerlineng.com	20
12	Ifesinachi Motors	114 Ikwere Road, *Port Harcourt*	https://tiketi.com › ifesinachi-transport-bus	20

Source: *www.finelib.com* (2022)

The study questionnaire (see Table 2) was developed after reviewing the existing empirical literature in the field. A subset of people who had recently made use of e-ticketing services for their vehicle travels were recruited for pilot testing. The questions were changed in response to the comments made by the respondents. The impact of e-ticketing features on customers was evaluated using a 5-point Likert scale, where 5 indicated 100% agreement and 1 indicated 100% disagreement. All 240 copies that were dispersed were collected; however, only 234 were usable (97.5%), and 6 (2.5%) were deemed unsuitable for inclusion in the study. Participants were asked to rate how they felt about each evaluation, noting where they agreed or disagreed. This study used Cronbach's Alpha, a measure of scale reliability, and the Spearman rank correlation coefficient to examine the connections between different factors.

Table 1: Bio-data of the respondents.

	Number	Percentages
Sex		
Male	129	55.1%
Female	105	44.9%
Age		
18-25years	48	20.5%
26-30years	73	31.2%
31-40years	59	25.2%
41-50years	32	13.7%
50years and above	22	9.4%
Years of Patronage		
1-2 years	58	24.8%
3-5years	122	52.1%
6-10years	42	18.0%
11years and above	12	5.1%

RESULTS AND DISCUSSIONS

H_{01} seeks to ascertain the relationship between e-reservation and service delivery of Road Transport Companies in Rivers State.

Spearman rank correlation coefficient of 0.981 and likelihood value of 0.000 was exposed by table 3 below. This result signifies that a solid and positive noteworthy connection exist between e-reservation and timeliness of service of road transport companies in Rivers state. Therefore, we reject the null hypothesis and accept the alternate hypothesis because the PV (0.000) <0.05. level of noteworthiness. E-reservation has a noteworthy impact on timeliness of service of road transport companies in Rivers state.

Table 4.3: Correlation Analysis showing the relationship between e-reservation and service delivery

Correlations

			ERESERVATION	SERVICE DELIVERY
Spearman's rho	ERESERVATION	Correlation Coefficient	1.000	.981**
		Sig. (2-tailed)	.	.000
		N	234	234
	SERVICE DELIVERY	Correlation Coefficient	.981**	1.000
		Sig. (2-tailed)	.000	.
		N	234	234

**. Correlation is significant at the 0.05 level (2-tailed).

H_{02} attempts to determine the relationship between data security and service delivery of Road Transport Companies in Rivers State.

Table 4.17 above reveals a spearman rank correlation coefficient of 0.993 and probability value of 0.000. This result signifies that there exist positive and solid impact/noteworthy rapport betwixt data security and convenience of road transport companies in Rivers State. Therefore, we reject the null hypothesis and accept the alternate hypothesis, because the PV (0.000) <0.05 level of significance. The above result shows that data security is significantly associated with convenience for customers of road transport companies in Rivers state.

Table 4.3: Correlation Analysis showing the relationship between data security and service delivery

Correlations

			DATASECURITY	SERVICE DELIVERY
Spearman's rho	DATASECURITY	Correlation Coefficient	1.000	.993**
		Sig. (2-tailed)	.	.000
		N	234	234

	SERVICE DELIVERY	Correlation Coefficient	.993** 1.000
		Sig. (2-tailed)	.000 .
		N	234 234

**. Correlation is significant at the 0.05 level (2-tailed).

The relationship between user friendliness and service delivery of Road Transport Companies in Rivers State is the thrust of H_{03}

Table 4.4 below reveals a spearman rank correlation coefficient of 0.984 and probability value of 0.000. It was suggested by the outcome that a positive and solid impact/substantial affiliation exist betwixt user friendliness of the e-ticketing platform and service delivery of road transport companies in Rivers state. Therefore, we reject the null hypothesis and accept the alternate hypothesis, because the PV (0.000) <0.05 level of significance. The above result further infers that user friendliness of the e-ticketing platform is connected to service delivery of road transport companies in Rivers state.

Table 4.4: Correlation Analysis showing the relationship between user friendliness and reliability

Correlations

			USERFRIENDLINESS	RELIABILITY
Spearman's rho	USERFRIENDLINESS	Correlation Coefficient	1.000	.984**
		Sig. (2-tailed)	.	.000
		N	234	234
	RELIAB	Correlation Coefficient	.984**	1.000
		Sig. (2-tailed)	.000	.
		N	234	234

**. Correlation is significant at the 0.05 level (2-tailed).

MANAGERIAL IMPLICATIONS

Several difficulties that managers in the road transport business should be aware of have been brought to light by this research. Several areas that have been proved to have substantial impact for high service delivery are highlighted by the issues presented. This technology is introduced into road transportation to eliminate ambiguity in the service offerings and improve the standard of their products. Therefore, managers must identify the challenges of traditional ticketing and design an electronic ticketing platform bearing in mind the above discussed constructs to enable quality service delivery which leads to customer satisfaction. This is so because this study had shown that there is a strong relationship between e-ticketing and service delivery. That is if customers' can do their reservation electronically, have confidence in the security of their data and the platform is userfriendly, the quality of service delivery will be high and customer satisfaction and retention is certain. Evidently, e-ticketing is gradually becoming the new normal in the road

transportation industry in which all marketing oriented and customer centric road transport companies must key into. The study has shown that e-tciketing improves service delivery.

CONCLUSION AND RECOMMENDATIONS

The challenges of road transport companies are facing is evident in timeliness, convenience and reliability which depicts that the conventional ticketing systems is characterized with poor service delivery. E-ticketing with its offering including e-reservation, data security and userfriendliness have been shown in this study to have a strong positive relationship with high service delivery in the road transportation industry. However, in general, e-ticketing systems have been proven to improve the efficiency and transparency of ticketing processes in the transportation industry. By adopting e-ticketing systems, road transport companies in Rivers State will benefit from streamlined operations, reduced paperwork, increased accountability, and improved customer service.

However, to ensure the success of e-ticketing and service delivery, it is essential for road transport companies to invest in the necessary infrastructure, such as reliable internet connectivity, robust ticketing software, and trained personnel. Moreover, regular maintenance and updates of the system are also crucial to avoid technical glitches and ensure smooth operations. In conclusion, the exposed relationship between e-ticketing and service delivery can offer significant benefits to road transport companies in Rivers State. Still, its success depends on the company's willingness to invest in the necessary infrastructure, personnel, and maintenance.

In line with the findings of the study the following recommendations are made:

- Road transport companies should invest heavily in technological infrastructure that will enable ease of use to all road user regardless of their level of education.
- Provide multiple payment options: To make the online ticketing system more convenient, road transport companies can provide customers with multiple payment options such as debit cards, credit cards, mobile money, and bank transfers. This will give customers the flexibility to choose the payment option that is most convenient for them.
- Road transport companies can implement a feedback system that allows customers to provide feedback on their experience with the company's services. This will help the company to identify areas for improvement and make necessary changes to improve the overall customer experience.

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