

Effect of Road Transportation Management on Customer Satisfaction (A Study of Peace Mass Transit Enugu Road Nsukka)

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Abstract: *This study examined Road Transportation Management and its Effect on Customer Satisfaction (A Study of Peace Mass Transit Enugu Road Nsukka. The objectives of the study included to: ascertain the effect of procurement of high quality spare parts on customers' loyalty of Peace Mass Transit, Determine the degree of relationship between availability of standard fleet and perceived value of Peace Mass Transit, The population of the study was 115 while the sample size of 94 was determined by using taro yamane's formula. The sources of data were both primary and secondary sources. The hypotheses were tested by using the chi-square statistical tool. The findings included that Procurement of high quality spare parts has a positive effect on customers' loyalty of Peace Mass Transit, as calculated value (182.74) is > the critical value (9.49) Availability of standard fleet has a significant relationship with perceived value, as calculated value (119.40) is > the critical value (9.49) The researcher concluded that transport management has a positive relationship on customer satisfaction while it was recommended that management of transportation companies should procure high quality spare parts as it has a positive relationship on customers' loyalty, management of transportation companies should provide standard fleet as it has a significant relationship with perceived value.*

Keywords: Transportation, Management, Customer Satisfaction

INTRODUCTION

The inability of Nigerians to devise a better transportation system has been a detraction of the growth of the economic, social and political sectors of the economy. Prominent among the problems includes travelling, lateness to work, movement of agricultural products, goods and services from area of production to area of utilization (Okonkwo, 2016). In Nigeria, the need for an effective transport system becomes more obvious if taken into consideration the analysis of the country and the need to disperse development move. The choice of the transport mode is a fundamental part of distribution management which should be analyzed carefully because of the impact upon a company's operational efficiency. Failure to identify the most appropriate transport mode may incur higher costs than are necessary and may provide a lower customer service level than is potentially possible. The decision upon the choice of the transport mode is extremely complex because of the vast volume of choice available together with the numerous methods of examination and evaluation of each choice (Umeadi, 2013).

Road transport has become one of the predominant modes of transport in Nigeria, aside other modes like rail and air. This mode of transport, services the vast majority of Nigerians due to its cheap nature with a population growth in Nigeria of an average of 2 percent per annum in major cities, reaching a size of 24 million (in 2011) and the transport industry has grown alongside. By this development, there has been an emergence of small and medium size companies to satisfy the growing demand (Oyesikie, 2012). Transportation has been a major contributor to the economy and a competitive force in business. It is the activity that physically connects the business to its supply chain partners, such as suppliers and customers, and it is a major influence on the customer's satisfaction with the company. Transporting is required in the whole production procedures, from manufacturing to delivery to the final consumers. Only a good coordination between each component would bring the benefits to a maximum.

Poor transportation management can therefore jeopardize the source of procurement of materials; goods and services, movement of people and even cause increase in prices and loss of lives (Ahmed, 2011). Whereas customer satisfaction is extremely important in an economy where the vendors have to work hard to win new business and keep their existing customers. If a company fails to satisfy their existing clients there are many other vendors who would like the opportunity to win the business. Therefore a company has to ensure that in every aspect with their dealings with the customer, whether it be on at order time, delivery or just simple

communication, they must guarantee that they understand the needs of the customer and how those needs can be met. It is against this background that the researcher examined road transportation management and its effect on customer satisfaction with Peace Mass Transit Enugu Road Nsukka as a case study.

STATEMENT OF THE PROBLEM

Inability to adopt adequate road transportation management could result to customers' dissatisfaction. Achieving customer satisfaction is the key objective of every company, that is, if total profit for a period is to be achieved. This cannot be achieved if the management of the transport activities in an establishment is faced with some problems such as: delay in delivery of goods, Improper handling of materials resulting in damage of goods, lack of qualified personnel, inadequate transportation system in the organization and improper maintenance of transporting system causing breakdown leading to late delivery. Furthermore, road transport management is bedeviled by many problems in Nigeria. These include many bad roads which have affected road transportation management, high cost of spare parts which makes it difficult for the management of transport companies to procure high quality spare parts and diversion of fund meant for procurement of spare parts. Moreover, the fluctuating nature of the price of petroleum products has equally affected road transport management adversely.

OBJECTIVES OF THE STUDY

The broad objective of the study is to examine road transportation management and its effect on customers' satisfaction. However, the specific objectives of the study include to:

1. Ascertain the effect of procurement of high quality spare parts on customers' loyalty of Peace Mass Transit
2. Determine the degree of relationship between availability of standard fleet and perceived value of Peace Mass Transit

RESEARCH QUESTIONS

Based on the objectives of the study, the following research questions were raised

1. What is the relationship of procurement of high quality spare parts on customers' loyalty of Peace Mass Transit?
2. What is the degree of relationship between availability of standard fleet and perceived value of Peace Mass Transit?

STATEMENT OF HYPOTHESES

Based on the objectives and research questions, the following hypotheses were formulated

Hypothesis One

H₁: Procurement of high quality spare parts has a positive relationship on customers' loyalty of Peace Mass Transit

Hypothesis Two

H₂: Availability of standard fleet has a significant relationship with perceived value of Peace Mass Transit.

CONCEPTUAL FRAMEWORK

Concept of Road Transportation Management

Transportation refers to the activity that facilitates physical movement of goods and people from one location to another (Johnson, 2012). It has a significant role in promoting national integration. An efficient transportation system helps in increasing productivity leading to a sustainable economic development. Road transportation is the oldest and primary form of transportation that links remote areas with the rest of the country. It facilitates door to door services and is very flexible with less overheads and maintenance cost.

Adewumi (2015) posits that road transportation is a type of transportation by using roads. Transportation on roads can be roughly grouped into the transportation of goods and transportation of people. In many countries, licensing requirements and safety regulations ensure a separation of the two industries. Movement along roads may be by bike or automobile, truck, or by animal such as horse or oxen. Standard networks of roads were adopted by Romans, Persians, Aztec, and other early societies. Cargo may be transportation by trucking companies, while passengers may be transportation via mass transit. Commonly defined features of modern roads include defined lanes and signage. Within the United States, roads between regions are connected via the Interstate Highway System (Wikipedia, 2013). Road transportation is one of the modes of transportation which involves the use of motor vehicles (cars, lorries, buses, bicycles, trucks and animals). There are various types of roads according to size and functions, some

roads are tarred while others are not. The best of these roads are the modern roads, which links major towns. Road transportation was developed first and it exists in all parts of the world.

Ahmed (2016), asserts that road transportation compared with other modes of transportation is more flexible, no specialised machinery or technique is necessary for its use so that all countries no matter how backward, possess them in some form. In primitive regions, they may be simple parts suitable only for foot or hoof traffic, but in advanced regions, they are more likely to be well made and suitable for heaviest and the most modern vehicles. Although stone-slab surfaces date back to Persian and Roman times, it was not really until the 18th century that roads proper ceased to be mere dirt tracks rutted in summer and water logged in winter. The first metalled surfaces appeared in Britain (designed by such men as Telford and Macadam), but soon spread throughout the civilized world. Vehicles, too improved and carriages became swift, smoother and larger.

Types of Road Transportation

Umeadi (2015), observed the different types of road transportation and they include;

1. **Animal:** This is mostly referred to as beast of burden. It is the oldest means of transportation; this usually involves the use of animals for the transportation of people and goods on land or road. Examples of animals used for this transportation include camel, horse, donkey, elephant, and giraffe.
2. **Walking:** Walking is a means of transportation that is commonly done on the road, it is used for only on short distance trips.
3. **Automobile:** This is a motorized vehicle consisting of wheels and it is powered by an internal engine and does not operate on railways like trains and trolleys. Automobiles are used to transport people and items from one location to another location on roads.
4. **Cycling-** This is also referred to as biking or the use of bicycle; this means of transportation is often used for conveying people or goods within short and moderate distance trips. It is one of the cheapest means of transportation. Cycling is a very efficient and effective mode of transportation with zero emission and it is as time-effective or even better as motorized traffic in dense and congested urban areas.
5. **Bus:** this is a road vehicle designed to carry passengers and goods to various locations. Some buses are designed with a large capacity to convey about 18 to 60 passengers at a time on larger roads. Examples of the common types of buses are the single-decker rigid bus, double-decker buses, articulated buses, midibuses and minibuses.

Advantages of Road Transportation

Laudon (2014), states that road transportation has many advantages and they include;

1. Road transportation creates flexibility of service since numerous routes and destinations are possible.
2. The maintenance cost involved in road transportation is low.
3. It offers directness and door-to-door communication is made possible.
4. It enables great speed and cheapness over short distances, continuous movement is made possible.
5. Road transportation carries more passengers and goods within localities because they are normally constructed to connect towns and villages where rail, air and water transportations are absent.

Disadvantages of Road Transportation

Stevenson (2010), opines that road transportation has some disadvantages. They include;

1. Roads and motor vehicles need constant maintenance and this adds greatly to running costs.
2. Road transportation links many places more than any other means of transportation
3. Most drivers and road users are very careless and as a result of this, a lot of accidents have claimed thousands of lives and property.
4. Road transportation at times can be very slow due to many factors such as poor maintenance, weather and traffic congestion.
5. Most cities have so many vehicles which ply the road, hence resulting in traffic congestion.

Concept of Road Transport Management

Road Transportation Management System (RTMS) is an industry-led self-regulation scheme that encourages consignees, consignors and transport operators engaged in the road logistics value chain to implement a vehicle management system that preserves road infrastructure, improves road safety and increases the productivity of the logistics value chain.

Urban Public Transportation Systems

Barnet (2014), asserts that transportation within urbanized areas presents unique planning challenge that has a direct impact on residents' quality of life. Within this framework, urban public transportation planning has the potential to attain many important environmental and social goals which transcend the commute of people. Indeed, the provision of public transportation is not an end in itself, but rather a catalyst for more equitable and sustainable communities. A comprehensive perspective of the contribution to quality of life that public transportation can make examines these four aspects: society, culture, economy and environment. Society benefits from a public transportation system that provides equitable access to opportunities, responds to differing demands and needs, and allows us to continue with our daily activities even during periods of uncertainty. Public transit also contributes to the creation of distinctive and vibrant places with a varied and human-scale design that minimizes intrusions from the network of roads and parking requirements that come with massive automobile usage. It also contributes to the economy by enabling mobility, making efficient use of energy and spatial resources, and reducing in-vehicle travel time by mitigating congestion. Finally, public transit contributes to the environment when it is safe and increases the non-recreational physical activity of residents. It should also play a significant role in diminishing the air emissions, as well as the energy and material consumption needed for people mobility.

Classification of Urban Transportation

Urban transportation consists of a family of modes, which range from walking and bicycles to urban freeways, metro and regional rail systems. The basic classification of these modes, based on the type of their operation and use, is into three categories:

- a) Private transportation consists of privately owned vehicles operated by owners for their personal use, usually on public streets. Most common modes are pedestrian, bicycle and private car.
- b) Para-transit or for-hire transportation is transportation provided by operators and available to parties which hire them for individual or multiple trips. Taxi, dial-a-bus and jitney are the most common modes.
- c) Urban transit, mass transit or public transportation includes systems that are available for use by all persons who pay the established fare. These modes, which operate on fixed routes and with fixed schedules, include bus, light rail transit, metro, regional rail and several other systems.

Urban public transportation, strictly defined, includes both transit and paratransit categories, since both are available for public use. However, since public transportation tends to be identified with transit only, inclusion of paratransit is usually specifically identified.

Bus Transit Service Planning and Operations

Improving public transportation systems is about more than just upgrading infrastructure, such as building new lanes and transit routes; it is also about operating those systems efficiently. Daganzo (2011), opines that good transportation planning and operations are required to delicately balance the trade-offs among the goals and constraints of transit agencies (supply side) and the competing values of passengers (demand side). Because terminology and concepts in the field of transportation often vary, special attention has been paid to precise definitions throughout the dissertation. Reliability is a key concept in the planning and operation of transportation services and is presented in different ways throughout the literature (discussed in the following section). Transportation service usually refers to transportation offered to passengers while operation has a wide range of definitions covering system management, scheduling and functioning, particularly from the agency point-of-view (Vuchic, 2005). In the transportation setting, planning is an area that involves the evaluation, assessment, design and location of transportation facilities (Rodrigue, Comtois, & Slack, 2009).

Bus Transit System

Buses represent the most widely used transit technology. Virtually every city in the world that has transit service operates buses. Large cities with rail transit also operate extensive bus networks, usually on lines with lower passenger volumes or as feeders to rail lines (Newell, 2014). Bus service is easy to introduce or modify: basic service requires only purchase of vehicles, garage and maintenance facilities, and organization of service. Stops along the lines can be simple. Therefore, buses represent the most economical transit mode for lightly traveled lines. This flexibility of bus routes is an advantage for any necessary changes, but it is a disadvantage for major bus lines: they lack permanence, efficiency in carrying heavy passenger volumes, and image of permanent, physically fixed routes desired by passengers.

Bus Vehicles

There is a range of bus vehicles by their size/capacity and body type. Main types are defined here.

1. Minibus

A minibus is a 6-8 meters long vehicle, which has a capacity of 15-40 seats and standing spaces. It is used for lightly traveled lines, short shuttle lines, services in residential neighborhoods, etc.

2. Regular Bus

A regular bus is 10-12 m long, 2.50 m wide. It has 30-50 seats and 60-20 standing spaces (minimum number of seats corresponds to the maximum number of standing spaces).

3. Articulated Bus

An articulated bus is a vehicle with the main body on two axles and an articulated section with the third axle. These buses are 16-18 m long and have a capacity approximately 50 percent greater than a regular bus. With their greater capacity, articulated buses are suited for heavily traveled lines. In a few cities with very heavy ridership double-articulated buses, with three body sections and four axles, are used.

Functional Road Classification

A functional road classification is important to the safe and efficient management of road transportation infrastructure because the process of classifying roads and streets considers and prioritizes the user's journey needs, and through a road design process manages potential user conflicts and expectations.

Well-connected Transportation Network Infrastructure

Creating a well-connected network with an access management strategy is fundamental to the safety, efficient and resilient aspects of RTM. Road connectivity can be defined as the density of connections in a road network and the directness of links (Litman 2017b). A well-connected road network has a number of links and intersections with minimum cul-de-sacs. Interconnected roads and streets facilitate traffic flow because they provide alternative routes which help reduce the demand on any single street. A poorly-connected network creates longer trips, and concentrates traffic on a selected number of streets, particularly arterial roads leading to congestion and untimely implementation of road widening and major improvement projects.

The efficiency of a well-connected transportation system enables convenient access by a variety of means of transportation from walking and cycling to driving and public transportation (Department of Infrastructure and Transportation 2013). This, in effect, encourages the use of more sustainable modes over the automobile. Figure 2.4 compares an interconnected road pattern with a disconnected layout in order to demonstrate the benefit of reducing trip distances and providing multiple route options between a house and a local school.

Strategies to improve road transportation connectivity involve the inclusion of connectivity goals and objectives in the city or district plan and undertaking a comprehensive planning process to establish the location and layout of future roads, and to preserve the right of way. Limiting the use of cul-de-sacs as well as requiring stub roads for future connection to adjacent properties in new subdivisions is a macro-level approach to improve street and pedestrian connectivity. Setting a minimum block length in a subdivision or land use planning process can also promote connectivity by creating more intersections and route choices (Lehigh Valley Planning Commission 2011).

Parking Strategy and Management

Parking forms an essential component of the road transportation system as it allows drivers to safely store their vehicles while they are not in use. It forms an interface between the road network and other land uses (Austroads 2017). Austroads (2017) defined parking as the act of stopping a vehicle and leaving it in the one location for a period of time, irrespective of an individual's presence in the vehicle. Even though parking is considered as an effect of demand that is generated by land use type and intensity, it has some environmental, mobility and safety implications depending on the categories of parking.

Travel Demand Management

Travel demand management (TDM) is a term applied to a broad range of techniques, including the management of existing road space and the amount of traffic on a specific route (Austroads 1995). TDM aims to reduce the impact of travel on the road and transportation system as well as the need and extent of car travel. It attempts to address congestion and environmental issues in a supply and demand framework (Luk 1992). With the aim of reducing demand on existing transportation networks, TDM combines transportation and land use planning in order to change how, when and where road users travel. The Austroads guidelines (Austroads 1995) highlighted the purpose and objectives of TDM. Due to the diverse nature of the transportation system, Austroads classified

the objectives into two broad categories, performance-based and purpose-based. Performance-based objectives are based on environmental, financial, economic and social considerations. The purpose-based objectives are based on administrative, incentives and educational considerations.

There are different types of TDM actions that can be undertaken depending on how and where they are implemented. Examples of TDM actions are improvements to alternative travel modes (e.g. walking and cycling), integrating transportation and land use planning, workplace TDM measures, ceiling on trip generation, taxi sharing, area pricing, road pricing, travel reduction plans, carpooling, incentives to carpooling, transit lanes or high-occupancy vehicle (HOV) lanes, and high-occupancy toll lanes. Additionally, promotional activities, behaviour change programs and parking demand management measures are also considered TDM actions.

TDM actions should be considered at different levels of road transportation system planning. Austroads (1995) emphasised that actions can be initiated:

- at a local level, within a confined district such as a CBD or metropolitan activity centre
- in a congested region such as an inner metropolitan region
- as a city-wide or national initiative.

The particular set of actions applied will depend on the overall goals and desired results. For example, the objective of seeking a substantial reduction in the use of private vehicles will reduce greenhouse gas emissions from transportation. In addition, with an objective of enabling a sustainable transportation system at a national level, voluntary travel behaviour change initiatives were implemented with positive outcomes highlighted in Australian studies (Taylor 2007, Taylor & Philp 2010, Stopher, Moutou & Liu 2013).

Moreover, at corridor and network levels, congestion pricing is an effective way to cope with high travel demand. There are three types of pricing mechanism (i.e. static, time-of-day and dynamic) currently in worldwide use (Chung 2013, De Palma et al. 2011), but only two are used for TDM. Federal Highway Administration (2009) states that static pricing is usually used with an aim to generate revenue while time-of-day pricing and dynamic pricing are used to manage traffic demand. Most of the variably priced mechanisms are based on vehicle occupancy and thus providing a benefit to HOV users over single-occupancy vehicle users. As a result, from the operational point of view, this strategy improves the overall network and lane performance (May & Milne 2000).

Key Strategies

The Road Transportation Management System strategy identifies various key strategies that will form the basis for various RTMS actions. These are:

- **Marketing strategy.** Establish RTMS as the business standard by creating early adopters among major consignors, consignees and transportation operators, on the basis of a new national standard for good corporate governance in the road logistics value chain, measurable productivity improvement and government endorsement;
- **Product strategy.** Evolve the existing private scheme into a South African National Standard, a SADC Standard and a new ISO standard for the road logistics value chain that are supported by concessions and a research and technology innovation programme;
- **Operational strategy.** Establish a self-administering certification scheme under the direction of an industry steering committee and manage implementation through existing organisations in the certification industry (e.g. SANAS, accredited certification bodies, service providers);
- **Funding strategy.** Use private sector sponsorship and government seed funding to establish a self-funding certification scheme, and coordinate specialised funding on a project basis.

Concept of Customer loyalty

Customer loyalty is customer's objective to repurchase something base on his/her expectancy and the past experience. Customer loyalty is the mind-set that compels the customers to reuse a product and service or brand again and again (John, 2011). Customer loyalty can be create by identify the customer need, managing them and fulfill them Maiyaki et al. (2011). Companies can build up customer's loyalty by offering better and admirable services or quality products. Customer loyalty is supposed to be the customer favorable attitude and there buying pattern. Consumer's loyalty and Consumer satisfaction are mutually consider as a device to build up and achieve sustainable spirited benefits. Loyal customers can be separated into two main categories that are Satisfied Consumers

and Un-Satisfied Consumers. A strong association exists between the loyal and satisfied consumers. Sometimes un-satisfied consumers are loyal due to their promise with dealers. Satisfied customers, on the other if require the commitment with the supplier; will always switch once when the competitor with better service is acknowledged. This is fake loyalty because of which the consumer feels hurdle during which stops him to prefer another supplier. These hurdles are called switching expenses. The consumer loyalty towards a company is mainly the consumer's feeling which compels him to reuse or buy again and again the product and service of that exacting company and the referring of that product and service by the consumer to the other of his family member, friends and others.

Concept of Customer satisfaction

Customer satisfaction is the extent of frequent buying of a product and service. Customer satisfaction creates value for customer, in short supervision of their hopes and to fulfill their requirements (Guzzo, 2010). Customer satisfaction is defined as meeting one's criteria or satisfying one's hopes or we can say that if customer is satisfied with product and services it has a different emotion or manners towards a particular brand it has used Maiyaki et al. (2011). They more explain Customer satisfaction is one of the main goal of marketing action whereby it create relationship what consumers purchase and how they act. It is clear that if anyone is satisfied with specific offer or product he will acquire themselves grip in repurchase. It is depend on Customer that how they identify the quality and service and customer satisfaction depend on quality (Ali et a 2010) .Satisfaction is a main determinant which effect the different variables and corporation's economic progress. Satisfaction come after use of some products or services which is essentially the result of actual and expected functions of product (Khokhar eal., 2011). For retting the customers it is very significant for any company to recognize and satisfy needs of customer that would help them for success. Customer satisfaction is most important objective for the marketing process. For high quality in their products and service; and most companies struggle as contests is increased for with a view to eventually growth in satisfying their consumers. Growth of any company depends on the specifics that they understands the needs of consumers and satisfy them in good manners. while every customer has different need, different attitudes and feelings, different behaviors, different satisfaction levels, different buying pattern, therefore it is not essential that every consumer get same level of satisfaction for specific products or services being presented.

Concept of Perceived value

Perceived value is a kind of gain where a customer obtains in return for the paid cost(Gallarza & Sorae 2006). Perceived value is a strategic instrument to attract and retain customers based on important factors for the success of industrial corporations and service providers. (Gallarza & Sorae). When we purchase a product after using the product we will get the idea of cost put in and benefit of using a product determine the product life, get the idea which will persuade customers' purchase objective and behavior. Consumer compared benefit received with cost in order to compare with competitors. When supposed value meets the need and want of the customer then customer feel value and want to reuse the product. When the supposed value is less than the expectation then the customer loyalty is decreased. Product quality is measured when we use the product comparative to the price paid by customer. Perceived value is the evaluation of the price paid for the excellence. Quality is measured in term of the product efficiency.

THEORETICAL FRAMEWORK

There are many theories of transportation management, but this study adopted the centralized and decentralized models.

This study adopted the Centralized and Decentralized models.

The centralized model

Abrahamsson (2012), states that what the centralized model provides is a separation of the physical distribution and the sales activities, the physical distribution was centralized into just including one central distribution center in one market, where the deliveries go directly from the central DC to the customers. The sales activities are still decentralized for the best market contact, and the communication with the central DC and the local sales function is through an integrated information system. Mattsson (2011), highlights the benefits of the centralized distribution structure in the form of economy of scale. First, with a centralized structure the material flow will be larger in the centralized storing units, enabling the organization to invest in more efficient automated warehouses and handling systems, and thereby reduce the handling cost in these storing units. Second, the centralized distribution structure means that in order to obtain a specific service level that will require a lower safety stock. If a company wants to obtain the same specific service level within a hierarchal distribution structure, this will mean that company has to keep a higher safety stock.

The Decentralized Model

Mattsson believes that it is, in some cases, crucial to use a hierarchal distribution system, with several levels of warehouses. One of the advantages with what Mattsson calls the hierarchal distribution structure (decentralized distribution) is the nearness to the end customer, which is crucial for products requiring secure and short delivery. Another aspect is the transportation cost; Mattson states that if the transportation cost is high related to the value of the product then a hierarchal distribution structure is the optimal solution. Even a rapid, small and frequent purchase from customers proposes a hierarchal distribution structure.

EMPIRICAL REVIEW

Effect of Procurement of high quality spare parts on customer's loyalty

In a study carried out by Adeyemi (2015) in Lagos state on the effect of procurement of high quality spare parts on customer loyalty, a population of 230 employees from two transportation companies in Nigeria were studied using the survey method of research and the questionnaire as the major instrument of data collection. The statistical package for the social science (SPSS) was used in the analysis and it was found that procurement of high quality spare parts has a positive effective on customer loyalty

Degree of Relationship between availability of standard fleet and perceived value

In another study conducted by Okoye (2013) in Enugu state on the degree of relationship between availability of standard fleet and perceived value, a population of 250 employees was studied using the survey method of research and the questionnaire as the major instrument of data collection. The pearson product moment correlation coefficient was used in the analysis and it was found there is a significant degree of relationship between availability of standard fleet and perceived value.

SUMMARY OF THE REVIEW OF RELATED LITERATURE

Adeyemi (2015) carried out a study on effect of quality service delivery on patronization of transportation companies. This study could be compared with that of Okoye (2013) that carried out a study on degree of relationship between availability of standard fleet and perceived value. Okoye (2013) used a population of 250 employees using the pearson product moment correlation unlike Adeyemi (2015) that used a population of 230 employees using SPSS in the analysis.

Furthermore, Ijadunola (2014) carried out a study on effect of quality service delivery on patronization. In the study a population of 320 employees was used while the chi-square statistical tool was used in the analysis unlike Pepple (2015) that used a population of 470 employees used a population of 470 employees using the Z-Test in the analysis

METHODOLOGY

The researcher used survey research design in the work. Survey is a systematic gathering of information through instruments like the questionnaire to ascertain the reality in which the respondents are exposed to. Survey design was employed because the researcher adopted the questionnaire as instrument for data collection.

Population of the study was 94.

Test of Hypotheses

The Pearson Fisher chi-square was adopted in the test of hypotheses. The chi-square formula is stated thus,

$$X^2 = \sum \frac{(oi - ei)^2}{ei}$$

Where

X^2	=	Chi-square
\sum	=	Summation sign
O_i	=	Observed frequency
e_i	=	Expected frequency

Test of Hypothesis One

H_0 : Procurement of high quality spare parts does not have a positive effect on customers' loyalty of Peace Mass Transit

Table 1: Distribution of Respondents on whether procurement of high quality spare parts has a positive effect on customers' loyalty of their organization

RESPONSES	FREQUENCY	PERCENTAGE
Strongly agree	52	55
Agree	31	33
Undecided	5	5
Disagree	4	4
Strongly disagree	2	3
Total	94	100

Source: Field Survey, 2021

Constructing the test statistics, we have

Response	O _i	E _i	(o _i -e _i)	(o _i -e _i) ²	(O _i -e _i) ² /e _i
Strongly agree	52	18.80	33.20	1102.24	58.63
Agree	31	18.80	12.20	148.84	7.92
Undecided	5	18.80	-13.80	190.44	10.13
Disagree	4	18.80	-14.80	219.04	11.65
Strongly disagree	2	18.80	-16.80	282.24	15.01
Total	94				103.64

The calculated value = 103.64. The degree of freedom, $n-1 = 5-1 = 4$ degree of freedom. The level of significance is = 0.05. The critical value at 4 degree of freedom and 0.05 Level of significance is 9.49. The calculated or chi-square value (103.64) is greater than the critical value (9.49).

Decision Rule: Reject the null hypothesis and accept the alternative hypothesis if the calculated value is greater than the critical value. Otherwise reject the alternative hypothesis.

Decision: Since the calculated value is less than the critical value, the researcher accepted the null hypothesis which states that procurement of high procurement of high quality spare parts has a positive effect on customers' loyalty of Peace Mass Transit

Test of Hypothesis Two

H_i: Availability of standard fleet has a significant relationship with perceived value of Peace Mass Transit.

Table 2: Distribution of Respondents on whether availability of standard fleet has a significant degree of relationship with perceived value of their organization

RESPONSES	FREQUENCY	PERCENTAGE
Strongly agree	49	52
Agree	40	43
Undecided	3	3
Disagree	1	1
Strongly disagree	1	1
Total	94	100

Source: Field Survey, 2021

Constructing the test statistics, we have

Response	O _i	E _i	(o _i -e _i)	(o _i -e _i) ²	(O _i -e _i) ² /e _i
Strongly agree	49	18.80	30.20	912.04	48.51
Agree	40	18.80	21.20	449.44	23.91
Undecided	3	18.80	-15.80	249.64	13.28
Disagree	1	18.80	-17.80	316.84	16.85
Strongly disagree	1	18.80	-17.80	316.84	16.85
Total	94				119.40

The calculated value = 119.40. The degree of freedom, $n-1 = 5-1 = 4$ degree of freedom. The level of significance is = 0.05. The critical value at 4 degree of freedom and 0.05 level of significance is 9.49. The calculated or chi-square value (119.40) is greater than the critical value (9.49).

Decision Rule: Reject the null hypothesis and accept the alternative hypothesis if the calculated value is greater than the critical value. Otherwise reject the alternative hypothesis.

Decision: Since the calculated value is less than the critical value, the researcher accepted the alternate hypothesis which states that availability of standard fleet has a significant relationship with perceived value.

Discussion based on Hypothesis One

Procurement of high quality spare parts has a positive relationship on customers' loyalty of Peace Mass Transit. The statement was confirmed to be true in the comparison of the researcher's findings with the empirical review. The evidence is shown in the calculated value (103.64) which is less than the critical value (9.49). In the empirical review, Taye (2015) carried out a research on whether Procurement of high quality spare parts has a positive effect on customers' loyalty of Peace Mass Transit. It was found that procurement of high quality spare parts has a positive effect on customers' loyalty of Peace Mass Transit

Discussion Based on Hypothesis Two

Availability of standard fleet has a significant relationship with perceived value. The statement was confirmed to be true in the comparison of the researcher's findings with the empirical review. The evidence is shown in the calculated value (119.40) which is less than the critical value (9.49). In the empirical review, Taye (2015) carried out a research on whether availability of standard fleet has a significant relationship with perceived value. It was found availability of standard fleet has a significant relationship with perceived value.

Summary of Findings

1. Procurement of high quality spare parts has a positive effect on customers' loyalty of Peace Mass Transit. From the tested hypothesis one $X^2 (4, n = 350) = 182.74, P = 0.05$. The research accepted the alternate hypothesis.
2. Availability of standard fleet has a significant relationship with perceived value. From the tested hypothesis two $X^2 (4, n = 94) = 119.40, P = 0.05$. The research accepted the alternate hypothesis.

Conclusion

Transportation has become a major contributor to the economy and a competitive force in business. It is the activity that physically connects the business to its supply chain partners, such as supply chain partners and customers and it is a major influence on the customer's satisfaction with the company. Transporting is required in the whole production procedures, from manufacturing to delivery to the final consumers. Only a good coordination between each component would bring the benefits to a maximum. The researcher therefore concluded that transportation management has a positive effect on customer satisfaction.

Recommendations

The following recommendations were made based on the findings.

- 1) Management of transportation companies should procure high quality spare parts as it has a positive effect on customers' loyalty.
- 2) Management of transportation companies should provide standard fleet as it has a significant relationship with perceived value.

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