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THE INFLUENCE OF TRANSPORT MANAGEMENT PRACTICES ON CUSTOMER SATISFACTION IN FAST-FOOD SECTOR: EVIDENCE FROM SOUTH-WESTERN NIGERIA

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ABSTRACT

The fast-food business over the years have been experiencing issues arising from the inefficient transport management practices (TMP), such as delays in delivery, high costs and variable service quality. Such issues negatively affect customer satisfaction (CS) and overall business performance as evidence from the literature. This research examines impact of TMP on customer satisfaction in fast-food sector of Nigeria. The data were sourced from primary source. A structured questionnaire was directed to 400 participants who are customers of fast-food industries from all the six states in south-west Nigeria. Moreover, data were analyzed using descriptive and inferential statistics. The SEM and EFA were used to evaluate relationship amid TMP and CS. The results show high load factors (TMP: 0.884–0.978; CS: 0.846–0.983) and excellent fit criteria for the model (CMIN/DF = 1.20523, RMSEA = 0.029, GFI = 0.951), indicating critical role of TMP in service speed, dependability, and product quality. The research concludes that efficient TMP results in higher customer satisfaction and suggests the use of the GPS-based route planning, computerized delivery systems to curtail delays and inefficiency in operations. It is recommended that the fast-food companies should adopt the real-time order tracking and also regularly train their delivery workforce so as to satisfy their customer as much as possible.

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INTRODUCTION

The efficient transport management plays an important role in how supply chains operate in fast-moving businesses around the world (Kin, Rai, Dablanc & Quak, 2024). It helps to make sure that food products make it from producers to customers as quickly and safely as possible. Poor transport systems in the sector where timing is everything can delay orders, reduce food

quality and increase costs. Christian, Ifekanandu, Awaji and Obalum (2024) added that in the competitive industries such as fast food, the transport systems have to be well managed so as to keep the customers satisfied and for the business to be successful thus focusing on delivery performance, and service reliability. Planning, organizing and controlling movement of goods from suppliers to users in a way that saves time, reduces costs and improves service outcomes (Zhang, Yang, & Yang, 2023), as in fast-food sector, effect transport management is especially important.

Food should be hot, fresh and delivered on time and customers expect that. A delay may cause dissatisfaction or even loss of repeat business. In this linking, according to Ballou (2013) and Sann, Pimpohnsakun and Booncharoen (2024), as good transport systems assist companies to meet customer expectations and enhance their reputation in the market. But if transport is not managed well, companies face stock shortages, delivery delays and increased costs which all lead to loss of the customer trust and loyalty (Christopher, 2016; Ayiti, 2023). While developed countries use modern technologies likewise the Transportation Management Systems (TMS) to improve routing and tracking (Ishola & Haruna, 2022), many Nigerian fast-food businesses still depend upon the manual systems encompassing route planning, fleet scheduling, driver performance, vehicle maintenance, and use of the technology. These outdated systems are not effective in today's fast-paced environment. Likewise, companies that fail to invest in transport technologies face regular delays, customer complaints & higher costs (Alade, Ureki & Adekoya, 2023).

Besides, despite the growing consumption of fast-food services in Nigeria, empirical evidence of transport management practices and its contribution to business success in remains limited. Some research identifies the potential contribution of effective transport strategies (Beitelmal, Nwokolo, Meyer & Ahia, 2024; Chukwunwem & Ndubueze, 2021), while others argue that the constraints in the physical landscape undermine contribution (Agyabeng, Afum & Ahenkorah, 2020; Christopher, 2016). In this connection, customer satisfaction is the critical success factor in the highly competitive fast-food industry. With the rise of food delivery services, the transport management has emerged as a pivotal element in service quality. These challenges make it hard for fast-food outlets to meet customer expectations and grow their business. In this regar, given these problems, this research focuses on the role of transport management practices in the performance of fast-food companies in the South-Western Nigeria. The study explores how transport affects the customer satisfaction, which is used as the important indicator of business success.

LITERATURE REVIEW

Transport management ensures that goods are moved in timely, safe and cost effective manner (Zhang, Kou, Liu, Zhang & Qie, 2022). In the fast food industry, it includes transport planning, vehicle scheduling, delivery tracking, route optimization (Buyko, 2022). Christian, Ifekanandu, Awaji and Obalum (2024) state that these activities directly affect quality of service, especially in time sensitive businesses such as fast food. The companies can avoid delays, reduce wastage and satisfy customers by delivering products quickly and in good condition through efficient

transport. Reducing delivery times and ensuring accuracy are one of main goals of transport management. The customers are dissatisfied when food is late or in bad condition. Anis and Muhamad (2024) argued that delays, backorders and inconsistent service delivery will soon harm business performance in the food industry. Along similar lines, Oluyemisi, Cynthia and Godwin (2023) confirmed that transport issues like poor route planning and limited tracking are the major causes of the customer dissatisfaction in Nigeria's food retail market. Transport practices that are efficient improve service speed and reduce costs overall which is essential for business competitiveness (Martyushev, Malozyomov, Khalikov, Kukartsev, Kukartsev & Qi, 2023).

Empirically, studies revealed that transport systems are enabled by technology which is a key enabler of efficient transport systems. Tools like GPS tracking, automated vehicle scheduling and digital delivery platforms have changed the way companies run their logistics. According to Sharma et al. (2023), transport technology helps businesses to increase order accuracy, track deliveries in real time and respond faster to customer demands. Such systems are already in use in the developed countries to increase delivery reliability and lower costs at most fast food chains. But in developing countries such as Nigeria, these tools are not used widely. Ishola and Haruna (2022) state that very few large businesses in Nigeria have adopted TMS tools while most small and medium fast food outlets still depend on manual coordination. Still, it's not just a problem of technology, but of infrastructure as well. Even well planned transport systems are still constrained by poor road conditions and traffic congestion (Babaei, Khedmati, Jokar & Tirkolaee, 2023). Traffic delays, unpaved roads and vehicle breakdowns are found to seriously affect logistics operations in urban centres like Lagos and Ibadan (Adewuyi, Isiaka & Olayiwola, 2025).

The result of these issues is increased delivery times and fuel costs. According to the Adeleke (2023) such infrastructural challenges result in frequent disruption of supply chains and affect the freshness of delivered food products. These problems prevent fast food businesses from meeting delivery deadlines, maintaining quality and being viable (Adeleke, 2023; Adequyi et al., 2025). On other hand, there are several studies that have examined the effect of transport management on customer satisfaction. According to Onasoga (2023), in retail businesses, the demand for quick delivery is very high. Customers feel valued when companies can deliver food quickly and on time and they are more likely to become repeat buyers. Salome, Odock, Wainaina and Kinoti (2022) also found that customer satisfaction in the Nigeria's food service sector increases when the delivery times are short and when the status of delivery is clear and frequent. This is in line with Expectation Disconfirmation Theory (EDT) as stated by Serenko and Stach (2009) that the satisfaction occurs when the service meets or exceeds the customer expectation.

Still, in spite of these findings, there is still gaps in the literature concerning fast food sector in Southwestern Nigeria. There is very little research available on fast food logistics, most of the research available is about general logistics, retail transport. For instance, Gounder et al. (2018) and Naik and Suresh (2018) offered useful insights into how technology improves logistics in

general, but did not examine customer specific outcomes in the quick service food industry. According to Agyabeng-Mensah, Afum and Ahenkorah (2020) local environmental constraints like urban traffic and poor roads make general transport strategies ineffective in the Nigerian context. These gaps require this research that bridges knowledge by concentrating on transport management practices and their effects on customer satisfaction in the fast food businesses in South-Western Nigeria. Review of related studies reveals that globally; benefits of transport technology and good planning are understood but there is little local evidence of how these strategies affect food delivery performance in Nigeria. Therefore, below hypothesis was set for study.

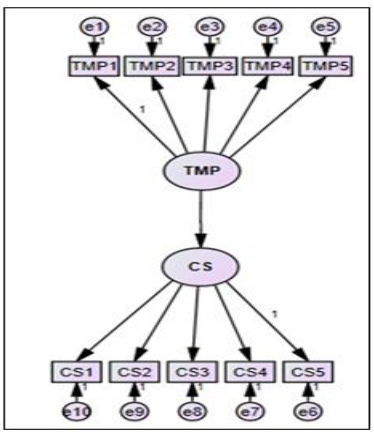
Hypothesis of Study

H_{01}: Transport management practices have no significant effect on performance of fast-food industries in South-Western Nigeria.

Conceptual Framework

Figure 1 shows the conceptual framework measuring the impact of Transport Management Practices (TMP) on Customer Satisfaction (CS) as a measure of success of fast-food company. The five major sub-practices of TMP (TMP1 to TMP5) all contribute to influencing CS through five quantifiable outcomes (CS1 to CS5). The linkage between TMP and CS directly informs the evaluation of whether transport efficiency has an impact on customer satisfaction in delivery of service, punctuality, product quality. Error terms (e1 to e10) account for external or residual variability in the relationship, indicating the role of transport optimization in maximizing the outcomes.

Figure 1
Conceptual Framework



RESEARCH METHODOLOGY

The research was carried out in South-Western Nigeria. This geopolitical region contains six states that are Lagos, Ogun, Oyo, Osun, Ondo, and Ekiti states (Ajikah et al., 2023). This region includes the business hub of Nigeria such as Lagos state which plays the key role in transport and supply chain management in the country (Taiwo, 2021). The fast-food industries located in

this region include Mr. Bigg's, Tastee Fried Chicken, Chicken Republic, Kilimanjaro, Domino's Pizza etc which are focus of this study (AFFCON, 2023). Also, this region was chosen because it has a high rate of the fast-food outlets in the country. The population of the study consists of 32,534,212 monthly fast-food customers from study area as at 2024 (Nigeria Bureau of Statistics, 2023). Sample size of 400 was calculated from the population of the study using Taro Yamane formula.

Thus, the study was based on 400 participants, who are customers of the selected industries. As regard sampling technique, the study employed a simple random sampling to evenly select the respondents, given each respondent's equal chance of being selected. Furthermore, data were sourced from primary source using structured questionnaire. Questionnaire was administered to the participants at the premises of the fast-food company across the study area, choosing 3-days a-week period of administration until 400 participants were willing to participate in the study. For a participant to qualify, he/she must have experience of home delivery services of the fast-food industry as a form measure for the TMP of the company. Furthermore, EFA and Confirmatory Factor Analysis (CFA) were used to analyzed the data and test the hypothesis of the study.

FINDINGS OF STUDY

The demographic data in Table 1 helps to understand the social and economic background of the people who took part in study. The respondents are grouped by four main factors: gender, marital status, age, and occupation. Starting with gender, the results show that females made up 72.7% of the total respondents. This high percentage suggests that women play a major role in the fast-food industry, in terms of how they interact with or are influenced by transport and delivery services. Inman and Nikolova (2017), women make food choices for their families and are active consumers in the food sector. Looking at marital status, the respondents were single, making up 82.9% of the total group. This is vital since single people are a key target group for fast-food outlets. Pettinger et al. (2018) explained that many single individuals live fast-paced lives and prefer quick, convenient meals. This high number of single respondents might show how transport services in fast-food sector are meeting expectations of people who value speed and ease.

In terms of age, the largest group was between 21 and 30 years old, accounting for 51.4% of all participants. This age group is very important to the fast-food industry because young adults are more open to fast-food products. As Rydell et al. (2008) pointed out, younger people often choose fast food because of their busy lifestyles and their interest in quick meal options. This result gives more understanding of how logistics and delivery services might be shaped to suit the needs of this active age group. Finally, in the area of occupation, 60.5% were self-employed. This is a useful finding as self-employed people usually do not have fixed work schedules. This means they might visit fast-food restaurants at different times of day, compared to those who work regular hours. Gardner (2018) stated that group may have more flexible routines, which makes them unique customer group for fast-food businesses, could help companies recognize how delivery services be planned to match changing needs of customers with different work patterns.

Table 1
Socio-Economic Characteristics of the Respondents

	Frequency	Percent	Valid %	Cumulative %
Gender				
Male	105	27.3	27.3	27.3
Female	280	72.7	72.7	100.0
Total	385	100.0	100.0	
Marital Status				
Single	319	82.9	82.9	82.9
Married	19	4.9	4.9	87.8
Divorced	47	12.2	12.2	100.0
Total	385	100.0	100.0	

Table 1A
Socio-Economic Characteristics of the Respondents

Age				
Less than 20yrs	85	22.1	22.1	22.1
21 – 30yrs	198	51.4	51.4	73.5
31 – 40yrs	61	15.8	15.8	89.4
41 – 50yrs	24	6.2	6.2	95.6
50yrs above	17	4.4	4.4	100.0
Total	385	100.0	100.0	
Occupation				
Student	100	26.0	26.0	26.0
Civil Servant	52	13.5	13.5	39.5
Self-employed	233	60.5	60.5	100.0
Total	385	100.0	100.0	

Source: Author's Field Survey (2023)

Exploratory Factor Analysis of Variables

The Exploratory Factor Analysis (EFA) was used to test how well the survey items measured key concepts in this study- transport management practices (TMP) and customer satisfaction (CS), the results of which are presented in Table 2. Very strong factor loadings are shown in the results, ranging from 0.884 to 0.978. The high loadings of these questions indicate that these questions are closely related to the broader ideas that they are measuring. In other words, the survey items were reliable in measuring what they were supposed to measure, especially in the sense of how transport systems influence customer experience. Further support for the items explaining a large amount of the variation in responses is provided by high R^2 values (0.781 to 0.956).

This is important because it demonstrates that the respondents consistently understood and agreed on what each question meant, particularly those questions related to the service quality,

delivery time and logistics coordination. The TMP domain has the Composite Reliability (CR) score of 0.975 and the CS domain has a CR score of 0.950 which indicates strong consistency among items. In other words, the responses were dependable and measured what we were interested in. It is more important, however, that the Average Variance Extracted (AVE) values for TMP and CS are 0.886 and 0.826, respectively which indicate that the constructs not only have strong internal consistency, but also capture a large part of what they are supposed to measure. This supports the notion that the well-structured transport system and practices do have a real and measurable impact on how customers perceive service quality in the fast food industry.

Table 2

Exploratory Factor Analysis Result

	Standard Loading	R2	CR	AVE
TMP1	.913	0.834	0.975	0.886
TMP2	.952	0.906		
TMP3	.884	0.781		
TMP4	.978	0.956		
TMP5	.977	0.955		
CS2	.886	0.785	0.950	0.826
CS3	.915	0.837		
CS4	.846	0.716		
CS5	.983	0.966		

Source: Author's filed survey (2023)

Transportation Management Practices & Customer Satisfaction

As shown in Table 3 and Figure 2, the Structural Equation Model (SEM) used in this study fits data very well. Several goodness-of-fit indices such as CMIN/DF (1.20523), GFI (.951), AGFI (.946), RMSEA (.029) and TLI (.985), were within the acceptable thresholds suggested by Lucas (2023), Furr (2021) and Pambudi et al. (2022), confirming this. These values verify the reliability of the relationship being studied and model structure that properly represents the observed data. In addition, good fit of the model indicates that transport management practices (route planning, vehicle tracking, delivery scheduling and communication) are good predictors of the customer satisfaction in fast food businesses. In this case, the customer satisfaction is not only about the food quality but also about the timeliness, reliability and accuracy of the delivery service.

Statistical model shows that if the transport systems are well organized, they have a positive impact on the customer's experience with the brand. This has direct implications for business operation. Investment in transport systems that are responsive and well organized improve satisfaction levels, results suggest, for fast food companies in South Western Nigeria. Using GPS route optimisation, reducing delivery delays and training drivers to follow the consistent service procedures can improve customer ratings (Vrhovac et al., 2024). This model confirms in the Nigerian context that communication during delivery and reliability of timing are strong

satisfaction drivers (López-Lemus et al., 2023). In this drive, findings reinforce the theoretical connection amid logistics quality and customer experience as previously suggested in studies such as Yang et al. (2024); Liu et al. (2021). In general, the model confirms that better transport management improves operational efficiency & directly improves how customers perceive the service.

Table 3

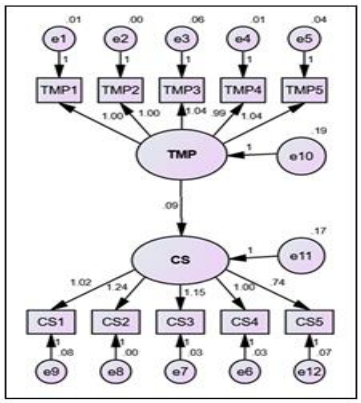
Model Fit for Effect of Transportation Management Practices on Customer Satisfaction

Index	Score	Threshold	Status	Supported Literature
CMIN/DF	1.20523	CMIN/DF<3	Fit	Lucas (2023)
GFI	.951	GFI>0.95	Fit	Furr, (2021) and Hooper et al., (2008)
AGRI	.946	AGRI>0.90		Hitt, et. al., (2020)
RMR	.013	RMR <0.08	Fit	Lucas (2023)
NFI	.954	NFI>0.95	Fit	Pambudi, et. al., (2022)
RMSEA	.029	RMSEA<0.08	Fit	Tavakol and Wetzel, (2020)
TLI	.985	TL>0.95	Fit	Pambudi, et. al., (2022)
CFI	.968	CFI>0.095	Fit	Furr, (2021) and et al., (2008)

Source: Author Field Survey, (2023)

Figure 2

Model Fit of Effect of Transportation Management Practices on Customer Satisfaction



Test of Hypothesis

H01: Transport management practices has no significant effect upon the customer satisfaction of fast-food industries in south western Nigeria.

In this regard, from the SEM result (see table 4), the line of interest for testing the hypothesis is:
CS <--- TMP .090 .049 20.858 ---------- (1)

The line (equation 1) from Structural Equation Model indicate that there is a clear and positive relationship between Transport Management Practices (TMP) and Customer Satisfaction (CS). A regression estimate of 0.090 shows strength of this relationship, i.e. as transport management

improves, customer satisfaction also improves. The value may seem small, but it is statistically significant and consistent across the data. For this relationship, the critical ratio is 20.858 which is much greater than the minimum value of 1.96 required for significance at the 5% level. The result is not due to chance, as confirmed by a very low p-value (less than 0.001). Thus, the null hypothesis that the TMP does not affect CS is therefore rejected. This verifies that the transport management does make a difference in the way customers perceive service quality in fast food delivery.

Furthermore, this result is in support of main focus of the study. Good transport systems are necessary in the fast-food business where customers expect fast, accurate and reliable service. If transport is well organised, customers are likely to be satisfied and come back to business. However, delays and delivery errors are a common cause of poor experiences, especially in a market where convenience is so important. It is found that fast food chains in South-Western Nigeria can increase customer satisfaction by improving transport coordination. This includes using digital tools to plan delivery routes, training staff for timely communication, changing schedules to match changing customer patterns. This offers statistical evidence that transport management is not a background activity but a core part of how customers judge the quality of service.

Table 4

Regression Weights

			Estimate	S.E.	C.R.	P	Label
CS	<---	TMP	.090	.049	20.858	***	
TMP1	<---	TMP	1.000				
TMP2	<---	TMP	.996	.008	120.212	***	
TMP3	<---	TMP	1.035	.031	33.719	***	
TMP4	<---	TMP	.992	.015	65.246	***	
TMP5	<---	TMP	1.038	.026	40.405	***	
CS4	<---	CS	1.000				
CS3	<---	CS	1.147	.031	36.675	***	
CS2	<---	CS	1.240	.027	45.361	***	
CS1	<---	CS	1.023	.042	24.503	***	
CS5	<---	CS	.739	.036	20.387	***	

Source: Author Field Survey, (2023)

DISCUSSION

This study findings also confirmed that transport management practices (route planning, vehicle tracking, delivery scheduling and communication) have a strong and significant effect on customer satisfaction in the fast food industry in South Western Nigeria. Good model fit indices (CMIN/DF = 1.20523, RMSEA = 0.029, GFI = 0.951, TLI = 0.985) indicate that proposed model is valid and reliable. In other words, better service quality, the higher dependability and faster response times are all key to customer satisfaction in time sensitive food services and advances in delivery time, route planning, tracking and coordination all contribute to these. The study found supports wider view that logistics performance, mainly in last mile delivery,

is directly linked to how customers rate their experience. Poor infrastructure & weak logistics planning continue to be problems in Nigeria, in urban areas such as Lagos and Ibadan where congestion and road quality impede deliveries (Beitelmal et al., 2024; Ayiti, 2023; Helon & Ejem, 2021).

This study further adds that if the transport systems are not efficient, customers are less likely to return or recommend the service hence reducing business growth. In addition, the results confirm that technology is not a luxury, but a necessity. Avoidable delays, wrong orders and poor communication are problems businesses that rely on manual delivery coordination face (Chukwunwem & Ndubueze, 2021; Buyko, 2022). Recent evidence has shown that GPS route optimisation, automated dispatch systems and live tracking can reduce such inefficiencies and build customer confidence (Zhang, Yang & Yang, 2023; Soon, Anis & Muhamad, 2024) and this study agrees with this. But technology is not enough on its own. Even advanced systems will not work effectively if the staff do not have the skills to use logistics tools or if roads are still in the poor condition (Adewuyi, Isiaka and Olayiwola, 2025; Christian et al., 2024; Salome et al. 2022).

Customer expectations are rising another important insight. Customers associate speed with value, expect real time communication, order accuracy on time arrivals as noted in previous studies (Umair et al., 2021; Sann, Pimpohnsakun & Booncharoen, 2024). When these are absent, even if the food quality is good, dissatisfaction increases. Such systems are already in use in the developed countries to increase delivery reliability and lower costs at most fast food chains. This is in line with expectation disconfirmation theory (Serenko & Stach, 2009) that satisfaction is related to whether a service is in line with or exceeds customer's expectations. In essence, this study have proved that good transport practices are not only part of logistics, they are at heart of how customers experience service quality in fast food businesses. Firms be able to decrease delivery failures and gain customer loyalty over improvements in planning, technology and infrastructure.

CONCLUSION

The conclusion of the research holds that practices of the transport management directly and significantly affect customer satisfaction in the South-Western Nigeria fast-food business. The structural equation modeling results verify that efficient transport systems accelerate delivery, enhance reliability, and improve the quality of delivery. Such results raise satisfaction, mainly in youth and self-employed customers who rely upon convenience and promptness. Findings authenticate that the efficient transport is not only a supporting function, but it forms a key component of attaining business success in fast-food business. Inefficient transport practices like delays & unreliable service lower customers' confidence and rate of repeat business. Thus, companies must treat transport planning as a key strategy in service delivery and business success.

Recommendations

From research, it follows that fast-food companies in South-Western Nigeria should embrace digital transport solutions like GPS routing optimization and automatic dispatching systems.

Such technologies minimize delivery mistakes and optimize time management. Delivery staff need to be constantly trained to acquire novel logistics tools and to improve interaction with customers. Real-time order tracking should also be implemented in order to inform customers and minimize uncertainty. The delivery routes should be adjusted periodically to account for traffic congestion and altered customer locations. Moreover, companies should partner with local government to tackle issues of road infrastructure. Investment in transport management will not only enhance operational efficiencies but also enhance customer satisfaction, enabling the companies to maintain more customers as well as raise long-term profitability in the food business.

Policy Implications of Research

The research outcomes indicate serious policy implications in enhancing business operations and customer satisfaction via efficient transport management. Government organizations and policy makers should consider investing in the road development in the South-Western part of Nigeria majorly in urban areas, fast-food chains converge. Policies supporting digitalization in logistics, including TMS subsidies and tax breaks for business use of GPS route optimization, should be enacted. Public-private collaboration can be utilized to enhance last-mile delivery systems. Regulatory bodies should also create transport effectiveness standards applicable to food service sector. Through enforcement of these policies, government will facilitate business development, lessen delivery delays, attain better customer satisfaction in Nigeria's fast-food industry.

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