EXTERNAL BUSINESS ENVIRONMENT AND THE OPERATIONAL PERFORMANCE OF SELECTED NIGERIAN DOMESTIC AIRLINES

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Abstract

This study aims to investigate external business environment on the operational performance of selected Nigerian domestic airlines. A descriptive survey research design was employed to systematically examine the relationship between the external business environment and operational performance. The population of the study was 3941 staff of the selected domestic airlines in Nigeria and using Taro Yamane statistical formula to determine the sample size of 363 respondents. Primary data was collected from 361 respondents working in selected domestic airlines in Nigeria using a structured questionnaire. Multiple regression technique, analysis of variance (ANOVA) and coefficient analysis were used to test the hypotheses in this study by using Statistic Package for Social Science (SPSS Version 27.0) to analyse the effect of external business environment on the operational performance of Nigerian domestic airlines. The findings revealed significant relationships between various external environmental factors and operational performance metrics in Nigerian domestic airlines. Based on the findings, it is concluded that the external business environment has a substantial effect on the operational performance of Nigerian domestic airlines. Therefore, it is recommended that airlines in Nigeria should adopt strategic measures to adapt to and leverage the opportunities presented by the external business environment.

Key Word: External Environment, Socio-Cultural Factor, Economic Factor, Technological Factor

1.1 Introduction

The external environment of a business, also known as the macro environment, includes all factors outside the reach of the business that can affect and impact the operations of the business. External factors influence the choices a business makes, determines opportunities and risks for a business and its performance. The business operates within the external business environment. It covers legal and regulatory developments, competitive dynamics, political, social, and environmental factors, as well as the economy. All external influences or elements that have an effect on how a business operates are collectively referred to as the external environment. The success of every business, among other things, lies on the macroeconomic landscape of the environment where the business is operated (Gerlich, et al.,2024). That is, the macroeconomic environment serves as a host to every business entity that stipulates some conditions in which a business operates. The philosophy that underlines this thought is rooted in the ideology that macroeconomic environment makes contributory impact to economic growth and development through the operations of other allied enterprises, such as business (Wolf, 2024). The environment constitutes the external forces or factors that contribute to the success or failure of business through the dynamic market interactions of demand and supply functions (Kafetzopoulos, et al., 2020). External business environmental factors encompass a wide range of elements, including economic conditions, technological advancements, regulatory frameworks, socio-cultural dynamics, and competitive landscapes.

Operational performance (OP) is a critically important and that must be accessed, measured, and assessed in organizations to understand the level of operational activities that correlate to

the set standard of performance. Companies used the OP strengths and capabilities to achieve sustainability in operational dealings and to meet operational expectations. Operational performance can be described as the periodic assessment of critical operational activities business settings. It involves the periodic review of strategic management implementation, competitive strengths and positions, and the technological impact and growth of a firm in a particular industry to ascertain the level of operational growth and sustainability (Adem, & Virdi, 2024). In a nutshell, operational performance can be used as an instrument to monitor and improve the holistic market situations that have a direct impact on the company's ability to adopt needed strategies to increase customer retention and revenue. Effective adoption of advanced technological variables in organizational operational system and processes could enhances operational performance (Oliveira-Dias, et al., 2024; Lee, et al., 2024).

1.2 Statement of the Problems

The operational performance of Nigerian domestic airlines may be significantly affected by various external business environment challenges (Oji, & Abili, 2024). Economic instability, fuel price fluctuations, inflation and currency devaluation may affect operational costs such as fuel costs, maintenance costs and overall profitability (Chukwu, 2023). Rapid advances in technology require continuous upgrading of aircraft and operating systems, which may be costly and difficult for domestic airlines with limited financial resources (Oji, & Abili, 2024; Chukwu, et al.,2024). Increased global attention on environmental sustainability and emissions regulations may necessitate investment in new, more fuel-efficient aircraft and sustainable practices, increasing operational costs. Political instability, policy changes and government interventions create uncertainty in the business environment and may affect investment decisions and business plans. Security-related issues, such as terrorist threats and crime at our airports and operating environments, can affect passenger confidence and operations and increase security-related costs (Adedeji, 2024; Florido-Benítez, 2024; Adenigbo, 2024).

More so, few studies that had address issues on external business environment and operations performance in different industrial operations were mainly conducted in developed nations and not in developing nations like Nigeria aviation industry (Mutie, F& Muli, 2024; Samunderu, 2023; Voltes-Dorta, 2024; Chaudhuri, et al., 2024). Studies have not also taken the dimensions of this current study on external business environment in terms of economic factor, technological factor, socio-cultural factor and operational performance of selected domestic airlines in Abuja, Nigeria (Agrawal, 2024; Amankwah-Amoah, et al., 2023). Despite the studies on external business environment and operational performance, it is still unclear how external business environment has impact on operational performance on industrial operations (Sidiq, et al., 2024; Adhaya, et al., 2024). Recent studies that had researched on external business environment and operational performance had little literature, and their findings are contradictory and had mixed outcomes in performance holistically (Adeniran, et al., 2023; Adedeji, 2024; Florido-Benítez, 2024; Adenigbo, 2024). It is based on these aforementioned gaps that the study examines the external business environment and the operational performance of selected Nigerian domestic airlines, as a fair of contribution to knowledge. The environmental factors selected in this study was economic, socio-cultural and technological factors. The rationale for selecting these external business contexts was to evaluate Nigeria's degree of economic volatility and how it affected operational performance. How sociocultural elements could serve to guarantee air travel safety and the influence of regional cultural preferences on operational performance, as well as how technological variables could offer insight into how technology impacts operational performance.

1.2 Objectives of the Study

The study objective investigates external business environment and operational performance of Nigeria domestic airlines. The specific objectives are to;

i. Examine the effect of economic factor on the operational performance of Nigerian domestic airlines.
ii. Evaluate the influence of technological factor on the operational performance of Nigerian domestic airlines.
iii. Assess the effect of socio-cultural factor on the operational performance of Nigerian domestic airlines.

1.3 Statement of Hypotheses

The following null hypotheses were postulated to guide the study:

H_{01}: Economic factor do not have significant effect on the operational performance of Nigerian domestic airlines.

H_{02}: Technological factor has no significant influence on the operational performance of Nigerian domestic airlines.

H_{03}: Socio-cultural factor do not have significant effect on the operational performance of Nigerian domestic airlines.

2.0. LITERATURE REVIEW

2.1 External Business Environment

External business environment is everything that exists outside of the company and has the ability to affect its operations. The goal of the external business environment is to comprehend the different external elements that affect the performance, operations, and strategy of a corporation. Everything outside of an organization that has the potential to impact its survival, competitiveness, and performance is considered to be part of the external business environment. Strategic decision-making requires an awareness of these aspects since they both present opportunities and risks to business operations. The external business environment typically explores the various external forces that affect a business, often categorized using frameworks like PESTEL (Political, Economic, Social, Technological, Environmental, and Legal) (Nguyen, et al., 2024). These forces are crucial because they shape the strategic decisions of an organization, influencing its success or failure. These factors are typically beyond the control of the company and are often categorized into different dimensions. The external environment of a business consists of all factors, conditions, and influences existing outside a business organization and which have the potential to affect its operational activities and performance (Ruwanika, & Massyn, 2024; Polat, et al., 2024). It is important to understand the external environment because it allows businesses including airlines to identify opportunities and threats, adapt to changes, and make informed decisions. Kravchenko, et al., (2024) revealed how the Influence of external and internal factors are reengineering business processes in the context of the activities of transport enterprises and the strategic growth that emerge. A study on the agile enterprise regarding the external business environment revealed that agile enterprises sustainability and profitability relied on strategic management of the external business environment (Penchev, & Kenarova-Pencheva, 2024). The external business environment plays a critical role in shaping the strategic decisions and performance of organizations (Tetteh, et al., 2024) and businesses cannot control these factors, they must be agile and proactive in their approach to managing them. By understanding the components of the external environment, applying relevant theories and models, and staying adaptable to emerging trends, companies must mitigate risks, leverage opportunities, and sustain competitive advantage (Adama, et al., 2024).

Economic Factors: This is the external economic conditions and factors that affect the operations, performance, and decision-making processes of businesses and organizations. These factors shape the overall health and functioning of an economy, influencing everything from consumer demand to corporate profitability and growth potential. Economic conditions such as inflation rates, interest rates, exchange rates, and economic growth affect a company's ability to operate profitably (Tiblola, et al., 2024). Businesses operate within the context of national and global economies, and these factors affect consumer purchasing power, cost of capital, and access to resources (Hasan, et al., 2024). For example, high inflation rates can increase production costs, whereas favourable interest rates can make borrowing more attractive for businesses. Businesses must monitor economic trends to adapt to changes in consumer demand, purchasing power, and costs (Kushariyadi, et al., 2024). The economic environment encompasses the broad spectrum of economic conditions that influence business activities (Zakhidov, 2024). Companies that monitor and adapt to these factors can better manage uncertainty and capitalize on market opportunities.

Socio-cultural Factors: The socio-cultural environment can be described as the customs, lifestyles, and values that characterize a society or community. The socio-cultural factors encompass the shared beliefs, behaviours, norms, and practices that influence individuals' interactions, consumption patterns, and overall social structure (Amoiradis, et al., 2024). It also encompasses demographic shifts, cultural trends, and consumer preferences. Social and cultural factors include changes in demographics, consumer behaviour, lifestyle changes, and attitudes towards products and services. For businesses, understanding the socio-cultural environment is essential because it shapes consumer preferences, employee behaviour, and the broader market environment (Gupta, 2024). Changes in population age, education levels, and lifestyle can lead to shifts in demand for certain products or services. Businesses must adapt to these social changes to stay competitive pressures from the business contexts.

Technological Factors: Technological environment is another external factor in an organization's environment related to technological advancements and innovation. These include the speed of technological change, the availability of new technologies, and the impact of technology on business operations and processes (Farrukh Shahzad, et al., 2024). A company's ability to adapt to these changes technologies has a significant impact on its competitiveness, efficiency, and overall success (Jaradat, et al., 2024). Technological advancements drive innovation and can affect production processes, product offerings, and operational efficiency (Aldoseri, et al., 2024) and shape industries through the introduction of new processes, products, and services (George, & George, 2024). Businesses constantly need to innovate or adopt new technologies to stay competitive (Jaradat, et al., 2024). Digital transformation, artificial intelligence (AI), and automation are prime examples of how technological change impacts efficiency, customer loyalty, and overall strategy (Adama, & Okeke, 2024). Holistically for strategic organizations to stay competitive, they need to stay on top of technology trends and adopting technologies in their operations consistently.

2.2. Operational Performance

Performance evaluation and measurement is a very important step in ensuring the profitability and sustainability of any industry. Performance evaluation has a significant impact in determining the operational sustainability and profitability of any business environment as it helps companies achieve and maintain their operational goals and objectives (Ovivi & Bello, 2022). For this reason, measuring the operational performance indicators of companies becomes important to determine whether there is growth and improvement in profitability. Operational performance can be described as a periodic evaluation of key operational activities

and strategies in the modern business environment (Ovivi & Bello, 2022). This includes a regular review of the implementation of a company's strategic management, competitive position and technological impact and growth to determine the level of business growth and sustainability. A study has deeply looked at operational performance as a strategic aspect of companies to enhance sustainability and profitability (Wann, 2023). Operational performance gauge how well and successfully a company runs its internal procedures to meet its targets. By evaluating and enhancing its operational performance, an organization can be profitable and competitively advantageous, lower expenses, boost customer satisfaction, and enhance customer retention to grow its market share (Wann, 2023). Additionally, operational effectiveness is crucial to a company's ability to provide its customers with high-quality goods or services. Chaudhuri, et al. (2024) believed that the adoption and application of technological drives to attain and sustain quality management and strategic innovation can help to drive consistent improvement in the operational performance of corporate settings. That is, effectiveness in the adoption of technological variables in operational settings could enhances operational performance (Chaudhuri, et al., 2024; Oliveira-Dias, et al., 2024; Lee, et al., 2024).

2.3 **External Business Environment and the Operational Performance of Domestic Airlines.**

The external business environment significantly impacts the operational performance of domestic airlines, as it encompasses various factors outside the direct control of airlines but can influence their strategies, efficiency, and profitability (Sithole, & Tran, 2024; Graham, 2023; Chaudhuri, et al., 2024). These factors can be categorized into political, economic, social, technological, environmental, and legal (PESTEL) dimensions. Fluctuations in fuel prices, driven by global markets, directly affect the operational costs of airlines (Prakash, 2024). High fuel prices can reduce profit margins and When the economy is growing, demand for air travel increases, boosting revenue. In a recession, discretionary spending decreases, leading to reduced demand for air travel. Currency fluctuations can affect the cost of importing aircraft parts, technology, or fuel, influencing overall operational costs (Raihan, et al., 2024). Changes in customer preferences, such as increased demand for budget airlines or environmentally conscious travel options, require airlines to adapt their services (Takagi, et al., 2024). Demographic changes, including the growth of the middle class or an aging population, affect travel habits and demand for domestic flights. (Sales, et al.,2024). Advances in aircraft design and fuel efficiency can reduce operational costs and improve performance and the adoption of business intelligence systems, advanced booking platforms, and automation in check-in and luggage handling can streamline operations and enhance customer experience (Bridgelall, 2024). Improvements in diagnostic tools and predictive maintenance technologies ensure better operational performance and reduce downtime (Mohammed, et al., 2024; Mazumdar, et al., 2024).

STUDY FRAMEWORK

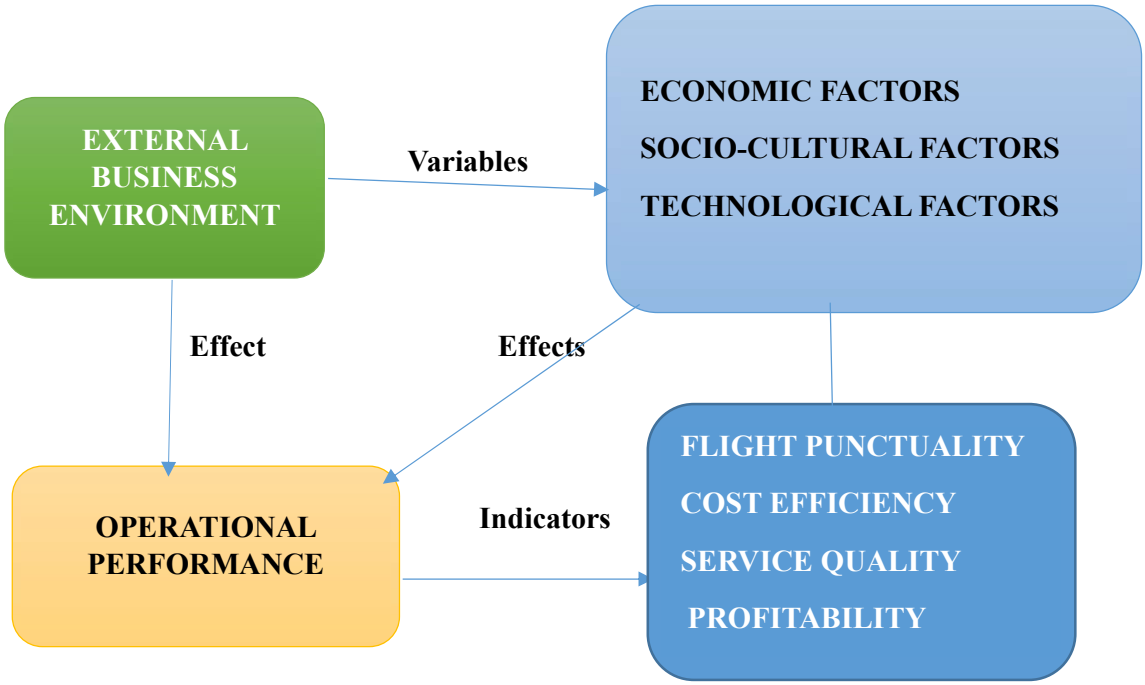

Fig. 2.1*: Study Framework on External Business Environment and Operational Performance*

Figure 2.1: The framework suggests a complex interplay between these external factors in the business environment and airline operational performance. Each factor influences decision making, cost structure and competitive position, determining how effectively airlines can serve the domestic market. Analysing these factors will enable Nigerian domestic airlines to better understand the external pressures they face and develop strategies to improve operational performance under changing conditions. Economic factors such as inflation, exchange rates, fuel prices and overall economic growth directly impact the cost structure and revenue streams of Nigerian domestic airlines. Socio-cultural factors include customer preferences, attitudes towards air travel and demographic characteristics. These factors shape the demand for air travel and influence the services offered by airlines. Technological advances are impacting the efficiency and competitiveness of domestic airlines. This framework evaluates how the introduction of new technology affects operations, cost control and customer service. In this context, operational performance refers to key figures such as flight punctuality, cost efficiency, quality of service and profitability. The framework analyses how these external environmental factors affect the key performance indicators of Nigerian domestic airlines. For example, flight delays and cancellations may have economic causes (such as rising fuel costs or an economic downturn), customer satisfaction may be linked to socio-cultural preferences, and profitability is influenced by both economic conditions (costs and demand) and technological factors (efficiency improvements due to modern aircraft and digital tools).

2.4 Theoretical Framework

In recent years, the arguments in favour of airline operational performance have received a lot of attention given the inherent dynamics in airline enterprises, which are implicated in the environment in which an airline operates. The theoretical understanding of

the external business environment is multifaceted and draws from several theories and models. In this study, effort was made to explore the relevance of Operations Management Theory, and PESTLE Analysis to express the importance of the environment in determining the operational performance of airlines operating within the Nigerian airline domestic industry. **Operations Management Theory** focuses on designing, overseeing, and controlling the production process and redesigning business operations for the efficient production of goods and services (Islam, et al.,2024). Key concepts of **operations management Theory** include resource allocation, process optimization, quality control, and inventory management. It blends elements of management science, engineering, and operations research to streamline operational processes. Operations Management Theory emphasizes the efficient and effective management of production and business operations. For airlines, this includes optimizing flight schedules, maintenance procedures, and ground operations to enhance overall performance (Islam, et al., 2024). In the context of Nigerian airlines, external factors such as fuel prices, regulatory policies, or economic fluctuations can affect the availability and cost of these resources. OM theory can help airlines devise strategies to manage these external pressures and improve efficiency. The application of OM theory in this context enables a better understanding of how airlines can navigate the challenges of the external environment and maintain or enhance operational performance in a competitive and dynamic industry.

The PESTLE Analysis framework provides a comprehensive tool for environmental analysis, considering Political, Economic, Social-cultural, Technological, Legal, and Environmental/Ecological factors. This framework is particularly relevant for the airline industry, where external environmental factors play a significant role in shaping operational performance. For the purpose of this study, the theoretical framework of Political, Economic, Social-cultural, Technological, Legal, and Environmental/Ecological factors (PESTLE) analysis framework was adopted. This theory is well-known for environmental analysis and offers a holistic approach to understanding the external factors that influence airline operational performance. The justification for adopting the PESTLE framework lies in its comprehensive nature, allowing for a detailed examination of the multifaceted environment in which airlines operate (Polat, et al., 2024; Hysa, & Mularczyk, 2024).

Economic conditions, including inflation, exchange rates, and economic growth, directly impact airline costs and passenger demand. Nigeria's fluctuating economy requires airlines to adapt to financial challenges such as rising operational costs and currency devaluation (Okolie, et al.,2023). In Nigeria, socio-cultural shifts such as increased urbanization and a growing middle class drive higher air travel demand, influencing airline route strategies and capacity planning. Advancements in aviation technology can enhance operational performance through innovations in aircraft, air traffic control systems, and customer service technologies (Merlo, 2024). Nigerian airlines that invest in modern technology can gain a competitive edge in efficiency and customer satisfaction. Technological advancements in aircraft design, navigation systems, and customer service platforms are vital for operational efficiency and competitive advantage. Holistically, PESTLE analysis helps airlines in Nigeria assess these external factors to make informed decisions that optimize operational performance and ensure long-term sustainability.

2.5 Empirical Review

Chaudhuri et al. (2024) investigate the external environment and internal dynamics of "born global" companies, i.e., the strategic and operational performance of the companies. The objective of this study is to investigate the impact of born global companies' external business environment and dynamic capabilities on their strategic and operational performance, and the role of management vision on internationalization performance. The model of this study is validated by partial least squares structural equation modeling technique based on 417

respondents from Indian companies. The study concluded that the external business environment and internal dynamic capabilities of born global companies have a significant and positive impact on their strategic and operational performance. Leadership vision plays a significant moderating role in this relationship. The study finally presents the business implications of the results and indicates the possibility for further scientific research. Adhaya et al. (2024) investigated the performance and operational innovation of manufacturing companies: the influence of the external environment. The objective of this study was to investigate the influence of the external environment on the relationship between innovation and firm performance in the Kenyan context. The study treated product, process, market and technological innovation as dimensions of operational innovation and empirically examined their impact on firm performance, while also investigating the moderating influence of the external environment (customers and suppliers, rules and regulations, economic conditions and labor unions). 182 companies actively participated in the study. The suggested model was tested using hierarchical regression using the PROCESS macro in SPSS. The results suggested that trade unions play a moderating role in the relationship between organizational innovation and firm performance, while customers, suppliers, rules and regulations, and economic conditions are irrelevant to this relationship. Importantly, the findings of this study have contributed positively to the existing literature by investigating the mechanisms between the external environment and the performance of Kenyan firms in the implementation of various operational innovations.

Lee et al. (2024) investigated the digital transformation of the supply chain: the role of intelligent technologies in the operational performance of manufacturing companies. The objective of this study is therefore to investigate the impact of digital supply chains and intelligent technologies on the operational performance of manufacturing companies. Thus, the objective of this study is to investigate how intelligent technologies and digital transformation of the supply chain can improve operational performance. To test the hypotheses and achieve the research objectives, the resource-based view (RBV) theory was combined with a quantitative research strategy. The surveyed company population was taken from the manufacturing directory, and a minimum sample size of 107 companies was determined using G*Power. Additionally, 600 online surveys were sent to manufacturing companies, resulting in a response rate of 17.83%. Data analysis was performed using Smart-PLS 4.0 software, and eight of the ten hypotheses were confirmed. Results showed that smart technology fully mediates the link between digital transformation and relationship performance, highlighting the need for manufacturing companies to focus on incorporating smart technology into their supply chains to improve operational performance. Finally, this study provides theoretical and practical implications, limitations, and recommendations.

3.0. METHODOLOGY

3.1 Research Designs

The study used descriptive survey research design in the examination of external business environment and operational performance of selected Nigerian domestic airlines. The choice of this method is justified by the fact that it enabled the researchers provide accurate and detailed portrayal of the phenomenon under investigation by focusing on describing the characteristics or attributes of what is being studied.

3.2 Population of the Study

The target population for this study were the entire staff of the selected domestic airlines in Nigeria as provided by the airline's operational details. This decision was taking to obtain a thorough understanding of how various departments and functions view and respond to outside factors like as competitive pressures, regulatory changes, economic situations, and technology

improvements. The population selected was designed to obtain adequate and diverse views pertaining to the impact of external business environment on the operational performance of domestic airlines in Nigeria.

Table 3.1 Domestic Airlines Staff Population Frame

Airlines	Number of Pilots	Cabin Crew	Aircraft Engineers	Flight Dispatchers	G/Operation Staff	Total
Aero Contractors	26	63	50	35	432	606
Arik Air	45	79	22	20	791	957
Air Peace	126	257	44	73	596	1096
Dana Air	16	46	24	18	277	381
Ibom Airlines	29	54	26	22	360	491
Max Air Ltd	36	77	51	36	210	410
Sum By Designation	**278**	**576**	**217**	**204**	**2666**	**3941**

Source: Airlines Operational Details Form NCAA/ATR/FHO1, 2023

3.3 Sample Size Determination

The sample size was determined from the population defined for the six domestic airline industry in Nigeria, using Taro Yamane formula. The choice of this formula was based on its unique characteristics such as allowing for sample size determination with high level of accuracy (sampling error), confidence level, and degree of variability.

Using the statistical formula cited in Guilford and Fruchter, (1973) where the author refers to Taro Yamane (1967).

The formula is given as follows:

Thus: $n = \frac{N}{1 + \propto^2 N}$

Where N = population
n = Sample size N = Population of the Study α = Level of significance = 5%
The sample size was calculated for each of the airlines. The aggregate of all the sample sizes then forms the sample size for the research.

$$n = \frac{3941}{1 + 3941(0.05)^2} = 363(\text{Approximately})$$

3.4 Sources of Data Collection

Primary data was sourced directly from the selected sample size of the prospective respondents through a structured, closed-ended questionnaire that was adequately and efficiently administered by the researcher and other experts in the field of the external business environment and operational performance. The secondary data were used to carried out

conceptual, empirical reviewed and theoretical framework on external business environment and its variables as well as operational performance and its accompanied variables in this study.

3.5 Methods of Data Collection

The study employed closed-ended structured questionnaire as instrument for data collection from the selected domestic airlines companies in Nigeria. The items in the questionnaire was developed by the research due to his comprehensive knowledge of the domestic airlines selected. The questionnaire was designed on a five-point Likert scale such as "strongly agreed," "agreed," "undecided," "disagreed," and "strongly disagreed." The questionnaire was be adequately administered by experts and academicians in the field of study to meet the expected result from the study on external business environment and operational performance in domestic Nigeria Airlines staff. Therefore, the study distributed 363 copies of the questionnaire administered to the sampled respondents of domestic Nigeria Airlines staff, through their Administrative and Human Resource Departments. The questionnaire for the respondents was structured based on the two main variables identified and sub-variables in the study and 359 was returned correctly filled and 4 were not filled correctly.

3.6 Validity and Reliability of Research Instruments

Content validity was used to assess the credibility of the study, as the items in the questionnaire was systematically drawn from the research objectives, questions, and hypotheses. The items in the questionnaire were accurately vetted and critically administered by experts, professionals, and academicians in the field of the external business environment and operational performance in an academic environment. However, this study used Cronbach's alpha to assess the internal reliability and consistency of the questionnaire used in this study. Sekaran and Bogie (2016) considered that an alpha value of 0.7 or higher for each item examined in the study indicates that the reliability of the instrument used is reliable and internally consistent. To investigate external business environment and operational performance of domestic airlines in Nigeria, a sample of the structured questionnaire was sent to 62 employees AirPeace in the Lagos office as a pilot study. The researcher constructed questions for each item to assess the internal consistency reliability of the variables and items used in the study. The results were as follows:

Table 3.2: ***Scale Reliability of Variables***

	No of Items	Cronbach's Alpha
External Environment	**3**	**.780**
Economic Factors	3	.722
Socio-cultural Factors	3	.735
Technological Factors	3	.727
Operational Performance	**3**	**.767**

Source: Researcher's Computation (2024) from SPSS Version 27.0

Table 3.2 showed that the reliability test by Cronbach's alpha was positive and consistent with the items and variables selected for the study, as all the alpha values tested for each item were greater than 0.7.

3.7 Methods of Data Analysis

The researcher used descriptive and inferential statistics that involve percentages, tables and other related tools were used in testing the statistical inference between the two variables in the study respectively. Multiple regression technique, analysis of variance (ANOVA) and coefficient analysis were used to test the hypotheses in this study by using Statistic Package for Social Science (SPSS Version *27.0*) to analyse the data extracted from the study. This ensures to ascertain the correlative effect external business environment and operational performance of domestic Nigeria Airlines, to attain reliable findings and conclusions that supported the stated objective of the study respectively. Simple regression is used to examine the relationship between two continuous variables. It helps in understanding how changes in one variable (independent variable) are associated with changes in another variable (dependent variable). ANOVA is used to compare means among different groups. It assesses whether there are any statistically significant differences between the means of three or more independent (unrelated) groups. Coefficient analysis is used to assess the strength and direction of the linear relationship between two continuous variables. It provides a measure of the degree to which changes in one variable correspond to changes in another.

3.8 Model Specification

The study's variables have a structural model that addresses the two main variables in the study, which will be the independent and dependent variables. The independent variable will be External Business Environment (EBE) is envoy by three subsets: (I) Economic Environment (EE), (II) Technological Environment (TE), and Socio-cultural Environment (SE). And the dependent variable will be Operational Performance (OP). As a result, in this model, External Business Environment evaluation is the functionality that is driven by the strengths and sustainability of Operational Performance.

$$OP= \beta o + \beta_1 EE+ \beta_1 TE+ \beta_1 SE+ e \ldots\ldots\ldots\

In Table 1, the model summary indicates that the coefficient of determination (R^2) is 0.770, meaning that approximately 77% of the variance in the dependent variable is explained by the independent variables SE (Standard Error), EE (Estimated Error), and TE (Total Error). The Adjusted R^2, which accounts for the number of predictors in the model, is slightly lower at 0.768, suggesting that the model is well-fitted and the predictors are relevant. The standard error of the estimate is 0.26520, indicating the average deviation of observed values from the predicted values. Based on a typical decision rule, since R^2 is high (close to 1), the model demonstrates a strong relationship between the predictors and the outcome, making it a reliable fit for the data.

Table 2 ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	84.366	3	28.122	399.863	.000[b]
	Residual	25.248	359	.070		
	Total	109.615	362			

a. Dependent Variable: OP

b. Predictors: (Constant), SE, EE, TE

***Source**: Generated using SPSS Version 27.0.1*

In Table 2, the ANOVA results provide insights into the overall significance of the regression model. The F-statistic of 399.863 indicates a strong overall fit of the model, and the p-value (Sig.) of 0.000 suggests that the model is statistically significant at the 0.05 level. This means that the independent variables SE (Standard Error), EE (Estimated Error), and TE (Total Error) collectively explain a significant portion of the variance in the dependent variable (OP). The decision rule for ANOVA is that if the p-value is less than 0.05, we reject the null hypothesis, indicating that the regression model provides a better fit than a model with no predictors. Thus, the regression model is significant and has strong predictive power.

Table 3 Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.279	.110		2.550	.011
	EE	.254	.037	.248	6.880	.000
	TE	.320	.039	.343	8.257	.000
	SE	.368	.041	.383	9.002	.000

a. Dependent Variable: OP

***Source**: Generated using SPSS Version 27.0.1*

Table 3 presents the coefficients for the regression model, showing the impact of the independent variables (EE, TE, SE) on the dependent variable (OP). The **unstandardized coefficients (B)** indicate that for every unit increase in EE, TE, and SE, OP increases by 0.254, 0.320, and 0.368 units, respectively. The **standardized coefficients (Beta)** show the relative strength of each predictor, with SE (0.383) having the strongest effect, followed by TE (0.343), and EE (0.248).

The **t-values** and **p-values (Sig.)** assess the significance of each predictor. Since all p-values are 0.000, which is less than the 0.05 threshold, all predictors (EE, TE, SE) are statistically significant in explaining variations in OP. According to the decision rule, when the p-value is

less than 0.05, the predictor is considered significant. Therefore, EE, TE, and SE have significant positive effects on OP.

4.2 Discussion of Findings

The above findings were based on the study of external business environment and the operational performance of selected Nigerian domestic airlines and the study revealed that there was a positive significant effect of external business environment on the operational performance of selected Nigerian domestic airlines. The study also revealed concretely from the finding that the analysis and adoption of external business environment had a strategic and concrete effect on the improvement of operational performance in terms of flight punctuality, cost efficiency, service quality and profitability of selected Nigerian domestic airlines. Findings from this study have been supported conceptually and empirically by previous studies that revealed that the adoption and application external business environment analyses had a significant impact on the operational performance abs sustainability of modern corporate settings (Chaudhuri et al., 2024; Sales, et al., 2024; Sithole, & Tran, 2024; Graham, 2023; Prakash, 2024; Raihan, et al., 2024 Takagi, et al., 2024; Lee, et al., 2024).

The first hypothesis, which was stated as **H_{01}:** Economic factor do not have significant influence on the operational performance of Nigerian domestic airlines and the test statistically revealed that economic factor had a significant influence on the operational performance of Nigerian domestic airlines. That is, the adoption and application of economic environmental analysis had strategically enhanced the improvement of operational performance of selected Nigerian domestic airlines. This finding has been supported by the findings of previous studies, both conceptually and empirically, that the adoption and analysis of economic variables had positive effect and impact on the operational performance of corporate settings (Raihan, et al., 2024; Hasan, et al., 2024; Tiblola, et al., 2024). The second hypothesis tested was stated as follows: **H_{02}:** Technological factor has no significant consequence on the operational performance of Nigerian domestic airlines and the finding statistically tested revealed that technological factor had a significant consequence on the operational performance of Nigerian domestic airlines. Recent studies conceptually and empirically supported this finding that the technological environmental variables had a significant effect and impact on the operational performance of corporate settings (Adama, & Okeke, 2024; Bridgelall, 2024; Mohammed, et al., 2024; Mazumdar, et al., 2024). The third hypothesis, which was stated as **H_{03}:** Socio-cultural factor do not have significant impact on the operational performance of Nigerian domestic airlines was tested and revealed that Socio-cultural factor had a significant impact on the operational performance of Nigerian domestic airlines. The finding was supported by previous findings that the sustainable analysis and adoption of technological changing variables enhanced strategic growth in the operational performance and sustainability of corporate settings (Amoiradis, et al., 2024; Gupta, 2024; Takagi, et al., 2024). Operations Management Theory, and PESTLE Analysis to express the importance of the environment in determining the operational performance of airlines operating within the Nigerian airline domestic industry and had also supported these findings (Islam, et al., 2024; Polat, et al., 2024; Merlo, 2024).

4.3. CONCLUSION AND RECOMMENDATIONS

From the above discussion of findings, the study concluded concretely that the analysis and adoption of external environmental variables had strategically contributed to the growth and operational performance sustainability of selected Nigerian domestic airlines. These conclusions showed that the external environmental variables analyses have led to a strategic improvement in the operational performance of Nigerian domestic airlines. The conclusion has

helped the study to attained its objective, which was to examine the external business environment and the operational performance of selected Nigerian domestic airlines. The study concluded that the economic, technological and socio-cultural environmental analyses adopted had a significant effect on operational performance sustainability of selected Nigerian domestic airlines. The study recommended that effectively assessment of economic indicators such as GDP growth rates, inflation, fuel prices, and exchange rates can heavily influence positively the operational costs, ticket pricing, and overall financial stability. The management of these Nigerian domestic airlines should explore the impact of technological advancements in aircraft, airport infrastructure, and digital transformation (e.g., online booking systems, automated check-ins) on operational efficiency and customer experience. The management of these Nigerian domestic airlines should investigate consumer behaviour trends, travel preferences, cultural influences on service expectations, and regulatory impacts (e.g., safety standards, travel restrictions).

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