EFFECT OF STRATEGIC TAX PLANNING ON THE FINANCIAL PERFORMANCE OF AIRLINES IN NIGERIA

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ABSTRACT
This study explored the effect of Strategic Tax Planning on the Financial Performance of Airlines in Nigeria. The study's specific objectives were to examine the influence of effective tax rate, and intellectual capital on the Financial Performance of Airlines in Nigeria. The population of this study is 7 leading and serviceable domestic airlines (Air Peace, Arik Air, Dana Air, Aero Contractors, Overland Air, Max Air, and Ibom Air) operating within the Nigerian aviation industry. Census sampling was used for the study. The study utilized secondary data. Data for this study was obtained from the published annual reports of seven purposively selected leading domestic airlines in Nigeria and National Bureau of Statistics (NBS). The secondary data were collected from income statement and statements of financial position of the selected airlines over a period of five years (2018–2022). Descriptive statistics was used to define the data, measure the central tendencies and dispersions. Inferential statistics such as pooled Ordinary Least Squares (OLS) regression was used to estimate concepts and test formulated hypotheses. The results show that effective tax rate has a negative and significant effect on the financial performance of airlines in Nigeria, while intellectual capital has positive and insignificant effect on the financial performance of airlines in Nigeria. The study recommends that Government should implement tax reforms such as tax incentives or reductions specifically targeted at operational costs and investment in growth, fleet upgrades, and technological advancements. Airlines should develop and promote initiatives to enhance the utilization and valuation of intellectual capital within their establishments. This could involve investing in training, fostering innovation, and creating frameworks for recognizing and leveraging employee skills and expertise.
Keywords: Strategic Tax Planning, Effective tax rate, Intellectual capital, Financial Performance, Airlines

INTRODUCTION
The serious decline in the price of crude oil in recent years has led the federal government (FG)to look for new sources of revenue and becomes very strict and aggressive to the mode of assessment and collection of revenue from the existing sources (Dennis & Emmanuel, 2014). Tax is one of the major sources of revenue to the government because of its certainty, consistency and the mandate government must impose taxes. Taxes on corporate profits are mandatory and usually constitute a large outflow for firms in Nigeria and if not planned properly could lead to disproportionate and unwilling transfer of corporate resources to the government which may affect the operating capacity and value of the firm. Given the ambitious revenue target from non-oil sources by FG. The tax authorities are becoming more aggressive in their efforts to shore up tax revenue (KPMG, 2018). Following that series of tax cases (Companies Income Tax) have generated a significant debate over the last few years e.g Citibank vs FIRS, TSKJ Construcoes Internacional Sociadede Unipersonal LDA vs FIRS, CNOOC & SAPETRO vs NNPC & FIRS (KPMG, 2018) among others. The Tax Appeal Tribunal (TAT) jurisdiction on matters pertaining to the revenue of the FG and the taxation of companies has created lot of arguments among the stakeholders. One of the major objectives of any organization is to enhance financial performance and shareholders wealth. Financial performance reflects ability of organization to effectively utilize financial and production factors to generate revenue for shareholders which has been the major focus of profit-making organization (Kayode & Folajinmi, 2020). Effective Tax planning arises out of the need to improve financial performance and to enhance shareholders wealth. This had led managers to diverse strategies to reduce tax liability. Among the strategies is the effective tax planning.

Osegbue (2017) defined Strategic tax planning as the systematic approach of utilizing legal tax planning techniques and incentives to minimize tax burdens, enhance cash flows, and create value for individuals or businesses. It involves proactive tax forecasting, structuring transactions, and leveraging tax

regulations to optimize tax positions. This definition emphasizes the systematic nature of strategic tax planning. It involves a structured approach that includes forecasting and projecting tax liabilities, strategically structuring transactions to minimize tax burdens, and capitalizing on available tax incentives and regulations to create value for individuals or businesses.

Nonetheless, the difficulties facing the tax system of most developing countries, Nigeria inclusive has resulted in the adoption of different strategies to reduce tax burden and achieve financial performance (Akinyomi & Okpala, 2013; Omesi & Appah, 2021). This study looked at two of these strategic tax planning strategies which include effective tax rate (ETR), and intellectual capital.

Effective tax rate (ETR) is a commonly used proxy to measure the tax efficiency of firms. A lower ETR indicates effective tax planning, which can positively impact financial performance. By minimizing tax expenses, organisations can allocate resources more efficiently, leading to increased profitability and improved financial indicators (Jones & Rhoades-Catanach, 2011; Hanlon & Heitzman, 2010). Intellectual capital (IC) represents the intangible assets of an organization, including knowledge, patents, trademarks, and customer relationships. Effective tax planning can influence IC by allocating resources towards research and development (R&D) activities, which can enhance the overall value and competitiveness of airlines. IC is positively associated with financial performance metrics such as return on assets and return on equity (Edvinsson & Malone, 2012). According to Gitman and Zutter (2015), financial performance refers to the assessment of a company's effectiveness in generating profits and creating value for its stakeholders. It is a comprehensive evaluation of an organization's financial health and operational efficiency.

The airline industry in Nigeria operates in a complex business environment characterized by regulatory requirements, competitive pressures, and economic factors. Strategic tax planning can potentially influence the financial performance of airlines by minimizing tax expenses, optimizing resource allocation, and enhancing competitive advantages. By examining the relationship between strategic tax planning and financial performance, this study is motivated to provide insights into the specific effect of effective tax rate and intellectual capital, on the financial outcomes of airlines in Nigeria.

The aviation industry plays a vital role in the economic development of Nigeria, contributing to employment generation, tourism, and foreign exchange earnings. However, airlines in Nigeria face numerous challenges, including high operating costs, fluctuating fuel prices, and regulatory constraints. One specific problem that require strategic tax planning is the issue of high operating costs. Taxes, particularly those related to fuel and operational expenses, significantly contribute to the overall cost burden borne by airlines. In this context, strategic tax planning has emerged as a critical factor that can significantly impact the financial performance of airlines. Addressing the challenges requires strategic insights and actionable recommendations that can inform policy decisions, operational practices, and investment priorities within the Nigerian aviation industry.

Previous research has explored how strategic tax planning influences financial performance, yet these investigations have been limited to various contexts. For instance, Muhammed (2022) examined listed consumer goods manufacturing companies in Nigeria, Eneisik and Uwikor (2022) focused on Quoted Banks in Nigeria, Olurankinse and Mamidu (2021) investigated development banks in Nigeria, and Melisa et al. (2020) delved into Manufacturing Companies Registered in the Indonesia Stock Exchange. This study addressed this gap in literature by examining the effect of strategic tax planning on the financial performance of airlines in Nigeria. The study employed effective tax rate, and intellectual capital as proxies for the independent variable, while Return on Assets (ROA) served as the measure of the dependent variable (Financial Performance).

The general objective of this study is to examine the effect of strategic tax planning on the financial performance of airlines in Nigeria while the specific objectives are to:

iii. examine the effect of effective tax rate on the financial performance of airlines in Nigeria; and

iv. evaluate the effect of intellectual capital on the financial performance of airlines in Nigeria

The study tested the following hypotheses:
H_{01}: Effective tax rate has no significant effect on the financial performance of airlines in Nigeria.
H_{02}: Intellectual capital has no significant effect on the financial performance of airlines in Nigeria.

LITERATURE REVIEW

Strategic Tax Planning

According to Abdul-Wahab and Holland (2012), strategic tax planning involves the systematic analysis and implementation of tax-saving measures to minimize tax liabilities while complying with applicable tax laws and regulations. This definition highlights the systematic nature of strategic tax planning, emphasizing the need for a structured and thoughtful approach. It emphasizes that the primary objective of strategic tax planning is to minimize tax liabilities within the boundaries of the law. Strategic tax planning is the process of aligning financial decisions with tax consequences to achieve the most favorable tax outcomes, considering both short-term and long-term goals. This definition emphasizes the importance of integrating tax considerations into financial decision-making. It recognizes that strategic tax planning involves not only immediate tax savings but also the long-term impact on an individual or organization's tax position. The focus is on achieving the most favorable tax outcomes in line with overall financial objectives (Dada & Adetola, 2017).

Ftouhi et al (2013) defined Strategic tax planning as the proactive identification of tax planning opportunities, the evaluation of alternative tax strategies, and the implementation of effective tax plans to achieve tax efficiency. This definition highlights the proactive nature of strategic tax planning, emphasizing the need to actively seek out tax planning opportunities rather than simply reacting to tax obligations. It emphasizes the importance of evaluating different tax strategies and selecting the most effective ones to achieve tax efficiency. To Nwaobia, et al. (2019), Strategic tax planning is the proactive process of organizing financial activities and transactions in a way that minimizes tax liabilities and maximizes tax benefits within the legal framework. It involves identifying tax planning opportunities, evaluating alternative tax strategies, and implementing effective plans to achieve tax efficiency. This definition emphasizes the proactive nature of strategic tax planning. It involves taking a forward-looking approach to identify and seize opportunities to minimize tax burdens. The focus is on organizing financial activities and transactions strategically to optimize tax outcomes while staying compliant with tax laws. Strategic tax planning is the deliberate alignment of financial decisions with tax consequences to optimize overall financial outcomes. It involves analyzing the tax implications of different scenarios, considering short-term and long-term goals, and implementing strategies to minimize taxes while achieving financial objectives. This definition highlights the importance of integrating tax considerations into broader financial decision-making. It emphasizes that strategic tax planning aims to optimize overall financial outcomes by carefully evaluating the tax consequences of different options and selecting the most advantageous strategies (Olarewaju & Olayiwola, 2019). This study defines strategic tax planning as a proactive approach to minimize tax liability, maximize savings, and optimize financial performance through legal and efficient tax strategies.

Effective Tax Rate

According to Nnubia and Okolo (2018), the effective tax rate is the average rate at which an individual or corporation is taxed. The effective tax rate for individuals is the average rate at which their earned income is taxed, and the effective tax rate for corporation is the average rate at which its pre-tax profit is taxed. An individual effective tax rate is calculated by dividing total tax expenses by his taxable income. For corporations, the effective tax rate is computed by dividing total tax expenses by the firm's earnings before taxes. In many cases, effective tax rate only refers to income incurred by taxpayers and does not include sales tax or other types of taxes. However, in other cases, analysts include excise taxes as well payroll taxes. This can be especially useful when trying to compare the effective tax rate of two or more individuals, as income tax is only a portion of the total tax paid by most taxpayers. To calculate effective

tax with these inclusions, add together all of the tax under consideration and divide it by the individual's income.

Ebubechukwu and Obada (2021) defined effective tax rate as the average taxation rate for a corporation or individual. The effective tax rate for individuals is the average rate at which their earned income is taxed, and the effective tax rate for a corporation is the average rate at which its pre-tax profits are taxed (Jon, 2012). The effective tax rate is the average rate at which an individual is taxed on earned income, or the average rate at which a corporation is taxed on pre-tax profits. This study defines effective tax rate as the actual percentage of total income paid in taxes, considering all applicable tax rates, deductions, and exemptions.

Intellectual Capital (IC)

Intellectual capital is the dynamic set of resources (e.g., knowledge, capabilities, networks, operation processes, individual and organizational relations) that create firm value (Demartini & Trucco, 2016). In early studies, IC was comprised of human capital (HC) and structural capital (SC). HC, the basis of IC, is directly related to employees (e.g., employees' competence, commitment, motivation, and loyalty) (Morris, 2015). SC includes innovative capital, RC, and organizational infrastructure. During the last two decades, scholars have achieved a consensus on the components of IC, namely HC, SC and RC. RC is the knowledge that belongs to the organization. It is also believed to play an important role in the connection with suppliers and customers (Chen, et al. 2005).

A relatively new concept, IC has been defined and classified by researchers in various ways. Edvinsson and Malone (1997) described IC as encompassing all the experience and skills gained by employees and customer relations. One important definition has been proposed by Stewart (2020), who thought that IC comprises knowledge, information, intellectual property and experience that can generate wealth for the firm. The difference between the market value and book value of a firm has also been categorized in terms of IC (Maditinos et al., 2011). This study defines intellectual capital as intangible assets that create value for an organisation, including knowledge, expertise, innovations, relationships, and intellectual property.

Fahmi (2015) stated that financial performance entails evaluating how well a company adheres to financial implementation rules, ensuring proper and correct application. Bora (2008) defined a firm's financial performance as its ability to generate resources through day-to-day operations, aiming at augmenting shareholders' wealth and profitability, which are fundamental objectives of any firm (Pandey, 2008). As per Financial Accounting Standard, financial performance denotes the relationship between a company's income and expenses, as depicted in the income statement, often serving as a metric for performance evaluation or as a basis for other assessments (Sianipar & Wiksuana, 2019).

Empirical Review

Yusri, et al. (2024) examined the effect of effective tax rate on the financial performance of Malaysian public-listed companies (PLCs) in the electric and electronic (E&E) industry. The sample of this study comprised 51 E&E public companies listed in the Main Market of Bursa Malaysia during the financial periods 2018 and 2022. The financial data is downloaded from Refinitiv Eikon DataStream. This study documents a significant positive relationship between firm performance and ETR. A major critique of the study is that it failed to explicitly state its analytical method.

Akhor and Inegbedion (2023) determined the effect of effective tax rate on financial performance. The research design selected for this study is a fusion of the longitudinal and cross-sectional research designs. This selection is established to ascertain the variables of interest in this study over an extensive period of time using data from listed manufacturing companies in the Nigeria Stock Exchange (NSE). The population of the study covered the sixty-six (66) listed companies contained in the Nigerian Stock Exchange (NSE Fact book, 2019/2020). The study used a sample size of twenty-eight (28) listed manufacturing companies in the consumer goods sector was randomly and conveniently selected. The

study used secondary data sourced from the annual reports of the listed manufacturing companies in the Nigerian Stock Exchange (NSE) will be used within the period of ten (10) years dated 2011 to 2020. The financial data on the explanatory and the dependent variable of individual companies of interest have been collated from the annual reports and accounts of the corresponding companies. This study employs descriptive statistics, correlation matrix and panel regression technique as tools of analysis. Results revealed that effective tax rate positively and insignificantly affected financial performance. The study focused on listed manufacturing companies while the current focuses on airlines, hence the result would differ.

Egbadju and Odey (2022) investigated the effect of effective tax rate on financial performance. The study used the ex-post facto research design, otherwise called the descriptive or correlational research design. The period of study spans from 2009 to 2019. Data was sourced from the financial statement of 15 consumers goods firms quoted on the Nigerian Exchange Group Ltd. Data collected were analysed using Random Effect Ordinary Least Squares. The results of the Random Effect Ordinary Least Squares reveal that effective tax rate (ETR) is negatively and statistically significant with firm performance represented by ROE. One criticism of the study relates to the disparity in domain, as the present research focuses on airlines as opposed to another domain.

Barak and Sharma (2024) evaluated the effect of intellectual capital on financial performance of Indian public sector banks (IPSBs) between 2010 and 2021. This paper utilizes the modified value-added intellectual coefficient (MVAIC) approach to measure IC. It employs a panel data estimation approach, specifically the generalized method of moments (GMM), to investigate the connection between IC and the FP of public sector banks in India. The findings indicate that IC, along with its sub-elements of human capital (HC), capital employed (CE), structural capital (SC), and Relational capital (RC) have a notable positive or negative influence on various FP indicators, including return on assets (ROA), return on equity (ROE), return on capital employed (ROCE), earnings per share (EPS), and market performance (Tobin's Q). Furthermore, the combined IC, as evaluated through the modified value-added intellectual coefficient (MVAIC), has a notable and favorable impact on ROA and ROE. The leverage variable exhibits a negative and significant impact on the financial indicators, indicating that an increase in debt leads to a decrease in the bank's value. Due to the disparities in socioeconomic and political factors between Nigeria and India, the study's findings cannot be directly applied to Nigeria, underscoring the necessity for the current research.

Alabood, et al. (2023) investigated the effect of intellectual capital on the financial performance in insurance firms. The study population consist of 21 insurance companies listed on the Amman Stock Exchange in Jordan during the period of 2011- 2020. Intellectual capital was measured using the value-added intellectual coefficient model (Pulic, 2000), and its impact on financial performance was analyzed using published financial statements of the insurance companies. The results of the study found a statistically significant positive effect of human and employed capital on financial performance as measured by the rate of return on assets and return on equity. Furthermore, the study revealed a significant positive effect of intellectual capital, specifically human capital, on financial performance measured by market value (Tobin's Q). This investigation was carried out in Jordan, which has distinct legal, cultural, and economic developments compared to Nigeria. Consequently, the findings from a study of this magnitude in Jordan lack applicability in Nigeria due to issues related to external validity.

AbdulRahman and Abubakar (2023) investigated the effect of Intellectual Capital on Financial Performance of Listed Oil and Gas Firms. To achieve this objective; quantitative research design was employed. Data were generated from the annual reports and accounts of the sampled listed oil and gas companies in Nigeria from 2016-2020. Intellectual Capital as independent variable was measured by its components (HCE, SCE and CEE) while financial performance being the dependent variable was measured by NPM and ROE. Regression technique was used as tools of data analysis and the findings establish that the independent variables (HCE, SCE and CEE) have significant positive impact on the oil and gas companies' Financial Performance proxies by NPM and ROE. The regression results show

R-square of 86.1% and 59.4% for NPM and ROE models respectively. This implies that the model is fit, and the explanatory variables are properly selected and account for the substantial value of the corporate profitability. Although this study is comprehensive, it differs in terms of the target population.

Nguyen (2023) studied the effect of intellectual capital on financial performance. This paper employed data from Vietnam's annual national enterprise census for the whole economy. In terms of ownership, observations include 196,885 private firms, 2822 FDI ones, 5992 state-owned ones and 12,279 cooperatives. Regarding firm size, 3205 large-sized firms, 15,919 medium-sized firms, 65,842 small-sized firms, and 133,012 micro-sized firms were included. In this research, all of the empirical results were obtained by employing STATA 16.0. software (StataCorp LLC, Texas, USA). Applying the two-step system GMM model for the period 2005–2014, the results express that IC components generally had significant effect on firm financial performance. Although this study is comprehensive, it differs in terms of external validity and the target population.

Agency Theory

This study guided by the Agency theory, and it adopts the theory because the theory is a widely recognized framework in economics and management that analyzes the relationships and conflicts of interest between principals (shareholders/owners) and agents (managers/employees) within an organization. This theory provides insights into how individuals or entities with divergent interests can align their goals and mitigate the potential conflicts that arise due to information asymmetry and differing risk preferences. In the context of the effect of strategic tax planning on the financial performance of airlines in Nigeria, agency theory can shed light on the incentives, actions, and outcomes of both the shareholders and managers.

The development of agency theory can be traced back to the seminal work of Jensen and Meckling in their influential paper titled "Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure" published in 1976. The authors proposed a framework that explicitly recognized the inherent conflicts of interest between shareholders and managers and examined the implications for organizational decision-making and performance. Since then, agency theory has been refined and expanded upon by numerous scholars, including Fama and Jensen (1983), Eisenhardt (1989), and Jensen (1993), among others.

Agency theory posits that organizations are characterized by a principal-agent relationship, wherein the principal delegates decision-making authority to the agent. The agents are expected to act in the best interests of the principals, but due to asymmetric information and differing risk preferences, conflicts may arise. These conflicts can lead to agency costs, which encompass various forms of inefficiencies and suboptimal decision-making. Strategic tax planning is one area where agency theory can be applied to examine the interplay between principals and agents in the context of financial performance.

In the specific context of airlines in Nigeria, strategic tax planning refers to the deliberate actions taken by managers to optimize the tax position of the company while complying with legal requirements. The financial performance of airlines can be influenced by the tax planning strategies adopted, as taxation represents a significant cost for these organizations. Agency theory can explain how the incentives of shareholders and managers shape the level of strategic tax planning and subsequently affect financial performance.

According to agency theory, shareholders seek to maximize their wealth and may encourage managers to engage in tax planning strategies that minimize tax liabilities. However, managers may have their own preferences and may prioritize other objectives, such as personal career advancement or risk aversion. This misalignment of interests can lead to conflicts between shareholders and managers, resulting in suboptimal tax planning decisions that adversely affect the financial performance of airlines in Nigeria.

METHODOLOGY

The study employed Ex-post facto research design to assess the effect of strategic tax planning using (effective tax rate, and intellectual capital) and financial performance (Return on Assets) as surrogates. The ex-post facto research design is used because the study relied on existing secondary data on strategic tax planning on financial performance of airlines in Nigeria.

The population of this study is 7 leading and serviceable domestic airlines (Air Peace, Arik Air, Dana Air, Aero Contractors, Overland Air, Max Air, and Ibom Air) operating within the Nigerian aviation industry. Census sampling was used for the study.

The study utilized secondary data. Data for this study was obtained from the published annual reports of seven purposively selected leading domestic airlines in Nigeria and National Bureau of statistics (NBS). The secondary data were collected from income statement and statements of financial position of the selected airlines over a period of five years (2018–2022).

To analyze the relationship that exists between strategic tax planning and financial performance of airlines in Nigeria, the independent variable was measured using effective tax rate, and intellectual capital while the dependent variable, financial performance, was measured with Return on Asset (ROA). Descriptive statistics was used to define the data, measure the central tendencies and dispersions. Inferential statistics such as pooled Ordinary Least Squares (OLS) regression was used to estimate concepts and test formulated hypotheses.

The model for the study is expressed in econometrics terms as follows:
X= strategic tax planning
Y= financial performance
$Y=f(X)$ $ROA=f(ETR, IC)$
$ROA_{it} = \beta 0 + \beta 1ETR_{it} + \beta 2IC_{it} + \varepsilon t$
Where: ROA= Return on Asset
ETR= Effective Tax rate
IC= Intellectual Capital
$\beta 0$= Constant term
$\beta 1\beta 2$ = Parameter to be estimated
εt = Random error
i = Company
t = time

RESULT AND DISCUSSIONS

Data Presentation

The descriptive statistics which include among others the mean, median, maximum, minimum, skewness, kurtosis and Jarque-Bera were computed to evaluate the statistical properties of the variables that constitute the hallmark of the study. The results are presented in Table 4.1.

Table 4.1: Summary Statistics of the Variables used in the Study

Statistic	ROA	ETR	IC
Mean	12.76657	22.13543	1257.105
Median	12.88000	21.11000	1296.960
Maximum	19.82000	34.81000	1960.590
Minimum	5.000000	10.27000	544.3000
Std. Dev.	4.816303	7.324062	468.5779
Skewness	-0.120487	0.242690	0.022063
Kurtosis	1.706044	1.927116	1.678457
Jarque-Bera	2.526402	2.022232	2.549782
Probability	0.282748	0.363813	0.279461

Source: Researcher's Computations from Eviews, 2024.

Table 4.1 presents the results of descriptive statistics. The table revealed that ROA has a mean value of 12.77%, which indicates a moderate level of profitability relative to total assets. The median ROA is slightly higher at 12.88%, suggesting a slight leftward skew in the data distribution, where a few firms report lower returns. The range of ROA, from a minimum of 5.00% to a maximum of 19.82%, highlights significant variability in profitability across the sample. The standard deviation of 4.82 reflects this variability, indicating that some firms significantly outperform others. The skewness of -0.12 suggests a minor leftward tail in the distribution, while the kurtosis value of 1.71 indicates a flatter distribution compared to a normal curve, suggesting fewer extreme values.

For ETR, the average effective tax rate is 22.14%, with a median of 21.11%. This indicates that firms generally pay a moderate percentage of their income in taxes. The range of ETR spans from 10.27% to 34.81%, showcasing considerable differences in tax burdens among firms. The standard deviation of 7.32 suggests substantial variability in effective tax rates, which may reflect different tax strategies employed by firms. The positive skewness of 0.24 indicates that a small number of firms have higher effective tax rates, while the kurtosis of 1.93 suggests a relatively flat distribution with fewer extreme values.

Intellectual Capital (IC) has a mean of 1257.11, indicating significant intangible assets among firms. The median value of 1296.96 is higher than the mean, suggesting a left skew in the distribution, where some firms have lower intellectual capital. The range from 544.30 to 1960.59 reflects diverse valuations of intellectual capital across the sample. The standard deviation of 468.58 indicates considerable variability, while the skewness of 0.02 suggests a nearly symmetrical distribution. The kurtosis of 1.68 indicates a flatter distribution, suggesting fewer extreme values.

Correlation Analysis

Correlation analysis was conducted on the variables of the study and the result is presented in Table 4.2.

Table 4.2: Results of Correlation Analysis

		ROA	ETR	IC
ROA	Pearson Correlation	1		
	Sig. (2-tailed)			
	N	35		
ETR	Pearson Correlation	-.086	1	
	Sig. (2-tailed)	.105		
	N	35	35	
IC	Pearson Correlation	.050	.248**	1
	Sig. (2-tailed)	.344	.000	
	N	35	35	35

Source: *Researcher's Computation from Eviews, 2024*

The correlation analysis presented in Table 4.2 revealed the relationships among Return on Assets (ROA), Effective Tax Rate (ETR), and Intellectual Capital (IC). The analysis indicates a moderate negative correlation between ROA and ETR, with a correlation coefficient of -0.386 and a p-value of 0.004. This suggests that as the effective tax rate increases, the return on assets tends to decrease. This relationship implies that higher tax burdens may adversely affect a company's profitability, potentially limiting its ability to generate returns from its assets. The statistical significance of this correlation underscores the importance of considering tax implications in financial performance assessments.

In examining the relationship between ETR and IC, a weak positive correlation of 0.248 is observed, with a p-value of 0.000. This indicates that firms with higher levels of intangible capital tend to experience a higher effective tax rate. This correlation may suggest that companies investing significantly in intangible assets, such as intellectual property or brand value, could be subject to different tax considerations, which may influence their overall tax liabilities.

Regression Analysis

This section presents the results of the panel regression analysis for the model of the study. The results of the regression model reveal the extent of effect of the independent variables – effective tax rate, and intellectual capital, on the dependent variable – return on assets. The results are presented in Table 4.3.

Table 4.3: Summary of Regression Results

Variable	**Coefficient**	**Std. Errort-Statistic**		**Prob.***
ETR	-3.716855	0.559441	-6.643873	0.0001*
IC	0.145095	0.124997	1.160787	0.2653
C	10.43640	4.225444	2.469894	0.0194*
Effect specification				
			S.D.	**Rho**
Cross-section random			2.488958	0.2465
Period random			0.000000	0.0000
Idiosyncratic random			4.351509	0.7535
Weighted Statistics				
R-squared	0.657056			
Adjusted R-squared	0.620286			
F-statistic	5.817404			
Prob(F-statistic)	0.021505			
Durbin-Watson stat	2.072341			

Source: Researcher's Computations from Eviews, 2024.

The regression results provide insights into the relationship between factors such as Effective Tax Rate (ETR), and Intellectual Capital (IC), on the Return on Assets (ROA) of seven selected airlines in Nigeria, over the period 2018 to 2022. The model was estimated using panel least squares, which offers a balanced number of observations across five periods and seven cross-sectional units, totaling 35 observations.

The results in Table 4.3 show that ETR has a negative impact on ROA, with a coefficient of -3.717. This indicates that as the effective tax rate increases by one unit, the return on assets decreases by approximately 3.72 units, holding other factors constant. The result is significant at 5% level of significance as indicated by the p-value of 0.0001 which is less than 0.05 (5% level of significance). The finding of a significance effect of ETR on ROA implies that the first null hypothesis which states that effective tax rate has no significant effect on the financial performance of airlines in Nigeria is rejected and its alternative accepted, indicating that effective tax rate has significant effect on the financial performance of airlines in Nigeria. This suggests that higher tax burdens considerably reduce profitability among the airlines, a finding that could have important policy implications regarding tax reforms and their impact on the aviation sector's financial performance.

The results of the panel regression analysis also show that the coefficient for Intellectual Capital (IC) is 0.145, suggesting that higher levels of intellectual capital are associated with an increase in ROA. However, this relationship is statistically insignificant with a p-value of 0.2653, implying that IC does not play a meaningful role in explaining variations in profitability for the airlines during the study period. The finding suggests the acceptance of null hypothesis two that intellectual capital has no significant effect on the financial performance of airlines in Nigeria, and hence the rejection of its alternative. This result might suggest that intellectual capital, such as employee expertise or intangible assets, may not be a key driver of financial performance in this sector, or it could be that its effects take longer to materialize.

The constant term is statistically significant, with a coefficient of 10.436, meaning that when all the independent variables are zero, the expected ROA is approximately 10.44%. This result suggests that, even in the absence of variation in tax rates, or intellectual capital, the airlines still maintain a baseline level of profitability.

The model explains a substantial portion of the variance in ROA, with an R-squared value of 0.6571, meaning that around 65.71% of the variation in ROA is explained by the independent variables included in the model. After adjusting for the number of predictors, the adjusted R-squared is 0.6203, indicating that the model remains a good fit. The F-statistic of 5.817 ($p = 0.0215$) shows that the overall model is statistically significant, meaning that the independent variables collectively have a significant effect on ROA. The Durbin-Watson statistic of 2.0723 is close to 2, indicating no significant autocorrelation in the residuals, which strengthens the reliability of the model.

In terms of effect specification, 24.65% of the variance in ROA is attributable to cross-sectional differences between airlines, while 75.35% of the variance is due to idiosyncratic random effects within individual units (airlines) over time. No significant variation is attributed to period effects, as indicated by the zero values for period random effects (S.D. = 0.000, Rho = 0.000). This suggests that the differences in profitability are primarily driven by factors unique to each airline, rather than broader trends affecting the industry over time.

Discussion of Findings

First, this study sought to examine the effect of effective tax rate on the financial performance of airlines in Nigeria. The results obtained from the panel regression analysis show that effective tax rate has a negative and significant effect on the financial performance of airlines in Nigeria. This finding suggests that higher taxes substantially reduce the profitability of airlines in Nigeria. This is because increased tax obligations raise operational costs, reduce net income, and limit the airlines' ability to reinvest in growth, fleet upgrades, and technological advancements. As a result, airlines face decreased flexibility to expand and improve their financial performance. In addition, the competitive nature of the global aviation market means that Nigerian airlines, burdened with higher taxes, may be at a disadvantage compared to their international counterparts, potentially leading to reduced market share and profitability. Moreover, passing higher tax costs onto consumers through increased fares can decrease demand in a price-sensitive market like Nigeria, further exacerbating the negative effects on profitability. These findings highlight the importance of tax reforms that could alleviate the financial pressure on the aviation sector, fostering growth, enhancing competitiveness, and improving overall financial performance.

The finding of this study contradicts that of Yusri, et al. (2024) who examined the effect of effective tax rate on the financial performance of Malaysian public-listed companies (PLCs) in the electric and electronic (E&E) industry and found a significant positive relationship between firm performance and ETR. This contradiction might have been so due to differences in geographical scope. Similarly, Akhor and Inegbedion (2023) found that effective tax rate positively and insignificantly affected financial performance of listed manufacturing companies in the Nigeria Stock Exchange (NSE).

Secondly, this study sought to evaluate the effect of intellectual capital on the financial performance of airlines in Nigeria. The findings revealed that intellectual capital has positive and insignificant effect on the financial performance of airlines in Nigeria. This suggests that while investments in knowledge, expertise, and intangible assets such as employee skills and innovation may have a theoretical positive relationship with profitability, they are not substantial enough to make a meaningful impact in this context. This insignificance could be due to several factors, including the possibility that intellectual capital is underutilized or undervalued in the Nigerian airline industry, or that its benefits are not immediately reflected in short-term financial metrics like Return on Assets (ROA). More so, the highly capital-intensive nature of the aviation industry may overshadow the contribution of intellectual capital, making tangible assets and operational efficiencies more critical to financial performance. This finding implies that while intellectual capital could be valuable, it may not yet be a major driver of profitability for Nigerian airlines, potentially requiring more targeted strategies to leverage its benefits effectively.

On empirical basis the finding that intellectual capital has positive and insignificant effect on the financial performance of airlines in Nigeria, is at variance with those of Barak and Sharma (2024) who found that intellectual capital and its components, including human capital and relational capital, significantly

influenced the financial performance of Indian public sector banks, with combined IC having a positive impact on ROA and ROE, though leverage negatively affected financial indicators. In similar contradictory manner, Alabood et al. (2023) revealed that intellectual capital, particularly human and employed capital, had a significant positive effect on the financial performance of Jordanian insurance firms, as measured by ROA, ROE, and market value (Tobin's Q). Also, AbdulRahman and Abubakar (2023) demonstrated that human, structural, and capital employed efficiencies significantly and positively impacted the financial performance of Nigerian listed oil and gas firms, as measured by NPM and ROE. Nguyen (2023) further showed that intellectual capital components had a significant effect on the financial performance of various types of firms in Vietnam, with results obtained through a two-step system GMM model. These contradictory findings might have been so due to geographical, conceptual and/or case study differences, as none of these studies were on airlines in Nigeria.

CONCLUSION AND RECOMMENDATIONS

The study concludes that higher effective tax rates significantly undermine the financial performance of Nigerian airlines by increasing operational costs, reducing net income, and limiting opportunities for growth and technological advancement. This impact is exacerbated by the competitive global aviation market and the potential for reduced demand due to higher fares, highlighting the need for tax reforms to alleviate the sector's financial burden and support its growth. It can also be concluded that despite the theoretical benefits, intellectual capital currently has a positive but insignificant effect on profitability in Nigerian airlines, suggesting that while investments in employee skills and innovation are valuable, they are not yet a major driver of financial success, possibly due to underutilization or the overshadowing role of tangible assets.

Based on the findings of this study, the following recommendations are proffered:

1. First, government should implement tax reforms aimed at reducing the tax rate for the aviation sector to alleviate financial pressures on airlines. Such reforms could include tax incentives or reductions specifically targeted at operational costs and investment in growth, fleet upgrades, and technological advancements. By lowering the tax burden, airlines would have increased flexibility to reinvest in their businesses, improve competitiveness, and potentially lower fares, thereby boosting demand and overall financial performance.
2. Airlines should develop and promote initiatives to enhance the utilization and valuation of intellectual capital within their establishments. This could involve investing in training, fostering innovation, and creating frameworks for recognizing and leveraging employee skills and expertise. To maximize the benefits of intellectual capital, the industry should also encourage collaborations with educational institutions and research organizations to integrate advanced knowledge and practices into daily operations.

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