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ENTREPRENEURIAL ORIENTATION AND ORGANIZATIONAL PERFORMANCE OF AIRLINES IN NIGERIA

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Abstract: *The Nigerian aviation industry faces persistent challenges in achieving optimal organisational performance, highlighting the need for strategic drivers such as entrepreneurial orientation (EO) and effective leadership in a highly regulated environment. This study examined the effects of EO - measured through risk-taking, proactiveness, and innovativeness - on the organizational performance of domestic airlines in Nigeria, assessed via financial and non-financial indicators. The mediating role of leadership style and the moderating effect of the regulatory environment were also investigated. A cross-sectional survey design was adopted, targeting 198 representatives across eleven domestic airline operators. Data were analyzed using Structural Equation Modeling (SEM) with SmartPLS. The results revealed that risk-taking, proactiveness, and innovativeness significantly improved financial performance, while non-financial outcomes also benefited, though with varying effect sizes across EO dimensions. Leadership style significantly mediated the EO–performance relationship, and the regulatory environment significantly moderated this link, confirming the stability of the estimates and supporting the mediation and moderation hypotheses. These findings underscore the critical roles of entrepreneurial behaviours, leadership, and regulatory frameworks in enhancing profitability, operational efficiency, service quality, and customer satisfaction in the Nigerian aviation sector. The study recommended implementing structured risk-assessment frameworks to optimize risk-taking, adopting proactive strategies through market intelligence and customer engagement, investing in innovative and eco-friendly technologies, and developing an effective leadership style to channel EO into measurable outcomes. Furthermore, regulatory reforms, including streamlined licensing procedures and tax incentives, can strengthen the moderating effect of the regulatory environment, enabling airlines to convert entrepreneurial capabilities into improved organizational performance*.

Keywords: Strategic Aviation Industry, Organizationl Performance, Public Sector, Niger Delta.

Introduction

There has been a major concern on the performance of airlines in Nigeria because of continued failures (Sidiq et al., 2024), inefficiency in operations, financial imbalances and encumbrance of regulations. Most national carriers in Nigeria are experiencing profitability issues, safety and reliability, and service delivery despite the high population and the increased air travel demand (Ojo, 2021). Nigerian aviation industry adds value to the economy in terms of trade, tourism, and employment, but the performance of airlines is below optimal, because of issues like high cost of operation, poor infrastructure, and strict regulatory policy (Adeyemi & Owoputi, 2022). Implementing measures to enhance the performance of airlines is important because it leads to better quality of services, sustainability and improve the contribution of the sector in GDP of Nigeria.

1.1 Background to the Study

The determination of performance in the airline industry employs financial and non-financial measures. Among financial performance indicators, profitability (return on assets and net profit margin), revenue growth, and estimation of the liquidity of an airline can be offered (IATA, 2023). Non-Financial performance measures include customer satisfaction, safety record, market-share, and on-time performance, all of which determine long-term competitiveness (Okafor & Eze, 2022). An ideal assessment of the performance of airline companies involves a trade-off between these measures to achieve efficiency of operation and strategic development. One of them is the ongoing underperformance of airlines, including their tendency to fail in their operations and become financially unstable and deliver poor services (Ojo, 2021).

1.2 Statement of the Problem

Nigerian aviation industry is confronted by great obstacles that compromise optimal performance of national carriers, in spite of the industry possessing the capacity to grow the economy and access trade, and improve connectivity (Adeyemi & Owoputi, 2022).

High operational costs, ineffective funding, poor fleet, and intense competition with foreign competitors are among the many problems of Nigerian airlines, making their lifespan short and their closure a frequent occurrence (IATA, 2023). These are complicated by the absence of stability in the regulation policies,

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insufficient infrastructural requirements and uncertained business future in its capacity to enhance growth and sustainability within the sector.

The symptoms of the issues appear through unsatisfactory profitability, constant delays and cancellations of flights, safety issues, and low customer satisfaction (Okafor & Eze, 2022).

2.1 Theoretical Review

Resource-Based View (RBV) Theory (Barney, 1991)

Resource-Based View is a theory advanced by Barney (1991) which points out that Resource based competitive advantage is therefore able to produce sustained competitive advantage through acquisition and subsequent utilization of valuable, rare, inimitable and non-substitutable (VRIN) resources (Barney, 1991). RBV explains that rather than rely on the external market conditions in determining the performance of an organization, the internal circumstances of an organization (human capital, technological resources, and organizational culture) have a greater influence on the performance of an organization (Wernerfelt, 1984).

The Resource-Based View (RBV) provides a compelling theoretical lens for explaining how entrepreneurial orientation (EO) influences the performance of domestic airlines in Nigeria.

Upper Echelons Theory (Hambrick and Mason's (1984)

The Upper Echelons Theory (UET), proposed by Hambrick and Mason (1984), provides a powerful lens for examining the relationship between entrepreneurial orientation (EO) and organisational performance in domestic airlines. UET posits that organisational outcomes—strategic choices, innovation, and performance—are reflections of the values, experiences, and cognitive bases of top executives. In other words, the characteristics of leaders, such as their risk preferences, educational background, and professional experience, shape how entrepreneurial strategies are formulated and implemented (Wang, Holmes, Oh, & Zhu, 2016).

Institutional Theory (DiMaggio & Powell, 1983)

Institutional Theory provides a robust lens for understanding how the regulatory environment combines with entrepreneurial orientation (EO) and, consequently, shapes organisational performance in domestic airlines. According to DiMaggio and Powell (1983) and Scott (2014), organisations operate under institutional pressures that compel conformity to laws, norms, and industry standards in order to gain legitimacy and secure resources. In the Nigerian domestic airline sector, regulatory agencies such as the Nigerian Civil Aviation Authority (NCAA) and the Nigerian Airspace Management Agency (NAMA) impose licensing requirements, safety standards, taxes, and operational guidelines (Daramola & Fagbemi, 2019).

2.2. Conceptual Framework

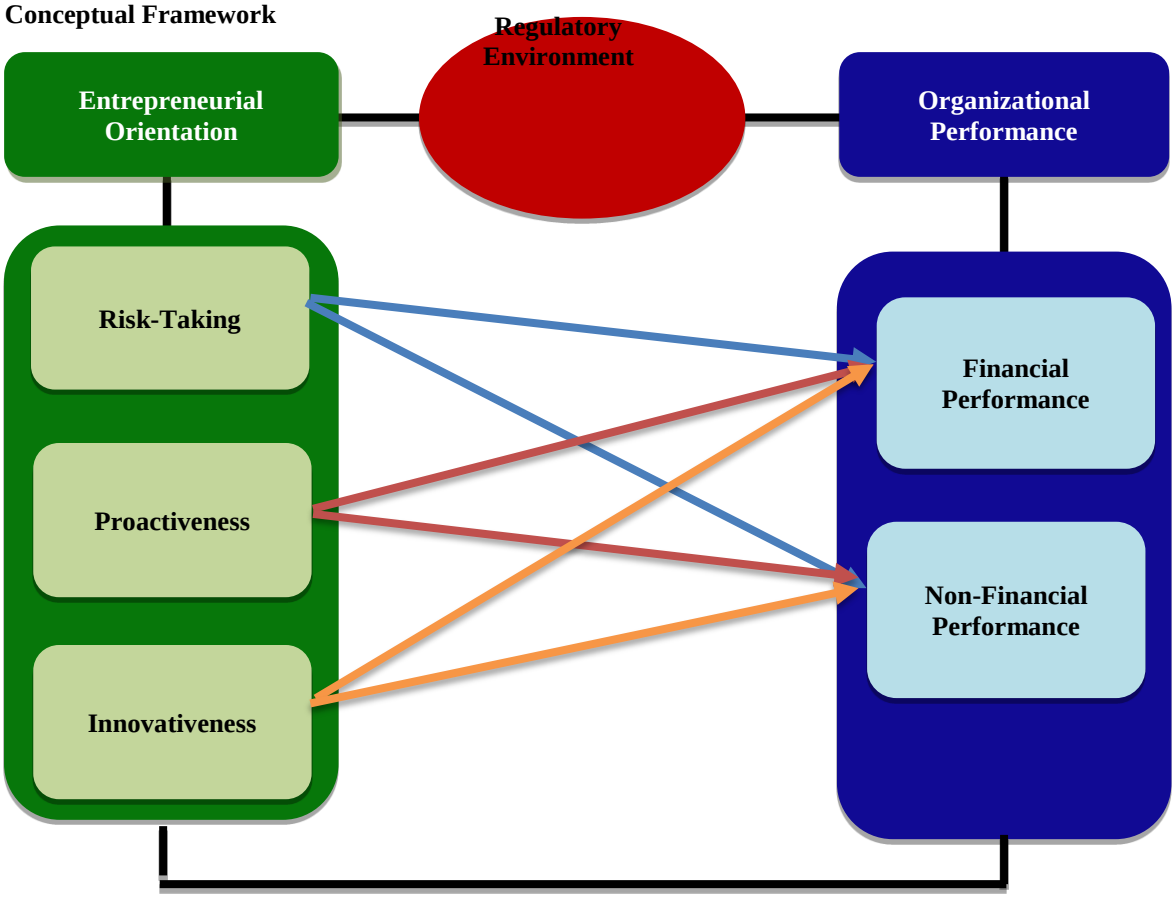

Figure 2.2: Conceptual Framework on the Relationship between Entrepreneurial Orientation and Performance of Airlines in Nigeria. The role of the Regulatory Authorities

Source: **Entrepreneurial Orientation**: Risk-Taking, Proactiveness, and Innovativeness (Covin & Slevin, 1989; Lumpkin & Dess, 1996; Wales et al., 2013). **Organisational Performance**: Financial and Non-Financial Performance (Adapted from Queiroz, Mendes, Silva, Ganga, Cauchick Miguel and Oliveira (2020). **Leadership Style**: (Bass & Avolio, 1995). **Regulatory Environment** (Stenholm et al., 2013)

2.3 Review of Empirical Literature

Gabriel and Edenkwo (2024) examined the influence of entrepreneurial innovations on organisational performance among telecommunication firms in Port Harcourt, Nigeria. The study adopted a correlational research design with a quantitative methodology, targeting 20 managerial staff drawn from four telecom firms, specifically R&D, marketing, and sales managers. A census approach was employed, and data were collected through 20 distributed questionnaires. The research instrument demonstrated high internal consistency with a Cronbach's alpha of .78, which exceeded the acceptable benchmark of .70. The study employed descriptive and inferential statistics, with hypotheses tested using the Pearson Product Moment Correlation technique via SPSS version 23. Findings indicated that both product innovations and process innovations were positively and significantly related to organisational performance. Specifically, firms that engaged in product innovations achieved improved network speed and overall performance outcomes, while process innovations—particularly the transition to advanced technologies such as 5G—further enhanced efficiency and competitiveness. The study concluded that entrepreneurial innovations serve as strong predictors of organisational performance in the telecommunication sector. It recommended that telecom firms invest in product innovations to enhance service delivery and adopt process innovations such as 5G upgrades to strengthen operational effectiveness. This study provides valuable insights into the critical role of innovation in driving organisational performance within the Nigerian telecommunications industry.

Susanto et al. (2023) investigated the relationship between entrepreneurial orientation (EO) and firm performance of small and medium-sized enterprises (SMEs) in Indonesia, focusing on the roles of marketing capabilities and social media usage during the COVID-19 pandemic. Recognizing the challenges SMEs face in sustaining performance in competitive and uncertain environments, the study employed a structured questionnaire targeting SME managers and owners as the unit of analysis. Data were analysed using partial least square–structural equation modelling (PLS-SEM). The findings revealed that EO had a significant and positive impact on SME performance, but the relationship was both mediated and moderated by marketing capabilities and social media usage. Specifically, marketing capabilities were found to significantly mediate the EO–performance relationship, implying that entrepreneurial orientation leads to improved performance when firms effectively leverage marketing functions. Social media usage moderated the EO–performance nexus, while also serving as a partial mediator. More importantly, the study established a serial mediation pathway, whereby EO influenced performance through the combined mechanisms of social media usage and marketing capabilities. The study concluded that entrepreneurial orientation enhances SME performance, but its effects are conditional on firms' ability to utilize social media and marketing capabilities strategically. In practice, the study recommended that SMEs invest in social media as a cost-effective marketing platform, especially under uncertain conditions like a pandemic, to sustain competitiveness. Theoretically, this study made significant contributions by developing a mediation–moderation framework that advances the literature on EO, marketing capabilities, and social media usage. It further extended knowledge by situating the EO–performance relationship within the context of COVID-19 and Indonesian SMEs.

Adiele and Onuoha (2023) investigated the impact of corporate entrepreneurship on the task performance of small and medium-sized enterprises (SMEs) in Rivers State, Nigeria. The study employed a survey research design and used the Krejcie and Morgan sample size determination table to select 169 SMEs from a population of 300. Of the distributed questionnaires, 147 were completed and returned, providing the data for analysis. The study applied the Spearman Rank Order Correlation Coefficient in SPSS version 25.0 to test the hypotheses, while frequency distributions were used to assess respondent characteristics. The findings revealed that corporate entrepreneurship significantly contributed to productivity and improved task performance among SMEs. Specifically, SMEs that embraced innovativeness through the development of unique processes, product differentiation, and expansion into new or existing markets recorded higher levels of effectiveness. The study concluded that corporate entrepreneurship is a vital driver of SME competitiveness and sustainability in Rivers State. It argued that SMEs could achieve strategic transformation by reengineering organisational processes and exploiting business opportunities through corporate ventures. Hence, fostering corporate entrepreneurship was recommended as a means for SMEs to enhance productivity and long-term performance.

3.1 Research Design

This research aligns with the positivist paradigm, which assumes that social phenomena can be objectively investigated through scientific methods (Midraj et al., 2007). Consistent with this paradigm, a quantitative methodology is employed, utilizing structured questionnaires whose responses are analyzed using statistical procedures to test hypotheses and identify causal relationships. The study adopts a realist ontological stance, acknowledging the existence of the social world of entrepreneurial practices, leadership, and regulatory influences independently of individual perceptions or measurements (Ahiauzu & Asawo, 2016).Epistemologically, the research is positivistic, focusing on empirical, testable, and generalizable knowledge. This orientation is appropriate, given the study's aim to quantify the impact of entrepreneurial orientation and leadership styles on airline performance within the constraints of regulatory conditions. The study employs a nomothetic approach, emphasizing universal patterns and relationships derived from quantitative data rather than subjective interpretations (Burrell & Morgan, 2000). Adopting this paradigm ensures that the research is rigorous, objective, and replicable, providing evidence-based insights to inform policy and managerial decision-making in Nigeria's aviation industry.

3.2 Population of Study

The population of this study is eleven (11) domestic airline operators in the aviation industry in Nigeria. These airlines are: Air Peace, Arik Air, Dana Air, United Nigeria Airlines, Overland Airways, Max Air, Ibom Air, Green Africa Airways, Rano Air, Azman Air and ValueJet.

This population comprises 198 representatives that work under designations such as Chief Executive Officer (CEO) or Managing Director (MD), Chief Operating Officer (COO), Chief Financial Officer (CFO), Chief Commercial Officer (CCO), Chief Technical Officer (CTO) or Vice President of Maintenance & Engineering, Chief Human Resources Officer (CHRO), Chief Information Officer (CIO), Chief Safety Officer or Director of Safety &

Security; as well as the officers who assist or deputize these categories of staff. These categories of staff were selected because they represent the key stakeholders whose roles are central to the interplay between entrepreneurial orientation, leadership styles, and organizational performance within the framework of regulatory oversight.

3.3 Sample and Sampling Techniques

This study did not draw a sample from the population; rather, it employed a census approach. A census of eleven (11) domestic airline operators, which have 198 representatives, was adopted to ensure that data were collected from every unit within the population, thereby providing findings that fully represent the entire group. By including all members, this approach eliminates sampling error and offers a comprehensive and accurate understanding of the phenomenon under investigation. Given the manageable size of the population, the use of a census enabled the study to generate precise and exhaustive conclusions regarding all individuals, rather than relying on estimates derived from a subset of the population.

Table 3.1 shows the study population and representatives.

Table 3.1 Study Population and Representatives

S/N	Airlines/Regulatory Bodies	Representatives of Population
1	Air Peace	28
2	Arik Air	21
3	Dana Air	16
4	United Nigeria Airlines	25
5	Overland Airways	15
6	Max Air	18
7	Ibom Air	29
8	Green Africa Airways	10
9	Rano Air	12
10	Azman Air	13
11	ValueJet	11
	Total	**198**

Source: NCAA, 2023

4.1. Results and Analyses

4.1.1 Field Work

Table 4.1: Questionnaire Distribution and Retrieval

	Frequency	Percentage (%)
Copies of Questionnaire Distributed	198	100
Copies of Questionnaire Retrieved	194	98
Copies of Questionnaire Not Retrieved	4	2
Copies of Questionnaire Invalid	3	2
Copies of Questionnaire Valid	191	98

Table 4.2: Gender Distribution of Respondents

GENDER

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	MALE	125	65.4	65.4	65.4
	FEMALE	66	34.6	34.6	100.0
	Total	191	100.0	100.0	

Table 4. 4: Educational Qualification Distribution of Respondents

QUALIFICATION

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	First Degree/Equivalent	120	62.8	62.8	62.8
	O/Level & Equivalent	9	4.7	4.7	67.5
	Master's Degree & Above	62	32.5	32.5	100.0
	Total	191	100.0	100.0	

Table 4.23: Results of Hypotheses Testing (Bivariate Analysis)

Null Hypothesis	Path (Relationship)	Path Coefficient (*β*)	Standard Error	*t*-Statistic	Decision
H_{O1}:	**RTG -> FPE**	0.704	0.045	15.626	Rejected
H_{O2}:	**RTG -> NFP**	0.687	0.036	19.250	Rejected
H_{O3}:	**PTS -> FPE**	0.855	0.025	34.431	Rejected
H_{O4}:	**PTS -> NFP**	0.887	0.012	75.551	Rejected
H_{O5}:	**INS -> FPE**	0.716	0.052	13.788	Rejected
H_{O6}:	**INS -> NFP**	0.625	0.048	12.926	Rejected

Note: RTG = Risk-Taking; **PTS** = Proactiveness; **INS** = Innovativeness; **FPE** = Financial Performance; **NFP** = Non-Financial Performance**:** Path coefficients (*β* values) of 0.10 to 0.29, 0.30 to 0.49, and 0.50 to 1.0, represent weak, moderate, and strong correlations respectively; *t* values above 1.96 are significant (two tailed test).

Source: SmartPLS 3.2.6 output on research data, 2025

4.1.5.1: Test of Hypotheses 1 - 2

Ho_1: There is no significant relationship between risk-taking and financial performance of Airlines in Nigeria.

Ho_2: Risk-taking does not significantly relate with non-financial performance of Airlines in Nigeria.

4.1.5.2: Test of Hypotheses 3 - 4

Ho_3: Proactiveness has no significant effect on financial performance of Airlines in Nigeria.

Ho_4: There is no significant relationship between proactiveness and non-financial performance of Airlines in Nigeria.

4.1.5.3: Test of Hypotheses 5 - 6

Ho_5: Innovativeness does not significantly relate with financial performance of Airlines in Nigeria.

Ho_6: There is no significant relationship between innovativeness and non-financial performance of Airlines in Nigeria

4.1.5.4: Multivariate Analysis (Mediation-Moderating Test for Hypothesis 7 and Hypothesis 8)

Ho_7: Leadership style has no significant mediating effect on entrepreneurial orientation and performance of Airlines in Nigeria.

Table 4.24: Results of Hypotheses Testing (Mediation Effect)

Null Hypothesis	Path (Relationship)	Path Coefficient (*β*)	Standard Error	*t*-Statistic	Decision
H_{O7}:	**EON -> LSE -> PFE**	0.472	0.0610	7.682	Supported

Note: EON = Entrepreneurial Orientation; **LSE** = Leadership Style; **PFE** = Performance**:** Path coefficients (*β* values) of 0.10 to 0.29, 0.30 to 0.49, and 0.50 to 1.0, represent weak, moderate, and strong correlations respectively; *t* values above 1.96 are significant (two tailed test).

Source: SmartPLS 3.2.6 output on research data, 2025

4.1.5.5: Test of Hypotheses 8

Higher-Order Constructs employed in structural equation modeling (SEM) are abstract, multivariate constructs, composed of two or more lower order constructs, which are more circumscribed, unidimensional variables (Hair et al., 2021). By relating similar lower order constructs in a mechanistic model into unifying construct, this hierarchy reduces complexity of the model without untheoretical loss of parsimony or interpretability. The higher order constructs also come in handy when the number of indicators or dimensions to be measured is large, in which case, the principle of parsimony should be observed (Sarstedt et al., 2019).

As an example, in Study, Entrepreneur Orientation, the higher order construct, is modeled to be comprised of the lower order construct of Risk-Taking (RTG), Proactiveness (PTS), and Innovativeness (INS). At the same time Performance (PFE) is an higher order construct, which includes Financial Performance (FPE) and Non-Financial Performance (NFP). These higher order constructs offer a moderated level of the knowledge of the interrelationships between the constructs, but all the same with maintaining the uniqueness of their elements.

4.1.7: Summary of Findings

This segment of the thesis presents a concise overview of the key outcomes of the study, highlighting the most significant findings in relation to the research objectives and hypotheses. The purpose of the Summary of Findings is to provide a clear and coherent account of what the research has discovered, without delving into detailed analysis or theoretical interpretation. It serves as a bridge between the results obtained from the data analysis and the subsequent discussion, offering readers a structured understanding of the main patterns, relationships, and trends identified in the study. By summarizing the critical insights, this section sets the stage for interpreting the implications of the findings, drawing conclusions, and making recommendations that are grounded in the empirical evidence gathered.

The study found that the dimensions of entrepreneurial orientation—risk-taking, proactiveness, and innovativeness—positively influence both the financial and non-financial performance of Nigerian airlines. Airlines that engage in calculated risk-taking, anticipate market trends, and implement innovative strategies tend to achieve higher profitability, increased revenue growth, and improved operational outcomes such as customer satisfaction, safety, and on-time performance. Among these dimensions, proactiveness exerted the strongest influence, highlighting the importance of forward-looking strategies and anticipatory planning in driving organizational success.

In addition to the direct effects of entrepreneurial orientation, the study demonstrated that leadership style plays a significant mediating role in the relationship between entrepreneurial orientation and airline performance. Effective leadership enhances the ability of airlines to translate entrepreneurial behaviors into tangible outcomes. Leaders who foster innovation, encourage calculated risk-taking, and support proactive initiatives help strengthen the impact of entrepreneurial orientation on both financial and operational performance. This finding underscores that entrepreneurial orientation alone may not be sufficient to optimize performance without competent leadership guiding and channeling these behaviors strategically.

The study also revealed that the regulatory environment has a moderating influence on the relationship between entrepreneurial orientation and performance. The nature of industry regulations, including safety standards, operational compliance, and government policies, affects how effectively entrepreneurial behaviors can be implemented. Airlines operating within a supportive and stable regulatory framework are better able to take risks, pursue innovative strategies, and act proactively, thereby enhancing performance outcomes. Conversely, restrictive or unpredictable regulations can limit the effectiveness of entrepreneurial initiatives, even in organizations with strong leadership and strategic orientation.

Collectively, these results highlight the interconnected roles of entrepreneurial orientation, leadership, and the regulatory environment in driving performance outcomes in the Nigerian airline industry. The findings provide actionable insights for managers aiming to improve competitiveness and for policymakers seeking to design regulations that foster both financial stability and entrepreneurial activity in the sector. Table 4.30 shows the Summary of Findings.

Table 4.30: Summary of Findings

Null Hypothesis	Path Coefficient (β)	*t*-Statistic	Decision t >1.96
H_{O1}: There is no significant relationship between risk-taking and financial performance of Airlines in Nigeria.	0.704	15.626	Rejected
H_{O2}: Risk-taking does not significantly affect non-financial performance of Airlines in Nigeria.	0.687	19.250	Rejected
H_{O3}: Proactiveness has no significant relationship with financial performance of Airlines in Nigeria.	0.855	34.431	Rejected
H_{O4}: There is no significant relationship between proactiveness and non-financial performance of Airlines in Nigeria.	0.887	75.551	Rejected
H_{O5}: Innovativeness does not significantly relate with financial performance of Airlines in Nigeria.	0.716	13.788	Rejected
H_{O6}: There is no significant relationship between innovativeness and non-financial performance of Airlines in Nigeria.	0.625	12.926	Rejected
H_{O7}: Leadership style has no significant mediating effect on entrepreneurial orientation and performance of Airlines in Nigeria.	0.0610	7.682	Rejected
H_{O8}: Regulatory environment does not significantly moderate the relationship between entrepreneurial orientation and performance of Airlines in Nigeria.	0.060	3.464	Rejected

Source: SmartPLS 3.2.6 output on research data, 2025

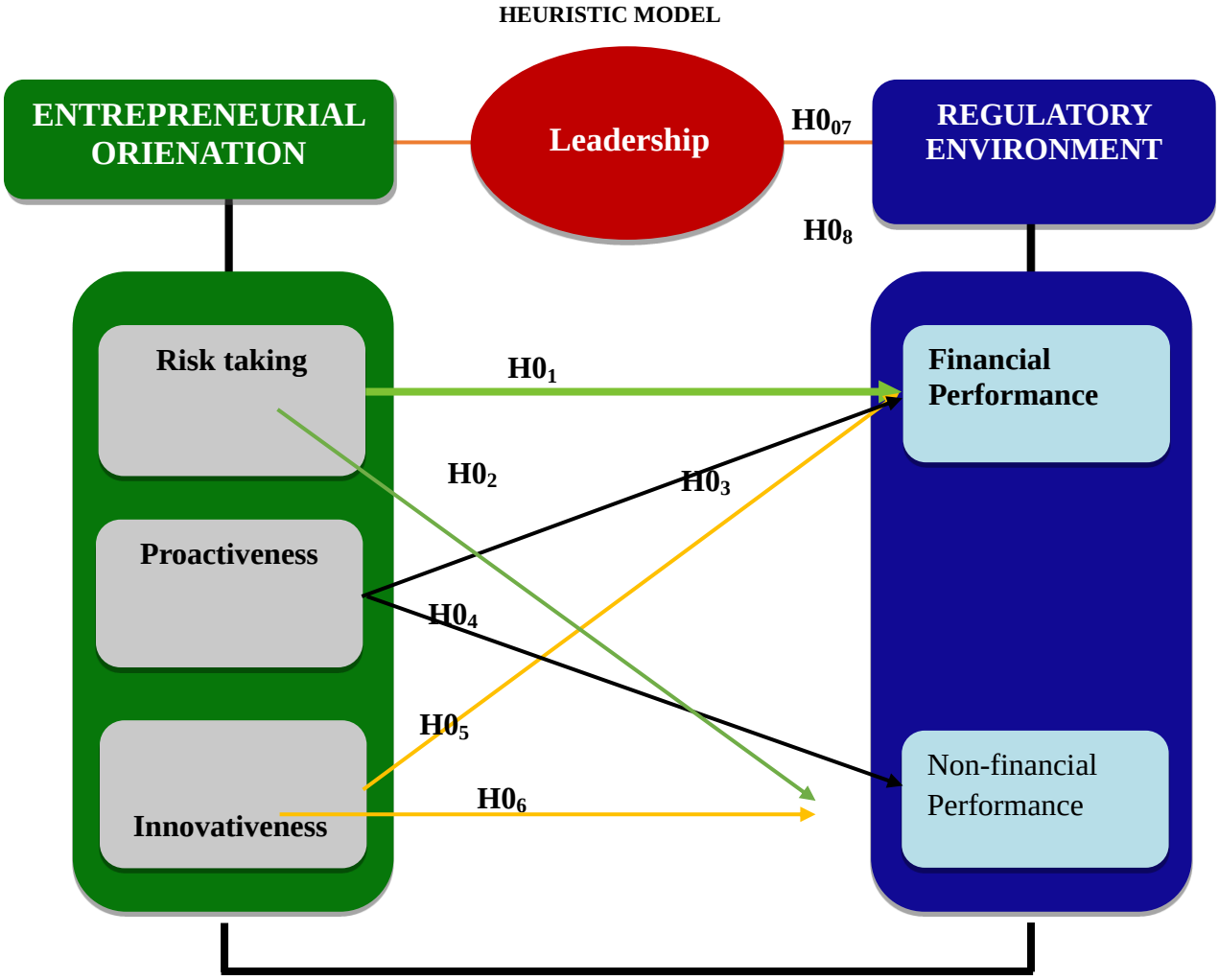

Figure 4.9: A model showing the Outcome of the Study

Note: Bold lines ($H0_1, H0_5, H0_7$ $H0_9, H0_2, H0_3$, $H0_4$, $H0_6$,$H0_8$ represent strong relationships.

5.1 Summary of Study

5.1.1 Summary of the Study

This study has investigated the intricate relationships between entrepreneurial orientation (EO), leadership style, and the performance of airlines in Nigeria, with a particular emphasis on the moderating role of the regulatory environment in this highly competitive and regulated aviation sector. Adopting a deductive approach grounded in entrepreneurial orientation theory and institutional theory, the research was structured across five chapters, encompassing the problem statement, literature review, methodology, empirical analysis, and conclusions with recommendations. The findings provide critical insights into how EO dimensions—risk-taking, proactiveness, and innovativeness—interact with leadership and regulatory factors to influence both financial (e.g., profitability, revenue growth, liquidity) and non-financial (e.g., customer satisfaction, safety records, market share) performance, offering a nuanced understanding of strategic drivers in Nigeria's aviation industry amid economic volatility, infrastructural challenges, and policy reforms.

A key finding was the significant positive association between risk-taking and both financial and non-financial performance of Nigerian airlines. The results indicate that calculated risk-taking behaviours, such as investing in new technologies, expanding routes, or modernizing fleets despite potential failures, substantially enhance profitability and revenue growth while also improving customer satisfaction, operational reliability, and brand reputation. This underscores the importance of strategic risk management in an industry characterized by high operational costs and external uncertainties, where airlines embracing measured risks can achieve a competitive edge and long-term sustainability in the Nigerian market, aligning with the need to adapt to fluctuating fuel prices and regulatory demands.

Proactiveness emerged as another dominant driver, exhibiting a strong positive correlation with financial and non-financial performance. Airlines that anticipate market changes, act ahead of competitors by optimizing operations or introducing new services, demonstrated superior revenue growth, cost efficiency, and market penetration. The particularly robust impact on non-financial performance highlights how proactive strategies, such as real-time customer engagement or preemptive compliance with safety standards, foster loyalty, on-time performance, and overall stakeholder satisfaction in Nigeria's dynamic aviation landscape,

where rapid response to economic shifts and consumer preferences is essential for maintaining competitiveness.

Innovativeness also showed a significant positive effect on financial performance, with creative initiatives like implementing e-ticketing systems, environmentally friendly practices, or process optimizations leading to improved profitability and liquidity. However, the relationship with non-financial performance was less pronounced, suggesting that while innovativeness drives operational efficiencies and cost reductions, its benefits may not fully extend to intangible outcomes like customer satisfaction or brand equity without targeted integration. This finding points to a potential gap in Nigerian airlines' innovation strategies, which may prioritize financial gains over customer-centric advancements, emphasizing the need for balanced approaches in an industry facing global sustainability pressures and local infrastructural limitations.

The mediating role of leadership style was a pivotal discovery, significantly influencing the EO-performance linkage. Transformational leadership, which motivates innovation and risk-taking, and transactional leadership, which ensures accountability and execution, were found to amplify EO's effects, converting entrepreneurial postures into enhanced financial and non-financial outcomes. Airlines with leaders who cultivate a vision-driven culture and align teams with strategic goals exhibited superior performance, illustrating that effective leadership acts as a bridge in Nigeria's aviation sector, where human capital management is crucial for navigating competitive and regulatory complexities.

The regulatory environment played a notable moderating role, significantly strengthening the relationship between EO and performance when supportive and stable. Favorable policies, such as streamlined licensing, tax incentives, or infrastructural support from bodies like the Nigerian Civil Aviation Authority (NCAA), enhanced EO's positive impacts, enabling greater innovation and proactiveness. Conversely, restrictive or inconsistent regulations hindered these effects, highlighting how external institutional factors shape internal entrepreneurial strategies in Nigeria's aviation industry, where recent reforms offer opportunities for growth but ongoing encumbrances like policy volatility pose challenges.

In summary, the research illuminates the synergistic interplay of EO dimensions, leadership styles, and regulatory frameworks in determining airline performance in Nigeria. The findings advocate for fostering a risk-tolerant, proactive, and innovative culture supported by strong leadership and enabling regulations to achieve sustainable financial and non-financial success. These insights contribute to theoretical advancements in EO and institutional theories while providing practical guidance for airline managers, policymakers, and regulators to enhance the sector's contribution to Nigeria's economy, tourism, and employment, ultimately positioning the industry for greater global competitiveness in an evolving landscape.

5.2 Conclusions

This study has elucidated the pivotal role of entrepreneurial orientation (EO), encompassing risk-taking, proactiveness, and innovativeness, as a fundamental determinant of both financial and non-financial performance in Nigeria's airline industry. Based on the findings of this study, the following conclusions are made:

i. Risk-taking positively influences the financial performance of Nigerian domestic airlines. Strategic and calculated risk-taking enables carriers to exploit market opportunities, optimize route networks, and pursue revenue-enhancing initiatives, thereby contributing meaningfully to profitability and revenue growth.

ii. Risk-taking has a modest positive effect on non-financial performance, such as customer satisfaction, service reliability, and safety. While risk-taking drives operational innovation, its impact on intangible outcomes is comparatively weaker, suggesting that complementary mechanisms may be required to fully enhance non-financial metrics.

iii. Proactive behaviours, including anticipating market trends and initiating competitive actions, are critical drivers of financial performance. By leveraging foresight and seizing first-mover advantages, Nigerian airlines can strengthen revenue streams, profitability, and liquidity, particularly in a resource-constrained and dynamic market environment.

iv. Proactiveness positively impacts non-financial performance. Airlines that actively anticipate customer needs, optimize operational processes, and implement innovative services improve customer satisfaction, service quality, and organizational responsiveness, demonstrating the broader organizational value of proactive strategies.

v. Innovativeness significantly enhances financial performance. Airlines that adopt creative operational solutions, implement new service models, and invest in technological innovations translate intangible entrepreneurial capabilities into tangible revenue and profitability gains.

vi. Innovative practices strongly improve non-financial performance. Process improvements, environmentally conscious operations, and customer-centered innovations substantially increase customer satisfaction, service reliability, and safety, highlighting the importance of innovation beyond mere financial metrics.

vii. Leadership style mediates the relationship between EO and airline performance. Leadership behaviors—articulating vision, modeling strategic behaviors, and providing support—enhance the effectiveness of entrepreneurial initiatives, ensuring that EO translates into both financial and non-financial organizational outcomes.

viii. The regulatory environment significantly moderates the EO–performance relationship. Effective alignment with regulatory requirements amplifies the positive effects of EO on performance, while regulatory misalignment or instability can limit the realization of entrepreneurial initiatives, emphasizing the necessity of strategic compliance in the highly regulated aviation sector.

5.3 Recommendations

In view of the conclusions of regarding the relationship between entrepreneurial orientation and leadership style and the

performance of Airlines in Nigeria, and the role of the regulatory environment, this study recommends as follows:

i. Given the significant positive relationship between risk-taking and financial performance of airlines in Nigeria, airline managers should implement structured risk assessment frameworks, such as enterprise risk management tools, to encourage calculated investments in fleet expansion or new routes, thereby enhancing profitability and revenue growth while mitigating potential financial losses in volatile market conditions.

ii. In light of the significant positive effect of risk-taking on non-financial performance, Nigerian airlines are advised to foster a culture of measured risk-taking through employee training programs that emphasize innovation in service delivery, which can improve customer satisfaction, safety records, and operational efficiency, ultimately strengthening brand reputation and market share.

iii. Considering the significant positive effect of proactiveness on financial performance, airline executives should prioritize proactive market intelligence systems, including data analytics for trend forecasting, to anticipate demand shifts and optimize pricing strategies, leading to improved revenue growth and cost efficiencies in Nigeria's competitive aviation landscape.

iv. Based on the significant positive relationship between proactiveness and non-financial performance, airlines in Nigeria should develop proactive customer engagement initiatives, such as real-time feedback mechanisms and personalized services, to enhance loyalty, on-time performance, and overall stakeholder satisfaction in a sector prone to operational disruptions.

v. With the significant positive relationship between innovativeness and financial performance established, Nigerian airline leaders are recommended to allocate resources toward research and development in cost-saving technologies, like advanced fuel management systems, to boost profitability and liquidity while addressing high operational expenses.

vi. Given the significant positive relationship between innovativeness and non-financial performance, airlines should integrate customer-focused innovations, such as eco-friendly practices and digital passenger experiences, into their strategies to elevate satisfaction levels, safety compliance, and environmental sustainability, fostering long-term competitive advantages.

vii. In view of the significant mediating role of leadership style on the relationship between EO and airline performance, Nigerian airline organizations should invest in leadership development programs that promote transformational styles to effectively channel entrepreneurial behaviours into enhanced financial and non-financial outcomes, ensuring strategic alignment and employee motivation.

viii. Considering the significant moderating role of the regulatory environment on the EO-performance relationship, policymakers and the Nigerian Civil Aviation Authority (NCAA) should reform regulations to create a more enabling framework, such as simplified licensing and tax incentives, to amplify the benefits of EO and drive sustainable performance improvements in the industry.

5.4 Contribution for Knowledge

This study contributes to knowledge in the following areas;

i. This research contributes to the understanding of how strategic orientation influences community engagement, equity and fairness, poverty alleviation, and regulatory enforcement within public sector organizations in the Niger Delta Region. It provides empirical evidence of the significance of strategic orientation in addressing socio-economic challenges, enhancing organizational responsiveness, and promoting inclusive governance.

ii. The study highlights the critical role of strategic execution in fostering community engagement and advancing social equity. By establishing significant relationships between strategic execution and various social outcomes, the research underscores the importance of translating strategic plans into effective actions, thereby enriching the literature on public administration and strategic management.

iii. The findings emphasize the need for strategic alignment with community needs and regulatory frameworks, offering a practical framework for public sector organizations. This contribution is vital for policymakers and practitioners aiming to enhance organizational effectiveness, accountability, and social sustainability in the Niger Delta Region.

iv. The study explores the moderating impact of engagement culture in the link between strategic leadership and social sustainability, expanding our knowledge of organisational culture in public sector settings. This contribution supports leadership and organisational development methods to improve social sustainability via employee and stakeholder involvement.

References

1. Abba, A., Weihrich, H., & Koontz, H. (2004). *Essentials of management: An international perspective* (7th ed.). McGraw-Hill.
2. Abdulkhaliq, S. S., & Mohammadali, M. A. (2019). The impact of training and development on employee performance. *Journal of Business and Management Sciences, 7*(3), 84–90. https://doi.org/10.12691/jbms-7-3-1
3. Achua, C. F., & Lussier, R. N. (2013). *Effective leadership* (5th ed.). Cengage Learning.
4. Adair, J. (2003). *The inspirational leader: How to motivate, encourage and achieve success*. Kogan Page.
5. Adala, A. (2014). Regulatory compliance and business sustainability in emerging markets. *Journal of African Business, 15*(2), 134–147. https://doi.org/10.1080/15228916.2014.920654
6. Adam, M. H. M. (2014). Evaluating the financial performance of banks using financial ratios: A case study of Eritrean commercial banks. *African Journal of Business Management, 8*(17), 728–736. https://doi.org/10.5897/AJBM2014.7426

7. Adams, R. B., & Mehran, H. (2012). Bank board structure and performance: Evidence for large bank holding companies. *Journal of Financial Intermediation, 21*(2), 243–267. https://doi.org/10.1016/j.jfi.2011.09.002
8. Adebiyi, S. O., Amole, B. B., Arikewuyo, K. A., & Oyenuga, O. G. (2019). Multi-criteria decision analysis of entrepreneurial orientation and business performance in Nigeria. *Economics and Business, 33*(1), 140–151. https://doi.org/10.2478/eb-2019-0010
9. Adedoyin, O., Victoria, O., & Akinlabi, B. H. (2021). Entrepreneurial orientation and market share of selected quoted consumer goods manufacturing companies in Nigeria. *International Journal of Engineering and Management Research, 11*(2), 64–74. https://doi.org/10.31033/ijemr.11.2.10
10. Adegbite, E. (2021). Financial instability and performance of Nigerian airlines. *Journal of African Aviation Economics, 15*(2), 45–60.
11. Adeiza, A., Malek, M. A., & Ismail, N. A. (2017). An empirical analysis of the influence of entrepreneurial orientation on franchisees' outlet performance and intention to stay. *The Korean Journal of Franchise Management, 8*(1), 5–18. https://doi.org/10.21871/kjfm.2017.03.8.1.5
12. Adeoye, A., & Elegunde, A. (2012). Impacts of external business environment on organisational performance in Nigeria. *International Journal of Business and Social Science, 3*(12), 283–291.
13. Adeyemi, O., & Owoputi, J. (2022). Challenges facing the Nigerian aviation industry: A regulatory perspective. *African Journal of Business and Management, 8*(3), 112–125.
14. Adeyemi, O., & Ojo, O. (2022). Strategic decisions and competitive advantage in Nigerian aviation: The case of Air Peace. *Journal of African Business Studies, 12*(3), 45–60.
15. Adidu, F. A., Olanye, G., & Oyejide, A. (2006). *Basic small business entrepreneurship: A practical approach*. Evi-Coleman Publications.
16. Adiele, L. C., & Onuoha, B. C. (2023). Corporate entrepreneurship and task performance of SMEs in Rivers State. *International Academy Journal of Management, Marketing and Entrepreneurial Studies, 10*(1), 71–83.
17. Adim, C. V., & Tamunomiebi, M. D. P. (2018a). Entrepreneurial orientation and women entrepreneurs' contribution to household livelihood and sustenance in Rivers State. *World Journal of Entrepreneurial Development Studies, 2*(1), 2579–0544.
18. Adim, C. V., & Tamunomiebi, M. D. P. (2018b). The moderating role of government policy framework on the relationship between entrepreneurial orientation and performance of women entrepreneurs in Rivers State. *World Journal of Entrepreneurial Development Studies, 2*(1), 36–52.
19. Adim, C. V., Tamunomiebi, M. D., Akintokunbo, O. O., & Adubasim, I. E. (2018). Entrepreneurial innovativeness and performance of women entrepreneurs in Rivers State, Nigeria. *World Journal of Entrepreneurial Development Studies, 2*(1), 9–23.
20. African Development Bank. (2011). *African development report 2011: Private sector development as an engine of Africa's economic development*. Oxford University Press.
21. Agboli, M., & Ukaegbu, C. C. (2006). Business environment and entrepreneurial activity in Nigeria: Implications for industrial development. *Journal of Modern African Studies, 44*(1), 1–30. https://doi.org/10.1017/S0022278X05001394
22. Agu, O. A., Kida, M. I., & Asogwa, O. J. (2018). Risk-taking among directors of SMEs: Challenges and qualitative data needs. *Journal of Small Business Management, 56*(3), 456–470. https://doi.org/10.1111/jsbm.12287
23. Aguilar, F. J. (1967). *Scanning the business environment*. Macmillan.
24. Ahiauzu, A. I., & Asawo, S. P. (2016). *Advanced research methods in management sciences*. Pearl Publishers.
25. Ahimbisibwe, G. M., & Abaho, E. (2013). Entrepreneurial orientation and export performance of SMEs in Uganda. *African Journal of Business Management, 7*(36), 3744–3755. https://doi.org/10.5897/AJBM2013.6942
26. Ahmad, N. (2016). Cash flow management and financial performance of small and medium enterprises in Malaysia. *Journal of Small Business and Entrepreneurship, 28*(5), 381–398. https://doi.org/10.1080/08276331.2016.1208780
27. Ahmed, S. (2019). Entrepreneurial orientation and its impact on business performance. *Journal of Business Research, 98*, 1–12. https://doi.org/10.1016/j.jbusres.2018.12.045
28. Ahmad, H.H., & Adilah Azhari, A. (2022). The performance and corporate risk-taking of firms: evidence from Malaysian agricultural firms. *Journal of Agribusiness in Developing and Emerging Economies, 12*(5): 791–808. https://doi.org/10.1108/JADEE-11-2020-0267
29. Ajayi, O. (2016). *Business environment and strategic management in Nigeria*. Lagos Business Press.
30. Akbar, Y. H., Kisilowski, M., & McBride, D. (2020). Innovation and internationalization in emerging markets. *Journal of International Business Studies, 51*(5), 773–786. https://doi.org/10.1057/s41267-019-00292-7
31. Akinyele, S., Akinyele, T., Feyisayo, E., & Okonkwo, I. B. (2019). Entrepreneurship orientation in palm oil processing as a panacea for youth unemployment in Federal University of Agriculture Abeokuta. *African Scholar Journal of Agriculture and Agricultural Technology, 15*(1), 13–49.
32. Akpa, V. O., Nwankwere, I. A., & Ibikunle, T. D. (2023). Entrepreneurial orientation and competitive advantage of quoted pharmaceutical companies in Nigeria. *Journal of Strategic Management, 7*(3), 22–38.
33. Akpoviroro, K., & Owotutu, S. (2018). Impact of business environment on organizational performance. *International Journal of Business and Management, 13*(5), 212–220. https://doi.org/10.5539/ijbm.v13n5p212