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Takaful insurance schemes (TIS) and performance of Takaful operators in Nigeria

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Abstract

This study examines the impact of Takaful Insurance Schemes (TIS) on the performance of Takaful operators in Nigeria using an ex-post facto research design. A census approach was adopted to include all twelve licensed Takaful operators registered by the National Insurance Commission (NAICOM). Secondary data covering 2018–2024 were sourced from operators' annual reports, NAICOM publications, and internal financial records. TIS was operationalized through the diversity and adoption of Takaful products, while performance was measured using four key indicators: Takaful Business Turnover (TBT), profitability (TBP), solvency (TBS), and cost of production (TBC). The study employed the Ordinary Least Squares (OLS) regression technique to assess the predictive influence of TIS on each performance outcome. Findings revealed that TIS has a positive and statistically significant impact on Takaful Business Turnover, as shown by a correlation coefficient of 0.582 and an R^2 value of 0.339, indicating that 33.9% of changes in turnover are explained by variations in TIS. The p-value of 0.00 ($p < 0.05$) confirms the significance of this relationship, leading to the rejection of the first hypothesis. Similar trends were observed across profitability, solvency, and cost indicators, where TIS contributed meaningfully to performance outcomes, although the magnitude varied across measures. Overall, the study establishes that well-structured and diverse Takaful schemes enhance the financial strength, operational efficiency, and overall sustainability of Takaful operators in Nigeria. The study recommends that Takaful operators deepen product innovation and expand scheme adoption to improve competitiveness and strengthen market performance within the Nigerian Islamic insurance landscape.

Keywords: Takaful Insurance Schemes (TIS), Takaful Business Turnover (TBT), Takaful Business profitability (TBP), Takaful Business solvency (TBS), and Takaful Business cost of production (TBC).

Introduction

Insurance penetration in Nigeria has continued to lag behind global and regional benchmarks, remaining below 1% of GDP despite several regulatory reforms and financial inclusion initiatives (NAICOM, 2023; World Bank, 2022). This persistent low penetration reflects limited adoption of insurance products among households and businesses, largely due to affordability constraints, cultural barriers, religious objections, and mistrust in conventional insurance models (Adegbaju & Olokoyo, 2021; Oni, 2022). As a result, the insurance sector struggles to contribute meaningfully to national economic resilience, leaving millions exposed to avoidable financial shocks. Insurance penetration, defined as the ratio of insurance premiums to gross domestic product (GDP), reflects the level of insurance adoption within a population. In Nigeria, this metric has hovered below 1%, signaling an underdeveloped insurance market compared to global standards (NAICOM, 2020). This low penetration rate underscores the need for innovative insurance models capable of addressing local needs and fostering greater financial inclusion.

Insurance penetration has capacity to bolster economic resilience, protect livelihoods, and support financial stability (Outreville, 2013). For a developing economy like Nigeria, where risks such as health emergencies, agricultural losses, and property damage are prevalent, expanding insurance coverage is critical. However, traditional insurance models have struggled to penetrate rural and low-income segments due to affordability issues, lack of awareness, and mistrust (Sanusi, 2012).

Takaful insurance, an Islamic-compliant alternative to conventional insurance, has emerged as a potential solution to this challenge. Takaful insurance, with its ethical framework and community-oriented design, presents an opportunity to bridge this gap and catalyze broader insurance adoption. Rooted in principles of mutual cooperation and risk-sharing, Takaful aligns with the cultural and religious values of significant portions of Nigeria's population, particularly in the northern regions where Islamic finance is prominent (AbdulKareem & Mahmud, 2021). Unlike conventional insurance, which often faces resistance due to perceptions of uncertainty (gharar) and interest (riba), Takaful operates on a participatory model, pooling contributions to support members in times of need. This approach not only enhances acceptability but also offers a pathway to increase insurance uptake in underserved markets.

As global evidence shows, Takaful has significantly contributed to insurance growth in countries such as Malaysia, Sudan, and Saudi Arabia, where its penetration has grown steadily over the past decade (IFSB, 2023). In sub-Saharan Africa, Tanzania and Kenya have also recorded increased uptake following the introduction of Takaful models

(Ernst & Young, 2021). Nigeria stands in a similar position, with growing interest in Islamic finance and recent regulatory support through the NAICOM Takaful Operational Guidelines (2020; updated 2023).

Despite its potential, few studies have empirically examined how Takaful insurance influences key performance metrics in Nigeria, such as turnover, profitability, solvency, and cost of production, that could drive insurance penetration. Previous research has largely focused on conventional insurance or Islamic banking, leaving a gap in understanding Takaful's specific role in the Nigerian context. This study addresses this gap by exploring the impact of Takaful insurance schemes (TIS) on insurance penetration in Nigeria. Drawing on quantitative data, it examines how TIS correlates with and predicts outcomes such as Takaful business turnover (TBT), Takaful business profitability (TBP), Takaful business solvency (TBS), and Takaful business cost of production (TBC). By doing so, it seeks to provide evidence-based insights into how Takaful can serve as a catalyst for deepening insurance markets in Nigeria.

Statement of the Problem

Despite Nigeria's large population and growing financial sector, insurance penetration remains critically low at less than 1%, far below the African average and global standards (Olayungbo & Akinlo, 2016; NAICOM, 2023). Conventional insurance models have struggled to gain acceptance due to deep-rooted socio-cultural resistance, low trust levels, high poverty rates, and limited awareness (Onoja & Abdulrahman, 2021). In many communities, especially in the northern region, conventional insurance is still perceived as non-compliant with Islamic principles, resulting in widespread exclusion. Empirical studies suggest that Takaful insurance, as a Shariah-compliant alternative, holds significant promise in addressing these challenges by providing ethical, interest-free, and community-oriented insurance products (AbdulKareem & Mahmud, 2021; Ali & Odunuga, 2019).

Although Takaful insurance offers a culturally and religiously acceptable alternative, its adoption in Nigeria remains marginal. The Takaful subsector faces challenges such as weak market awareness, inadequate distribution channels, limited capitalisation, and a slow-growing regulatory environment (Abubakar & Hassan, 2023; NAICOM, 2023). More importantly, there is insufficient empirical evidence on whether Takaful insurance improves essential business performance indicators, turnover, profitability, solvency, and cost efficiency, that support insurance penetration. Without such evidence, policymakers and industry regulators lack the data needed to promote Takaful as a strategic mechanism for expanding insurance inclusion.

While some studies demonstrate positive relationships between Takaful adoption and business turnover (Yusuf & Hassan, 2019) or highlight its role in business continuity for SMEs (Chilekezi, 2023), there is a scarcity of comprehensive quantitative research examining how Takaful insurance schemes influence core performance metrics such as turnover, profitability, solvency, and cost of production. Furthermore, most research either focuses on a single product line, examines Takaful in other countries (Khan & Noreen, 2018; Achmakou, 2020),

or emphasizes adoption factors rather than operational and financial outcomes (Kazaure & Abdullah, 2019).

This gap limits our understanding of how the structure, distribution, and adoption of Takaful schemes can strengthen the performance of Takaful operators and, in turn, enhance overall insurance penetration in Nigeria. Without empirical evidence linking Takaful schemes to measurable performance outcomes, regulators, operators, and policymakers lack the data needed to design effective strategies for expanding insurance coverage and improving financial inclusion.

Therefore, this study seeks to investigate the impact of Takaful insurance schemes on key performance indicators, Takaful business turnover, profitability, solvency, and cost of production, to provide evidence-based insights into how Takaful can serve as a catalyst for increasing insurance penetration in Nigeria.

Objectives of the Study

The main objective of this study is to investigate Takaful insurance schemes (TIS) and performance of Takaful operators in Nigeria. The specific objectives are:

i. To examine the impact of Takaful insurance schemes (TIS) on Takaful business turnover (TBT) in Nigeria.
ii. To investigate the relationship between Takaful insurance schemes (TIS) and Takaful Business Profitability (TBP) in Nigeria.
iii. To evaluate the effect of Takaful insurance schemes (TIS) on Takaful Business Solvency (TBS) in Nigeria.
iv. To assess the influence of Takaful insurance schemes (TIS) on Takaful Business Cost of production (TBC) in Nigeria.

Takaful Insurance

Takaful insurance, derived from the Arabic term "ta'awun" (mutual cooperation), refers to a Sharia-compliant system where participants pool resources to collectively manage risks (Ahmed, 2019). Unlike conventional insurance, which is often criticized for elements of uncertainty (gharar), interest (riba), and gambling (maysir), Takaful provides an ethical model that aligns with Islamic principles (IFSB, 2023). It involves a dual structure: participants contribute to a common fund managed by a Takaful operator, who invests the funds in Sharia-compliant avenues, and surplus is redistributed among participants after claims and expenses (Ali & Odunuga, 2019). The ultimate goal of Takaful is to enhance financial inclusion and resilience by offering an alternative that aligns with cultural and religious values, particularly in Muslim-majority regions.

A well-monitored Takaful system can demonstrate tangible benefits, such as increased coverage and financial protection, thereby attracting more participants and driving insurance penetration (Yusuf & Hassan, 2019). Takaful is different from conventional insurance all operations comply with Islamic jurisprudence (*fiqh al-muamalat*), strictly avoiding interest

and excessive speculation(IFSB, 2023).Takaful emphasizes cooperation, solidarity, and mutual support, making it attractive to low-income and rural communities(Ernst & Young, 2021).Participants are entitled to share in surpluses, unlike conventional insurance where profits accrue to shareholders(Ali & Odunuga, 2019). Its religious acceptability is a major driver of adoption in Muslim-populated areas such as northern Nigeria(Yusuf & Abdulraheem, 2022).Takaful offers product that includes family Takaful (life/family protection), general Takaful (motor, fire, property, marine), Health Takaful, micro-Takaful, agricultural Takaful(Ernst & Young, 2021; IFSB, 2023). This makes Takaful suitable for improving insurance penetration at multiple socioeconomic levels.

Takaful insurance encompasses several operational dimensions, including underwriting, risk pooling, claims management, and surplus distribution. These elements collectively aim to ensure the financial sustainability of the scheme while deepening market penetration (AbdulKareem & Mahmud, 2021). In the Nigerian context, Takaful's relevance stems from its potential to address the low insurance penetration rate, which has been attributed to mistrust, affordability issues, and limited awareness of conventional insurance products (Olayungbo & Akinlo, 2016).

Takaful Business Performance Metrics

As a progressively developing insurance model, the sustainability and expansion of Takaful depend on specific performance indicators. This study focuses on four essential metrics:

i. **Takaful Business Turnover (TBT)**: TBT refers to total contributions (gross written contributions) collected by Takaful operators in a defined period. Increases in TBT typically reflect improved product acceptance, successful distribution strategies, and adequate pricing. Empirical evidence from mature Takaful markets shows turnover growth is associated with increased national insurance penetration (IFSB, 2023).

ii. **Takaful Business Profitability (TBP)**: TBP measures the net underwriting and investment results attributed to Takaful operations. Profitability depends on prudent underwriting, effective claims control, and Shariah-compliant investment performance. Studies indicate that well-managed Takaful operations can deliver sustainable profitability while maintaining Shariah compliance, thereby enabling reinvestment into distribution and product innovation (Ali & Odunuga, 2019; Ernst & Young, 2021).

iii. **Takaful Business Solvency (TBS)**: Solvency captures an operator's ability to meet claim obligations and sustain operations under stress. Adequate capitalisation, liquidity reserves, and conservative risk management are critical to solvency. Strong solvency positions build public confidence and provide the financial backbone necessary for expanding coverage to new segments (NAICOM, 2023; IFSB, 2023).

iv. **Takaful Business Cost (TBC)**: TBC encompasses acquisition, administrative, claims handling, compliance, and maintenance costs. Efficient cost structures — especially when leveraging digital distribution and community channels — enable affordable contributions and improve the accessibility of Takaful for lower-income households. Micro-Takaful

initiatives demonstrate how cost-efficient designs can significantly increase uptake in low-income markets (Ernst & Young, 2021; Abubakar & Hassan, 2023).

Improvements across turnover, profitability, solvency, and cost efficiency create a reinforcing cycle: greater trust and affordability attract more participants; higher participation strengthens pooled funds and solvency; improved solvency and profitability enable product diversification and deeper outreach, thereby increasing national insurance penetration (Outreville, 2013; World Bank, 2022).

Takaful Risk Assessment

Takaful risk assessment involves evaluating the viability of the risk pool and the capacity of participants to meet obligations under the mutual guarantee framework. This process includes analyzing participant contributions, potential claims, and the financial stability of the Takaful fund (Noor & Abdullah, 2020). Effective risk assessment ensures that the scheme remains solvent and capable of covering losses, which is critical for building trust and encouraging adoption. In Nigeria, where economic volatility and informal sector dominance pose challenges, robust risk assessment can tailor Takaful offerings to local needs, enhancing penetration (NAICOM, 2021).

Financial Intermediation Theory

Financial Intermediation Theory provides the foundation for understanding how financial institutions facilitate economic activity by mobilizing resources, reducing risk, and improving financial efficiency. The theory was initially articulated by Gurley and Shaw (1960) and later expanded by Diamond (1984), who explained that intermediaries exist primarily to address market imperfections such as information asymmetry, high transaction costs, and uncertainty in financial markets. Insurance providers, including Takaful operators, play a central role as intermediaries by collecting contributions (or premiums), managing pooled funds, and redistributing resources to participants who experience losses(Imam & Kpodar, 2016).

In the context of Takaful insurance, financial intermediation occurs through the structured pooling of participant contributions in a Shariah-compliant fund from which claims and benefits are paid. Takaful operators mobilize resources ethically and invest surplus contributions in permissible ventures, thereby increasing the financial pool available for indemnification and operational use (Khan & Hassan, 2022). This process aligns with Diamond's (1984) assertion that when intermediaries manage funds effectively, they enhance market trust, reduce financial risk, and strengthen overall financial system stability.

This study is underpinned by the Financial Inclusion Theory, which posits that access to affordable and appropriate financial services enhances economic participation and resilience (Demirgüç-Kunt & Klapper, 2013). Takaful aligns with this theory by offering an inclusive insurance model that caters to underserved populations, thereby driving penetration through culturally resonant financial solutions.

The theory is especially relevant to this study because the dependent variables, Takaful business turnover, profitability, solvency, and cost of operation, are core indicators of intermediation efficiency. When Takaful insurance schemes (the independent variable), are well-designed and widely adopted, they attract more contributions into the system, strengthening the financial pool available for investment and claims settlement (Srairi, 2018). This increased inflow enhances turnover and profitability, while efficient fund management improves solvency by ensuring that operators can meet their financial obligations promptly (Kpodar & Imam, 2016). Furthermore, effective Takaful schemes can streamline administrative processes and minimize operational costs, which is consistent with the theory's assertion that intermediaries reduce transaction costs in the financial system.

Financial Intermediation Theory also supports the argument that Takaful insurance can catalyze broader insurance penetration in Nigeria. By offering ethical, interest-free, and cooperative insurance alternatives, Takaful institutions can mobilize savings from populations that traditionally avoid conventional insurance due to religious and cultural reservations (Khan & Hassan, 2022). As Takaful operators expand their intermediation activities, they strengthen financial inclusion, enhance market performance, and improve confidence in the insurance sector (Imam & Kpodar, 2016). These outcomes align with the central propositions of the theory, which emphasize the role of intermediaries in promoting economic development and increasing access to financial services.

Thus, Financial Intermediation Theory provides a robust framework for this study by explaining how the efficiency and effectiveness of Takaful insurance schemes can enhance performance indicators and strengthen insurance penetration in Nigeria. It directly connects the independent variable (Takaful insurance schemes) with the dependent variables (turnover, profitability, solvency, and costs), making it the most appropriate theoretical basis for analyzing the effect of Takaful on insurance sector performance.

Empirical Review

Empirical studies on Takaful insurance have demonstrated its potential to improve both financial performance and insurance penetration. For instance, Jeje, Abiola, and Mesike (2024) conducted a comparative analysis of the efficiency of Takaful and conventional insurance in Nigeria using a Data Envelopment Analysis approach. They found that Takaful firms often outperformed conventional insurers in terms of operational efficiency, although performance varied across years. The authors concluded that Takaful and conventional insurers each have operational strengths and weaknesses, recommending that both types of firms benchmark against each other to enhance efficiency. Similarly, Chilekezi (2023) investigated the role of Takaful insurance in ensuring business continuity among Muslim-owned SMEs in Nigeria, employing an ex-post facto research design with 250 respondents. The study revealed that Takaful significantly contributes to business continuity by protecting SMEs against sudden losses, and it recommended that Takaful providers intensify awareness

campaigns to increase uptake among Muslim-owned businesses, particularly in northern Nigeria.

AbdulKareem and Mahmud (2021) examined the role of Takaful in promoting financial inclusion in Nigeria using a qualitative approach. Their findings revealed that Takaful's ethical and Shariah-compliant framework enhances acceptability among Muslim communities, suggesting that it could serve as a viable tool for expanding insurance coverage. However, the study identified regulatory hurdles and low awareness as major constraints and recommended policy reforms and awareness campaigns to facilitate wider adoption. Similarly, Yusuf and Hassan (2019) investigated the performance of Takaful operators in Nigeria using financial data from 2015 to 2018 and applied regression analysis to explore the relationship between Takaful adoption and business performance. The study found a positive correlation between Takaful adoption and business turnover, though profitability remained modest due to operational inefficiencies. They concluded that while Takaful adoption improves business activity, operators need capacity-building initiatives to maximize market impact, including training and operational optimization.

Ali and Odunuga (2019) explored the impact of Takaful on insurance penetration in Malaysia using secondary data analysis, drawing lessons relevant to Nigeria. They observed that Takaful contributed to a 15% increase in insurance penetration over a decade, attributing the success to supportive regulations, public education, and awareness campaigns. Their study recommended the adoption of similar strategies in Nigeria, including regulatory support and widespread public sensitization, to replicate Malaysia's success.

Olayungbo and Akinlo (2016) analyzed insurance penetration in Nigeria from 2000 to 2014 using econometric models. Their findings indicated that conventional insurance struggled to achieve significant penetration due to cultural resistance and low trust in traditional models. They proposed Takaful as a culturally and religiously acceptable alternative but noted that empirical evidence quantifying Takaful's contribution to penetration was largely lacking, highlighting a critical research gap.

Khan and Noreen (2018) assessed Takaful's financial performance in Pakistan using correlation and regression techniques. They found significant relationships between Takaful schemes and solvency ($r = 0.45$, $p < 0.05$) as well as turnover ($r = 0.60$, $p < 0.01$), suggesting that well-structured Takaful operations could stabilize and expand insurance markets. They recommended that emerging Takaful markets, including Nigeria, focus on robust financial management and risk-sharing structures to achieve similar outcomes

In northwestern Nigeria, Kazaure and Abdullah (2019) examined how micro-enterprise size affects acceptance of Islamic health insurance using quantitative surveys and moderation analysis. They found that attitudes, social influence, and perceived behavioral control significantly predict Takaful adoption, with social influence having a stronger effect for larger enterprises, and suggested that operators leverage community and religious leaders to promote acceptance. Saeed (2019), using a mixed-methods approach combining content analysis and secondary financial data, demonstrated that the choice of Takaful business model, such as

Wakālah or Mudarabah, significantly impacts operator profitability, concluding that model selection is a key driver of performance and recommending standardization of best-performing models to improve financial outcomes. Evidence from Malaysia by Achmakou (2020), employing an ARDL Bounds Testing model, indicated that Takaful contributions positively affect manufacturing sector performance, suggesting that Takaful supports economic growth through capital accumulation and investment. A bibliometric study by Sanusi and Hasan (2024) further highlighted the rapid growth of research on Takaful performance but identified persistent gaps in empirical studies on African markets, digital innovation, and governance, recommending that future research focus on these areas to provide actionable insights for operators and regulators.

Collectively, these studies demonstrate that Takaful can enhance business turnover, profitability, solvency, and financial inclusion while also addressing cultural and religious barriers to conventional insurance adoption. However, there remain significant gaps; particularly in quantitative evidence linking Takaful schemes to measurable performance outcomes in Nigeria. Most prior studies either focused on adoption (AbdulKareem & Mahmud, 2021; Olayungbo & Akinlo, 2016) or used data from other countries (Ali & Odunuga, 2019; Khan & Noreen, 2018). Few studies have comprehensively examined the direct impact of Takaful schemes on key performance indicators such as turnover, profitability, solvency, and cost of production, which are central to insurance penetration.

This gap underscores the need for a study like the present one, which quantitatively investigates how Takaful insurance schemes influence performance metrics that can drive broader insurance adoption in Nigeria. By linking independent variable (Takaful schemes) to dependent variables (turnover, profitability, solvency, and cost), the study addresses an empirical void in the literature and provides actionable insights for policymakers, regulators, and Takaful operators aiming to increase market penetration.

Methodology

This study adopted the *ex-post facto* research design. The study population consists of all licensed Takaful insurance operators in Nigeria, as registered by the National Insurance Commission (NAICOM). Currently, there are approximately 12 licensed operators offering various Takaful products in Nigeria. Given the relatively small and well-defined population, the study employs a census approach, ensuring that all registered operators are included in the analysis. Secondary data, including annual reports of the licensed operators from 2018 to 2024, are sourced from NAICOM records, company reports, and internal databases. The study identifies Takaful insurance schemes (TIS) as the independent variable, operationalized through the diversity and adoption levels of products offered by operators. The dependent variables comprise four key performance metrics: Takaful business turnover (TBT), measured as total premium contributions; profitability (TBP), assessed through net surplus and return on assets; solvency (TBS), evaluated using solvency and liquidity ratios; and cost of production (TBC), captured through operational and administrative expenditures. To test predictive

relationships and quantify the impact of Takaful schemes on performance outcomes, Ordinary Least Square was employed.

The model for the study

TBT = a_0+β_1TIS$_1$+U……. (i)

TBP = a_0+β_1TIS$_1$+U……. (ii)

TBS= a_0+β_1TIS$_1$+U……. (iii)

TBC = a_0+β_1TIS$_1$+U……. (iv)

Where,

TBT = Takaful Business Turnover

TBP = Takaful Business Profitability (TBP)

TBS = Takaful Business Solvency

TBC = Takaful Business Cost (TBC)

TIS = Takaful insurance schemes (TIS)

Hypothesis One:

$H_{01:}$ Takaful insurance schemes (TIS) have no significant impact on Takaful business turnover (TBT) in Nigeria.

Table 1 Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.582	.339	.332	.393

The independent variable is TIS.

Table 2 Coefficients

	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	.437	.062	.582	7.089	.000
Takaful Insurance Schemes	2.211	.210		10.520	.000

a. Dependent variable: Takaful Business Turnover (TBT)

From Table 1 the correlation coefficient R is 0.582 this means that there is a positive relationship between Takaful Insurance Schemes (TIS) and Takaful Business Turnover (TBT). As TIS is increasing, TBT is also increasing. The coefficient determination (R^2) is 0.339 which implies that about 33.9% of the total variation in the dependent variable i.e. Takaful Business Turnover is being explained by the independent variables i.e. Takaful insurance schemes (TIS) while the remaining 66.1% is due to other factors not captured within the model.

Table 2 shows that the p value of 0.00 is less than 0.05 confidence level $p < 0.05$, therefore hypothesis one is rejected. This result implies that Takaful insurance schemes (TIS) have significant impact on Takaful business turnover (TBT) in Nigeria.

Hypothesis Two:

$H_{02:}$ There is no significant relationship between Takaful insurance schemes (TIS) and Takaful Business Profitability (TBP) in Nigeria.

Table 3 Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.312	.097	.088	.397

The independent variable is TIS.

Table 4 Coefficients

	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	.202	.062	.312	3.249	.002
Takaful Insurance Schemes	2.698	.212		12.709	.000

a. Dependent variable: Takaful Business Profitability (TBP)

From Table 3 the correlation coefficient R is 0.312 this means that there is a positive relationship between Takaful Insurance Schemes (TIS) and Takaful Business Profitability (TBP). As TIS is increasing, TBP is also increasing. The coefficient determination (R^2) is 0.097 which implies that about 9.7% of the total variation in Takaful Business Profitability (TBP) is being explained by the independent variables i.e. Takaful insurance schemes (TIS) while the remaining 92.3% is due to other factors not captured within the model.

Table 4 shows that the p value of 0.00 is less than 0.05 confidence level $p < 0.05$, therefore hypothesis two is rejected. This result implies that there is positive significant relationship between Takaful insurance schemes (TIS) and Takaful Business Profitability (TBP) in Nigeria.

Hypothesis Three:

$H_{03:}$ Takaful Insurance Schemes (TIS) has no significant effect on Takaful Business Solvency (TBS) in Nigeria.

Table 5 Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.418	.175	.166	.530

The independent variable is TIS.

Table 6 Coefficients

		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
(Constant)		.379	.083	.418	4.558	.000
Takaful Schemes	**Insurance**	2.552	.283		9.008	.000

a. Dependent variable: Takaful Business Solvency (TBS)

From Table 5 the correlation coefficient R is 0.418 this means that there is a positive relationship between Takaful Insurance Schemes (TIS) and Takaful Business Solvency (TBS). As TIS is increasing, TBS is also increasing. The coefficient determination (R^2) is 0.175 which implies that about 17.5% of the total variation in the dependent variable i.e. Takaful Business Solvency is being explained by the independent variables i.e. Takaful insurance schemes (TIS) while the remaining 82.5% is due to other factors not captured within the model.
Table 6 shows that the p value of 0.00 is less than 0.05 confidence level $p < 0.05$, therefore hypothesis three is rejected. This means that Takaful insurance has significant effect on Takaful Business Solvency (TBS) in Nigeria**.**

Hypothesis Four:

$H_{04:}$ Takaful Insurance Schemes (TIS) does not significantly influence Takaful Business Cost of production (TBC) in Nigeria.

Table 7 Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.123	.015	.005	.538

The independent variable is TIS.

Table 8 Coefficients

		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
(Constant)		-.104	.084	-.123	-1.227	.223
Takaful Schemes	**Insurance**	2.969	.288		10.327	.000

a. Dependent variable: Takaful Business Cost of production (TBC)

From Table 7 the correlation coefficient R is 0.123 this means that there is a positive relationship between Takaful Insurance Schemes (TIS) and Takaful Business Cost of production (TBC). As TIS is increasing, TBC is also increasing. The coefficient determination (R^2) is 0.015 which implies that about 1.5% of the total variation in the dependent variable i.e. Takaful Business Cost of production (TBC) is being explained by the independent variables

i.e. Takaful insurance schemes (TIS) while the remaining percentage is due to other factors not captured within the model.

Table 8 shows that the p value of 0.00 is less than 0.05 confidence level $p < 0.05$, therefore hypothesis four is rejected. This result implies that Takaful Insurance Schemes (TIS) significantly influence Takaful Business Cost of production (TBC) in Nigeria.

Summary of findings

The first objective investigated the relationship between TIS and Takaful Business Turnover (TBT). The analysis revealed a correlation coefficient (R) of 0.582, indicating a moderate positive relationship between TIS and TBT. The coefficient of determination ($R^2 = 0.339$) shows that approximately 33.9% of the variation in business turnover is explained by TIS, while the remaining 66.1% is influenced by other unmeasured factors. The regression results, with a p-value of 0.00, indicate that TIS has a significant positive impact on business turnover, suggesting that the expansion and adoption of Takaful schemes directly enhance revenue generation for operators. These findings are consistent with the results of Yusuf and Hassan (2019) and Ali and Odunuga (2019), who reported that Takaful adoption improves turnover and market penetration by mobilizing funds and expanding customer participation.

Regarding Takaful Business Profitability (TBP), the correlation coefficient ($R = 0.312$) shows a positive relationship with TIS, though weaker than for turnover. The R^2 value of 0.097 indicates that only 9.7% of the variation in profitability is explained by TIS, suggesting that other factors, such as operational efficiency, fund management, and market conditions, play a larger role in determining profitability. Nonetheless, the regression analysis yielded a p-value of 0.00, confirming that TIS has a significant positive influence on profitability. This aligns with prior studies such as Saeed (2019), which emphasized that the choice of Takaful business model (e.g., Wakālah or Mudarabah) affects profitability outcomes, highlighting the importance of operational strategies and model selection.

The third objective focused on Takaful Business Solvency (TBS). The correlation coefficient ($R = 0.418$) and R^2 of 0.175 indicate a moderate positive relationship, with TIS explaining 17.5% of the variation in solvency. The p-value of 0.00 demonstrates that Takaful schemes significantly enhance solvency, meaning that effective pooling and management of contributions improve the operator's ability to meet financial obligations. This finding supports the theoretical expectation of Financial Intermediation Theory, which posits that intermediaries, such as Takaful operators, enhance financial stability by efficiently mobilizing and distributing funds. Similarly, Khan and Noreen (2018) highlighted that well-structured Takaful schemes positively influence solvency ratios, ensuring operator reliability and market confidence.

Finally, the study examined the impact of TIS on Takaful Business Cost of Production (TBC). The correlation coefficient ($R = 0.123$) and R^2 of 0.015 indicate a very weak positive relationship, suggesting that TIS explains only 1.5% of the variation in production costs. Despite this, the p-value of 0.00 indicates a statistically significant effect, implying that

Takaful schemes influence operational costs, albeit minimally. This may reflect the additional administrative and operational activities associated with managing multiple schemes. The result suggests that while costs increase with scheme adoption, the effect is modest relative to turnover, profitability, and solvency gains.

In summary, the findings demonstrate that Takaful insurance schemes significantly influence all key performance indicators of Takaful operators in Nigeria. The strongest impact is observed on business turnover, followed by solvency and profitability, while cost of production shows a relatively small but significant effect. These results underscore the role of Takaful schemes as a catalyst for expanding insurance penetration, improving financial performance, and strengthening operator stability.

Conclusion and Recommendation

This study examined the impact of Takaful Insurance Schemes (TIS) on the performance of Takaful operators in Nigeria, with a focus on four key indicators: business turnover, profitability, solvency, and cost of production. The findings revealed that TIS has a positive and significant impact on all four performance measures, although the strength of the relationship varied.

Takaful schemes were found to have the strongest effect on business turnover, highlighting their role in generating revenue and expanding market participation. The impact on solvency and profitability was moderate, suggesting that while TIS enhances financial stability and operational efficiency, other managerial and market factors also influence these outcomes. The influence on cost of production was minimal but statistically significant, indicating that expanding and managing multiple Takaful schemes slightly increases operational costs, likely due to administrative and compliance requirements.

Overall, the study confirms that Takaful insurance impact significantly on the performance of Takaful operators in Nigeria by providing Shariah-compliant, ethical, and community-oriented products that attract wider adoption. The findings support the theoretical framework of Financial Intermediation Theory, emphasizing that Takaful operators act as intermediaries that mobilize resources, share risks, and improve financial performance while fostering broader financial inclusion.

The study recommends that Takaful operators continue to diversify and optimize their product offerings, improve fund management practices, and implement awareness campaigns to maximize adoption, financial performance, and market growth. Policymakers and regulators should promote public awareness of Takaful insurance and provide supportive regulations that facilitate product innovation, compliance, and consumer confidence, particularly in regions with high Muslim populations.

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