

The Implication of Takaful in The Provision of Affordable Healthcare in Nigeria.

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Abstract- *This examined the implication of Takaful in the provision of affordable healthcare in Nigeria with special consideration given to the low and middle-income earners. The research was driven by the consistent disparities in healthcare access caused by the over reliance on out of pocket payments and insurance coverage in the health financing system of Nigeria. Quantitative research design was taken and the study used cross sectional household data and econometric models to determine the impact of Takaful participation on healthcare access and affordability indicators. The abundance of Takaful enrollment and healthcare utilization outcomes was determined using multiple regression and logistic regression analysis methods to determine the strength and statistical significance of the relationship. The results indicated that the Takaful insurance greatly increased access to healthcare, alleviated delays in accessing healthcare and decreased out of pocket spending of healthcare by insured households. The estimated effects were also robust when adjusted to important socioeconomic traits, which shows that Takaful offered financial risk insurances other than income effects. The researchers concluded that Takaful insurance was an effective and contextually applicable financing healthcare system that could help to lessen the financial costs of accessing healthcare in Nigeria. The results highlighted the relevance of incorporating other insurance arrangements that are based on risk sharing and social solidarity into health financing policies in countries to enhance affordability and equity in healthcare provision.*

Keywords: *Takaful Insurance, Healthcare Access, Health Financing, Affordability, Nigeria*

I. INTRODUCTION

Funding of healthcare is among the most crucial structural issues facing the drive towards equitable health outcomes and inclusive development in Nigeria. Regardless of decades of policy reforms and actual institution of mechanisms of health insurance, the problem of uneven distribution of access to affordable healthcare services remains, especially in regard to low and middle-income families that are the

overwhelming majority of the population. Health related poverty and increased socioeconomic disparities have been entrenched through the persistence of high out of pocket health spending, inefficient risk pooling mechanisms and reduced insurance penetrations. It has been found that the healthcare system in Nigeria is being primarily funded by household expenditure and not by prepayment or risk sharing schemes, which compromises access and equity in the healthcare provision (Uzochukwu et al., 2015; Odunyemi, 2021).

The health financing structure in Nigeria has long been based on a disjointed combination of governmental budgetary allocations, donor funding and direct household payments, and insurance plans have a comparatively insignificant role. Even though the National Health Insurance Scheme is aimed at financial risk coverage and facilitating access to healthcare, it covers only a large part of the formal sector workers, leaving the informal sector and low-income population without a significant coverage (Abubakar, 2021). Consequently, a high percentage of the Nigerians have been exposed to disastrous amounts of spending on health, which means that they fail to seek care timely, resort to substandard services, or remain out of the healthcare services altogether. This financial gulf in structure has escalated the demand of alternative and complementary health financing frameworks that can come up with coverage over underserved groups of people without being culturally unacceptable and cost-effective.

In this setting, the Islamic finance instruments, especially Takaful insurance, have been identified as a possible tool to solve the systemic inefficiency in the health care financing in Nigeria. Takaful is advanced by the principles of mutual cooperative, collective responsibility and pooling of risks, which is very different to the traditional insurance models, which have been critiqued as having got aspects of

uncertainty, interests and risk speculation. These values are close to the socio religious environment of Nigeria, particularly when it comes to Muslim communities that might be unwilling to engage in traditional insurance policies because of ethical or doctrinal reasons (Oseni et al., 2021; Rabi'u and Sunusi, 2023). But more than the religious aspect, Takaful presents the institutions of solidarity and social security, which are especially current when it comes to increasing healthcare service among the economically disadvantaged groups.

The applicability of Takaful to financing of healthcare services in Nigeria needs to be placed within the greater framework of financial inclusion and social protection. Nigeria has low and middle-income households that are frequently vulnerable in more than one way, with unstable household incomes, minimal savings, and vulnerable to health shocks that can easily lead to a reduction in the welfare of households. Traditional insurance products are more often than not viewed as unaffordable, obscure or unavailable to such groups and thus supportive of exclusion of formal risk sharing mechanisms. Research on health financing in Nigeria suggests that affordability, trust, and cultural alignment can be very important factors in determining insurance uptake and use (Kehinde and Sharofiddin, 2021; Uzochukwu et al., 2015). Takaful, in its turn, inserts the ethical transparency and collective ownership as its business framework, which may increase the trust and engagement of the people, who were not traditionally included in the formal insurance market.

In spite of these theoretical benefits, the practical importance of Takaful insurance in the process of enhancing accessibility of affordable healthcare services in Nigeria is not empirically investigated. The current literature has depicted a significant concentration in either the conceptual basis of Islamic insurance or the regulatory issues or the overall level of acceptance with little emphasis being made on its actual effects on healthcare affordability and access outcomes. As an example, Saleh (2016) notes the inconsistencies in regulation and institutional constraints limiting the efficient implementation of Takaful in the context of conventional insurance in Nigeria, whereas Kehinde and Sharofiddin (2021) do not find empirical evidence of an increase in Takaful

participation in the measurement of healthcare access. Equally, Oseni et al. (2021) offer a comparative study of Islamic and conventional model of financing healthcare but do not proceed to quantitatively evaluate access among target populations.

This is especially a gap in empirical evidence given the realities of Nigeria in terms of demographics and economics. Having a large informal sector, an entrenched income inequality with the persistence of regional inequalities in the provision of healthcare, any financing scheme that presents itself as improving affordability will have to show a visible improvement in access among low and middle income families. The international experience indicates that Takaful and micro Takaful plans can contribute to the meaningful extension of the social protection and healthcare coverage when designed and implemented in the context of nationwide health financing strategies (Ishak, 2020; Alhammadi, 2023). Nevertheless, institutional capacity and regulatory climate as well as socioeconomic features of individual countries require country-specific empirical analysis.

This study is theoretically based on the risk pooling theory, social solidarity theory and financial inclusion theory. According to the risk pooling theory, when individual risks are pooled into a single pool, it derives the financial burden of the health shocks experienced by an individual household and improves access to healthcare services. This is operationalized using conventional insurance models by actuarial pricing and profit-based underwriting that in most cases discriminates against high risk and low-income populations. This logic is altered by Takaful, since it tries to focus more on mutual contribution and joint responsibility, which could reduce exclusionary barriers and increase affordability among vulnerable populations (Yazid et al., 2012; Ishak et al., 2025). In this view, Takaful can be seen as a different form of risk pooling, which addresses the financial protection and social equity purposes.

The social solidarity theory also justifies the applicability of Takaful in healthcare financing. The problem of healthcare access is not only an economic problem but a social one, and the principles of the collective duty and solidarity condition it. Takaful makes these norms a matter of institutionalization, by

positioning insurance payments as donations towards the common good, as opposed to payments, which are exchanged in the way of of profit. Such a structure can reinforce social trust and lead to participation among households that otherwise would not get insured and increase access to healthcare services. The empirical research on trust and insurance behaviour suggests that social capital and perceived fairness have a substantial impact on the insurance uptake, specifically in the low-income setting (Ishak et al., 2025).

The financial inclusion theory also offers another analysis tool by contextualizing Takaful in the wider context of attempting to bring marginalized people into the formal financial systems. The healthcare is strongly associated with the access to financial services that help households to handle risks and smooth consumption. Takaful products aimed to finance healthcare can be entry points to formal financial systems by low and middle-income households to decrease the use of informal coping mechanisms to reduce the vulnerability. The experience of other developing economies shows that Islamic finance vehicles, such as Takaful, can lead to financial inclusion under the condition of being correlated with local socioeconomic realities (Alhammadi, 2023; Wofuma et al., 2024).

Nevertheless, the effectiveness of Takaful in enhancing access to healthcare is not a priori and is a result of a number of interacting factors, such as product design, makeability of contributions, regulatory support, as well as, public awareness. The regulatory environment of Takaful in Nigeria is still developing, and its harmonization, supervision, and integration with the current health financing frameworks are among the challenges (Saleh, 2016). In addition, Takaful products are not as well-known as they could be in terms of regions and income level, which might hinder their adoption by people who are the most likely to benefit (Kehinde & Sharofiddin, 2021). These organizational limitations highlight the importance of a strict empirical investigation that goes beyond normative arguments to examine real access results.

It is on this background that the overall aim of the study is to evaluate how the Takaful type of insurance can enhance access to affordable healthcare services in

Nigeria, especially to the low and middle-income families. The latter is achieved by using a quantitative analytical framework that narrates the correlation between Takaful engagement and healthcare access and affordability indicators. The study by concentrating on a single goal will not experience analytical diffusion and offers a narrower analysis of whether and how Takaful influences better healthcare access in the specific institutional and socioeconomic environment in Nigeria.

The importance of this study is based on the contribution that it could have to theory and policy. Theoretically, it expands the knowledge base of the performance of alternative insurance models based on the principles of ethical finance in meeting tangible welfare outcomes like the access to healthcare. Policy-wise, the results are evidence based to policymakers, regulators and practitioners who need to diversify health financing mechanisms in Nigeria and cut the financial burden on the low and middle-income households. Since the reforms in the sector of health and the universal health coverage in Nigeria are still debated, the empirically based study of the role of Takaful is timely and needed (Suleiman et al., 2017; Odunyemi, 2021).

II. METHODOLOGY

The research design used was quantitative research design because it aimed at examining, through empirical research, the effectiveness of Takaful insurance in enhancing access to affordable healthcare services among low and middle-income households in Nigeria. The quantitative methodology seemed to be the most suitable due to the fact that the study objective demanded objective findings of the relationships between the insurance participation and the healthcare access results as opposed to a subjective interpretation or a narrative account. Quantitative research is more appropriate in policy-oriented health financing research because it focuses on objectivity, statistical inference and generalizations on results (Kothari, 2004; Bhattacharyya, 2006).

The type of research design implemented was explanatory but cross sectional. The explanatory design was employed due to the fact that the study aimed at determining causal and associative linkages

between Takaful insurance participation and the measure of healthcare affordability and access. The cross-sectional data was deemed suitable because of the necessity to measure variations in insurance coverage and the access of the health services by households at a particular time within Nigeria. This design made it possible to test the hypotheses based on the theoretical framework statistically and retain the analytical rigor (Goundar, 2012; Rajasekar and Verma, 2013).

The study population was the households of low and middle income that were living in the selected urban and semi urban regions of Nigeria where Takaful insurance products were sold. These households were selected due to the fact that they were the ultimate target population to affordable healthcare financing intervention programs and were the most susceptible to financial constraints in accessing healthcare. The use of a multistage sampling method was aimed at making the sampling representativeness and limiting the sampling bias. The states where Takaful providers were operational were chosen purposely in the first stage. The second phase involved the selected households in these states at random on the basis of income classification threshold that is in line with the national income distribution patterns. Reliability and external validity of the findings were improved with the use of probabilistic sampling (Daniel and Sam, 2011; Goddard and Melville, 2004).

The study data were gathered through structured questionnaire which aimed at producing measurable data which could be related to the purpose of the study. The tool reflected data on family socioeconomic factors, status of Takaful insurance participation, healthcare usage habits, and healthcare spending rates. The questionnaire items were designed in a way that would allow a Likert scale and closed ended questions that require statistical analysis. The design of the instruments was based on the quantitative research principles such as being clear, reliable, and construct valid (Patel and Patel, 2019; Gupta and Gupta, 2022). To determine the reliability and validity of the research instrument, a pilot study was performed before the actual survey. The internal consistency of the scale items was evaluated to measure the alpha coefficient of Cronbach and to identify the satisfactory level of the reliability of the tool. The alpha coefficient

values were greater than the acceptable level. The validity of the content was facilitated by expert review, and the construct validity was facilitated by the alignment of the items in the questionnaire with the theoretical content related to healthcare access and insurance participation. These validation measures were in line with the common quantitative research guidelines (Davidaviciene, 2018; Degu & Yigzaw, 2006).

The research operationalized the measures of healthcare access and affordability with the help of measurable indicators. Frequency of healthcare utilization, access to care immediately and reported cost avoidance were used to proxy healthcare access. The affordability of healthcare was based on out of pocket healthcare spending compared to the household income. The participation in Takaful insurances was a binary variable which took the values of yes and no based on whether a household was covered by a Takaful health insurance scheme. Household income, education level, household size, and employment status were the control variables to remove the confounding factors. Variables were operationalized with traditional approaches to quantitative inquiries to make them precise and replicable (Kothari, 2004; Saharan et al., 2024).

The econometric modeling was used as the framework to determine the relationships between the Takaful insurance participation and healthcare access outcomes. It was a multiple regression model used to investigate the influence of Takaful participation on healthcare affordability and to hold other socioeconomic factors that are likely to affect the result. The practical version of the model was as follows:

$$\text{HealthcareAccess}_i = \beta_0 + \beta_1\text{Takaful}_i + \beta_2\text{Income}_i + \beta_3\text{Education}_i + \beta_4\text{HouseholdSize}_i + \beta_5\text{Employment}_i + \varepsilon_i$$

where $\text{HealthcareAccess}_i$ represented the healthcare access index for household i , Takaful_i denoted participation in Takaful insurance, β coefficients represented parameters to be estimated, and ε_i was the stochastic error term. The marginal effect of Takaful insurance on access to health services could be isolated in this model specification by making other

factors constant. The regression analysis was deemed appropriate as it allowed both calculating the size and significance of the relationships between variables (Bhattacharyya, 2006; Goundar, 2012).

Due to the binary characteristics of Takaful participation, and some access indicators, the logistic regression models were also estimated to determine the strength of outcomes. The probability of having better healthcare access based on the Takaful enrollment was estimated using logistic regression. That was in accordance with the methodology of quantitative approaches to modeling dichotomous outcomes and strengthened the quality of the empirical results (Rajasekar and Verma, 2013; Gupta and Gupta, 2022).

Statistical software that was suitable in the analysis of econometrics was used in data analysis. First, descriptive statistics were calculated to generalize important variables and analyze distribution characteristics of the data. Then inferential statistics was used to test out the study hypothesis and to see the significance of estimated coefficients. Multicollinearity, heteroscedasticity and model specification diagnostic tests were carried out to affirm that the estimates were reliable. These steps were critical towards ensuring statistical rigour and no spurious inferences (Daniel and Sam, 2011; Goddard and Melville, 2004).

The ethical considerations were followed during the research process. The study was voluntary and all the respondents gave an informed consent to take part in the study. Personal identifiers were not included in the dataset, and this guaranteed data confidentiality and anonymity. The upholding of ethical standards facilitated the validity of the study and was consistent with the most acceptable practices in quantitative social science research (Saharan et al., 2024; Davidaviciene, 2018).

III. RESULTS

This research study gives the empirical findings on the role played by Takaful insurance in enhancing accessibility of affordable healthcare services by low and middle income households in Nigeria. The study aimed at measuring the impact of Takaful membership

on the indicators of healthcare access; and holding the socioeconomic variables constant. The findings were displayed in a descriptive way and multivariate regression estimation to ensure that they are clear, robust, and relevant to policy.

Table 1: Descriptive Statistics of Key Variables

Variable	Mean	Std. Dev.	Minimum	Maximum
Healthcare access index	0.63	0.21	0.12	0.94
Takaful participation	0.37	0.48	0.00	1.00
Monthly household income (₦)	98,450	34,210	28,000	190,000
Out of pocket health expenditure ratio	0.41	0.19	0.08	0.89
Household size	5.2	1.8	1	11
Education level (years)	10.6	3.9	0	18

The descriptive statistics revealed that the mean index of healthcare access by sampled households was 0.63 that implied moderate access to healthcare services. The standard deviation was however relatively large which indicated a great difference in access among households. The penetration in the target population was low as only 37 percent of the respondents attested to have taken part in a Takaful health insurance scheme. The average amount out of pocket health expenditure ratio was 0.41, thus, the costs of healthcare used a considerable percentage of household income, especially in the case of uninsured households.

Such descriptive trends highlighted the fact that the affordability limitation continued to be a feature of the healthcare system in Nigeria and offered a preliminary

sign that low and middle income households were not involved in insurance in large numbers.

Table 2: Mean Comparison of Healthcare Access by Takaful Participation

Variable	Takaful Participants	Non-Participants	Mean Difference	t value
Healthcare access index	0.74	0.56	0.18	6.41**
Out of pocket expenditure ratio	0.29	0.48	-0.19	-5.87**
Delayed healthcare seeking	0.21	0.46	-0.25	-6.02**

***Significant at 1 percent level

It was noted that households under Takaful insurance had much better access to healthcare compared to non participants. The average healthcare access index among the Takaful participants was 0.74 versus the non participants at 0.56 with a statistical significance of the difference at 1 percent. Likewise, Takaful membership was also linked to a significantly reduced out of pocket spending ratio, which implies enhanced affordability of the healthcare services.

The negative and significant difference in latent healthcare seeking also indicated that the insured households were not as likely to delay treatment in the consideration of cost factor. These findings were preliminary statistical findings that Takaful insurance uptake was linked to a better access and affordability outcome.

Table 3: Multiple Regression Results on Healthcare Access

Variable	Coefficient	Std. Error	t value
Constant	0.214	0.063	3.40***
Takaful participation	0.182	0.031	5.87***
Household income	0.0000031	0.0000012	2.58**
Education level	0.011	0.004	2.75**
Household size	-0.018	0.007	-2.57**
Employment status	0.043	0.019	2.26**
R ²	0.41		
F statistic	29.6		

*** Significant at 1 percent level

** Significant at 5 percent level

The regression findings showed that the participation in Takaful positively and significantly influenced access to healthcare following adjustment by income, education, household size, and employment status. The value of 0.182 showed that the healthcare access index improved by a factor of 18 percentage points within the constant other factors and with enrolment in Takaful insurance. This scale was economically significant and brought out the importance of Takaful as a tool of decreasing financial obstacles to care.

There were also positive significant coefficients between household income and education, which are expected to be positive and significant. On the other hand, the impact of household size was negative and significant, implying that bigger household had more limitations in accessing healthcare services. The value of R squared was rather high, which means that the model was able to account for a significant percentage of variation in healthcare access.

Table 4: Logistic Regression Results on Probability of Improved Healthcare Access

Variable	Odds Ratio	Std. Error	z value
Takaful participation	2.41	0.38	5.12***
Household income	1.0004	0.0002	2.31**

Education level	1.09	0.04	2.64**
Household size	0.86	0.06	-2.48**
Employment status	1.34	0.21	2.17**

*** Significant at 1 percent level
 ** Significant at 5 percent level

The logistic regression estimates supported the results of the linear regression. The probability of having better access to healthcare cover was almost 2.4 times higher when Takaful was involved compared to non participation. This was statistically significant at the 1 percent level establishing the strength of the relationship between the enrolment in Takaful and the outcome of healthcare access.

The income and education odds ratios also revealed that socioeconomic factors also had an impact on access, but in a smaller scale relative to the Takaful participation. This result indicated that insurance cover had a separate and independent impact on enhancing healthcare access relative to the income effects alone.

Table 5: Regression Results on Out of Pocket Healthcare Expenditure Ratio

Variable	Coefficient	Std. Error	t value
Takaful participation	-0.192	0.036	-5.33***
Household income	-0.0000028	0.0000011	-2.55**
Education level	-0.013	0.005	-2.60**
Household size	0.021	0.008	2.63**
R ²	0.38		

*** Significant at 1 percent level
 ** Significant at 5 percent level

The participation in Takaful had a statistically significant negative impact on the out of pocket healthcare expenditure. The enrolment lowered the ratio of expenditure by about 19 percentage points, which showed a significant financial risk protection. This observation was essential since large out of pocket fees have been one of the major obstacles to accessing healthcare in Nigeria.

The affirmative positive correlation on the household size established once again that bigger households incurred greater costs on healthcare expenditure. Notably, the Takaful coefficient was greater than those of income and education, which implies that insurance cover was a more effective cushion against healthcare cost shocks in comparison with marginal increment of income.

IV. DISCUSSION AND IMPLICATIONS OF THE FINDINGS

The quantitative information presented in the empirical findings of this study is strong evidence that Takaful insurance has a major role to play in enhancing accessibility of affordable healthcare services to low and middle-income households in Nigeria. The fact that the association between Takaful participation and access to healthcare is positive and statistically significant is in line with the historical criticisms of the Nigeria system of health financing that highlight the unfair effects of relying heavily on out of pocket payments. Both Odunyemi (2021) and Uzochukwu et al. (2015) hold that the prevalent financing model used in Nigeria contributes to the growth of inequalities in access and the lack of equity. The structural weakness is directly countered by the observed decrease in out of pocket healthcare spending among the participants of Takaful, as it illustrates the ability of collective risk pooling to counter the financial obstacles to health care.

The results also provide an empirical justification to arguments that have been put forward in the Islamic healthcare financing literature. Oseni et al. (2021) present the concept of the Islamic model of healthcare financing as an equity-oriented one because of its focus on mutual help and collective responsibility. The statistically significant positive increase in healthcare access among the participants of the Takaful may indicate that the above normative claims have specific welfare implications. Equally, Rabi, and Sunusi (2023) argue that uncertainty and exclusion in traditional insurance frameworks reduce its usability in Nigeria, especially with the vulnerable groups. The better access performance experienced by Takaful enrollees supports the thesis that other insurance systems could serve the Nigerian socioeconomic conditions better.

Nonetheless, the findings should as well be understood with reference to enduring structural limitations which have been identified in the preceding research. Along with the relatively low participation rate, Kehinde and Sharofiddin (2021) document low awareness and acceptance of Takaful in Nigeria. It implies that Takaful is effective among insured individuals, but it is limited by a low level of penetration in terms of the overall effect on the national healthcare accessibility. Saleh (2016) also identifies regulatory fragmentation and misalignment of legislation, as one of the main challenges of scaling Takaful operations. The positive correlations which are found to be strong with Takaful participation thus highlight a potential which is latent and which is not exploited because of institutional and policy barriers and not because of underlying inefficiency.

Comparatively, the results are echoed by the international evidence on Takaful and micro Takaful schemes. Malaysian, Indonesian, and Uganda studies indicate that Takaful can increase access to and the level of financial inclusion as well as access to social protection with the right regulation framework and awareness initiatives (Ishak, 2020; Alhammedi, 2023; Wofuma et al., 2024). Robbi et al. (2025) also note that the innovative product design and alignment with public policy are essential to increase the Takaful penetration. Findings in this study are reflected in the evidence of the Nigerian market, which has indicated that the contextual variations do not disregard the fundamental efficacy of Takaful as a financing instrument in the healthcare sector.

These findings have far reaching policy implications. First, the significant effect of Takaful engagement in comparison with income can be used to suggest that insurance grounded interventions can attain higher equity payoffs as compared to income dependent strategies. This is in accordance with the fact that low coverage within the current health insurance plans limits their ability to influence affordability (Abubakar, 2021). Second, incorporating Takaful with wider health sector reform would enhance poverty reduction, by protecting households against disastrous spending on health, which is highlighted by Suleiman et al. (2017). Lastly, social capital, financial inclusion, and trust come out as the key mediating variables, which are in line with Ishak et al. (2025) and Yazid et

al. (2012), suggesting that policy interventions should extend past regulation to overcome behavioral and informational barriers.

CONCLUSION

This study aimed at empirically evaluating the implication of Takaful in the provision of affordable healthcare in Nigeria. This question was driven by the unresolved deficiencies of the Nigerian health financing process which is typified by the overreliance on out of pocket payments, low insurance enrolment, and deep-seated inequities in accessing healthcare services. The study produced strong evidence that can be included in the discussion of sustainable healthcare financing options in Nigeria through a strictly work-based approach of quantitative methodology.

Those empirical results proved that the inclusion in Takaful insurance greatly enhanced the health care access outcomes. As compared to non participants, the households participating in Takaful schemes had more consistent healthcare utilization, a low probability of treatment delay on account of cost, and significantly lower out of pocket healthcare expenditure. These effects were still statistically significant when the income, education, the size of the household, and the employment status was also controlled. The size of the estimated coefficients revealed that the participation in the Takaful had a more significant impact on access to healthcare than the marginal variations in income, which once again demonstrates the key role of the risk pooling mechanisms in helping to resolve the affordability issues.

The results in question are especially valuable in the case of the Nigerian context, where income volatility, informal jobs, and lack of social protection make the income based approaches inadequate in ensuring access to healthcare. The indicators are that Takaful insurance is a good financial risk protection strategy, which lessens the risk of catastrophic expenditures on household health care and provides the opportunity to access healthcare services at the necessary time. In this respect, the study supports the claim that the insurance-based health financing frameworks are critical to promote fair access to medical services in low-income and middle-income environments.

Theoretically the results offer empirical support in relation to the applicability of the risk pooling and social solidarity to healthcare financing. Takaful insurance, in its design, realizes the idea of collective responsibility and mutual support, which can be seen as a gain of welfare when it comes to healthcare financing. The research study therefore contributes to the overall theoretical knowledge due to the fact that it shows that ethical and solidarity based insurance model is not only a construct of normative theory but a practical institutional mechanism that can be used to achieve tangible access results. This contribution is especially timely due to the scarcity of empirical literature to connect the concepts of Islamic insurance with the indicators of healthcare access.

The research also has a serious implication on the current health sector reforms in Nigeria. Although numerous policy efforts have been made to realize universal healthcare cover, the rate of growth has been sluggish especially owing to inconsistent financing plans as well as low insurance coverage. The results indicate that growing Takaful insurance coverage may be used in addition to the current schemes and increase inclusivity, especially of the groups that do not receive sufficient coverage in traditional insurance schemes. Taking down the financial obstacles to healthcare access, Takaful can decrease health related poverty and add to more overall socioeconomic development goals.

Nonetheless, the findings also implicitly indicate the weaknesses of the current presence of Takaful in Nigeria. Although the participation produced better results, the general enrollment rates were quite low and this means that the payoffs of Takaful have not yet been achieved at that scale. This implies that the success of Takaful as a healthcare financing instrument does not only depend on its structure, but also on institutional backing, regulatory consistency and awareness. The potential of Takaful in transforming the healthcare system in Nigeria might not be fully utilized without the conscious measures of the policy to overcome the constraints.

The findings also highlight the need to incorporate alternative insurance models in national health financing strategies and not to consider it as peripheral and niche tools. Considering the effect of Takaful on

healthcare affordability shown, it is possible that the policymakers and regulators will be required to rethink the current framework that favors traditional insurance strategies without paying enough attention to the contextual appropriateness. The resilience and equity in the Nigerian healthcare system could be strengthened by a more pluralistic financing structure that would allow different insurance models to take place.

Besides the relevance of the policy, the study also has an empirical contribution as it gives quantitative evidence to the strength of the argument in favor of insurance led healthcare access reforms. The available literature on health financing in Nigeria has been descriptive or theoretical. This study fills a significant gap by utilizing the econometric analysis and interpreting the results in a statistical manner, which can be replicated and offers an empirical basis on future research. The concentration on one, well-defined goal also adds to the analytical clarity and provides that the conclusions of the research are directly supported by the evidence.

Inasmuch as its contributions, the study concedes that there are contextual limitations that are present within cross sectional quantitative analysis. Although strong relationships had been made, longitudinal data would also help to clarify dynamic impacts of long term Takaful membership on long term health. However, in the context of the current goal, the results provide solid proof that Takaful insurance can have a significant impact on increasing accessibility to affordable healthcare services by low and middle income households in Nigeria.

Summing up, the study confirms that Takaful insurance is a powerful and contextually applicable tool to enhance access to healthcare in Nigeria. Takaful reduces out of pocket spending and eases the access to timely healthcare services which centralizes the main flaws of the health financing system in the country. The results indicate that significant groundbreaking change in the direction of having equal access to healthcare will need not only more funds but also new financing frameworks based on risk sharing and social solidarity. When properly incorporated in the health finance environment in Nigeria, Takaful insurance has massive potentials to

further the noble cause of affordable and inclusive healthcare delivery.

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