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**An Analytical Study of the Determinants of Access to Insurance Services in Rural  
Nigeria**

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## ***Abstract***

*This paper analyses the determinants of accessibility of insurance services in rural areas of Nigeria. The paper uses cross-sectional primary data sourced through a structured questionnaire from 384 respondents dwelling in rural areas of Katsina state. In analysing the data Logit modelling approach was used to find a significant positive influence of age, access to credit, educational attainment and availability of insurance services on access to insurance services. Moreover, the influence of income and gender are positive but statistically insignificant. Contrary, the study finds a significant negative influence of marital status on the accessibility of insurance services in rural areas. The study therefore concluded that deepening of insurance services in rural areas requires a special intervention taken into cognisance of religious viewpoint of these people. We recommended among other things, that while establishing micro-insurance in the rural areas of Northern Nigeria should be in conformity with the principles of Islam.*

## **1. Introduction**

There has been growing recognition amongst development practitioners that poverty alleviation is best achieved by empowering the disadvantaged and giving them the right and the opportunity for economic choices and self-determination. The poor are faced with many difficulties in improving their livelihoods including limited access to health,

education and income opportunities. In recent decades, a number of microfinance institutions have been established to provide savings and credit services to the poor (Aliero & Ibrahim, 2012; Ibrahim & Aliero, 2012; Patel, 2002). These schemes were designed to empower the individual to become more self-sufficient as well as to enable them protect and cater for their family. The poor are faced with many risks and are highly vulnerable to fluctuations in their income and expenses arising from health costs, property theft and fire, violence, drought, flood and catastrophes. Risk has been identified as a central fact of life in the rural areas of less-developed countries (Ibrahim, 2012; Udry, 1994). The primary function of insurance is to act as a risk transfer mechanism, to provide peace of mind and protect against losses. Risk can be handled by; assumption, combination, transfer or loss prevention activities. Insurance schemes utilize the combination method by persuading a large number of individuals to pool their risks into a large group to minimize overall risk (Ali 2000). In the developed world insurance is part of society, such that some forms of cover are required by law. In developing countries the need for such a safety net is much greater, particularly at the poorest levels where vulnerability to risks is much greater and there are fewer opportunities available to recover from a large loss (Brown and Churchill, 1999).

Despite Nigeria's growing population, it is still lagging seriously in the insurance world global market ranking. Nigeria, curiously occupies the sixth position in Africa and 65th in the global insurance market with Human Development Index (HDI) of 0.453 and Gross Domestic Product (GDP) per-capita of \$1,050. The insurance density per-capita of the country is USD 4.3 and 0.70% as premium share of GDP (UNDP, 2003; SIGMA,

2005). Against this background, this study investigates insurance penetration in rural Nigeria. To achieve this objective, the paper is divided into four sections including this introduction. Section two describes the study area and presents the methodology used in the study, section three discusses the result and the last section concludes the study.

## **2. The Study Area and the Methodology**

Katsina state was carved out of Kaduna state in 1987; it is now made-up of 34 local Government Areas (LGAs) with three senatorial zones. The state is located in the North Western part of Nigeria. It's bordered by Niger Republic in the North, Kano state in the South, Kaduna state in the South-West, Jigawa in the East, Sokoto and Zamfara state in the West. The native people are predominantly Hausa and Fulani while Islam is their major religion, only few among them are Christian. Katsina state has a total population of 5,801,584 as at 2006 census (Ibrahim & Bakori, 2011; NPC, 2007). The main economic activity of the rural people of Katsina state is farming (small scale farming, animal husbandry and food processing). Informal trading and other micro-entrepreneurship are also playing a crucial role in their economic life ([www.katsinastategov.ng](http://www.katsinastategov.ng)). Despite CBN directive on rural banking, most rural areas in the state do not have even a single financial institution, talk less of insurance company.

A structured questionnaire was used to source primary data from the study area. The questionnaire was designed to contain a total of 27 questions, which were administered on the respondents dwelling in rural areas of Katsina state. The questionnaire was divided into two broad sections, the first section consists of questions related to the

demographic profiles of the respondents which made-up of age, sex, marital status, etc. On the other hand, second section comprises questions pertaining respondents accessibility to formal insurance services. The selection of the LGAs in the state that represents population of the study was randomly made. The LGAs were arranged in alphabetical order; number was allotted to each often which table of the random numbers was used to select six LGAs, the selected LGAs were Mani, Safana, Zango, Kurfi, Rimi and Kankara. However, the respondents from each of the selected LGAs were purposely selected due to the unavailability of their sample frame. The sample size of 384 was shared to the selected LGAs based on Proportional Allocation Formula (PAF). The data was analysed using descriptive statistics such as means, frequency distributions and percentages.

Logit model was used to analyse the influence of independent variables (determinants of insurance usage) on the dependent variable (access to insurance). The model is given below:

$$L_i = \ln\left(\frac{p_i}{1-p_i}\right) = Z_i \text{-----(1)}$$

$$Z_i = \beta_1 + \beta_2 X_i \text{-----(2)}$$

Where:

L = log of odd ratio

X = vector of explanatory variables

P = probabilities

$\beta$  = parameters of the model

### 3. Results and Discussions

The result discussed hereunder consists of two sets; descriptive statistics and regression results beginning with descriptive results as shown in the tables that follow:

**Table 1: Age of the Respondents**

Minimum	Maximum	Mean	Std. Dev.
16	71	34.82	12.51

Source: Field Work, 2010.

In Table 1 above, it could be deduced that the average age of the respondents is approximately 35 with the standard deviation of 12.51. The youngest respondent was 16 years old and the oldest respondent was 71 years old. Thus, our data covered both youth and ageing population.

**Table 2: Sex of the Respondents**

	Frequency	Percent
<b>Sex</b>		
Male	298	78
Female	86	22
<b>Marital Status</b>		
Single	125	33
Married	251	65
Divorced	8	2
<b>Qualifications</b>		
No formal education	137	37
Primary school cert	67	17
Secondary school cert	81	21
Diploma/ NCE	71	19
Degree+	28	7
<b>Occupation</b>		
No response	7	2
Farming	167	44
Business	120	31
Civil servant	90	23
<b>Income Category of the Respondents</b>		
Below ₦5,000	84	22
Below ₦10,000	111	29
Below ₦20,000	95	25
Above ₦20,000	94	24
<b>Total</b>	<b>384</b>	<b>100</b>

Source: Field Work, 2010.

In Table 2 it shows that 298 respondents were male while 78 were female representing 78% and 22% respectively. This distribution of respondent reflects the social system in the community, where most women are purdah women. On the marital status of the respondents it could be seen that majority of the respondents (251) were married, 125 were single and while only 8 were divorced representing 65%, 33% and 2% respectively. It could also be discerned from the Table above that 137 respondents representing 37%, do not have any formal educational qualification, but 67 or 17% possess primary school leaving certificate, 81(21%) indicated having secondary school certificate, 71(19%) had diploma/NCE and its equivalent, 28 respondents or 7% of them have first degree certificate and above.

Furthermore, the result (Table 2) indicated the frequency of the occupational distribution of the respondents. It was observed that 7 of the respondents (2%) did not respond to the question, out of those that answered the question 167 (44%) were farmers, 90 (23%) were civil servant, 120 (31%) were business operators. In order to avoid multiplicity of response, respondents that have more than one occupation were only asked to give the major one. Similarly, in the Table 2, the monthly income brackets of the respondents was presented. One hundred and eleven (111) respondents indicates earning above ₦5,000 but less than ₦10,000, 95 indicates earning above ₦10,000 but less than ₦20,000, 94 indicates earning above ₦20,000, 84 indicates earning below ₦5,000 representing 29%, 25%, 24% and 22% respectively.



**Table 3: Insurance Company in Rural Community**

	Frequency	Percent
<b>Availability of Insurance Companies in the Rural Community</b>		
Yes	11	3
No	373	97
<b>Access to Insurance Services</b>		
Insured	30	8
Uninsured	354	92
<b>Product Insured</b>		
Vehicle insurance	21	6
Property insurance	4	1
Medical insurance	0	0
Pension scheme	5	1
No response (uninsured)	354	92
<b>Reasons for not Patronizing Insurance</b>		
I don't know about insurance	145	38
It is not allowed in my religion	109	28
I don't have enough income	97	25
No response	33	9
<b>Total</b>	<b>384</b>	<b>100</b>

Source: Field Work, 2010.

The result in Table 3 shows that only 11 of our respondents are living in a community where insurance company exists. While an overwhelming majority (373) of the respondents were living in a community without insurance company, representing 3% and 97% respectively. Moreover, in the Table 3 reveals that 354 out of 384 respondents do not have access to any formal insurance company, while 30 of them accesses insurance services, representing 92% and 8% respectively. This coincidentally support the work of Atmanand (2003), who asserts that where people live below poverty line and their per capita income is low, insurance penetration is bound to be low. Similarly, Morduch (1994) identifies weak financial institutions in low-income countries as one of the causes of low insurance culture. The distribution of those who are insured indicated that 21 respondents insured their vehicles, 4 respondents insured their property, and 5 respondents indicated having pension scheme, while nobody takes health insurance. When the respondents were asked why they do not patronize conventional insurance

services, 145 of them said it is because they don't know about insurance services, 109 said insurance is against the dictates of their religion, 97 said it is because they don't have enough income, while 33 respondents did not respond to the question at all, these represent 38%, 28%, 25% and 5% respectively.

On the other hand, Table 4 contained summary of logit results of factors that influence accessibility of insurance services in rural areas. It could be discerned from the above Table that the coefficient of age is positive and significant at 10% level of significance, means that age accessibility of insurance services increases with respondents' age. In other words, ageing populace is more likely to have insurance cover. This finding is consistence with the finding of Yusuf *et al.* (2009). Moreover, the estimated coefficient of gender is positive but not significant which means that gender has an insignificant positive influence on access to formal insurance services in rural areas. Similarly, the finding concurred with findings of Aliero *et al.* (2010) and that of Yusuf *et al.* (2009). On the contrary, marital status was measured as dummy variable where 1 was coded for married respondents and 0 if otherwise. The decision rule is that the estimated coefficient will be positive if marital status has significant influence and negative if otherwise. From the results it could be observed that the estimated coefficient of marital status is negative and significant at 10% level of significance indicating that marital status has no influence on accessibility of insurance services. This finding contradicts the finding of Ibrahim (2011) and that of Yusuf *et al.*, (2009) which documents a significant influence of marital status on access to insurance. Furthermore, the estimated coefficient of access to credit is

positive and significant at 5% level, meaning that access to formal credit by the respondents increases their possibility of accessing insurance services.

**Table 4: Summary of Logit Results**

<b>Dependents Variable: Access to Insurance</b>		
<b>Variables</b>	<b>Coefficients</b>	<b>t-value</b>
Age	0.40*	1.69
Gender	0.33	0.38
Marital status	-1.17*	1.85
Access to credit	0.90*	1.96
Education qualification	0.17***	3.19
Income	0.43	1.47
Availability of insurance services	0.96**	1.98
Pseudo R <sup>2</sup>	0.26	
LR Chi <sup>2</sup>	55.04 (0.000)	

\*,\*\*&\*\*\* denotes significance at 10%, 5% & 1% levels.

Source: Field Work, 2010.

The estimated coefficient of educational qualification is positive and significant at 1% level of significance. This means that level of awareness about working of insurance increases the likelihood of insurance coverage to the rural dwellers. This finding is consistent with the finding of Yusuf *et al.*, (2009). Surprisingly, the estimated coefficient of income is positive but not significant. Thus, it appears that this finding contradicts a priori expectation because we expect a significant positive influence of income on accessibility to insurance services. This finding disputed the finding of Ozdemir and Kruse (2004) and that of Yusuf *et al.*, (2009) which revealed a significant influence of income and access to insurance services. In addition to the above, the estimated coefficient of insurance availability in rural areas is positive and significant at 5% level of

significance. This finding means that availability of insurance services in rural areas increases the likelihood of its usage by the rural dwellers. The overall model has a good fit given by significant LR Chi<sup>2</sup> value.

#### **4. Conclusion**

Although it is widely acknowledged that access to formal credit is unrivalled catalyst for winding the engine of growth in both developed and developing countries since the time of Schumpeter in 1912, who held the view that finance leads to growth because it reduces creative destruction by allocating resources to efficient newcomers, (Ibrahim, 2012; Rajan and Zingales, 2003). However, formal financial institutions were unable to allocate credit in rural areas due to the vulnerability of rural dwellers to different risks. Moreover, these people were not patronising insurance services because they do not know about it and partly because the *modus operandi* of the insurance firms contradicts the teachings of their religion. The study therefore, found that age, access to credit, educational qualification and availability of insurance services have significant influence on accessibility to insurance services in rural areas. The implication of this study is that even though micro-insurance could be established in Nigeria, care must be taken to address such factors that negatively affect access to insurance services in the rural Nigeria. In order to ensure smooth operation of micro-insurance in these areas, socio-cultural factors of the host community should be taken into consideration.

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