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Short communication

Inhibitors and Motivators of Adoption of Agricultural Insurance in Nigeria

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Abstract

Agricultural risks constitute a fundamental challenge in Nigeria, hence the importance of agricultural insurance in managing farm risks cannot be underestimated. As the crop sub-sector contributes about 85% of the agricultural GDP in Nigeria, this study focussed on awareness and factors that can enhance the adoption of crop insurance among crop farmers in Nigeria. Data collected from 310 randomly sampled crop farmers in three agro-ecological zones in Nigeria using interview schedule were analysed with frequency and percentage counts. Majority (82.7%) of the crop farmers who were aware of crop insurance did not adopt. Major inhibitors cited include; complicated procedures (70.2%), accessibility (64.9%), high premium (63.2%) and religious/ethical considerations (41.2%). Respondents identified major motivating factors as; increased local availability of agricultural insurance offices (88.4%); higher propensity in getting claims (87.1%) and low bureaucratic procedures (79.7%). The study concludes that awareness is not a major determining factor in adoption of agricultural insurance in Nigeria. The study recommends that procedures should be less complicated; while agricultural insurance offices should be locally accessible to crop farmers. Insurance procedures should also be redesigned to enhance the adoption of crop farmers who are hindered by religious/ethical considerations.

Keywords:
Agricultural risks, agricultural insurance, crop farmers, insurance adoption

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INTRODUCTION

Agriculture serves as the foundation of the economy in Nigeria in spite of the dominant role of the petroleum sector. According to Alegieuno (2010), agriculture serves as the largest employer of labour and contributes a high share of the GDP in Nigeria, with the crop sub-sector contributing about 85% of the agricultural GDP in Nigeria (Federal Ministry of Agriculture and Water Resources, 2008). However, as valuable as agriculture is, it is also considered a vulnerable sector in Nigeria as it is characterised by substantial levels of risks. These risks may often be influenced by changes in economic, biophysical, environmental, political and institutional conditions. These conditions are often beyond the control of agricultural producers (Mishra & Uematsu, 2011).

According to Lagerkvist (2005), agricultural risks can be categorised into three:

Economic risks; these are risks related to exposure to an uncertain economic outcome of the farm business. For instance risks associated with changes in prices of farm products due to factors of demand and supply as well as variations in farm input costs.

Social and personal risks; these risks relate to the social and personal context of the farmer and the retroactions to the farm business operation from that context. These risks may occur as a result of the possibility that family or farm laborers /employees may not be available to provide labour or management as a result of disability, accident, sickness or death.

Environmental risks; these refer to the dependence and impact of agricultural production on the natural environment. For instance, risks associated with weather conditions (such as excessive rainfall and drought) and influx of diseases and pests,

With this diversity in sources of agricultural risks, farmers need to manage their risks effectively in order to safeguard their livelihoods. Risk management is therefore an essential tool for farmers to anticipate, avoid and react to shocks. Risk management entails measures/strategies by individuals and organizations that contribute to reducing, controlling and regulating risks. Miller (2008) explained five general methods for managing risk and these are:

Retention; farmers can also retain or accept risks when there is no protection. For example, holding an unpriced commodity.

Shift; farmers may lower their risk by transferring the risk to someone else. This is usually in exchange for a fee. Examples are forward contracts and agricultural insurance.

Reduction; farmers may reduce risk by having good management practices such as diversifying across different agricultural enterprises, thereby lowering the risks associated with agricultural production.

Self-insure; farmers may self-insure by having adequate reserves. For instance, a crop farmer may have savings so as to build capacity to bear risk.

Avoidance; farmers can avoid specific risks by organizing the farm business so that certain types of risk are absent. For example, a crop farmer may decide not to plant a particular crop due to its level of risk.

Agricultural insurance assists farmers in surviving disasters and it can also serve as collateral for operating loans, thereby enhancing farmers' access to credit. As it is a reliable supporting tool to enhance the financial resources of farmers and sustain livelihoods, Sadati et al. (2010) affirmed that it is an effective tool for risk management in agriculture. Also according to Olubiyo et al. (2009), it is one of the best strategies to address farm risks and this may be because agricultural insurance involves the exchange of a relatively small payment (premium) for protection from uncertain, but potentially huge losses.

In Nigeria, agricultural insurance is administered by the Federal Government through the Nigerian Agricultural Insurance Corporation (NAIC). The corporation was established in 1984 with the mandate of providing insurance cover to all categories of farmers, namely – small, medium and large scale holders, either in groups or as individuals (NAIC, 2010). According to Kwatri (2007), NAIC was established because the general insurance companies were not interested in agricul-

tural insurance due to the high rate of natural disasters associated with the agricultural industry. NAIC was therefore established to protect Nigerian farmers from the effects of natural hazards by introducing measures that ensure a prompt payment of appropriate indemnity (compensation) sufficient to keep the farmer in business after suffering a loss. In order to make the scheme attractive to farmers, the scheme was subsidized by 50% by the Federal Government (NAIC, 2010). Furthermore, in order to stimulate competition in the agricultural sector, the Nigerian government removed the monopoly of NAIC on exclusivity of agricultural insurance in the country. Although, NAIC has the exclusive right to insure all subsidized agricultural risks, opportunities abound for other insurance companies in the areas of commercial unsubsidized agricultural risks.

However, as valuable as agricultural insurance is, Abdulmalik et al. (2013) observed that there is a low level of participation in insurance activities in Nigeria. This study therefore investigated the level of awareness and adoption of crop insurance by crop farmers in Nigeria. The study also identified factors that can hinder crop farmers from adopting as well as those that can motivate crop farmers in adopting crop insurance.

METHODOLOGY

This study was designed to generate basic knowledge on use of agricultural insurance among crop farmers in Nigeria. The study focused on crop farmers who had at least five years farming experience, as it was expected that this category of farmers would have experience in agricultural risk management. The study involves multistage random sampling procedure using the nine agro-ecological zones in Nigeria (mangrove forest and coastal vegetation, freshwater swamp forest, rainforest, derived savannah, southern guinea savannah, northern guinea savannah, jos-plateau, Sudan savannah and Sahel savannah) (Figure 1).

Thirty-five percent of the nine agro-ecological zones in Nigeria were randomly selected. Ten percent of the states in each of the randomly selected zones (mangrove forest and coastal vegetation, rainforest and southern

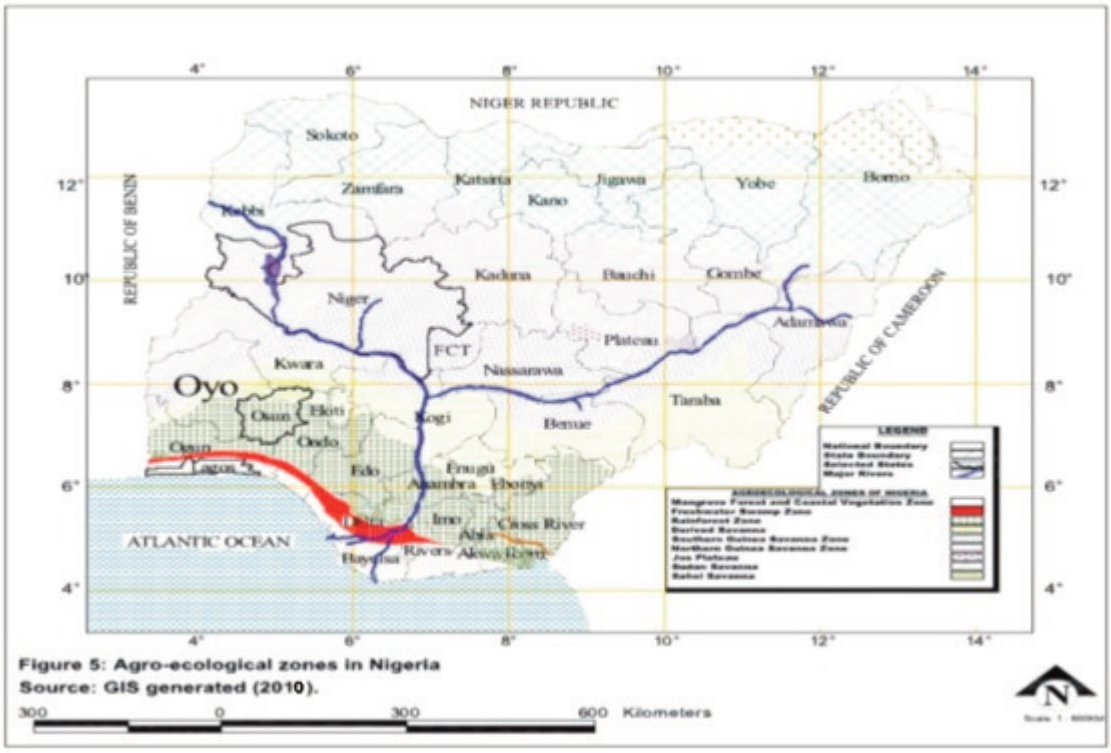

Figure 5: Agro-ecological zones in Nigeria
Source: GIS generated (2010).

Figure 1: Agro-ecological zones in Nigeria
Source: GIS generated (2010)

guinea savannah) were then randomly sampled. Thereafter, 10% of the local governments in the selected states were randomly chosen. Two communities were randomly selected from each of the local governments, while fifteen percent of the crop farmers (registered with the Agricultural Development Project) in each of the selected communities were randomly selected to arrive at a total of 323 farmers as shown on Table 1.

Out of the three hundred and twenty three respondents, a response rate of 96% (three hundred and ten) was achieved. An interview schedule was developed to gather information on necessary variables including; awareness of agricultural insurance scheme, source of awareness as well as factors that can inhibit respondents from purchasing agricultural insurance. Respondents also indicated factors that can motivate them or sustain their interest to purchase agricultural insurance. Descriptive statistical procedure was applied for data analysis using by SPSS.

Table 1
Sampling Procedure and Sample Size

35% of 9 agro-ecological zones	10% of states in zones	10% of local government areas in State	Two communities in each local government area	15% of registered crop-farmers in sampled communities
Mangrove and coastal zone	Lagos	Badagry Ojo	Topo; Ajara Ajangbadi; Igbede	61
Rainforest zone	Osun	BoripeOsogboEde south	Egbeda; AagbaAjenisua; Owode-Sekona; Loogun	110
Southern guinea savannah zone	Niger	BossoShiroroPaikoro	Maikunkele; BejiKuta; ShiroroKaffinkoro; Adunnu	152
				323

RESULTS AND DISCUSSION

As shown in Table 2, more than half (57.1%) of the respondents were not aware of agricultural insurance. Tologbonse et al. (1995) also found that 48.3% of the crop farmers sampled in their study were not aware of agricultural insurance. This shows that much has to be done in ensuring that farmers are aware of market instruments such as insurance that can help reduce agricultural risks. The coastal zone recorded the highest level of awareness (53.4%) and this may be related to the coastal nature of the zone. According to Adelekan (2009) coastal towns are often the most developed of Africa's urban centers, thus by implication, they may have a high concentration of educational facilities, thereby increasing the literacy levels of farmers in the zone. This high literacy level is expected to have a positive influence on crop farmers' level of understanding of risks as well as knowledge of risk management tools (such as agricultural insurance) as they are able to understand how to reduce or avoid risks. They are also able to source information from a variety of channels like print media.

Regarding crop farmers' source(s) of information on agricultural insurance (Table 2), almost half (48.1%) of the respondents who were aware of agricultural insurance explained that they learnt about it through their friends or from family members. However 16.5% affirmed that they were told by extension agents, while 21.1% said they learnt about it either through Bank of Agriculture or

other formal sources of credit. Respondents that heard through the electronic or print media were 14.3%. This indicates that friend/family members is a very strong and effective means of passing information on agricultural risk management in Nigeria.

However, only 17.3% of those that are aware of agricultural insurance (7.4% of the total respondents) had ever purchased it. The analysis in Table 2 reveals that 6.5% of respondents in mangrove forest and coastal vegetation, 33.0% in rainforest and 14.5% in southern guinea savannah zones adopted crop insurance. The results indicate that the zones with higher awareness rate had lesser adoption rates. The low adoption rate despite awareness corroborates the findings of Tologbonse et al. (1995); Ajijola et al. (2011) who found that out of 51.7% and 10.0% respectively of farmers who were aware of agricultural insurance, none purchased it. Abdulmalik et al. (2013) also observed that farmers' participation in insurance activities is low despite the existence of Nigerian Agricultural Insurance Corporation (NAIC). This low rate of adoption indicates that there are strong factors preventing those aware from adopting it. Therefore, awareness is not a major determining factor in adoption of agricultural insurance in Nigeria, even though it is a prerequisite.

Table 2
Awareness and Adoption of Agricultural Insurance

	CoastalL		Rain forest		Southern Guinea Savanah		Total	
	FREQ	%	FREQ	%	FREQ	%	FREQ	%
Awareness of agricultural insurance								
Yes	31	53.4	33	32.4	69	46.0	133	42.9
No	27	46.6	69	67.6	81	54.0	177	57.1
Source of awareness								
Family/friends	15	48.4	18	54.5	31	45.5	64	48.1
Extension/development agents	6	19.4	5	15.2	11	16.4	22	16.5
Bank of Agriculture/other formal credit sources	3	9.6	6	18.2	19	27.3	28	21.1
Print media	5	16.1	1	3.0	0	0	6	4.5
Radio	2	6.5	3	9.1	8	10.8	13	9.8
Ever purchased crop insurance (n=133)*								
Yes	2	6.5	11	33.3	10	14.5	23	17.3
No	29	93.5	22	66.7	59	85.5	110	82.7

*n=133: Population of respondents who are aware of agricultural insurance.

Pertaining to factors inhibiting crop farmers (who were aware of crop insurance) from adopting; Table 3, highlights the major factors as complicated procedures, accessibility and high premium. Majority of the crop farmers (72.7%) indicated that agricultural insurance was somehow complicated. Sixty-seven percent claimed it was not easily accessible, while 65.5% observed that the premium was high. An enabling environment is a prerequisite for effective and efficient insurance market in Nigeria; such as the availability of insurance companies, the variety and affordability of products available to farmers. For example, Olubiyo et al. (2009) observed that, private insurance companies in Nigeria do not have agricultural insurance schemes; hence this limits the participation of farmers

in insurance schemes in the country. The Nigerian Agricultural Insurance Corporation (NAIC) was the only insurance company available to farmers in the country until 2012, when the monopoly of NAIC on agricultural insurance was disbanded, so as to stimulate competition in the sector. However, only NAIC has the exclusive right to insure all subsidized risks and since majority of the farmers in the country are small-scaled with limited resources, NAIC still remains their solace for agricultural insurance.

Furthermore, forty-three percent of the respondents associated their non-patronage to religious reasons. These religious reasons were the belief that loss was from God (23.6%) and the non-compliance of insurance procedure with their religious/ethical beliefs (19.1%). Seventy one percent of respondents who were hindered by non-compliance of insurance procedure with their religious/ethical beliefs were from the southern guinea-savannah zone. Part of the government initiative in making insurance process more compatible with investors' ethical beliefs is the incorporation of *Takafful* into mainstream insurance.

According to Maysami and Kwon (1999), *takafful* insurance is a type of joint guarantee insurance mechanism based on the law of large numbers in which a group of members pool their financial resources together against certain loss exposures. The conceptual nature of *Takafful* entails mutual help/solidarity, mutual responsibility, mutual cooperation as well as mutual protection. *Takafful* is an alternative to conventional insurance and its products are not entirely new to the insurance industry in Nigeria, having been in the market for close to a decade (Jankara, 2011). As the potential of *Takafful* insurance is vast (Daniel, 2012); *Takafful* can as well be incorporated into agricultural insurance policy so as to cater for farmers who are excluded due to religious/ethical reasons.

Table 3
Inhibitors of Agricultural Insurance

	Coastal	Rain forest	Southern Guinea Savanah	Total				
Inhibitors	**FREQ**	**%**	**FREQ**	**%**	**FREQ**	**%**	**FREQ**	**%**
	n=29	**n= 22**	**n=59**	**n=110**				
Complicated procedure	22	75.9	18	81.8	40	67.8	80	72.7
Loss is from God	5	17.2	4	18.2	17	28.8	26	23.6
Ethical beliefs	2	6.9	4	18.2	15	25.4	21	19.1
Accessibility	26	89.7	13	59.1	35	59.3	74	67.3
High premium	21	72.4	12	54.5	39	66.1	72	65.5

In relation to motivating factors that respondents believed can either sustain or improve their interest in agricultural insurance, Table 4 indicates that a higher percentage identified local availability (88.4) as their key motivating factor. This result may be connected to the fact that one NAIC zonal office is locatedin each state of the country and this limits crop-farmers' accessibility to insurance products. Eighty seven percent observed that higher propensity in getting claims is also a key motivating factor. Eighty percent of the respondents said they would be stimulated to purchase an agricultural insurance policy if there were low bureaucratic procedures, 79.7% claimed low premium is a motivating factor, while 61.0% affirmed that the pedigree of the insurance company issuing the

policy will affect their decision. Concerning propensity to get claims and insurance company involved, Mshelia (2012) asserted that low level of trust among farmers is one of the major challenges of agricultural insurance in the country, while Cole et al. (2013) indicated that advice from trusted sources or the quality of the insurance sellers' reputation is likely to influence the decision on insurance take-up. In relation to ethical considerations, 28.7% of the respondents would be motivated if insurance processes are compatible with their ethical beliefs.

Table 4
Motivators of Agricultural Insurance

	Coastal	Rain forest	Southern Guinea Savanah		Total			
Motivators	**FREQ**	**%**	**FREQ**	**%**	**FREQ**	**%**	**FREQ**	**%**
	n=58	**n=102**	**n=150**		**n=310**			
More Awareness	22	37.9	68	66.7	118	78.7	208	67.1
Local availability	41	70.7	93	91.2	140	93.3	274	88.4
low premium	44	75.9	81	79.4	118	78.7	243	78.4
Higher Probability of receiving claims	50	86.2	84	82.4	136	90.7	270	87.1
Less bureaucracy	49	84.5	83	81.4	115	76.7	247	79.7
If required by lender of loans	44	75.9	77	75.5	81	54.0	202	65.2

CONCLUSION AND RECOMMENDATIONS

Awareness is not a major determining factor in adoption of agricultural insurance in Nigeria even though it is a prerequisite. Moreover, religious/ethical beliefs play a vital role in farmers' decision making process. As such, the introduction of *takafful* (an alternative to conventional insurance, which entails ethical financing and cooperative risk protection) in general insurance can also be extended into agricultural insurance so as to serve those excluded due to ethical considerations. Given the prominent role the southern guinea savannah zone plays in agricultural production in Nigeria, it becomes imperative that the religious/ethical considerations of the farmers in the zone is addressed. The Nigerian Agricultural Insurance Corporation also needs to strengthen their awareness campaigns so that farmers can be aware of the benefits of agricultural insurance and be encouraged to adopt it. The insurance offices should be made available in farmers' communities instead of the use of zonal offices in each state of the federation as is presently practiced. There should also be lesser bureaucracy, while claims period is shortened.

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