EUROPEAN ACADEMIC RESEARCH
Vol. IV, Issue 3/ June 2016

Impact Factor: 3.4546 (UIF)
DRJI Value: 5.9 (B+)

ISSN 2286-4822
www.euacademic.org

Effects of Risk Havoc on Maize in Olorunsogo Local Government Area

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Abstract:

This study evaluated the effects of risk havoc on maize in Olorunsogo Local Government Area of Oyo State. A multistage sampling procedure was employed. The first stage was the purpose sampling of Agricultural Development Project (ADP) Zone. The second stage was the purpose sampling of Olorunsogo Local Government Area. The third stage involved random sampling of three villages (3) from the Local Government Area. The fourth stage involved systematic sampling of 109 household heads using structured questionnaires.

Descriptive statistics and Ordinary Least Square (OLS) were used to analyze the data. The finding revealed that the largest segment (approximately 50%) of the respondents were between the age of 31-40 years: while 50% of the farmers have completed either OND or NCE programme.

The most prominent among this havoc was flood (80%).The coefficient of droughts, flood, pilfering and theft and inadequate labour were negative and significant at 5%, 5%, 5% and 1% level respectively. It was recommended that, farmers should site their farms in areas where there were existing community vigilante and low records/incidence of pilfering and theft.

Key words: disease and pest, drought and flood

INTRODUCTION

Agro-business is risky compared to other businesses. Farmers, like most other people, also place greater weight on potential negative outcomes of risk and they are generally willing to sacrifice potential income to avoid either risk or uncertainty (Picazo-Tadeo and Wall, 2011).

Peasant farmers are naturally keen to avoid taking risk which might threaten their livelihoods. This behaviour influences the levels and types of inputs by reducing the aggregate levels of input produced Agricultural production is subject to risk and the attitudes of producers toward risk will influence input choices so far as these affect production risk (Karlan*et al.*, 2012).

Risk plays an important role in human livelihood particularly for third world Countries farmers who are exposed to the vagaries of weather and price shocks (Kurosaki and Fafchamps,2002). However, due to the increased complexity and variation in agriculture risk, farmers find it very difficult in making rational decisions when faced with risks. This decision-making process consists of a series of actions and choices over time, through which a farmer evaluates an innovation and decides whether to incorporate it into his ongoing practices. Due to the diversity of social, economic and natural factors influencing the adoption of an innovation, making such a decision is not a simple process (Sadati, *et al.*,2010).

The objectives are to;

- Examine the socio-economic characteristics of the respondents in the study area.
- Identify the distribution of risk havoc on maize in the study area.

- Analyze the effects of risk havoc on maize's revenue in the study area.

METHODOLOGY

The study was conducted in Olorunsogo Local Government Area of Oyo State Nigeria. The area is well known for farming activities due to large expanse of land in the area. Two seasons experienced in the area include rainy and dry seasons, during the raining season which is between May to October, it rains heavily and this make the water level of the rivers and streams to be either normal or overshoots but in the dry season which is between November and April, the temperature is very high and water levels normally goes down (NPC, 2006).

Primary data were employed in this study and the data were collected using a well-structured questionnaire. The information that were obtained from the farmers include their socio-economic characteristics such as farming experience, household size, educational status, farm size, sex, marital status and risk havoc.

The population of the study consists of all farmers in Olorunsogo Local Government Area, Oyo State. Multistage sampling procedure was employed. The first stage was the purpose sampling of Agricultural Development Project (ADP) zone. The second stage was the purpose sampling of Olorunsogo Local Government Area. The third stage involved random sampling of three villages (3) from the Local Government Area. The fourth stage involved systematic sampling of 109 household heads.

Descriptive statistics:

This was included in tabular presentation of frequency distribution, percentage and means of the socio-economic characteristics of respondents and the distribution of risk havoc on maize in the study area.

Ordinary Least Square (OLS):

Ordinary Least Square (OLS) was used to analyze the effects of risk havoc on maize's revenue in the study area.

RESULTS AND DISCUSSION

The mean age of the household head was 38 years, this shows that the farmers were in their productive year. The result shows that about 50% of the farmers have completed Ordinary National Diploma (OND) or National Certificate of Education (NCE) Programme. Thus, the farmers will be able to adopt modern and innovative technology because of their education average educational level.

Table 1: Socio-economic characteristics of the household heads

Characteristics	Frequency	Percentage
Age (years		
< 30	17	15.60
31-40	49	44.95
41-50	31	28.44
>50	12	11.01
Mean = 38		
Educational status		
Secondary/Tertiary	25	22.94
OND/NCE	51	46.79
B.Sc/HND	27	24.77
Post Graduate Degree	6	5.50
Mean = 12		

Source: Field survey, 2015

The results of risk havoc encountered by farmers were stated in table 2. Farmers experienced risk havoc that threatens their livelihood and production. These were drought (10%), flood (80%), diseases and pest (30%), pilfering and theft (40.18%), produce price fluctuation (31.82%), change in price of input (29.09%), shortage of fund (20.09%) and poor water quality (32.73%). However, none of the farmer experienced bush burning and problem of unfavourable land topography. The most prominent among this havoc was flood (80%). This could

be caused by lack of drainage, excessive rainfall and road construction among other causes.

Table 2: Distribution of risk havoc encountered

Risk havoc encountered	Frequency	Percentage
Drought		
Yes	11	10
No	99	90
Flood		
Yes	88	80.00
No	19	17.27
Disease and pest		
Yes	77	30.00
No	33	70.00
Bush burning		
Yes	0	0
No	110	100.0
Pilfering and theft		
Yes	53	48.18
No	57	51.82
Production price fluctuation		
Yes	35	31.82
No	75	68.18
Change in price of input		
Yes	32	29.09
No	78	70.91
Shortage of fund		
Yes	23	20.09
No	74	67.27
Land topography		
Yes	0	0.00
No	110	100.00
Inadequate labour		
Yes	32	29.09
No	78	70.91

Source: Field survey, 2015.

The coefficients of droughts, flood, pilfering and theft and inadequate labour were negative and significant at 5%, 5%, 5% and 1% level respectively. Therefore, these risk havoc reduced revenue of maize. A reduced revenue on farm produce could lead to food insecurity and reduce farmers' earnings.

Table 3: Effects of maize revenue on risk havoc

Risk Encountered	Coefficient	p-value
Drought	-523165.1**	0.032
Flood	-285650.3**	0.017
Diseases and pest	-36688.39	0.748
Pilfering and theft	-296674.8**	0.016
Price fluctuation	-197188.9	0.343
Change in price input	169461.9	0.192
Shortage of fund	245877.6	0.214
Poor water quality	322592.5	0.106
Land topography	-965337.56	0.454
Inadequate labour	-783435.4***	0.000
Intercept	553435.4***	0.000
R^2	0.334	
Adjusted R^2	0.265	

***1% level of significance, **5% level of significance, *10% level of significance

Source: Field survey, 2015.

CONCLUSIONS AND RECOMMENDATIONS

The farmers were in their young and productive age. Thus, young and educated individuals should be encouraged to be engaged in agriculture. Farmers experienced risk havoc that could threaten their livelihood and production. Thus, risk havoc should be reduced. This will allow more products to be produced: and it will enhance farmer's welfare.

Flood, pilfering and theft and inadequate labour reduced revenue of maize. Therefore, government should construct drainage in other to reduce the problem of flooding. Also, channelization of major streams and rivers should be done to reduce the problem of flooding. Farmers should site their farms in areas where there were existing community vigilante and low records/incidence of pilfering and theft. Mechanized farm implement that is not labour intensive: and with reduced cost of production should be provided to the farmers.

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