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Perceived Effects Of Cocoa Price Variation On Cocoa Marketing In Nigeria

Agbebaku, E.E.O.

Akinlembola, O.A.

Folarin, O. E.

Dada, O.A

Orisasona, T.M

Department of Economics and Extension,
Cocoa Research Institute of Nigeria, Ibadan

Abstract: ***The study was aimed to examine the Perceived effects of cocoa price variation on cocoa marketing in Idanre, Ondo State, Nigeria. It specifically examined the socio-economic characteristics of the respondents, recent prices of cocoa, factors causing cocoa price variation, and the sources of respondents' livelihood in addition to cocoa farming.***

Descriptive statistics such as frequency tables, percentage, and inferential statistics such as Chi-Square and Pearson Product Moment Correlation were used to analyze the data collected.

The analysis of the socio-economic characteristics revealed that most of the respondents (70.8%) were male, 45% of respondents were between 36-51 years and a mean age of 48.65years. It also showed that 52.5% of the respondents completed primary education while most of them (62.5%) have a household size of 6-10 people and a mean household size of 6 people. Also, the study revealed that 70% of the respondents Perceived that cocoa price variation strongly influences (4.44points) the quantity of available cocoa in the market. It also showed that 70% of the respondents Perceived economic variation and the need for survival as strongly influencing cocoa farmers' livelihood.

Pearson Product Moment Correlation (PPMC) showed that there is no significant relationship between cocoa price variation and cocoa marketing (r= 0.058, p= 0.531). Chi-square showed that there is a significant relationship between cocoa price variation and cocoa farmers' livelihood (χ^2= 59.121, p= 0.000).

It was recommended that Government should be actively involved in the provision of input such as fertilizer which will reduce cocoa farmers' overall cost of production. Local consumption of cocoa products should be encouraged amidst Nigerians to further raise the prices received by cocoa farmers. ICT should also be incorporated to enable ease of accessing recent development on cocoa prices locally and globally for cocoa farmers.

I. INTRODUCTION

GENERAL BACKGROUND

Cocoa tree belongs to the family *sterculiacee* and the genus *theobroma.* There are over twenty species in the genus of which *theobroma cacao* is the widely cultivated. Cocoa was introduced to West Africa in the 19th century and its introduction to Nigeria is said to have been around 1874 (Ayorinde, 1966).Cocoa export is the main agricultural export in Nigeria even if cocoa production accounts for only 0.3% of the agricultural GDP (IFPRI, 2010).Cocoa industry is one of the backbones of the Nigerian economy as it accounts for about 2% of the national export earnings, while over 200,000 rural households in the 14 cocoa-producing states in the country depend on it for majority of their cash income (NCDC, 2008).Between 1950 and 1960, cocoa was the highest source of foreign exchange in the country (Oyedele, 2007). In

1998; a revenue of 7459.3million naira (US $ 53,280 at 140 per US $) was derived from dried cocoa beans (CBN, 1998).In addition, cocoa is an important source of raw materials, as well as source of revenue to governments of cocoa producing States (Olowolaju, 2014).The South West is regarded as the cocoa belt of the country, it accounts for 70% of Nigeria's annual cocoa production (Michael and Nzeka, 2011).Ondo state however ranks as the largest cocoa-producing state of the 14 cocoa-producing states in Nigeria (Olujide and Adeogun, 2006 and Olubamiwa and Adhuze, 2008). Essential commodities overtime have had their challenges; one of which is price instability. According to Encarta dictionaries; price instability is the tendency for prices to fluctuate, the likelihood of changes in the prices of goods and services as a result of changes in supply and demand. Nigeria commenced commercial cultivation of cocoa with the *Amelonado* variety which is slow in growth, only to bear fruit after five years of planting with medium sized beans (generally lesser than 1g per bean), as it produces its yearly crop all at once between September to October (Opeke, 2003). One of the earliest commercial plantings was made near Ibadan where it eventually gained its first impetus as she produced the bulk of Nigerian cocoa up to the early 20th century. The early growth of cocoa industry in western Nigeria was phenomenal from a total 183hectares in 1900 to 408,163hectares in 1958 which further progressed into 650,000hectares in 2004 (Olayemi, 1974; Olatunbosun, 1974; Aigbekan, 2004; Sanusi & Oluyole, 2005). Nigeria was only producing 4000tonnes of Cocoa per annum which is equivalent to <2% of the total world's output at the time. Progress however became rapid since the start of 1913 to 1930 when the production rose to 80,000tonnes per annum. With time of constant improvement, a new variety *Amazonian foresto* was developed by the West Africa Cocoa Research Institute (WACRI) to replace *Amelonado* which was at the brink of elimination from the devastating effect of Cocoa Swollen Shoot Disease (CSSD) around 1935. By 1965 the production rose to 270,000tonnes per annum which made her the second largest producer in the world at the time with a recognized contribution to total world's output at 18% (Olayemi, 1974; Olatunbosun, 1974; Aigbekan, 2004; Sanusi & Oluyole, 2005).Price instability/variation/volatility is the rate of price variation over a successive period of time; it is determined by the speed, magnitude and change in the direction of such varied price (ECLAC/FAO/IICA 2011). Price instability in agriculture is when the price that farmers receive for their produce varies widely from one year to the next. It is the function of a lot of varying factors such as climatic condition, seasonal movement, outbreak of disease, development in exchange rates, etc.

PROBLEM STATEMENT

Price variation is not new in agricultural market, however since 2007, the degree of and the number of countries been affected have been very high (HLPE, 2011). Cocoa marketing is very lucrative, profitable and susceptible to changes in price.

Weymar's basic model (1968) summarized cocoa price volatility as follows;

- ✓ The short-term dynamics of the cocoa price result from shocks to the cocoa crop through occasional crop failures
- ✓ Cocoa consumption i.e. grindings is price elastic
- ✓ Long term price expectation are constant and unaffected by shocks

OBJECTIVES OF THE STUDY

The objective of this study was to determine the effect of price instability on cocoa marketing in Idanre, Ondo state, Nigeria.

The specific objectives were to;

- ✓ determine the socio-economic characteristics of the respondents;
- ✓ examine the recent prices of cocoa;
- ✓ identify the major factors causing cocoa price instability;
- ✓ identify other sources of livelihood of farmers in addition to cocoa farming; and
- ✓ Identify the coping strategies of farmers on cocoa price instability.

JUSTIFICATION

Cocoa farmers worldwide depend on cocoa for their livelihood, with an annual world production of three million tonnes (WCF, 2009), and according to several authors (Adheya, 1989; Olubamiwa et al., 2000 and Hamzat et al., 2003), millions are dependent on cocoa for their livelihoods in different areas of its supply chain such as its marketing, and processing, thus making cocoa industry a major say in the Nigerian economy.

Compared with the development from the early cocoa marketing of the 1980s and 1990s when Nigeria ranked second largest producer of cocoa in the world with an annual output of 270,000tonnes (Olayemi, 1974; Olatunbosun, 1974; Aigbekaen, 2004; Sanusi and Oluyole, 2005), the current market is not appreciable as various contributions have had devastating effect on its production.

Daramola (2004) reported that Nigerian cocoa output has declined from over 300,000tonnes to 155,000tonnes with average annual growth rates declining from 8.3% during the 1992-1996 to 1.8% during the 1997-2001 periods, respectively. Sanusi (2005) also revealed that average cocoa output was 175,000tonnes in 2000-2004.

If Nigeria is to maintain and improve its stronghold as one of the world's largest cocoa producers; it is justifiable to query the ineffective pricing and compensation system practiced in cocoa marketing. A flexible pricing system tends to bring improved cocoa production hence improved livelihood for cocoa farmers. Given a situation of balanced and effective pricing; farmers will be motivated to adhere to global standard cocoa cultural practices which will boost cocoa market in the country, and generally the country economy.

HYPOTHESES

Hypotheses were tested in this study, namely;

H_o; there is no significant relationship between price instability and cocoa marketing in Idanre

H_o; there is no significant relationship between price instability and cocoa farmers' livelihood in Idanre

PRODUCTION STATISTICS OF COCOA IN NIGERIA

Years	Area harvested (Ha)	Value description	Yield (Hg/Ha)	Value description	Production (tonnes)	Value description
2005	1088698	FAO data based on imputation methodology	4051	Calculated data	441000	Official data
2006	1104000	FAO estimate	4393	Calculated data	485000	Official data
2007	1359550	Official data	2652	Calculated data	360570	Official data
2008	1349130	Official data	2720	Calculated data	367020	Official data
2009	1354340	Official data	2684	Calculated data	363510	Official data
2010	1272430	Official data	3137	Calculated data	399200	Official data
2011	1240000	FAO estimate	3153	Calculated data	391000	Unofficial figure
2012	1196000	FAO estimate	3202	Calculated data	383000	Unofficial figure
2013	1200000	FAO estimate	3058	Calculated data	367000	Unofficial figure

Source: FAOSTA

CHALLENGES OF COCOA MARKETING IN NIGERIA

The international market for cocoa is notoriously volatile; the crop is susceptible to vagaries of effects ranging from its production to the processing. Various factors had affected and still affects cocoa production and consequently it's marketing; evident from the several literatures been written about these effects.

Ajetomobi (2011) identified a number of these factors and these include; (i.) ageing farmers and farms, (ii) unstable and unfavorable cocoa prices, (iii) high cost of inputs ranging from cutlasses at the lowest level to chemicals and tractors (to open up the land), (iv) inadequate labour supply due to Rural-Urban migration, (v.) high cost of hired labour for critical operations on the farm, (vi.) inadequate infrastructures such as all-weather roads, pipe borne water, electricity, etc. to service the production area, (vii) untimely distribution of farm inputs, (viii) low and declining soil fertilities leading to low yield, (ix) low survival rate of transplanted seedlings due to unstable weather conditions, (x.) inadequate credit facilities to procure farm inputs, (xi.) inadequate land for expansion and (xii.) declining quality of beans, as challenges of cocoa production and its marketing in Nigeria.

WCF (2015) cited low productivity, pest and disease, ecological and environmental issues, and access to education as major banes of cocoa marketing in the world market. Farmers lack knowledge of the adequate cultural practices to keep cocoa farm sustainable and are thus likely to lose their profit to pest and disease infestation.

ITC (2001) pointed cocoa cycle as the chief bane of cocoa marketing. This was explained using cocoa boom and its dependence on availability of land and labour. Thus during cocoa boom periods; there tends to be a surplus of supply on the world market, leading to falling, then low and stagnant prices. The low prices contribute to the ending of the boom period, until eventually consumption outgrows production; resulting in the world market entering a period of structural supply deficits until prices rise again to encourage new cocoa booms.

Oguntade and Afolayan (2006) attributed the faulted cocoa marketing system in Nigeria to the dissolution of the then cocoa marketing board in the 1980s. This culminated at inadequate quality control, exploitation of farmers living in remote and inaccessible areas, and ultimately making farmers dependent on sellers' good intentions.

II. METHODOLOGY

AREA OF STUDY

Idanre is an ancient historic town located on hilly areas of Ondo state. The town is located between 20km southeast of Akure, the state capital. Idanre falls within the latitude 9^o8'N and latitude 5^o5' of the equator and Greenwich meridian respectively. It has an area of 1,914km^2 and a population of 129,024 at the 2006 census.

DATA COLLECTION AND ANALYSIS

A multistage sampling technique and descriptive statistic such as frequency, percentage, inferential statistic, and means were used for the study.

The sequential steps are as follow;

- ✓ The first stage; purposive selection of Ondo state as it is the highest producer of cocoa in the country,
- ✓ The second stage; purposive selection of Idanre because of her predominance in the production of cocoa within the state,
- ✓ The third stage; simple random selection of 8 communities in Idanre,
- ✓ The fourth stage; systematic random selection of 15 respondents from each community sample frame. Data used are primary and secondary source of which (questionnaires) and books (FAO) were used.

MEASUREMENT OF VARIABLES

The dependent variable of this study is cocoa marketing (H_o1) and cocoa farmers' livelihood (H_o2), while the independent variable is cocoa price variation. Price instability was measured by examining the respondents' recently received prices for cocoa sales for the past six years. Cocoa marketing as an essential element was measured by the recent quantity of cocoa by the respondents for the past six (6) years due to price variation; eg 622.96,670.5,575.42,697.31, 607.63, and 722,96 naira per kilogram

III. RESULTS AND DISCUSSION

Table 1 Socio-economic characteristics of the respondents

Gender of respondents

Table 1.a: Showed that 70.8% of the respondents were males, 29.2% females; this implies that male farmers are more involved in cocoa farming than the female farmers. This corroborates with the findings of Fawole and Rahji (2016).

Age of respondents

Table 1.b: States that 45% of the age of respondents is between 36-51years, 32.5% falls between 52-67years, 15.8% falls between 20-35years and 6.7% were between 68-83years. This shows that the mean age of the respondents is 48.65years; which implies that majority of the respondents are agile and active, and thus can work effectively on the farm. According to Adesina and Baidu – Foresen, 1995), found age to be a positive factor that can influence adoption.

Religion of respondents

Table 1.c: Indicate that 75% of respondents were Christians, 20% were Muslims and 5% were traditionalist. This simply shows that majority of cocoa farmers are Christians. It also shows that majority of those residing in the study area are Christians.

Educational of respondents

Table 1.d: Shows that 52.5% of the respondents completed their primary education, 16.7% attempted primary education, 11.7% attempted secondary education, 7.5% had no formal education, 6.7% completed secondary education, 3.3% had adult literacy education, , and 0.8% attempted tertiary education, while 0.8% completed tertiary education. Feder, G. and Slade, R. (1984) stipulate that education is to create favourable mental attitude to new practices.

This implies that majority of the respondents have basic primary education and can easily read and write useful information as at when needed.

Marital status of respondents

Table 1.e: Indicates that 70% of the respondents were married, 11.7% were widowed, 10% were single, while 7.5% were separated, and 0.8% is divorced. This implies that majority of the respondents are married.

Household size of respondents

Table 1.f: Explained that, 62.5% of the respondents had 1-6 household members, 35% had 7-12 household members, and 2.5% had 13-18 household members. The mean family size is 6; this implies that majority of the respondents have a considerable family size to carry out their farming operations if the need arise.

Primary occupation of respondents

Table 1.g: States that, 95.8% had farming as their major occupation, 1.7% had hunting as the major occupation, while 1.7% had trading as major occupation, and 0.8% owned businesses as major occupation. This indicates that majority of the respondents are primarily farmers.

Secondary occupation of respondents

Table 1.h: Explain that, 44.2% had farming as their secondary occupation, 22.5% had trading as secondary occupation, 15% had transportation as secondary occupation, while 12.5% owned businesses as secondary occupation, 3.3% had hunting as secondary occupation, 1.7% identified other occupation as secondary, and 0.8% had civil service as secondary occupation,. This indicates that majority of the respondents had farming also as their secondary occupation.

Number of respondents' farms

Table 1.i: Indicates that, 91.7% of the respondents had 1-5 cocoa farms, while 7.5% had 6-10 cocoa farms, and 0.8% had 11-15 cocoa farms. The mean number of respondents' farms is 2.73; this indicates that majority of the respondents had 1-5 cocoa farms from which they operate cocoa production.

Farm Size of respondents

Table 1.j: Shows that, 55% of the respondents had cocoa farms greater than 5ha, 35.8% had cocoa farms of 3-5ha, and 9.2% had cocoa farms of 1-2ha. The mean size of respondents' farms is 5.97ha; this implies that majority of respondents operate on cocoa farms greater than 5ha and are not deficient of land for cocoa farming.

Farming experience of respondents

Table 1.k:

Explain that, 78.3% of the respondents had more than 7years of cocoa farming experience, while 17.5% had 4-7years of cocoa farming experience, and 4.2% had 1-3years cocoa farming experience. The mean respondents' farming experience is 13.81years; this implies that majority of the respondents had more than 7 years of cocoa farming experience which is quite a high number of years. According to Amos, (2007) stipulated that age is a determinant factor to farming experience, since farming is important to day to day running.

Social status occupied by respondents

Table1.l:

Shows that, 69.2% of the respondents were mere community members, 11.7% were executives of their respective cooperatives 7.5% had chieftaincy titles, and 5.8% were religious heads. This indicates that majority of the respondents are mere community members of their respective communities.

N=120

Variable	Frequency	Percentage	Mean
GENDER			
Male	85	70.8	
Female	35	29.2	
Total	120	100	
AGE			
20-35	19	15.8	
36-51	54	45	48.65
52-67	39	32.5	
68-83	8	6.7	

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Total	120	100	
RELIGION			
Christianity	90	75	
Islam	24	20	
Traditional	6	5	
Total	120	100	
EDUCATIONAL LEVEL			
Non-formal education	9	7.5	
Adult literacy education	4	3.3	
Attempted primary education	20	16.7	
Completed primary education	63	52.5	
Attempted secondary education	14	11.7	
Completed secondary education	8	6.7	
Attempted tertiary education	1	0.8	
Completed tertiary education	1	0.8	
Total	120	100	
MARITAL STATUS			
Single	12	10	
Married	84	70	
Widowed	14	11.7	
Divorced	1	0.8	
Separated	9	7.5	
Total	120	100	
HOUSEHOLD SIZE			
1-6	75	62.5	
7-12	42	35	6
13-18	3	2.5	
Total	120	100	
PRIMARY OCCUPATION			
Farming	115	95.8	
Hunting	2	1.7	
Trader	2	1.7	
Business owner	1	0.8	
Total	120	100	
SECONDARY OCCUPATION			
Farming	53	44.2	
Hunting	4	3.3	
Trader	27	22.5	
Civil servant	1	0.8	
Transporter	18	15	
Business owner	15	12.5	
Others	2	1.7	
Total	120	100	
SIZE OF FARMS IN ACRE			
1-5	110	91.7	
6-10	9	7.5	2.73
11-15	1	0.8	
Total	120	100	
FARM SIZE			
1-2ha	11	9.2	
3-5ha	43	35.8	5.97
>5ha	66	55	
Total	120	100	
FARMING EXPERIENCE			
1-3yrs	5	4.2	
4-7yrs	21	17.5	13.81
>7yrs	94	78.3	
Total	120	100	
SOCIAL STATUS			
Chieftaincy title	9	7.5	
Religious head	7	5.8	
Market head	7	5.8	
Community member	83	69.2	
Executive of cooperative	14	11.7	
Total	120	100	

Source: Field Survey, 2016

Table 1: Socio-economic characteristics of the respondents

Price per kg	N	Range	Mean	Std. Deviation
price per kg 2010	120	27.5	622.96	3.54
price per kg 2011	120	30	670.5	3.86
price per kg 2012	120	25	575.42	3.21
price per kg 2013	120	50	697.31	3.93
price per kg 2014	120	7.5	607.63	.96
price per kg 2015	120	27.5	722.96	3.54

Source: Field Survey, 2016

Table 2: Recent Prices of Cocoa

Variable	Frequency	Percentage	Rank
Rising income and changing taste	116	96.7	1
Poor harvest due to adverse weather condition	113	94.2	2
Changes in demand and supply of cocoa	108	90	3
Economic variation and spikes in exchange rate	107	89.2	4
Availability of cocoa produce itself	99	82.5	5
Prices of other and related commodities	95	79.2	6
Government investment	93	77.5	7
Agricultural subsidies	77	64.2	8
Prices of crude oil	65	54.2	9
Intensity of agricultural research	56	46.7	10

Source: Field Survey, 2016

Table 3: Factors causing cocoa price variation

	Frequency	Percent
No	46	38.3
Yes	74	61.7
Total	120	100.0

Source: Field Survey, 2016

Table 4 a: Engagement in other livelihood in addition to cocoa farming

	Frequency	Percent
None	46	38.3
lumbering only	3	2.5
food cropping only	1	.8
transportation only	17	14.2
dying only	1	.8
hunting only	5	4.2
pottery only	1	.8
lumbering and transportation	6	5.0
food cropping, hunting, and lumbering	13	10.8
food cropping and hunting	10	8.3
Others	17	14.2
Total	120	100.0

Source: Field Survey, 2016

Table 4b: Other livelihood engagement

Variable	Frequency	Percentage	Rank
Crop diversification	110	91.7	1
Proper agrochemical	109	90.8	2
Mixed cropping	104	86.7	3
Maintenance of proper cultural practices	99	82.5	4
Planting cocoa varieties improved	95	79.2	5

Source: Field Survey, 2016

Table 5: Coping strategies adopted by respondents

Statements	SA		A		U		D		SD		Mean	Rank
	F	%	F	%	F	%	F	%	F	%		
Quantity of available cocoa in the market	84	70	14	11.7	13	10.8	9	7.5	-	-	4.44	1
Production of good quality cocoa	69	57.5	30	25	17	14.2	4	3.3	-	-	4.37	2
Motivation to plant cocoa for	74	61.7	30	25	12	10	-	-	4	3.3	4.32	3

the market												
Adequate storage and handling of cocoa beans	68	56.7	34	28.3	6	5	8	6.7	4	3.3	4.28	4
Motivation and readiness of warehouses to buy cocoa	55	45.8	48	40	-	-	17	14.2	-	-	4.18	5
Seasonal occupational shift of cocoa farmers	68	56.7	19	15.8	11	9.2	22	18.3	-	-	4.11	6
Cocoa production processes	36	30	55	45.8	3	2.5	25	20.8	1	0.8	3.83	7
Channel of cocoa distribution	22	18.3	67	55.8	14	11.7	17	14.2	-	-	3.78	8
Compliance towards using approved and tested inputs	50	41.7	31	25.8	4	3.3	26	21.7	9	7.5	3.73	9
Agricultural subsidies and incentives	40	33.3	41	34.2	8	6.7	28	23.3	3	2.5	3.73	10
						Grand mean					4.08	

Source: Computed from Field Survey, 2016

Table 6: Perception of respondents on the effect of cocoa price variation on cocoa marketing

Statements	SA		A		U		D		SD		Mean	Rank
	F	%	F	%	F	%	F	%	F	%		
Economic variation and the need for survival	84	70	36	30	-	-	-	-	-	-	4.7	1
Rigors of purchasing improved input, its availability and affordability	74	61.7	42	35	4	3.3	-	-	-	-	4.58	2
Changes in demand for cocoa	74	61.7	37	30.8	9	7.5	-	-	-	-	4.54	3
Inflexibility of contract terms during price variation	72	60	41	34.2	5	4.2	2	1.7	-	-	4.53	4
Inflexibility of contract terms during poor weather conditions	63	52.5	53	44.2	4	3.3	-	-	-	-	4.49	5
High and unhealthy competition during periods of inflated cocoa price	67	55.8	46	38.3	3	2.5	4	3.3	-	-	4.47	6
Unavailability of government subsidies and incentives	74	61.7	67	55.8	-	-	-	-	-	-	4.44	7
Inability to afford standard storage facility	50	41.7	66	55	-	-	4	3.3	-	-	4.35	8
Attitude of local buying agents and warehouse agents	34	28.3	75	62.5	11	9.2	-	-	-	-	4.19	9
Low returns from cocoa sales discourages farmers to continue cocoa farming	42	35	54	45	6	5	13	10.8	5	4.2	3.96	10
						Grand mean					4.43	

Source: Computed from Field Survey, 2016

Table 7: Perception of respondents on the effect of cocoa price variation on the livelihood of cocoa farmers

Variable	r-value	p-value	Decision
Average quantity sold Vs average cocoa price	0.058	0.531	Accept $H_{o;}$ Not significant

Source: Field Survey, 2016

Table 8: Correlation between cocoa marketing and cocoa price variation

Variable	X^2-value	Df	p-value	Decision
Average cocoa price Vs livelihood change during price variation	59.121	5	0.000	Reject $H_{o;}$ significant

Source: Field Survey, 2016

Table 9: Chi-Square test between cocoa price variation and cocoa farmers' livelihood

IV. SUMMARY, CONCLUSION AND RECOMMENDATION

SUMMARY

Analysis of 120 respondents revealed that most cocoa farmers were male (70.8%), as majority were between the ages of 36-51 (45%). The study also revealed that majority of the respondents completed primary education (52.5%), with most of these respondents having a household size of 1-6 (62.5%).

The respondents also identified rising income and changing taste as the major factor causing cocoa price variation of which (96.7%), while the least considered was intensity of agricultural research (46.7%).

It was also discovered that most of the respondents practiced crop diversification of which (91.7%) as a coping strategy to curb cocoa price variation, 90.8% maintained proper agrochemical use, 86.7% employed mixed cropping, while 82.5% maintained proper cultural practices on their farms, and 79.2% planted improve cocoa varieties.

In addition, the study revealed that respondents Perceived that cocoa price variation strongly influences (4.44points) the quantity of available cocoa in the market. It also showed that respondents Perceived economic variation and the need for survival as strongly influencing cocoa farmers' livelihood.

Pearson Product Moment Correlation (PPMC) showed that there is no significant relationship between cocoa price variation and cocoa marketing (r= 0.058, p= 0.531). Chi-square showed that there is a significant relationship between cocoa price variation and cocoa farmers' livelihood (x^2= 59.121, p= 0.000).

CONCLUSION

The finding from this study has revealed that there is a significant relationship between cocoa price variation and cocoa farmers' livelihood, and not between cocoa price variation and cocoa marketing.

Thus failure to appropriate real per capita income and curtail cocoa consumers' changing taste will have a major

implication on cocoa production and consequently its marketing.

Adaptation strategies are therefore central to improve cocoa production, marketing and boost cocoa farmers livelihood especially during cocoa price variation in Ondo state and Nigeria.

RECOMMENDATIONS

To enhance cocoa production and its marketing in the study area, the following recommendations were made based on the finding of this study.

- ✓ Local consumption of cocoa products should be encouraged amidst Nigerians to further raise the prices received by cocoa farmers
- ✓ Government should be actively involved in the provision of input such as fertilizer which will reduce cocoa farmers' overall cost of production
- ✓ Cocoa marketing board should be reinstated however in a favorable layout wherein both cocoa farmers and the government can benefit from its flexibility and stable pricing system as such in Ghana

Incorporation of ICT for accessing information on cocoa market price both locally and globally to keep cocoa farmers updated so not to be exploited by buying agents

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