Profitability and Efficiency Analysis of Cocoa Marketing in Ondo State, Nigeria

Oladejo Joana Adefemi

Department of Agricultural Economics, Faculty of Agricultural Sciences, Ladoke Akintola University of Technology, Ogbomoso, Oyo State, Nigeria jaoladejo@lautech.edu.ng

Abstract

This study presents an economic analysis of Cocoa marketing in Ondo State, Nigeria. The specific objectives include describing the socio-economic characteristics of cocoa marketers in the study area, examining marketing activities of respondents, analyzing the cost and returns associated with cocoa marketing in the study area and identifying the challenges to marketing activities of respondents. Multi-stage sampling technique was used to select 90 cocoa marketers. Descriptive and Budgetary analyses were employed to analyze data. Results of analysis showed that 84.4% of the respondents were married with average household size of 5.46 and 38.9% attained tertiary level of education. Average age was 46.49 years while respondents claimed 16.89 years (mean) of marketing experience. Budgetary analysis showed that Cocoa marketing is profitable in the study area with gross margin of #1,665.90 per bag sold and benefit cost ratio of 1.04. Respondents were found to perform marketing activities efficiently. Results further revealed that financial handicap, price instability and high transportation cost are the most pressing challenges militating against cocoa marketing activities in the study area. The Regression analysis revealed that the number of cocoa bags transacted per season, storage cost, rent/building cost, age of marketer, number of years spent in school were significant variables influencing revenue generated by respondents. The study concluded that cocoa marketing is a profitable enterprise in the study area and recommends that the cocoa marketers should initiate cooperative society through which financial assistance could be provided to members.

Keywords: Cocoa marketing, profitability, marketing efficiency, budgetary analysis, OLS regression analysis

Introduction

Cocoa originated from the upper Amazon region of the South America from where it spreads to different parts of the world (Osun, 2001). According to Microsoft Encarta (2009), cocoa has a high food value, containing as much as 20 percent protein, 40 percent carbohydrate, and 40 percent fat. It is also mildly stimulating because of the presence of theobromine, an alkaloid that is closely related to caffeine. Cocoa beans, as well as cocoa derived products, also present a rich source of phytonutrients, particularly catechins and procyanidins (Lecumberri *et al*, 2007). The total poly-phenol content of the bean is estimated to be 6-8% by weight of the dry bean (Wollgast and Anklam, 2000). Cocoa polyphenols have been reported in many studies as bioactive compounds, with antioxidant, antiradical and anti-carcinogenic properties (Counet *et al*, 2006). The beans are sold in international markets. African countries harvest about two-thirds of the total world output; Ghana, Côte d'Ivoire, Nigeria, and Cameroon are the leading African cocoa producers. Most of the remainder comes from South American countries, chiefly

Brazil and Ecuador. The crop is traded on international commodity futures markets. Attempts by producing countries to stabilize prices through international agreements have had little success.

In Nigeria, agriculture is the largest non-oil export earner, a key contributor to wealth creation and poverty reduction, the largest employer of labour (Central Bank of Nigeria, 2005). Cocoa export plays a pivot role in this regard in Nigeria. In terms of foreign exchange earnings, no single agriculture export commodity has earned more than cocoa. With respect to employment, the cocoa sub-sector still offers quite a sizeable number of people employments both directly and indirectly. It is an important source of raw materials, as well as source of revenue to governments of cocoa producing states (Nkang, 2007). Prior to the oil boom era in Nigeria, cocoa, cotton, groundnut, palm oil products and rubber were the principal export crops. With export re-orientation, only cocoa remained of any importance after 1975.

An important integrative part of any marketer's activities is the channel. According to FAO (1997), a channel is an institution through which goods and services are marketed. Channels give place and time utilities to consumers. In order to provide these and other services, channels charge a margin (Crawford, 1997). They further suggest that, the longer the channel the more margins are added. Marketing channels are defined according to Coughlan et al (2002) as "a set of interdependent organizations involved in the process of making available a product or service for use or consumption". This definition highlights the fact that marketing channels are a set of interdependent organizations. It is not just one organization making its best, but several firms involved in many activities in a certain channel structure. Each marketing channel member depends on others to develop its function efficiently. Therefore, making the product available in an efficient way is the purpose of the "process" highlighted. On the other hand, Profitability is the primary goal of all business ventures. Without profitability the business will not survive in the long run. So measuring current and past profitability and projecting future profitability is very important. Profitability is measured with income and expenses. Income is money generated from the activities of the business.

Prior to introduction of Structural Adjustment Programme (SAP) in 1986, Nigerian cocoa beans were exported exclusively by Nigerian Cocoa Board (NCB) constituted in 1947. Marketing board refers to an organization set up by a government to regulate the buying and selling of a certain commodity within a specified area. In 1954, the board was reconstituted on regional basis. Given creation of states in 1967 and 1976, the board like other marketing board in Nigeria was once more rearranged on state basis. In terms of mode of operation, the board had the statutory responsibility to procure cocoa beans locally and export. In doing so, it created and maintained a structure of local buying agents (LBAs) for the sole aim of aggregating cocoa beans from farmers in the producing areas. The boards appointed License Buying Agents (LBA) who could either be companies, individuals or cooperative societies to purchase, bag, store, grade and transport to the boards' port stores. The fundamental aim of the NCB between 1960/61 and 1975/76 cocoa season was to cut the link between the price received by cocoa farmers and day-to-day fluctuations in world prices. The producer prices were fixed in the state concerned. The price received by the cocoa farmers was the difference between the producer price and the sales tax. Thus the cocoa prices announced were different for the cocoa producing regions and states. A benefit of the board is that surplus accumulated in years of high prices were used to maintain the stable prices paid to the cocoa farmers. Over time, price stabilization became a secondary objective of the board. Funds raised to stabilize prices were diverted to development programme. In order to create large surplus, the proportion of world prices paid to cocoa farmers reduced significantly. The main advantages of these systems include protecting farmers from market fluctuations and making it easier for the government to obtain

revenue through export taxes. Furthermore in the case of marketing boards, they were egalitarian, with all growers paid the same price for their crop; marketing boards also often provided inputs to farmers on credit, recovering the cost from the price of the crop, and having more control over quality. However the main disadvantages include the use of stabilisation funds for other purposes by governments, bureaucratic inefficiency and corruption increasing marketing costs, low farm-gate prices for the farmers resulting from these factors (Anti-Slavery International, 2004).

The orderly marketing of the cocoa almost stopped with the abolition of the Nigerian Cocoa Marketing Board (NCMB). The abolition of the commodity board also led to an increasing number of people buying and marketing cocoa which results in numerous channels for producers to market their production. The marketing channel between cocoa farmers and exporters in Nigeria encompasses at least two middlemen: small traders and wholesalers. The small traders buy cocoa beans directly from farmers, visiting them one by one. In a second stage, small buyers sell the beans to wholesalers, who in turn will re-sell them to exporters who sometimes double as cocoa processors. At some occasions however, cocoa beans are sold directly to exporters by farmers' cooperatives or even directly exported by the co-operative. Once cocoa beans reach the port of export, they are stocked in warehouses, while being graded and subsequently loaded onto cargo vessels. At present, About 123 cocoa exporting firms (local and expatriates) are registered with Nigeria Export Promotion Council (NEPC), but at present few of them account for about 60% all cocoa exports from Nigeria. Generally, chaotic markets, characterized by the entry of numerous exporters with a wide range of expertise, initially emerged after abolition of NCB (Dand, 1999). However, in a few seasons, the majority of these firms were replaced by a few corporations who are now backward integrating into domestic distribution links of the cocoa supply chain.

Despite the significant roles of marketing in agriculture development, over the two decades, the world has witnessed a land slide movement towards market liberalization and this movement has affected both international and domestic markets (Onu and Iliyasu, 2008). In developed economies, liberalization has resulted in concentration and vertical integration with a small number of large corporations purchasing directly from farmers and selling to distributors (Fatchamps and Mintenn, 2001). On the other hand, market liberalization in developing countries, Nigeria included, has resulted in de-concentration and specialization and subsequently poor market price for producers (Onu and Iliyasu, 2008). For instance in Nigeria, since the abolition of the marketing boards in 1986 following structural changes in the Nigerian economy, farmers and marketers have being facing problems in the disposal and buying of their produce in the world market especially such crops as Cocoa, Cotton, and rubber with the attendant of most farmers and marketers diversifying into production of food crops and other sectors of the economy (Akinwale, 2000).

Although most Nigerian Governments in the past initiated a series of institutional programmes in agriculture in the development plans, very little success were recorded due to poor implementation and inconsistency in Government policies. Efficiency in agricultural industry is the most frequently used to measure market performance and marketing efficiency is a common objective of farmers, food marketing firms, consumers and the society at large (Olukosi and Isitor, 2004). Given this background, it is expected that a lot of research efforts should be directed towards finding solutions to problem of poor marketing in cocoa business in Nigeria. This study is therefore a response to filling this knowledge gap as well as providing some policy impetus to stakeholders in Nigerian agriculture, especially the cocoa industry in solving the challenges to cocoa marketing activities in Nigeria. The general objective of this

study is to analyze the economics of cocoa marketing in Odigbo and Ondo West Local Government Areas of Ondo State. The specific objectives include describing socio-economic characteristics of cocoa marketers in the study area, examining marketing activities of respondents, analyzing the profitability and marketing efficiency, identifying the challenges to marketing activities of respondents. Hypothesis of the study stated that there is no significant relationship between selected market variables and revenue generated by respondents.

Methodology

The study area is Ondo State, Nigeria. Ondo state is one of the states carved out of the former western state. It is worth noting that the world cocoa production is on the scale of 3 million tons and Ondo state is the largest cocoa-producing state in Nigeria (Amos & Adeleke, 2010). About 60% of the nation's output is produced in Ondo State (IITA, 2007). Ondo State is commonly known as the cocoa belt or the land of cocoa farmers. It shares a common boundary with Ekiti and Kogi States in the north, Edo State in the east, Delta State in the south east, Osun and Ogun states in the west and Atlantic Ocean in the south. Agriculture is the main occupation of the people and it provides income and employment for over 75% of the population in the state. It also contributes well over 70% of the state's Gross Domestic Product (GDP) (Ministry of Agriculture, Fisheries and Forest Resources, Annual Report, 2006). The farmers in the state grow food and other cash crops for both domestic consumption and export. These include cocoa, cashew, cassava, palm produce, coffee, yam, timber, citrus, plantain, soya beans, cowpea and kolanut. The population of the study consists of all cocoa stakeholders in the study area. Two-stage sampling procedure was used to select 90 respondents. The first stage involved purposive selection of two (2) local government areas notable for high production of cocoa which are Odigbo and Ondo West Local Government Areas. Odigbo is a Local Government Area (LGA) in Ondo State, with headquarters in the town of Ore. It has an area of 1,818km² and a population of 230,351 at the 2006 census. Ondo West is a LGA in Ondo State, with headquarters in the town of Ondo. It has an area of 970km² and a population of 283,672 at the 2006 census. The second stage involved random selection of forty five (45) cocoa stakeholders from the list made available by the association of cocoa farmers and marketers in each LGA to make a total of ninety respondents.

Data were obtained from the primary source. Data were collected with the aid of structured questionnaire that was administered to literate respondents and used as interview schedule for illiterate respondents. The schedule was designed to collect information on quantity of purchased cocoa in metric tons, size of capital used (N), size of credit facilities given to customer by Licensed Buying Agents (LBA), Naira value of chemical to the farmers, number of customer farmers of the LBA, number of Local buying agents, quantity of cocoa in metric tons, cost and selling price per metric ton.

Descriptive Statistical tools were used to analyze the socio-economic characteristics of the respondents. It involves the use of frequency tables, percentage and mean. Budgetary analysis was carried out to determine how profitable cocoa marketing is. Multiple regression equation, involving the use ordinary least square techniques (OLS), was employed to investigate the magnitude and direction of selected independent variables on revenue of respondents. Data collected were fitted to two functional forms including linear and semi-log functional forms. The semi-log form was found to be the best considering the statistical characteristics obtained.

Budgetary Analysis: This was used to determine the profitability of the enterprise and marketing efficiency of respondents. The equations were specified as: Total revenue (TR) = P*Q, where P is price per ton and Q is quantity sold in bags Total cost $(TC) = Total \ Variable \ cost \ (TVC) + Total \ fixed \ cost \ (TFC)$

Gross margin =TR - TVC Profit (π) = TR -TC Benefit cost ratio (BCR) = $\sum TR$

When BCR is greater than 1, the enterprise is profitable. Otherwise, it is not.

Marketing efficiency = BCR *100%

The marketing system is efficient if the value is greater than 100%

The OLS Regression Model: Some of the factors that influence Revenue of cocoa marketers was determined quantitatively using the ordinary least square (OLS) multiple regression analysis under the assumption that data were collected to fulfill the assumption of multiple regression models. The OLS function postulated for cocoa beans marketers in the study area is implicitly presented by the following equation: $Y = f(X_1 X_2 X_3 X_4 X_5 X_6 X_7 X_8 X_9 \mu i)$

Where:

Y = Revenue

 X_{1} = Numbers of Bags Transacted last season (actual)

 X_2 =Transportation Cost (naira)

 $X_3 = Labour Cost (naira)$

X₄ =Rent/Building Cost (naira)

 X_5 =Association Due (naira)

 X_6 = Grading Fees (naira)

 $X_7 = Age (years)$

 X_8 = Household Size (actual)

 X_9 = Numbers of years spent in school (actual)

μi =the error term (which is assumed to have zero mean and constant variance)

Presentation and Discussion of Results

Socio-economic Characteristics of Respondents

Table1 showed the age distribution of cocoa marketers. About 21% of respondents were below 40 years old, 77.8% were between 40-69 years, 27.8% while only 1.1% claimed 70 years and above. The mean age of respondents was 47 years, indicating most of the respondents were still in their economic active age. Data analysis revealed that 84.4% of the respondents are married while the remaining 15.6% of respondents are otherwise. Marital status is therefore no barrier to being involved in the enterprise. Results further showed that 52.2% of the respondents had household size of less than 6 members, 46.7% had 6-10 household members and 1.1% claimed above 10 household members. Averagely, household size was 5.46 while the standard deviation was 2.259. Some (13.3%) of the respondents did not attend formal school at all, 6.7% had primary school education, 34.4% received secondary school education, another 6.7% had vocational education while 38.9% claimed tertiary school education. Average number of years spent in school was 12 with the standard deviation of 5.673. The result shows that most of the Cocoa marketers are literate which may enhance marketing efficiency. Furthermore, 87.8% of the respondents are non-member of any cooperative society while 12.2% claimed to be members.

Marketing Activities Performed by Cocoa Marketers

Results of data analysis as shown in Table 2 revealed that 74.4% of the respondents transact less than or equal to 20,000 bags of cocoa per annum, 11.2% transact 20001-40000 bags, 8.8% transact 40001-60000 bags, 5.6% transact 60001-80000 bags. This implies that cocoa marketing is practiced at both small and large scale levels in the study area. Average sales volume per annum was 14,839.31 bags. According to the findings a bag of cocoa weighs

62.5 kilograms, thus respondents transact 927456.86 kg per annum. The results revealed that 27.8% of the respondents had less than 11 years of cocoa marketing experience, 40% claimed 11-20 years of experience, 26.6% had 21-30 years of experience while 5.6% recorded 31-40years of experience. Average value was 16.89 years while standard deviation was 8.367. This implies that on the average, the respondents are experienced cocoa marketers, which should have a positive effect on marketing efficiency. Analysis further revealed that 20% of the respondents got their cocoa supplies directly from the farmers, 55.6% got theirs from the licensed buying agents (LBA), 17.8% claimed to obtain cocoa supplies from both farmers and licensed buying agent, 2.2% obtain their supplies from brokers, 3.3% claimed to obtain supplies from brokers and licensed buying agents while the remaining 1.1% claimed to do business with farmers and cooperative groups. This result revealed that a large percentage of the respondents obtain supplies from LBAs, and it looks like what Fatchamps and Mintenn (2001) found among developed economies, that liberalization has resulted in concentration and vertical integration with a small number of large corporations purchasing directly from farmers and selling to distributors. Table 2 further depicts that 33.3% of the respondents do not store their cocoa while the remaining 66.7% store their cocoa. This result implies that most of them store their cocoa because an increase in storage would increase of care given to cocoa which will have a positive effect on the quality and profit incurred. Concerning labour use, 6.7% of the respondents do not make use of hired labor while 93.3% of the respondents make use of hired labor, which may be an indication that cocoa marketing is labor intensive. It was found that 25.6% of the respondents do not belong to any marketer's association, while 74.4% belong to one marketer's association or another.

Table 1: Distribution of Respondents according to Socio-economic characteristics, n=90

Variable	Frequency	Percentage	
Age (years)			
<40	19	21.1	
40-49	36	40.0	
50-59	25	27.8	
60-69	9	10.0	
70 and above	1	1.1	
Household size			
≤5	47	52.2	
6-10	42	46.7	
11-15	1	1.1	
Level of education			
None	12	13.3	
Primary	6	6.7	
Secondary	31	34.4	
Vocational	6	6.7	
Tertiary	35	38.9	
Number of years spent in school			
10 and below	21	23.3	
11-20	69	76.7	
Cooperative society membership			
No	79	87.8	
Yes	11	12.2	
Marital status			
Married	76	84.4	
Otherwise	14	15.6	

Source: Field survey, 2016

Table 2: Marketing	Activities	Performed 1	by Cocoa	Marketers.	n=90
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Variable	Frequency	Percentage
Quantity transacted per annum (bags		
≤20000	67	74.4
20001-40000	10	11.2
40001-60000	8	8.8
60001-80000	5	5.6
Years of Experience		
≤10	25	27.8
11-20	36	40.0
21-30	24	26.6
31-40	5	5.6
Source(s) of supply		
Farmers	18	20.0
LBA	50	55.6
Farmers and LBA	16	17.8
Brokers	2	2.2
Brokers and LBA	3	3.3
Farmers and Marketing Cooperatives	1	1.1
Storage functions		
No	30	33.3
Yes	60	66.7
Utilization of hired labour		
No	6	6.7
Yes	84	93.3
Membership of Marketer Association		
No	23	25.6
Yes	67	74.4
Source: Field survey, 2016		

Source: Field survey, 2016

Budgetary Analysis

Analysis of cost and returns data as supplied by respondents revealed the following:

Total Revenue (TR) = Selling Price * Quantity sold = #580,000,000.00 per annum

(Recall that on the average, respondents transact 14,839.31 bags per annum, which equivalents 927,456.86 kilograms of cocoa)

TR Per bag = $\#580,000,000.00 \div 14,839.31$

TR Per bag = #39,085.38

TR per kg = $\#580,000,000.00 \div 927456.86 = \#625.37$

Total Variable Cost (TVC) per annum = Cost of Cocoa + Marketing Cost

TVC = #550,000,000 + #52,791.49 = #555,279,149

Total Fixed Cost (TFC) per annum = rent on transaction land + rent on warehouse + depreciated cost on marketing tools and equipment = #49,941.232

Gross Margin (GM) = TR - TVC

GM = #580,000,000.00 - #555,279,149.00

GM = #24,720,851.00 per annum

GM per bag = $\#24,720,851.00 \div 14,839.31$

= #1,665.90

GM per Kg = $\#24,720,851.00 \div 927,456.86$

= #26.65

Profit $(\pi) = GM - Depreciated FC$

= #24,720,851.00 - #49,941.23

= #24,670,910.00

Profit per bag = $\#24,670,910.00 \div 14,839.31$

= #1,662.54

Profit per Kg = $\#24,670,910 \div 927,456.86$

= #26.60

Benefit Cost Ratio (BCR)

Benefit cost ratio = Total revenue ÷Total cost

= #580,000,000.00 ÷ 555329090.00

BCR = 1.04

BCR >1 reveals further that Cocoa Marketing in the study area is profitable.

Marketing Efficiency (ME)

BCR*100% = 104%

ME>100% signifies that the respondents were efficient in performing marketing activities

Challenges Associated with Cocoa Marketing in the Study Area

Major challenges identified by the respondents include: Financial challenge (100%), price instability (97.8%), high transportation cost (83.3%), irregular supply (67.8%), high taxation (64.4%), inadequate storage facilities (44.4%), pest and diseases (38.9%), absence of strong marketing board (34.4%), poor infrastructure (31.1%), high cost of preservation (25.6%), low patronage (24.4%), high cost of cocoa (3.3%), unfavorable weather (8.9%), poor grade of cocoa beans (3.3%).

Table 3: Challenges associated with Cocoa marketing, n=90

Challenge	*Frequency	Percentage
Financial challenge	90	100.0
Price instability	88	97.8
High transportation Cost	75	83.3
Irregular supply	61	67.8
High taxation	58	64.4
Inadequate storage facilities	40	44.4
Pest and Diseases	35	38.9
Absence of strong marketing board	31	34.4
Poor infrastructure	28	31.1
High cost of preservative	23	25.6
Low patronage	22	24.4
Bad Weather (unfavorable)	8	8.9
High cost of Cocoa	3	3.3
Poor Quality (low grade)	3	3.3

^{*}Multiple Responses

Source: Field survey, 2016

Hypothesis Testing

The ordinary least squares regression analysis was employed to test the hypothesis of the study which was stated as: There is no significant relationship between selected transaction /market variables and revenue generated by respondents. The selected variables include number of bags transacted (sales volume in bags), storage cost (#), labor cost (#), transportation cost (#), marketers' association annual due (#), number of years spent in school, marketing experience (years), Grading fee (#), annual rent on transaction land / warehouse (#), household size of respondent (actual).

The semi - log functional form was found to be the best fitted considering the number of statistically significant estimated variables and sign carried by coefficient of the variables. Result of data analysis revealed that sales volume, storage cost, rent on transaction land, marketing experience and years spent in school were found to be significant variables influencing revenue generated by respondents. Adjusted R square indicates 75.7% variations in revenue could be explained by the estimated variables while the remaining 24.3% was embedded in the error term. F-value of 28.729 which is significant at 1% revealed the goodness of fit of the model.

Sales volume (in bags) has t-value of 4.432 which is significant at 1%. It has positive relationship with revenue, meaning that as more quantity of cocoa is transacted by the marketer, more revenue is generated. Storage cost has t-value of 2.333 which is significant at 5%. It has a positive relationship with revenue which means, the higher the storage cost the higher the revenue. This could be explained that longer storage period will result to higher storage cost, but it could eventually lead to possibility of the marketer selling at better price at period of scarcity, which would have a positive effect on revenue generated. Better still, quality of cocoa beans tend to improve while in storage (if properly stored) as it loses moisture content, making it attractive to buyers. This will make buyers to buy at a profitable price from the marketers. Rent on transaction land / warehouse has t-value of 4.842 and significant at 1% level. It has a positive relationship with revenue. Transaction site or warehouse that is strategically situated is likely to attract higher rent, but such is also good for profitable business transactions. Marketing experience has t-value of 3.808 which is 1% significant. It has a positive relationship with revenue. Which means marketers with more business experience is likely to make accurate business decisions. The marketer will be able to project correctly when, how, to whom and where to sell his/her goods that will result in better sales.

Years of formal schooling has t-value of 3.221 which is significant at 1%. It has a positive relationship with revenue. Increase in the number of years spent in school by the respondents is likely to positively influence marketing efficiency and enterprise performance.

Table 4: Result of the Regression Analysis

Variables	Coefficient	t-value
(Constant)		20.535
Annual sales volume	0.856	4.434***
Transportation cost	-0.293	-1.482
Labor cost	-0.171	-1.449
Storage cost	0.175	2.333**
Rent	0.344	4.842***
Association due	-0.072	-1.157
Grading fee	0.026	.421
Marketing experience	0.356	3.808***
Household size	-0.011	125
Years spent in school	0.181	3.221***

F-value = 28.729***

R Square = 0.784

Adjusted R Square = 0.757

*** Represents 1% level of significance

** Represents 5% level of significance

Source: Field survey, 2016

Conclusion and Recommendations

The study concluded that cocoa marketing is a profitable enterprise and marketing activities are efficiently performed in the study area. Variables influencing revenue generated include quantity of cocoa transacted, storage cost, rent on transaction land / warehouse, marketing experience, years of formal schooling. Pressing challenges to cocoa marketing enterprise in the study area include financial constraint, unstable market price, high transportation cost, irregular supply and high taxation.

The following recommendations were made:

- Based on the finding that cocoa marketing was found to be profitable, which indicates that it has a potential of improving the standard of living of marketers, this study recommends that currently unemployed citizens should be encouraged to consider the enterprise, so that unemployment problem could be alleviated and income evenly distributed.
- Based on the finding that respondents claimed to be financially handicapped, this study recommends that registered trade association /cooperative group should be organized by the cocoa marketers through which effective call could be made to the Government / financial institutions to release credit at low interest rates to members. This is aimed to be a palliative measure to cocoa marketers' financial constraints.
- Based on the finding that unstable market price is a major constraint under the recent post liberalization/ deregulation era as against cocoa marketing board era in Nigeria, this study recommends that the present cocoa marketers' association trade union should make effort in alleviating the problem of price instability by providing easy access of price information that could get the marketers alerted on the future price of cocoa.

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