

ASSESSMENT OF PUBLIC RELATIONS AMONG CERTIFIED AND NON-CERTIFIED COCOA MARKETERS IN ONDO STATE, NIGERIA

Shehu Abdulganiyu Salau¹, Temitope Blessing Agbede¹

¹Kwara State University, Nigeria

Abstract. Public relations (PR) are often ignored in agricultural marketing, and organizations with imperfect utilization of PR are usually badly managed, ineffective and generate high labor turnover. Therefore, this study identified the different types of adopted PR strategies, described the structure of the cocoa market, estimated the marketing margin, identified factors affecting PR strategies and outlined the major challenges hindering the use of PR among certified and non-certified cocoa marketers. A combination of purposive and random sampling techniques was used to select 120 respondents for the study. The analytical tools used to achieve the research objectives are descriptive statistics, Likert-scale, Herfindahl Index, marketing efficiency model, marketing margin and multiple regression analysis. The result revealed that the most frequently used PR strategy was phone calls. The Herfindahl Index values of 0.19 and 0.12 suggested that the structure of cocoa markets among certified and non-certified marketers was moderately concentrated and non-concentrated respectively. Moreover, the higher efficiency (122.6%) and marketing margin (18.44%) values for certified cocoa marketers revealed that they are more productive than non-certified marketers. Age, marketing margin, cost of spoiled cocoa beans and household size are important variables explaining the adoption of PR strategies among certified cocoa marketers. On the other hand, marketing margin, cost of spoiled cocoa beans and household size are important variables influencing the adoption of PR strategies among non-certified marketers. The most important factors hindering cocoa marketing are high costs of transportation among certified cocoa marketers, and commission among non-certified cocoa marketers. We recommend the use of mobile phone and training of marketers on the use of PR strategies and modern cocoa processing techniques.

The challenges of erratic network performance, high airtime tariff and input subsidies should be addressed by the government to reduce wastage in the industry.

Keywords: certified, cocoa, Herfindahl Index, marketing, public relations strategies, wholesalers

INTRODUCTION

Cocoa (*Theobroma cacao*) is a significant cash crop that originated in South America (Julius, 2007). The increased world demand for chocolate in the 19th Century has increased cocoa production in most African countries. The major cocoa cultivating countries in West Africa are: Cote d'Ivoire, Ghana and Nigeria. There are over 500,000 cocoa farmers involved in cocoa farming in Nigeria, producing about 20,000 tons of cocoa per year from over 600,000 hectares of land. According to CRIN, 2000, more than 50% of this quantity is produced in Ondo State alone, with a considerable amount produced in Oyo, Ogun and Osun States.

Cocoa products can be certified and non-certified. Certification means cultivating cocoa in accordance with certain basic requirements. On the other hand, non-certified cocoa is cultivated without any reference to known basic standard requirements. In Nigeria, cocoa is the first agricultural export crop and is still the second most significant export item, after petroleum. In fact, no

✉ Shehu Abdulganiyu Salau, Department of Agricultural Economics and Extension Services, Kwara State University, Nigeria, e-mail: abdulganiyu.shehu@kwasu.edu.ng, <https://orcid.org/0000-0003-3930-0708>

single agricultural export commodity has earned more than cocoa in terms of foreign exchange earnings (Candoni, 2013). Apart from employment opportunities, the cocoa sub-sector still constitutes an important source of raw materials and revenues for the governments of cocoa producing states.

Nigerian cocoa beans were marketed by the Nigerian Cocoa Marketing Board (NCMB), before the initiation of the Structural Adjustment Programme (SAP) in 1986. The well-organized marketing of cocoa was terminated with the eradication of NCMB in 1986, due to structural changes in the Nigerian economy. Consequently, traders were confronted with the challenges of marketing cocoa bean at reasonable prices, leading to diversification into other sectors of the economy (Akinwale, 2000). Furthermore, prices are no longer determined by farmers and marketers, they are set by few companies and because the marketers do not have the required technological, individual and investment abilities to preserve the beans, they are forced to trade with these intermediaries at ridiculous prices. Hence, the marketers receive a small portion of the price paid by consumers in rich countries because of low price communication between marketers and export markets. The outcomes are price fluctuation, higher production costs, economic insecurity and poverty among marketers (MCF, 2013). Worse still, cocoa marketers have a poor application of public relations (PR) strategies that could ensure quick and efficient sales. PR strategies are strategies used by marketers to communicate the proper marketing message to the right customers using the correct medium at the accurate time to increase market share (Jayne, 2019). Organizations and marketers with poor utilization of PR are usually inefficiently managed, have poor deals and high labor turnover (Nyenjeri et al., 2014). Thus, this study identified the adopted PR strategies, described the structure of cocoa markets, estimated the profitability of cocoa marketing and identified factors influencing PR strategies among certified and non-certified cocoa marketers in the study area.

MATERIALS AND METHODS

Study Area

Cocoa is mostly grown in the rainforest belt of Nigeria. The cocoa-producing states are Akwa Ibom, Cross River, Delta, Edo, Ekiti, Ogun, Ondo, and Oyo. Ondo state is leading in terms of suitable climatic and edaphic

conditions (Fawole and Rahji, 2016). Hence, this study was conducted in Ondo State. The state falls between latitudes 5° 45' and 7° 52' north of the equator and longitudes 4° 20' and 6° 50' east of the Greenwich Meridian. The climate is a tropical monsoon climate with two main seasons—the rainy season (April–October) and dry season (November–March). Humidity is high during the rainy season and low during the harmattan period of the dry season (Adekunle et al., 2013). The temperature ranges between 21°C and 29°C and the annual rainfall between 1150 mm and 2000 mm. The state is grouped into 18 Local Government Areas (LGAs) based on administrative convenience. The farmers in the area also grow other cash crops such as kola nut, palm tree, coffee and food crops such as yams, maize and cocoyam (KWADPs, 2000).

Data collection and sampling methods

Both primary and secondary data were used for this study in the year 2020. Primary data were collected with the use of a structured interview schedule to gather information on socio-economic variables, the quantity of cocoa sold and purchased, public relations strategies employed by the marketers as well as the constraints hindering PR strategies in cocoa marketing in the area.

The population of interest are certified and non-certified cocoa marketers in Ondo state, Nigeria. Ondo state, was purposively selected for this study as the top-producing state. Three local government areas (LGAs) leading in cocoa production, namely Idanre, Ile-Oluji, and Owo were purposively chosen (Joseph and Adewale, 2013). Furthermore, 60 certified cocoa marketers were randomly selected from three LGAs, out of a total of 123 marketers. Sixty non-certified marketers were selected in the three LGAs, using snowballing approach because there were no formal associations among non-certified marketers.

Analytical techniques

Descriptive statistics tools such as frequency, percentage, mean, mode and range were used to describe the socio-economic characteristics of the respondents.

The Herfindahl–Hirschman Index (H) was employed to analyze the structure of the cocoa market. The Index is given as:

$$H = \sum M_i^2 \quad (1)$$

$$M_i = A_i/A \quad (2)$$

where: M_i – market share for i^{th} respondent, A_i – total tons of cocoa sold per annum per respondent, A – total tons of cocoa sold per annum by all respondents.

Marketing efficiency (ME) was obtained from the ratio of revenue realized in cocoa marketing, to the costs of marketing services were expressed as percentage (Ozougwu, 2002). The higher the value of ME, the more efficient the market (Shehu and Mohammed, 2017).

$$ME = \frac{ROFM \times 100}{COMS} \quad (3)$$

where: ROFM – revenue obtained from marketing / costs of marketing services, COMS – costs of marketing services.

The profitability of marketers was determined using marketing margin (MM). The model is given as:

$$MM = \frac{SP - FG}{SP} \times 100 \quad (4)$$

where: SP – consumer or selling price (₦), FG – Farm-gate or supply price (₦).

Factors determining PR were measured using multiple regression analysis. The model is stated as:

$$Y = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + ei \quad (5)$$

where: Y = PR (proxies by the number of PR strategies employed by each marketer), X_1 – shop size (m^2), X_2 – marketing margin (₦), X_3 – marketing experience (years), X_4 – membership in association (membership = 1, and non-membership = 0), X_5 – value of spoilt cocoa beans per annum (₦), X_6 – household size (number), ei – error term, b_0 – intercept (or constant), $b_1, b_2 \dots b_6 = i^{\text{th}}$ coefficient corresponding to $X_1, X_2 \dots X_6$.

To describe the factors hindering PR strategies in the study area, a five-point Likert-type scale was employed. Respondents were asked to indicate whether they agree or disagree and the extent of agreement or disagreement as the case may be. The response options and values (1–5) assigned were as follows: strongly disagree (Sdis, 5), disagree (D, 4), agree (A, 3), moderately agree (MA, 2), and strongly agree (SA, 1). These values were added and divided by 5 to obtain the mean (3.0). Factors with mean scores higher than 3.0 would be regarded as significant variables, and those with mean scores lower than 3.0 as non-significant variables.

RESULTS AND DISCUSSION

Socio-economic characteristics of respondents

The majority (66.7% and 91.9%) of certified and non-certified cocoa marketers respectively were males indicating that the industry is male-dominated. About 43% and 77% of certified and non-certified marketers were between the ages of 41 and 60 years. The mean age and standard deviation for certified marketers are 46.8 years and 14.115 respectively. On the other hand, non-certified marketers have a mean age of 51.8 years and a standard deviation of 6.330 (Table 1).

A large (21.7%) proportion of certified marketers have tertiary education while there are no graduates of tertiary education institutions among non-certified marketers. Highly educated traders are likely to be more responsive to innovation than those with primary and secondary education. It is expected that information can be disseminated with ease among the respondents at this level of education (Shehu and Salman, 2017). The average household size is 5 and 9 persons among certified and non-certified marketers, respectively. Their polygamy probably explains the large family size recorded in the area. The majority (83.3%) of certified respondents has cocoa marketing as their primary occupation while just 56.7% of non-certified respondents embraced cocoa marketing as a primary occupation. A considerably large proportion of certified and non-certified marketers (45.0% and 48.3% respectively) have between 11 and 20 years of marketing experience. This shows that the respondents are experienced in the trade. According to Shehu and Salman (2017), this would enable the marketers to understand the complexity of the trade and thus know how to minimize marketing costs in order to raise profit. All (100%) of certified respondents belonged to at least one cooperative society, so they have access to credit facilities when compared with their non-certified counterparts (Akinsanmi and Doppler, 2005). Out of the eleven PR strategies adopted by the respondents, mobile phone technology is the most often used among certified and non-certified cocoa marketers. Facebook and internet services are commonly used by certified marketers.

Structure of certified and non-certified cocoa markets

The Herfindahl Index (HI) is the ratio of total tons of cocoa sold per annum per respondent to the ratio of total

Table 1. Socio-economic characteristics of respondents

Variable	Class	Certified marketers		Non-certified marketers	
		frequency	percentage	frequency	percentage
Age (years)	21–40	21	35.0	5	8.3
	41–60	29	43.3	46	76.7
	61–80	10	16.7	9	15.0
Gender	Male	40	66.7	55	91.7
	Female	20	33.3	5	8.3
Education	Primary	26	43.3	24	40.0
	Secondary	21	35.0	36	60.0
	Tertiary	13	21.7		
Household size (No. of persons)	1–10	48	80.0	42	70.0
	11–20	12	20.0	18	30.0
Marketing experience (years)	1–10	28	46.7	28	46.7
	11–20	27	45.0	29	48.3
	21–30	05	8.3	03	5.0
Primary occupation	Cocoa marketing	50	83.3	34	56.7
	Others	10	16.7	26	43.3
Membership in association	Yes	60	100	38	63.3
	No	0	0	22	36.7
Most commonly used PR strategies	Phone calls	12	20.0	21	35.0
	Facebook	6	10.0	2	3.3
	Internet	8	13.3	2	3.3
	Off-season visit	4	6.7	7	11.7
	Gift	7	11.7	7	11.7
	Signage	5	8.3	8	13.3
	Text messages	11	18.3	5	14.5
	Direct supply	3	5.0	2	8.3
	Honoring invitation	2	3.3	2	3.3
	Fellow customers	2	3.3	2	3.3
	Marketing societies	0	0.0	2	3.3

Source: own elaboration based on field survey, 2020.

tons of cocoa sold per annum by all respondents for both certified and non-certified cocoa marketers. HI values of 0.19 and 0.12 were obtained for certified and non-certified cocoa marketers respectively. This suggests that

the structure of cocoa markets among certified and non-certified cocoa marketers is moderately concentrated and non-concentrated respectively. A moderately concentrated market implies that the market is moderately

well structured when compared to the non-concentrated one where there is a large number of sellers and buyers and there are no barriers to entry. This agrees with the findings of Salau et al. (2017).

Marketing efficiency of certified and non-certified cocoa marketers

Table 2 shows that the average costs are ₦20,324,000 (\$50,810) and ₦14,371,000(\$35,928) for certified and non-certified cocoa marketers respectively. On the other hand, the average revenue is ₦27,520,000 (\$68,800) and ₦19,010,000 (\$475,250) for certified and non-certified cocoa marketers respectively. The marketing efficiency value of 122.6% and 116.7% for certified and non-certified cocoa marketers respectively indicates that the marketers are efficient in the business. A t-statistics value of 2.03 indicates there is a significant difference between the means. The higher efficiency value of certified cocoa marketers suggests that they are more productive when compared with their non-certified counterparts.

The marketing margin values of 18.44% and 14.31% for certified and non-certified cocoa marketers, respectively, were obtained. This indicates that every ₦1 sale results in a price spread of 18.4k among certified cocoa

marketers. On the other hand, every ₦1 sale result in a price spread of 14.3k among non-certified cocoa marketers. This shows that certified cocoa marketing is more profitable when compared to its non-certified marketing (Table 2).

Factors influencing public relations among certified and non-certified cocoa marketers

Table 3 reveals the *R* square (*R*²) values of 0.392 and 0.303 among certified and non-certified cocoa marketers, respectively. This implies that about 39% of the total variation in the adoption of PR strategies was explained by the explanatory variables among certified cocoa marketers, while 59.8% is attributed to other variables not included in the model. On the other hand, 30.3% of total variations in the adopted PR strategies were accounted for by the included explanatory variables.

Age, marketing margin, cost of spoilt cocoa and household size are the important variables influencing the adoption of PR strategies among certified cocoa marketers. The coefficient of marketing margin and age are both negative and significant at the 1% level of probability. This suggests that the adoption of PR strategies reduces the marketing margin of certified cocoa

Table 2. Marketing efficiency and profitability (₦) of cocoa marketers

Variable	Certified marketers	Non-certified marketers
Average cost of cocoa (50 MT)	20,324,000	14,371,000
Average costs of transport	1,392,628	1,344,471
Average costs of warehouse	170,516	138,808
Average costs of other marketing services	50,127	23,120.
Average costs of spoilt cocoa	31,435	45,591
Average costs of labor	476,000	366,400
Total costs	22,444,706	16,289,390
Total revenue generated	27,520,000	19,010,000
Market efficiency	122.6%	116.7%
Profit	5,075,294	2,720,610
Return per capital invested	1.35	1.32
Percentage marketing margin	18.44	14.31

1 dollar = 400 Nigerian Naira (₦).

Source: own elaboration based on field survey, 2020.

Table 3. Factors influencing PR strategies among marketers

Variables	Certified marketers (R ² =0.392)		Non-certified marketers (R ² =0.303)	
	coefficient	t-value	coefficient	t-value
Age	-0.049	-3.810***	0.380	1.605
Marketing margin	-0.063	-2.726***	72.324	3.766 ***
Marketing experience	0.013	0.519	-0.770	-1.510
Membership in association	-0.456	-1.052	0.141	0.435
Cost of spoilt cocoa	0.000	1.908*	5.700	4.235 ***
Household size	0.395	2.831***	1.960	1.726*

*, *** Significant at 10% and 1%, respectively.
Source: own elaboration based on field survey, 2020.

marketers. It also shows that the youth better adopt PR strategies than older marketers. The coefficient of costs of spoilt cocoa is positive and significant at the 10% level. This suggests that as the costs of spoilt cocoa increase, the adoption of PR strategies increases among certified marketers to increase sales. The coefficient of household size is also positive and significant at the 1% level of probability. This indicates that households with more members are likely to use more PR strategies than those with fewer members.

On the other hand, marketing margin, cost of spoilt cocoa and household size are important variables

explaining the adoption of PR strategies among non-certified marketers. Interestingly, the coefficient of marketing margin is positive and significant at the 1% level of probability among non-certified marketers, suggesting that increasing the use of PR strategies would lead to an increase in the marketing margin of non-certified marketers. The coefficients of household size and costs of spoilt cocoa are both positive and significant at the 10% and 1% level of probability, respectively. This indicates that increasing any of these two variables would probably lead to an increased adoption of PR strategies.

Table 4. Challenges hindering certified cocoa marketing

Challenges	SA	A	Sdis	Mean	SD	Rank
Poor storage facilities	26 (43.3)	24 (40)	10 (16.7)	2.266	0.733	4 th
High cost of transportation	28 (46.7)	24 (40.0)	8 (13.3)	2.333	0.705	1 st
Poor unit of measurement	19 (31.7)	27 (45.0)	14 (23.3)	2.083	0.743	8 th
Poor access to formal credit	18 (30)	29 (48.3)	13 (21.7)	2.083	0.719	8 th
Poor sales	20 (33.3)	29 (43.3)	11 (18.3)	2.150	0.708	7 th
Poor drying mechanism	23 (38.3)	30 (50)	7 (11.7)	2.266	0.660	4 th
Incidence of pest	25 (41.7)	29 (48.3)	6 (10)	2.316	0.650	2 nd
Theft	26 (43.3)	15 (41.7)	9 (15)	2.283	0.715	3 rd
High cost of market commission	23 (38.3)	24 (40)	13 (21.7)	2.166	0.762	6 th

Source: own elaboration based on field survey, 2020.

Table 5. Challenges facing non-certified cocoa marketing

Challenges	SA	A	Sdis	Mean	SD	Rank
Poor storage facilities	3 (5)	25 (41.7)	32 (51.3)	1.516	0.59	7 th
High cost of transportation	4 (6.7)	27 (45)	9 (48.3)	1.583	0.61	6 th
Poor unit of measurement	2 (3.3)	33 (55.0)	25 (41.7)	1.616	0.55	4 th
Poor access to formal credit	19 (31.7)	18 (30)	23 (38.3)	1.9333	0.84	3 rd
Poor sales	12 (20)	37 (61.7)	11 (18.3)	2.0167	0.62	2 nd
Poor drying mechanism	1 (1.7)	25 (41.7)	34 (56.7)	1.4500	0.53	9 th
Incidence of pest	4 (6.7)	28 (46.7)	289 (46.7)	1.6000	0.61	5 th
Theft	2 (3.3)	24 (400)	34 (56.7)	1.4667	0.56	8 th
High cost of market commission	35 (58.3)	17 (28.3)	8 (13.3)	2.4500	0.72	1 st

Source: own elaboration based on field survey, 2020.

Challenges hindering certified and non-certified cocoa marketing

Table 4 shows that the most important factors hindering certified cocoa marketing are high costs of transportation and incidence of pests with the weighted means of 2.333 and 2.316, respectively. On the other hand, high costs of market commission and poor sales are the most important factors hindering non-certified marketing of cocoa in the area (Table 5).

CONCLUSION AND RECOMMENDATIONS

This study assesses public relations among certified and non-certified cocoa marketers in Ondo state, Nigeria. Sixty certified and 60 non-certified cocoa marketers were randomly selected for this study. The result revealed that phone calls are the most important frequently used PR strategies among marketers. Furthermore, the Herfindahl Index values showed that the structure of cocoa markets among certified and non-certified marketers was moderately concentrated and non-concentrated respectively. Moreover, the higher efficiency and marketing margin values for certified cocoa marketers implied that they are more productive than non-certified marketers. Age, marketing margin, cost of spoilt cocoa and household size are the important variables explaining the adoption of PR strategies among certified cocoa marketers. On the other hand, marketing margin, cost of spoilt cocoa and household size are important variables

influencing the adoption of PR strategies among non-certified marketers. Lastly, the most important factors hindering cocoa marketing are high costs of transportation and commission among certified and non-certified cocoa marketers, respectively. Therefore, we recommend mobile phone as a marketing tool among marketers. Consequently, marketers should be well trained on the effective use of PR strategies and modern cocoa processing and storage techniques. Government should provide basic inputs at affordable prices and help in the construction of market infrastructure to reduce spoilage and cost of transport. It should also address the challenges of erratic network performance and high airtime tariff to encourage the adoption of PR in the country.

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