

THE INFLUENCE OF PUBLIC RELATIONS ON FOOD SECURITY AMONG COCOA MARKETERS IN ONDO STATE, NIGERIA

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Abstract. Food insecurity is quickly becoming a key topic in national and international debates. Consequently, a series of studies on food security and its determinants have been conducted. However, none of these studies has measured food security among cocoa marketers or taken into account the influence of public relations (PR) on food security among cocoa marketers in Nigeria. Therefore, this paper aimed to identify the adopted PR strategies, measure the food security status and determine the influence of PR strategies on food security of marketers. A combination of purposive and random sampling techniques was used to select a group of 100 respondents. The analytical tools included descriptive statistics, food security index and logistic regression analysis. The result revealed that the majority of respondents were males with an average household size of eight persons. The food security index showed that 65% of the study participants were food insecure. The logistic regression analysis indicated that about 53% of the total variation in food security of the wholesale cocoa marketers was accounted for by the estimated explanatory variables. The age of the respondents, marketing margin, household size, access to credits and PR strategies constituted the critical determinants of food security among cocoa marketers in the area. It was determined that the government should provide PR tools at a subsidised rate as well as train marketers on the effective use of these tools. Policies that address irregular access to the mobile phone network and high airtime tariff challenges associated with the adoption of PR strategies in the country, as well as those aimed to reduce household sizes should be encouraged.

Keywords: cocoa, food security, internet, mobile phone, Ondo State

INTRODUCTION

Many countries struggle to ensure food security due to climate change, decreasing resources and the global economic crisis. Food security for everyone is a basic necessity, while its fulfilment is the primary responsibility of all governments. FAO estimated that in 2016, about 792.5 million people across the globe were malnourished, which is a decrease from 1,010.7 million people in 1991. Nearly one-fourth of these individuals live in Sub-Saharan Africa, but it is Asia that is home to the majority of hungry people (Sharma et al., 2016). Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for a healthy and active life (FAO, 2016). This definition has four dimensions that are understood as necessary conditions for food security, namely: 1) availability; 2) accessibility; 3) utilisation; and 4) stability (Pinstrup-Andersen, 2009). Food insecurity continues to pose a critical challenge among rural and urban households in Nigeria (Salau et al; 2019). Problems associated with food insecurity cannot be fully understood without better knowledge of the role of markets and the food marketing system that transforms commodities in the farmer's field in time, place and form into food on household tables. However, some people perceive marketing and public relations (PR) as one and the same, but there are major differences between the two disciplines that arise from established relationships. The

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primary difference is the type of stakeholders involved. Marketing management focuses on relationships with customers and channels. A well-developed food marketing system with suitable PR strategies is expected to enhance food security of the respondents by transferring commodities from the place of production to areas they are needed in order to benefit the producers, marketing intermediaries and consumers (Adetunji et al., 2013). On the other hand, PR consists in more than simply selling products and services (Ströh, 2007). According to Grunig et al. (2002), stakeholders such as mass media, activist groups, employees, unions, funders, or the direct community who may not be part of the market are also important determinants of change and organisational goals. PR and marketing function together by building mutually beneficial relationships with consumers, customers, distributors, and other marketing agents through sponsorships, corporate identity, image building and media relations (Kotler and Keller, 2009). In Nigeria, the food marketing system is poorly structured, which results in challenges associated with food availability and accessibility at local and national levels (Ali, 2018). Agricultural and food commodity markets have always exhibited volatility on account of production fluctuations, poor distribution, changes in international markets, seasonality of production and increased demand with a rise in consumer income leading to low affordability of net buyers. Moreover, PR strategies that could entail profitable sales and enhance food security among cocoa marketers are poorly applied (Salau and Agbede, 2020). Such strategies are used by the marketers to send the right marketing message to the appropriate customer through a suitable medium at the proper time to achieve high turnover (Jayne, 2019). That is why a series of studies have been carried out on food security and its determinants. However, none of these studies has measured food security among cocoa marketers and taken into account the influence of PR on food security of cocoa marketers. Therefore, the research objectives include the identification of different PR strategies among marketers, measurement of food security and determination of the influence of PR strategies on food security of cocoa marketers in Ondo State, Nigeria.

MATERIALS AND METHODS

Study area

The main cocoa producing states in Nigeria include Akwa Ibom, Cross River, Delta, Edo, Ekiti, Ogun, Ondo,

and Oyo states. Ondo State is considered as the best of them based on favourable climatic and edaphic conditions (Fawole and Rahji, 2016). Ondo State was therefore purposively selected for this study.

Ondo State is located on the 7° 6' 0.0180" N latitude and the 4° 50' 30.0984" E longitude. It has two distinct seasons – rainy (April – October) and dry (November – March). Humidity is high during the rainy season and low when the weather is dry (Adekunle et al., 2013). The temperature ranges between 21°C and 29°C while the annual rainfall amounts to between 1,150 mm to 2,000 mm. There are eighteen Local Government Areas (LGAs) in the state. Apart from cocoa, other cash crops grown in the state include kola nuts, oil palms and coffee, while food crops include yam, maize and cocoyam, among others (Fawole and Rahji, 2016).

Data collection and sampling methods

The primary data was applied in the study with the aid of structured interview schedules. According to Fawole and Rahji (2016), Ondo State is the best cocoa producing state in Nigeria, and their assessment is based on favourable climatic and edaphic conditions. Three (Idanre, Ile-Oluji and Owo) Local Government Areas (LGAs) are known for cocoa production and marketing (Oseni and Adam, 2013). They were purposively selected for the study. This was followed by a proportionate selection of three, five and two villages in Idanre, Ile-Oluji and Owo, respectively. Furthermore, ten wholesale cocoa marketers were randomly chosen from each of the ten villages to comprise a sample size of 100 wholesale cocoa marketers presented in Table 1.

Table 1. Number of selected villages and sample size

LGAs	No. of villages	No of selected villages	Sample size
Idanre	95	3 (Oke-idanre, Akindana and Lafere)	30
Ile-Oluji	139	5 (Aiyegun, Adekunle, Adeoba, Omigbede, and Bafon)	50
Owo	44	2 (Gbadegun and Sanusi)	20
Total	278	10	100

Source: field survey.

Analytical techniques

To achieve the research objectives, tools used in the analyses included descriptive statistics, food security index and binary logistic regression. Descriptive statistics were used to explain the socioeconomic characteristics of respondents. The wholesale cocoa marketers were classified into food secure and food insecure households using the food security index. The index takes the form of:

$$F_{ith} = \frac{PCFE_{ith}}{2/3 MPCFE}$$

where:

F_{ith} – food security index of the i^{th} household ($F_{ith} > 1$ = the household is food secure $F_{ith} < 1$ – the household is food insecure)

PCFE_{ith} – per capita monthly food expenditure of the i^{th} household

MPCFE – Mean mean per capita food expenditure of all households

If the per capita monthly food expenditure (PCMFE) of a marketer and his or her household is larger or equal to two-thirds of MPCFE, the household is food secure. On the other hand, if the PCMFE is smaller than two-thirds of MPCFE, the household is considered to be food insecure (Salau et al., 2019).

The binary logit regression analysis was employed to identify the influence of PR on the food security status of cocoa marketers. The model is as follows:

$$Z_i = b_0 + n_1M_1 + n_2M_2 + \dots + n_kM_k + e$$

where:

Z_i – the binary food security status. It equals 1 if the food is secure and 0 if it is not

b_0 – constant

M_j – independent variables ; ($j = 1, 2, \dots, k$)

e – error term

The explanatory variables include:

M_1 – experience of respondents in cocoa marketing (years)

M_2 – marketing margin (%)

M_3 – access to credits (1 for access to credits and 0 for the lack of access to credits)

M_4 – public relations (proxy by the number of PR strategies used by the i^{th} marketer)

M_5 – value of spoiled cocoa beans (₦/kg)

M_6 – household size (number of adults per household)

RESULTS AND DISCUSSION

Socio-economic characteristics of respondents

The majority (79.0%) of wholesale cocoa marketers consisted of males with an average age of 44.6 years. This suggests that most of the respondents were in their active age, capable of conducting business with vigour (Table 2).

Table 2. Socio-economic features of marketers

Variable	Class	Frequency	Percentage
Age	1–30	27	27.0
	31–60	49	49.0
	61–90	24	24.0
Gender	male	79	79.0
	female	21	21.0
Education	1–6	19	19.0
	7–13	43	43.0
	14–20	38	38.0
Household size	1–10	78	78.0
	11–20	22	22.0
Marketing Experience	1–10	37	37.0
	11–20	49	49.9
	21–30	14	14.0
Primary occupation	cocoa marketing	69	69.0
	others	31	31.0
Access to credit	yes	89	89.0
	no	11	11.0
Mostly used PR strategies	phone calls	23	23.0
	signage	13	13.0
	retailer association	10	10.0
	direct supply	8	8.0
	through fellow customer	9	9.0
	honoring invitation	7	7.0
	text messages	10	10.0
	facebook	4	4.0
	gift	4	4.0
	off-season visit	4	4.0
WhatsApp	8	8.0	

Source: field survey, 2020.

The respondents' marketing experience ranged between 5 and 30 years, with an average of 12.2 years. This indicates that most of the study participants have been involved in cocoa marketing for years. All surveyed individuals were literate, with 19%, 43% and 38% having completed primary, secondary and higher education, respectively. Considering this level of literacy, it is expected that information can be easily disseminated among the respondents. The family size ranged between 2 and 13 persons, with an average of 8 persons. Most (89%) of these persons had access to credit facilities, which could facilitate growth and development (Salau and Salman, 2017). The main (69%) occupation of the respondents was cocoa marketing. Out of eleven PR strategies adopted by the studied individuals, the most frequently used were mobile phones. This finding is in line with Sikundla et al., 2018, who recommended mobile phones as marketing tools among smallholder irrigation farmers in South Africa. They were followed by the use of signs and text messages.

Food security status of cocoa marketers

The calculated MPCFE amounted to ₦4,339.87. Households in which per capita food expenditure fell below and above ₦4,339.87 were regarded as food insecure and food secure.

Table 3. Food security status

Variables	Food security status of households		Total
	food secure	food insecure	
2/3 MPCFE was ₦4339.87			
Proportion of households (%)	35	65	100
Number of households	35	65	100

Source: field survey, 2020.

In view of the above, 36% and 64% of the households were considered food secure and food insecure, respectively (Table 3).

The influence of PR strategies on food security of cocoa marketers

Table 4 reveals a Nagelkerke R square value of 0.528, suggesting that about 52.0 % of the total variation in

food security of the cocoa marketers is accounted for by the estimated explanatory variables. The most significant factors included age, household size, marketing margin, access to credits and adoption of PR strategies. The age of respondents was significant at a 5% level, but it had a negative influence on food security. This is an indication that young marketers were more food secure compared to the older ones. An elderly marketer was more likely to have a larger household and lack the energy required in order to work to maintain the household.

Table 4. Determinants of food security of marketers

Variable	Coefficient	SE	Sig.
Age (years)	-0.041	0.019	0.034**
Marketing margin (%)	7.199	3.150	0.022**
Credit access (N)	2.895	0.686	0.000***
PR strategies (number)	0.467	0.250	0.062*
Value of spoilt cocoa bean (N)	0.000	0.000	0.320
Household size (N)	-0.320	1.340	0.017**
Constant	-5.058	2.731	0.064*

***, **, * significant at 1%, 5% and 10% levels respectively.

Source: field analysis, 2020.

The coefficient of marketing margin had a positive influence and was significant at a 5% level, indicating that an increase in marketing margin would likely enhance the food security of marketers. Access to credit facilities also positively affected food security yet it was important at a 1% level only. According to Salau et al. (2020), farmers' access to credit facilities is an important factor in determining the food security status of households, as it had a significant level of importance amounting to 5% in their study on the mitigation of effects of youth migration and food security among farming households in Kwara State, Nigeria. The coefficient of PR strategies had a positive effect and was critical at the 10% level. This suggests that the adoption of PR strategies constituted an important factor influencing food security of cocoa wholesale marketers in the studied area. The household size had a negative influence and was also important at a 5% level. This suggests that larger households may be food insecure, which is in line with the findings of Salau et al. (2019).

CONCLUSION AND RECOMMENDATIONS

The study identified common types of PR strategies, measured the level of food security and determined the influence of PR strategies on food security of cocoa marketers in Ondo State, Nigeria. The paper indicated that the majority of marketers were males, with an average age of 44.6 years. Furthermore, out of eleven PR strategies adopted by the respondents, the most frequently used included mobile phones. Subsequently, it was shown that 65% of the studied individuals were food insecure while the age of marketers, household size, marketing margin, access to credits and adoption of PR strategies constituted significant variables influencing food security of cocoa marketers. Consequently, it is necessary to introduce policies and strategies addressing challenges associated with irregular access to the network and high airtime tariffs of phone calls and WhatsApp, as well as other PR strategies to enhance food security in the country. The household size is a significant factor influencing food security of cocoa marketers, that is why, policies aimed to reduce household sizes should be encouraged, similarly to those intending to strengthen cocoa marketers by improving access to both formal and informal sources of credits.

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