

**Socio Economic Characteristics and Constraints in Cocoa Production among Cocoa Farmers in Ondo State, Nigeria**

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**ABSTRACT**

This study focused on the socio-economic characteristics and constraints encountered in cocoa production among the cocoa farmers in Ondo State, Nigeria. Primary data were collected with the aid of structured questionnaire in three local government areas of the State through a multi-stage sampling procedure. Data collected were analyzed using descriptive statistics, and field's method. The results revealed among others that the modal age range of the respondents was 55-64 years which accounted for 36.2% of cocoa farmers while 94% of the farmers are male. About 94.8% of the farmers were married. Also, 41.4% of cocoa farmers completed secondary school education. The mean household size was 7 with modal household size of 5-9 which accounted for 74.1%. About 31% of cocoa farmers had farming experience of less than 20 - 39 years. Farm size within the range of 1-5 hectares was the dominant farm size among the sampled cocoa farmers, it accounted for 48.3% of the total respondents. Also, a very large proportion (84.5%) of the respondents purchased the land they use for cocoa plantation. The major sources of labour in the study area were hired labour accounting for 95.7% of cocoa farmers. The major problems faced by the respondents in the study area were poor road network and price instability which both accounted for 99.1%

**Key words:** Socio Economic, Cocoa, Industrialization

**INTRODUCTION**

The centrality of agriculture to the development of developing economies is now beyond dispute. A vast body of knowledge has assigned a phenomenal role to agriculture in the early stages of industrialization. In West and Central Africa, agriculture has continued to play a dominant role in the provision of food, raw materials for industries, employment for the majority, and foreign exchange earnings, which are used in financing the developmental activities particularly the permanent crops. In the last 40 years, permanent crops, notably cocoa, coffee, oil palm, and rubber, have dominated the export sector of agriculture [1]. Perennial tree crop systems in Africa are important for national macroeconomic balances and rural livelihoods. Among the perennial tree crops, cocoa (*Theobroma cacao*) is of particular interest to West and Central Africa from where approximately 70 percent of the world supply of cocoa originates and for the global chocolate industry [2]. Cocoa is grown on about 7.2 million hectares with major concentrations in West Africa, South East Asia and Latin America. Specifically, cocoa production is dominated by four countries: Côte d'Ivoire and Ghana produce approximately 41 percent and 17 percent of the world output respectively. The other two important cocoa producers are Cameroon and Nigeria, each contributing approximately five percent of the world cocoa production [1].

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The Nigerian cocoa economy has a rich history which is well documented in literature. The contributions of cocoa to the nation's economic development are vast [3]. Cocoa has been the main agricultural stay of Nigeria economy until 1970's when crude oil was discovered in the country in commercial quantities. Apart from its contribution to the nation's economy, Cocoa is a plant-based food that contains carbohydrates, fats, proteins, natural minerals and some vitamins and like several other plant foods such as tea, red wine, fruits, vegetables and nuts, cocoa contains a group of compounds which exhibit health benefits [4]. Research conducted at Harvard Medical School showed that heavy consumers of cocoa had significantly lower rates of heart disease and cancer compared to those who consumed less. Cocoa has a unique natural taste and colour and possesses a delicious aroma used in many food products for extra flavor and colour (International Cocoa Organization (ICCO), 2005) [8]. Cocoa being a major agricultural product remained a major prime source of foreign exchange earnings. Up till now, cocoa is the largest contributor of Nigerian earnings from non-oil exports [5]. The importance of cocoa in Nigerian agricultural production in general and Ondo State in particular comes from three factors: The first major factor is the production opportunity possessed by cash crop farmers in Ondo State. The second factor is the income and employment effects through provision of domestic markets for both food and non-food commodities and thirdly, the ability to generate large amount of foreign exchange earning to finance imports and various developmental projects in the country. More specifically, cocoa is a source of income to both farmers and government, employment to the youths, raw materials to agro-allied industries and feed ingredients to animals among others. The fact that farmers cannot process raw cocoa beans for direct consumption and the abrogation of Cocoa Marketing Board [CMB] in 1989 which gives farmers opportunity to negotiate price makes it an important cash crop to the growers. Cocoa is therefore needed to finance other agricultural enterprises and farmers personal developmental projects. However, the production of this very important crop has been experiencing a downward trend. This ultimately results in low cocoa yield and crop losses with its resultant effect on socio-economic variables such as farm income, livelihood and farm level decision making. The huge benefits of cocoa as a modest source of income to both farmers and government therefore necessitate the urgent need to identify the constraints facing cocoa farmers in Ondo State. Hence, the research outcome will enable the government to proffer solutions towards encouraging the farmers involved, reduce poverty and also total dependence on crude oil for income in the country.

## **METHODOLOGY**

This study was carried out in Ondo State, South west Nigeria, created in 1976. The State is situated between longitudes  $4^{\circ} 15^1$  E and  $6^{\circ} 00^1$  E of the Greenwich meridian and latitudes  $5^{\circ} 45^1$  N and  $7^{\circ} 45^1$  N which is the North of the equator in the South West Nigeria. The State occupies a land area of about 15,000 Square kilometers with a population of 3,441,924 people according to 2006 census. Agriculture is the mainstay of the people of Ondo State. The climate of the area is highly favoured for agrarian activities of her teeming population who grow crops such as cocoa, kola nut, palm tree and arable crops like: maize, yam and cassava. The annual rainfall is between 1000mm and 1500mm with a high daily temperature of about  $30^{\circ}$  C. The vast majority of the population consists of peasant farmers cultivating food and cash crops at a small-scale level. Multi-stage sampling procedure was used in selecting the sample size. At the first stage three local government areas dominant in cocoa production namely; Idanre, Ile-Oluji/Oke-Igbo, and Owo were purposively chosen. At the second stage, two communities were randomly selected from

each of the 28 local government areas. The third stage involved random selection of fifty (50) cocoa farmers from the two communities selected in Idanre local government area, forty (40) cocoa farmers from the two communities selected in Ile-Oluji local government area and thirty (30) cocoa farmers from the two communities selected in Owo local government area of the state making a total of 120 cocoa farmers based on their cocoa production levels. Four of the respondents did not fill the questionnaire correctly and they are not used for the analysis. In essence, only 116 cocoa farmers were sampled. Primary data was used for the purpose of this study. Data were collected on socio-economic characteristics such as: age, gender, farming experience, level of education, farm size, etc. using structured questionnaire. Other information sought includes income and household size. The analytical techniques that were employed include descriptive statistics such as: frequency; percentage to describe the socio-economic characteristics of the respondents. In order to examine and identify main constraints faced by the respondents in the study area, descriptive statistics such as frequency and percentage were used to identify the problems, while ranking was used to determine problems that need serious attention in case of any intervention from the government, non-governmental organizations, and stakeholders in cocoa business.

## RESULTS AND DISCUSSION

### Socio-economic characteristics of cocoa farmers in the study area

Table 1 presents the socio-economic characteristics of cocoa farmers in the study area. The mean age of the respondents was 57.4. The table also revealed that 36.2% of the total respondents fell within the age range of 55-64 years while 31% of the total respondents fell within the age range of 45-54 years. This indicates that respondents between the two age ranges are still very agile and full of strength to carry out necessary operations in cocoa production. This finding agrees with Amos (2007) [6] that an average cocoa farmer in Ondo State is old. The gender distribution of cocoa farmers in the study area indicates that 94% of the respondents are males while 6% are females. Reasons for this type of distribution may be attributed to the fact that women are mostly involved in post-harvest activities like breaking of pods and drying. This agrees with the study of Babatunde (2008) [7] who reported that majority of those that practice agricultural production are males. About 94.8% of the total respondents were married, 2.6% were single while respondents that are widowed constitute 1.7% of the total respondents in the study area. The marital status distribution in the study area indicates that majority of the respondents were married. This is probably because of the need for family labour to be used for farming activities. The educational level among the cocoa farmers revealed that respondents that completed secondary school education constituted 41.4% of the total respondents, 28.4% of the respondents' attempted secondary education, 11.2% of the respondents completed primary education while only 8.6% of the total respondents has tertiary education. Reasons for this high post primary educational level among cocoa farmers in the study area might be attributed to the generally high level of education in Ondo State. With a minimum household size of 3 and maximum of 19, the mean household size was 7 and the minimum household size range of less than 5 constitutes 12.1% of cocoa farmers while 74.1% of the households sampled have a size of between 5 and 9 members and household size between 10 and 14 constituted 12.1% of the respondents. The household members will serve as sources of labour since 74.1% of household sampled had between 5 and 9 members which will enhance increased production.

The distribution of respondents by their primary occupation in the study area. The table reveals that 75% of the total respondents in the study area have no primary occupation apart from farming. However, 10.3% of the respondents are artisan while 9.5% of the respondents are civil servants and 5.2% of the respondents are traders. The distribution of respondents by their secondary occupation in the study area. The table revealed that 57.8% of the total respondents in the study area have no secondary occupation. However, 25% of the respondents are farmers while 11.2% of the respondents are artisans and 3.4% of the respondents are drivers. The farming experience distribution of respondents in the study area. The mean farming experience was found to be 31.1. It was also revealed table that 31% of the respondents in the study areas have 30 to 39 years of experience, while about 24.1% and 15.5% of the respondents had between 20 to 29 years and 40 to 49 years farming experience respectively. This indicated that larger proportions of the respondents are experienced cocoa farmers and this is expected to have a positive impact on their production level. The farm size distribution among cocoa farmers in the study area. The mean of the farm size was found to be 6.62 hectares. 48.3% of the cocoa farmers had farm size of 5.99 hectares and below, 37.9% of the respondents had farm size ranging between 6 to 10 hectares, 7.8% of the respondents had farm size of 11-15 hectares while 6% of the respondents had farm size of 16 hectares and above. This result agrees with Olayide and Heady (1982) [9] that classified small-scale farms as those that range from 0.10 ha to 5.99 ha holdings. The land ownership type distribution among respondents in the study areas. The table revealed that direct purchase constituted about 84.5% of the land ownership type of the study area, communal constituted 8.6% while farmers who got their farm land through rent/lease constituted 6.9% of the total respondents. The findings revealed direct purchase ownership is the major method of acquiring cocoa plantations in the study area. The distribution of respondents by sources of labour in the study area. Two major categories of labour sources were identified in the study area. The first category consisted of those that make use of family labour only and it constituted 4.3% of the total respondents. The last category of labour source is those that utilized hired labour for their cocoa farming activities which constituted 95.7% of the total respondents. This implied that respondents incurred more labour cost which increases their total cost and would lead to decrease in their profit.

**Table 1: Socio-economic characteristics of respondents**

Age	Frequency	Percentage (%)
25-34	1	9.0
35-44	15	12.8
45-54	36	31.0
55-64	42	36.2
≥65	22	19.0
<b>Total</b>	<b>116</b>	<b>100.0</b>
<b>Mean</b>	<b>57.4</b>	
<b>Gender</b>		
Female	7	6.0
Male	109	94.0
<b>Total</b>	<b>116</b>	<b>100.0</b>
<b>Marital Status</b>		

Single	3	2.6
Married	110	94.8
Separated	1	0.9
Widowed	2	1.7
<b>Total</b>	<b>116</b>	<b>100.0</b>
<b>Educational Level</b>		
No formal education	8	6.9
Attempted primary school	4	3.4
Completed primary school	13	11.2
Attempted secondary school	33	28.4
Completed secondary school	48	41.4
Tertiary	10	8.6
<b>Total</b>		
<b>Household</b>		
<5	14	12.1
5-9	86	74.1
10-14	14	12.1
15-19	2	1.7
<b>Total</b>	<b>116</b>	<b>100.0</b>
<b>Mean</b>	<b>7.0</b>	
<b>Primary Occupation</b>		
Farming	87	75.0
Trading	6	5.2
Civil Service	11	9.5
Artisan	12	10.3
<b>Total</b>	<b>116</b>	<b>100.0</b>
<b>Secondary Occupation</b>		
<b>No secondary occupation</b>	67	57.8
Farming	29	25.0
Trading	3	2.6
Civil Service	13	11.2
Artisan	4	3.4
<b>Total</b>	<b>116</b>	<b>100.0</b>
<b>Year of Farming Experience</b>		
≤ 9	2	1.7
10-19	17	14.7
20-29	28	24.1
30-39	36	31.0
40-49	18	15.5
≥50	15	12.9
<b>Total</b>	<b>116</b>	<b>100.0</b>
<b>Mean</b>	<b>31.1</b>	
<b>Farm Size</b>		
<6	56	48.3
6-10	44	37.9

11-15	9	7.8
>15	7	6.0
<b>Total</b>	<b>116</b>	<b>100.0</b>
<b>Mean</b>	<b>6.62</b>	
<b>Land Ownership</b>		
Direct Purchase	98	84.5
Communal	10	8.6
Rent/Lease	8	6.9
<b>Total</b>	<b>116</b>	<b>100.0</b>
<b>Source of Labour</b>		
<b>Family</b>	<b>5</b>	<b>4.3</b>
<b>Hired</b>	<b>111</b>	<b>95.7</b>
<b>Total</b>	<b>116</b>	<b>100.0</b>

Source: Field Survey, 2018

### Constraints faced by cocoa farmers

Table 2 revealed the cocoa farmers' responses based on the problems they encountered. The study shows that the farmers have constraints in terms of: illiteracy, limited access to land and capital, absence of technical assistance and services centered on cocoa production, price instability, and inaccessibility to extension services, poor road network and other constraint such as soil infertility. It was revealed from the study that the 1<sup>st</sup> ranked problems are price instability and poor road network which has the highest percentage respectively (99.1%) followed by inadequate access to land and absence of technical assistance and services catered on cocoa production with 97.4% and 92.2% respectively while inaccessibility to extension services and illiteracy were ranked 5<sup>th</sup> and 6<sup>th</sup> respectively with 33.6% and 24.1%. The implication of this is that the constraints associated with cocoa farmers' income in the study area were majorly price instability, poor road network and limited access to land while other problems such as inaccessibility to extension services and illiteracy land inheritance problem were minor problems.

**Table 2: Distribution of respondents according to the problems faced in cocoa production**

Constraints encountered by cocoa farmers	Frequency	Percentage (%)	Rank
<b>Price instability</b>	115	99.1	1 <sup>st</sup>
<b>Poor road network</b>	115	99.1	1 <sup>st</sup>
<b>Limited access to land</b>	113	97.4	3 <sup>rd</sup>
<b>Absence of technical assistance and services centered on cocoa production</b>	107	92.2	4 <sup>th</sup>
<b>Inaccessibility to extension services</b>	39	33.6	5 <sup>th</sup>
<b>Illiteracy</b>	28	24.1	6 <sup>th</sup>
<b>Perceived soil infertility</b>	20	17.2	7 <sup>th</sup>

Source: Field Survey, 2018

## CONCLUSION

The constraints encountered in cocoa production among the cocoa farmers in Ondo State, Nigeria have been studied. This study revealed that the modal age range of the respondents was 55-64 years which account for 36.2% of cocoa farmers while 94% of the farmers are male. About 94.8% of the farmers were married. About 31% of cocoa farmers had farming experience of less than 20-39 years. Also, a very large proportion (84.5%) of the respondents purchased the land they use for cocoa plantation. It has been shown that both price instability and poor road network are the major (99.1%) constraint facing the cocoa farmers, while the least constraint was soil fertility. These implied that the major constraints will affect the farmers' associated with profitability in the area. Therefore, the attention of the Nigerian Government would be needed to proffer solution to the problems of road for easy accessibility to their farms and market besides regulating the prices of cocoa products.

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