

## Effects of Customer Relationship Management on Customer Retention by Agribusiness Firms in Aba Metropolis of Abia State, Nigeria

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**Abstract:** In recent years, customer retention strategies have gained increased value among both goods and service providing firms. Although extensive researches exist on the retention and its measures and instruments, studies and research on how agribusiness firms retain their customers remain limited. Hence the purpose of this research is to examine the effects of customer relationship management (CRM) on customer retention by agribusinesses in Aba Metropolis of Abia State. To achieve the aim of this study, fourteen agribusiness firms were randomly selected and from each firm, two staff and five customers were randomly selected. A total of 98 respondents were therefore used for the study. Data was collected from both primary and secondary sources. Primary data was collected using a well structured questionnaires designed for the respondents. The data was analyzed quantitatively using descriptive statistics (means and standard deviations) and binary logit regression analyses. The results of the analyses showed that CRM strategies play major role in customer retention and there are effective CRM strategies agribusiness firms use that are acknowledged by customers that has encouraged their retention in the various firms. More so, the results obtained showed that certain extents of these strategies of CRM were helpful in customer retention; however certain challenges facing these agribusiness firms were identified. Some socioeconomic characteristics of the customers were found as factors that could affect customer retention ( $p < 0.05$ ), on the contrary, the overall effect of the socioeconomic characteristics of customers and firms were found not to have any significant effect on customer retention ( $p < 0.05$ ). The study concludes that effective CRM strategies are valuable tools for customer retention. The incorporation of the findings of this research work in CRM strategies would serve as competitive edge to attract and retain potential customers by agribusiness firms.

**Key words:** Customer Retention • Customer Relationship Management and Agribusiness Firms

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### INTRODUCTION

Today, businesses follow different marketing strategies to survive in the highly competitive world by identifying, acquiring and retaining most important and economically viable customers as well as developing ongoing and long-lasting relationship with them, [1]. A business that wants to succeed in today's global competitive market, where customers are empowered and brand loyalty erosion is increasing, will have to move to customer relationship management (CRM). Customer relationship management enables organizations to provide excellent real-time customer service through the effective use of individual account information [2]. This requires a

more complex approach. Organizations need to investigate customer needs and build relationships with both existing and potential customers [3].

Winner, [4], noted that in a competitive environment, customer relationship management is critical to a company's profitability and long-term success. To become so customer-focused, all managers, professionals and executives of marketing as well as employees of the organization must understand how to build profitable relationship with each customer and to make managerial decisions every day designed to increase the value of both the company and the customer that will grow their value from the customer-based strategy, [5]. The broad application of CRM has led to a multitude of definitions.

[6], defined CRM as “an enterprise-wide commitment to identify the individual customers of an organization and to create a relationship between the organization and these customers as long as the relationship is mutually beneficial. Customer Relationship Management evolved from organization process such as relationship marketing (RM) and increased emphasis on improved customer retention through effective management of customer relationships. The aim of customer relationship management is to establish long-lasting relationships with the most important customers and generate increased customer satisfaction, loyalty and retention.

Roger [1], observed that developing a better understanding of existing customers allows companies to collaborate, respond and communicate more effectively to significantly improve retention rates of their customers. Currently, various companies begin to establish their networks to new as well as existing customers to increase ongoing long-term customer satisfaction, retention and loyalty. To be able to maintain this, some companies engage in competition by implementing the principles of relationship marketing via strategic and technology-based customer relationship management applications. Customer Relationship Management is an important element of organization which helps them assess customer satisfaction, loyalty, retention and profitability in terms of repeat purchases, money spent and longevity [7].

The origin of CRM is from relationship marketing that is aimed at improving long run profitability by shifting from transaction-based marketing that stresses new customers to customer retention with effective management of customer relationships [7]. According to Chen and Popovich, [7], CRM is a more complex and sophisticated application that mines customer data pooled from all customer touch points, a single and comprehensive view of a customer while uncovering profiles of key customers and predicting their purchasing patterns. It also involves acquiring a better understanding of existing customers, which in turn allows organizations to cooperate, respond and communicate more effectively to improve customer satisfaction and retention as much as possible [1].

The increase in competitive intensity is forcing marketers to be concerned with customer retention since retaining customers is less expensive and perhaps, has a more sustainable competitive advantage than acquiring new customers. As several studies have indicated, marketers are realizing that it costs less to retain customers than to compete for new ones [8]. For instance, it has been established that retention of five additional

percent of the company’s customers can increase profits by almost one hundred percent [9]. The goal of CRM is to create an effective customer relationship as much as possible and develop future competences within the company.

Daniel and McDonald, [10], viewed agribusiness as the total operations involved in the manufacture and distribution of farm supplies, production activities on the farm, storage, processing and distribution of farm commodities and items made from them. They went on to add that agribusiness involves three sectors which include:

- The input sector which deals with the supply of inputs required by the farmers for raising crops, livestock and other allied enterprises. Usually, the inputs in this regard include seeds, fertilizers, chemicals, marketing, fuel etc.
- The farm sector which aims at producing crops, livestock and other products.
- The product sector which deals with various aspects like storage, processing and marketing the finished products so as to meet the dynamic needs of consumers.

Therefore, agribusiness is the sum of all the operations or activities involved in the business of production and marketing of farm supplies and farm products for achieving the targeted objectives. Agribusiness in the context of this study will focus on the input sector that deals with various aspects of supply of inputs required by farmers for raising crops, processing and marketing of finished agricultural product in the study area.

According to Tores [11], developing effective marketing strategies and anticipating the needs of current and future customers is one of the most significant challenges faced by agribusiness firms. The drastic and rapid changes in the structure of farm sector compel agribusiness firms to continually adapt their marketing strategies in order to remain competitive and to attract and retain customers. Baran [12], noted that agribusinesses are experiencing a trend towards closer relationship between buyers and sellers of agricultural products in a bid to cope with the uncertainty of environmental changes due to globalization, rapid technological advances and increasing consumer power. He went on to state that agribusiness firms strive to achieve competitive advantage by moving away from the adversarial buyer-seller interactions towards more cooperative long-term

relationships that create value and are difficult to duplicate. Value is created when the competitive abilities of the two trading partners are enhanced by being in the relationship. It has become increasingly evident that for agribusinesses to survive and grow, they must begin to meet and exceed the expectations of their most important assets- their customers. It is only through the process of understanding the customers' needs and meeting those needs that agribusinesses can begin to keep and maintain these customers. Winner [4], is of the opinion that customer satisfaction and retention is all about keeping the customer happy with the product and service offering provided. Customers do not buy what companies sell but rather what those goods and services can do for them [13].

Understanding customers' problems and providing solutions too, help to make customers profitable to the agribusiness firm and make them feel good about the transactions as well [11]. As agribusiness firms seek to fulfill the expectations of their specific customers they can concentrate on providing consistent values that will increase the relationship and retention of customers thereby increasing their chances of more purchases which will also improve the economic conditions of the business.

**Statement of the Problem:** Customer Relationship Management is a business strategy which leads to the value for customers, anticipating and managing their expectations and demonstrating the ability of and the responsibility to satisfy their needs [14]. Qualities of services are critical factors for the success of any business [15]. As Rootman [3], points out, enterprises exist because they have a customer to serve. The key for the achievement of sustainable advantage lies in delivering high quality service that result in satisfied customers [16].

Sharma and Patterson [17], argue that it is difficult for customers to evaluate professional services and the benefits of making such investments. Consequently, customers need to place higher confidence on professional service providers. The central characteristic of a professional service is that it is a product of the interaction between the providers and the clients Thakor and Kumar, [18]. Hence, it becomes essential for firms to identify factors useful in service conception, provider selection and customer behaviour prediction in such ways that are satisfactory for both parties involved in the relationship. As a result, if one wants to study the success and failure determinants of any relationship, the

study of both partners' behaviour in the interactive process is necessary.

One of the main characteristics of a professional service is the high degree of interaction that exists between the provider of goods/services and the customer and also the high degree of uncertainty in terms of what is actually going to be delivered Lowendahl, [19]. Maister [20], in Lowendahl [19], argues that there are two major factors that make services interesting to look at. The first factor is that quality services involve a high degree of customization. This means that traditional management principles such as, for instance, standardization and supervision are difficult to apply. The second factor is the strong component of face-to-face interaction with the client, which leads to major challenges in quality assurance and requires very special skills of top performers.

Jobber [21], argues that not all service encounters have the potential for a long term relationship and the service providers must raise the following questions before applying any relationship marketing activities: "does the customer have an ongoing or periodic desire for the service? Does the customer have any other alternatives? It is important for service providers to understand why customers stay or leave and also what creates value for them. In other words, firms need to identify those customers with whom they wish to create long term relationships.

Winer [4], argues that in building successful relational exchanges with the customers, there is a need to understand customer behaviours and to focus on those customers who can deliver long term profits to the firm. However, no firm can hold on to all its customers and aim at full customer retention Egan, [22]. This is due to several factors; one factor is for example, the fact that in highly competitive markets, customers may switch either temporarily or permanently to another product or service. Egan, [22], succinctly reiterates this fact in the statement that firms must know when to 'cut and run'. Hence, firms are turning more and more towards seeing customer retention as a strategic tool. Further, Egan [22], defines customer retention strategies as strategies focusing on a firm's existing customers with the aim of securing a customer's loyalty over time.

Erikson and Vaghult [23], argued that in order for firms to benefit from customer relationships, they need to understand the mechanisms behind it by studying already retained customers. They further argued that however, studying already retained customers is not an easy task as customer retention is relative to a firm's specific

context. For instance, it is complicated for a firm to know when the customer should be considered as being 'retained'. In some cases, a customer is considered as retained when the customer makes repeated purchase. However; it then becomes complicated to evaluate how often this customer is expected to purchase the product or service.

As today's markets and industries are characterized by high competition, it is crucial for firms in such environments to create new ways to gain competitive advantage over competitors Morgan, Robert and Shelby Hunt [24]. Recent studies have shown that strong customer relationships may provide such competitive advantages for firms. According to Bejou and Palmer [25], for many services the essence of marketing is the development of long-term and value-laden relationships with the customers.

Despite the explosion in the practice of relationship marketing, many questions about CRM practices continue to be debated in academic journals Shugan, Byron and Anne Sharp [26]. Though most CRM practices involve special treatment of a firm's more valuable customers Fournier, Susan, Susan Dobscha and David Gen Mick [27], should firms provide special services early to increase the number of customers it attracts or later-on to enhance its ability to keep the consumers already attracted?

Most industry analysts and academics recommend that firms focus on retention rather than on acquisition Thomas, Jacquelyn, Werner Ranartz and Kumar [28]. They argue that the cost of retaining existing customers is considerably lower than the cost of acquiring new customers Hart, Christopher, James, Heskett and Earb Sasser [29]. However, systematic empirical evidence of this is meager [30]. Blattberg and Deighton [31], point out that in some industries the low intrinsic retainability of customers makes retention strategies ineffective. Little or no research has been done on the effects of CRM on customer retention in agribusiness therefore this study intends to fill this knowledge gap by answering the following research questions; what are the roles of CRM processes in customer retention in the study area? What are the effects of socio-economic characteristics of both customers and firms on customer retention? What are the effective CRM strategies and their effects on customer retention? To what extent can effective CRM lead to customer retention in the study area? What are the effects of CRM on agribusiness firms? What are the challenges of agribusiness firms in their practice of CRM in the study area?

**Objectives of the Study:** The broad objective of the study is to examine the effects of customer relationship management (CRM) on customer retention by agribusinesses in Aba Metropolis of Abia State. The specific objectives are to:

- Discuss the role of customer relationship management process in customer retention.
- Examine the effects of socioeconomic characteristics of both customers and firms on customer retention.
- Ascertain effective customer relationship management strategies.
- Determine the extent to which effective CRM can lead to customer retention.
- Ascertain the effects of CRM on agribusiness firms.
- Examine the challenges of agribusiness firms in their practice of CRM.

**Hypotheses of the Study:** The following null hypotheses were tested:

- Ho<sub>1</sub> Socio-economic characteristics of customers have no significant effect on customer retention.
- Ho<sub>2</sub> Firms characteristics have no significant effect on customer retention.

**Justification of the Study:** The study will serve primarily as a bridge and springboard for further studies in the field of customer relationship management (CRM), generally by agribusinesses, particularly agribusiness firms which have been growing rapidly. The research findings are expected to be of benefit to the corporate bodies (banks and insurance etc), academic and researchers in general.

The study will focus on the CRM practices among customers of agribusiness in Aba agricultural zone and its effects on customer retention. Therefore, this will give practitioners clues to the important tools necessary to implement a successful CRM program so as to acquire, maintain, serve and retain its customers and be profitable. The results of this work can help the managers of agribusinesses as an input to evaluate performance status of its CRM strategy and take necessary actions.

**Limitations of the Study:** The following limitations were inherent in the study. In the course of carrying out this research, the researcher was faced with the problem of regulating and tracking down the respondents because of their busy schedules. Also, the researcher was faced with time constraint and inadequate financial resources.

### **Research Methodology**

**Study Area:** The study area is Aba Metropolis of Abia State. Aba Metropolis lies within latitudes  $05^{\circ} 07' N$  and longitudes  $07^{\circ} 22' E$ . It has a population of 423,852 as of 2006 census. It lies along the west bank of the Aba River and at the intersection of roads leading to Port-Harcourt, Owerri, Umuahia, Ikot-Ekpene and Ikot-Abasi. The city is a collecting point for agricultural inputs, a major urban settlement and the commercial center in a region surrounded by small villages and towns. The indigenous people of the Aba are the Ngwa people.

Aba Metropolis is divided into two local governments areas namely: Aba south and Aba north. Aba south is the main city center and the heart beat of Abia State, south east Nigeria. Aba is made up of many villages such as: Umuokpoji Aba, Eziukwu Aba, Obuda-Aba, Aba Ukwu. The people are known for farming and trading as their major occupations. The major cash crops grown are palm produce, cocoa and rubber while food crops such as yam, cassava, plantain, banana, maize and cocoyam are produced in large quantities. Mixed farming is a very common practice among the farmers.

**Sampling Procedures:** Aba Metropolis was selected for the study because the area is a highly productive agricultural belt in the south east geo-political zone of Nigeria where agricultural products are produced and marketed throughout the year. A simple random procedure was employed in the selection of respondents. Twenty two agribusiness firms that engage in the following supply of inputs required by the farmers, storage, processing and marketing of finished agricultural products were identified during a reconnaissance survey in the area. Fourteen out of the twenty two agribusiness firms were randomly selected for the study. Two staff and five customers from each of the agribusiness firms were randomly selected for the study. A total of 98 respondents were therefore used for the study.

**Validity and Reliability Test Result:** A validity test was conducted to show how valid the result of the questionnaire would be. Fifty (50) respondents were distributed which represents fifteen (15) respondents for firms and thirty-five (35) as well for customers. After the distribution, only 10 and 30 questionnaires from the firms and customers respectively were collected as valid (40 in total). This was because some were poorly filled or not returned at all. Analyses were done with these two sets of questionnaires using the Cronbach's Alpha reliability test analysis. From the customers validity tests, section A, B,

C, D and E got their Cronbach Alpha figures as 0.854, 0.968, 0.948, 0.951 and 0.956 respectively. A total Cronbach's Alpha analysis was also done taking all the questions irrespective of section and the result was 0.933. Therefore, since the total value and the values for the section were above 0.5 (that is 50%) this study can conclude that the result of this analysis in the next chapter will be reliable. The firms validity tests, section A, B and C had Cronbach Alpha figures as 0.987, 0.859 and 0.654 respectively. A total Cronbach's Alpha analysis was also done taking all the questions irrespective of section and the result was 0.824. Therefore, since the total value and the values for the sections were also above 0.5 this study concludes that the result of the analysis is reliable.

**Data Collection:** The data for this study was obtained using primary source and the data was sourced from staff and customers of the fourteen selected agribusiness firms. Two sets of questionnaires were used for data collection. The questionnaires were developed for completion by the staff of the agribusiness firms and customers respectively. The questionnaires provided information on CRM practices of the agribusinesses, the staff perception and customers view on CRM. The questionnaires used to collect data from the customers were made up of four sections. Section A dealt with the role of CRM on customer retention, section B collected information on socio-economic characteristics of customers, section C also collected information on the effective CRM strategies and their influence on customer retention while section D dealt with information on the extent to which effective CRM can lead to customer retention. For the staff the questionnaire comprises three sections. Section A dealt with questions on socio-economic characteristics of the firm, section B was on information on the effects of CRM on agribusiness firms while section C looked at the challenges faced by these firms in their practice of CRM.

**Data Analysis:** Descriptive statistics such as means and tables were used in realizing objective (i), Objective (ii) was realized using binary Logit model while objectives (iii), (iv) and (v) were realized using Likert rating scale.

### **Model Specification**

**Likert Rating Scale:** A likert scale is a psychometric scale commonly used in questionnaires and is the most widely used scale in survey research. When responding to a Likert questionnaire item, respondents specify their

level of agreement or disagreement on a symmetric agrees, disagree scale for a series of item statements. Thus, the scale captures the intensity of their feelings. A 4-point rating scale was used in this work to determine the effective CRM strategies on customer retention; this was graded as; Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD) with corresponding values of 4,3,2 and 1 respectively. Also, a 4-point rating scale was used for determining the extent to which effective CRM can lead to customer satisfaction, customer loyalty, product repurchase and customer retention and the scaling was graded as Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree with corresponding values of 4,3,2 and 1 respectively and finally a 4-point rating scale was as well used for determining the challenges and benefits of agribusiness firms in their practice of CRM and the scaling was graded as; Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD) with corresponding values of 4,3,2 and 1 respectively.

The mean score of respondents based on the 4-point rating scale was computed as;

$$\frac{4 + 3 + 2 + 1}{4} = \frac{10}{4} = 2.50$$

Based on this, any mean score below 2.50 was taken as disagree while those items with mean values of 2.50 were considered as agree. A mean score greater than or equal to 2.5 indicates a strong customer response.

**Binary Logit Model:** In order to answer the two hypotheses in this study, the study adopted Logit models which were used to analyze data sets to reflect whether a customer is retained or not. The model measured the effects of socio-economic characteristics of customers and firms' characteristics on the possibility of the customer being retained by the agribusiness firm or not being retained. The specifications helped us to define a probability to monitor being retained or not. The study therefore states its logit model as follows;

$$\text{Logit}P_x = \log \left[ \frac{P(Y=1)}{1-P(Y=1)} \right] = \sum_{k=1}^k \alpha_k X_k \quad (3.1)$$

The model above shows that there is a linear relationship between the logit  $p_x$  and the vector of explanatory variables X. Therefore, the study can state the probability of a customer being retained as thus;

$$Pr(Y=1) = \frac{\sum_{k=1}^k \alpha_k X_k}{\sum_{k=1}^k \alpha_k X_k} \quad (3.2)$$

While the probability of not being retained (which is 1 minus the probability of being retained) is specified thus;

$$Pr(Y=0) = \frac{1}{\sum_{k=1}^k \alpha_k X_k} \quad (3.3)$$

The logit model categorized customers into retained and not retained based on the questions in the questionnaires (that is for customers and firms) which permitted the respondents to tick whether the firm they patronize have retained them or not and whether the firm thinks it has retained most of her customers or not respectively for the hypotheses one and two respectively and use it as the dependent variable for the two hypotheses in this study.

**Model Specification for Hypothesis One:** Socio-economic characteristics of customers have no significant effect on customer retention.

$$\text{Logit}(P) = \ln \left[ \frac{P}{1-P} \right] = \alpha_0 + X_1 + X_2 + X_3 + X_4 + X_5 + X_6 + X_7 + X_8 + \epsilon \quad (3.4)$$

where,

P = Probability of a customer being retained (P=1) or not being retained (P=0), based on the previous question, can you consider yourself as a customer that has been involved in regular and repeated transactions with the firm since you were first introduced to it?

- X<sub>1</sub> = Age of the customer (years)
- X<sub>2</sub> = household size (number of persons)
- X<sub>3</sub> = Education level of customers (educated)
- X<sub>4</sub> = Business size (large/small)
- X<sub>5</sub> = Gender of customers (male/female)
- X<sub>6</sub> = Income (Naira)
- X<sub>7</sub> = Marital status (single/married)
- X<sub>8</sub> = Marketing experiences (years in business)

**Model Specification for Hypothesis Two:** Firms' characteristics have no significant effect on customer retention.

$$\text{Logit}(P) = \ln \left[ \frac{P}{1-P} \right] = \alpha_0 + X_1 + X_2 + X_3 + X_4 + X_5 + X_6 + X_7 + X_8 + \epsilon \quad (3.5)$$

Where,

P = Probability of a customer being retained (P=1) or not being retained (P=0), based on the firms perception on retaining most of her customers or not

X<sub>1</sub> = Location of the firm (beginning/end, center or outskirts)

X<sub>2</sub> = Age of the firm (years)

X<sub>3</sub> = Number of employees by the firm

X<sub>4</sub> = Number of products produced by the firm

X<sub>5</sub> = How do the firm reach out to customers? (Adverts, phone calls, emails or text messages)

X<sub>6</sub> = Number of times customers purchase monthly

X<sub>7</sub> = Education level of the manager.

While, the dependent variable in the first hypothesis was captured with question number 6, under consumer personal data, which is, can you consider yourself as a customer that has been involved in regular and repeated transactions with the firm since you were first introduced to it? The customers that ticked “Yes” were the ones retained while the ones on “No” were the ones not retained. Also, for hypothesis two, firms who ticked “Yes” that they have retained most of her customers over the years would be taken as retained while the ones that ticked “No” were seen as not retained and the values were used as the dependent variable for the second hypothesis. Hence, the ones that accepted to be retained were denoted with one while the ones (1) that said no were denoted with zero (0), this gave the 1 and 0 in the binary logit model for this study.

The reason for the adoption of this model is based on the nature of both the study and data to be collected which the dependent variable is expected to be binary, that is a customer being retained or not retained. Also, this approach has been used by many such as [32,33 and 34] and others to produce satisfactory result.

The logit model was used to estimate the two hypotheses in this study. The study adopted a 5% level of significance in testing the hypotheses. What this means is that for a variable (that is socio-economic characteristic) to be significant, it must be less than 0.05 level of probability.

## RESULTS

**The Role of Customer Relationship Management Process in Customer Retention:** Data in Table 1 shows the role of customer relationship management in customer retention. All the items have its mean (2.9-3.4) higher than the stated 2.5 cut-off mean. The standard deviations (0.54-0.93) of the posed questions were all less than 1.0 and by far less than the mean. This is an indication that almost all the respondents’ individual scores about their opinion and perception on the respective questions did not differ much from the mean score. With the standard deviation supporting the mean values found to be above the cut-off mean, the mean of the result should be accepted. This finding could imply that good customer relationship management plays a key role in a firm retaining her customers.

Table 1: Showing the Role of CRM in Customer Retention

Item description	N	Mean	Std. Deviation
Do you agree that this firm values you and welcomes your complaints readily?	70	3.3714	.93517
Do you agree that management shows by its actions that everything begins and ends with customers?	70	2.9000	.59344
Do you agree that the firm has formal complaints system which covers both written and oral complaints?	70	3.3714	.85417
Do you agree that you were given an opportunity to let the management know certain pieces of information regarding what you deem to be improper in the system?	69	2.9420	.59121
Do you agree that you talk freely with management about the quality, quantity and many other issues about their products/ and or the firm?	70	3.3714	.81953
Do you agree that you receive birthday wishes and other good will messages from your firm regularly?	70	2.9429	.56172
Do you agree that your firm collected your profile when you first started business with them?	70	3.4000	.76896
Do you agree that you receive one or more extra package(s) as bonus and other free gifts depending on your purchase quantity?	68	2.9706	.54555
Do you agree that the incentive(s) always entice you to come back for repurchase?	70	3.4000	.76896
Do you agree that the few problems you encounter with firms are handled quickly?	70	2.9286	.59761
Do you agree that you get good and trusted products from this firm?	70	3.3857	.78561
Do you agree that availability of the products enhances their selling power and customer retention?	70	2.9429	.56172
Do you agree that prompt attention is given to customers always?	70	3.3571	.79920
Valid N (listwise)	67		

Source: Field survey 2014

Some of the roles played by CRM identified were valuing customers complaints, management making their customers have the perception that they the customers are their priority, formal complaints system which covers both written and oral complaints for customers, sending congratulatory messages to customers like on their birthdays, given them prompt attention always, giving the customers bonuses among others (Table 1 above). From these roles, one can infer that such roles and more need to be identified and adopted by agribusiness firms for effective CRM thus enable customer retention.

**The Effects of Socioeconomic Characteristics of Both Customers and Firms on Customer Retention:** Tables under table 2 (that is 2.1 to 2.5). Based on the analysis, table 4.2.1 shows the codes given to the binary dependent variable which when a customer is not retained it gave it zero (0) and when retained it assigned it one (1) as this study stated in the previous chapter where the binary logit model was formulated.

Table 2.1: Showing the Dependent Variable Encoding

Original Value	Internal Value
No	0
Yes	1

Table 4.2.2 below shows the classification table. The overall percentage must be greater than cut off value of 0.500 (check it under table 4.2.2) when converted to probability for the case to be classified as yes (that is customer being retained) category, otherwise the reverse becomes the case. Specifically, the probability of the overall percentage of 0.884 is higher than the cut value of 0.500, the case could be addressed as customer being retained category case and could be used for further analysis on customer retentions.

Table 2.2: Showing the Classification Table<sup>a</sup>

		Predicted			
		-----			
		Can you consider yourself as a customer that has been involved in a regular and repeated transactions with the firm since you were first introduced to it?			
		-----			Percentage
Observed		No	Yes		Correct
Step 1	can you consider yourself as a customer that has been involved in a regular and repeated transactions with the firm since you were first introduced to it?	no	7	6	53.8
		yes	2	54	96.4
Overall Percentage					88.4

a The cut value is.500

To look at how the variations in dependent variable were by the model (usually done with R<sup>2</sup> in linear multiple regression), the study will focus on table 4.2.3. Based on table 4.2.3 below, the linear multiple regression R<sup>2</sup> is replaced in logit regression with either Cox & Snell R Square or Nagelkerke R Square. These two methods explain the variations of the dependent variable attributed to the independent variables in the model (though they often have lower values than the linear R<sup>2</sup> hence are more like the pseudo R<sup>2</sup> values. Specifically for this study, since the Nagelkerke R<sup>2</sup> is the modified version of Cox & Snell R<sup>2</sup>, the study adopts the former and posits that 48.9% of the variations in the retention of a customer by firms were explained by the selected socio-economic characteristics of the customers (Table 4.2.3).

Table 2.3: Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square <sup>1</sup>
	41.842 <sup>a</sup>	.303	.489

a. Estimation terminated at iteration number 20 because maximum iterations has been reached.

To ascertain the behavior of the independent variable, the study looked at table 4.2.4 which captures specifically the variables in the equation. One could see from that table that all the variables (at its various categorical capacities were not significant except experience of the customer) as their significance value were greater than the 0.05 adopted level of significance, which means that the effect of these socio-economic characteristics on customer retention were not significant. The only significant predictor as posited below was experience of the customer. Specifically, table 4.2.4 shows that the odds of a customer being retained is 20.254 (check the Exp(B) column under experience on table 4.2.4 below) times greater for people with experience of between 5 to 10 years to those with experience of 1 to 4 years. Furthermore, B column in still table 4.2.4 below shows whether there is correlation between the predictors and the dependent variable. Based on the table, increasing age, household size, business size, how often income is received and experience of the customer were associated with an increasing likelihood of customers being retained. While, an increasing education and gender disparity decreases the likelihood of a customer being retained.



Table 2.4 – Showing Socioeconomic Characteristics of Customers that could have Effect on Customer Retention

Item description	B	Sig.	Exp(B)
Step 1 <sup>a</sup>			
Age		.288	
age(1)	22.951	.999	9275046242.319
age (2)	3.795	.059	44.484
age (3)	2.299	.207	9.968
household size (hhsz)		.753	
Household size(1)	.864	.497	2.373
Household size(2)	.198	.900	1.218
Education qualification (eduqua)		.686	
Educational qualification (1)	.371	1.000	1.449
Educational qualification (2)	-17.097	1.000	.000
Educational qualification (3)	-18.986	1.000	.000
Educational qualification (4)	-18.896	1.000	.000
business size (bizsize)		.900	
Business size(1)	21.883	1.000	3187832086.824
Business size (2)	.488	.647	1.629
gender(1)	-1.331	.198	.264
income nature (1)	1.503	.137	4.497
experience		.036	
experience (1)	3.008	.011	20.254
experience (2)	2.576	.066	13.142
Constant	14.172	1.000	1428203.033

Source: Field survey 2014

Finally, table 4.2.5 below shows whether the overall effect of the socio-economic characteristics is significant or not on customer retention. The chi square value of 4.157 and p value (0.843) greater than 0.05, means that the null hypothesis stands, that is, the socioeconomic characteristics of customers has no effect on their retention. Therefore, this study concludes that the socioeconomic characteristics of customers have no significant effect on customer retention.

Table 2.5: Hosmer and Lemeshow Test

Step	Chi-square	Df	Sig.
1	4.157	8	.843

**The Effect of Firms Characteristics on Customer Retention:** Table 3.1 below shows the coding for the dependent variable where customer being retained was assigned one (1) while not retained was assigned zero (0).

Table 3.1: Dependent Variable Encoding

Original Value	Internal Value
No	0
Yes	1

Table 3.2 presents the classification showing the overall percentage value of 94.4% which when converted to probability it becomes 0.944. This 0.944 is greater than the 0.500 cut value, hence customer being retained becomes the reference category for the analysis.

Table 3.2: Showing Classification Table<sup>a</sup>

Observed		Predicted		Percentage Correct
		No	Yes	
Step 1	Can you say that this firm has retained most of her customers over the years?	No	Yes	
	Can you say that this firm has retained most of her customers over the years?	4	1	80.0
	yes	0	13	100.0
Overall Percentage				94.4

a. The cut value is .500

November 30, 2006 Table 3.3 below captures the model summary (using Nagelkerke R<sup>2</sup> based on what this study stated in hypothesis one above) the table shows that 32.6% of the variations in a customer being retained were explained by the independent variables (firms socioeconomic characteristics).

Table 3.3: Model Summary

Step-2	Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	2.773 <sup>a</sup>	.242	.326

a. Estimation terminated at iteration number 20 because maximum iterations has been reached.

Table 3.4 (variables in the equation), shows under the significance column that none of the socio-economic characteristics of the firm have any significant impact on the firm retaining her customers. This is evident as all the variables used have their respective significance to be above 0.05, hence were not significant.

Table 3.4: Showing Socioeconomic Characteristics of Firms that could have Effect on Customer Retention

Item description	B	Sig.	Exp(B)
Step 1 <sup>a</sup>		1.000	
Location		1.000	
location(1)	-21.203	1.000	.000
location(2)	-21.203	1.000	.000
Age		.087	
age(1)	63.609	.099	4215999655045683000000000000.000
age(2)	42.406	1.000	2609758780028397600.000
age(3)	63.609	.979	4215999655045773400000000000.000
age(4)	63.609	.795	4215999655045683000000000000.000
age(5)	21.203	.755	1615474726.566
age(6)	63.609	.764	4215999655045743000000000000.000
age(7)	42.406	.854	2609758780028378600.000
Number of employee		1.000	
Number of employee(1)	.000	1.000	1.000
Number of employee(4)	.000	1.000	1.000
Reach out means		1.000	
Reach out means(2)	.000	1.000	1.000
Constant	-21.203	.999	.000

Source: field survey 2014

Finally, using table 3.5 below to know whether the overall effect of the socioeconomic characteristics was significant or not on customer retention. Focusing on the significance levels which have a high value of 0.998 which is higher than the 0.05 maximum significance level, it therefore shows that they were not significant. Hence these studies accept the null hypothesis and conclude that the socio-economic characteristics of firms have no significant effect on them retaining their customers.

**Effective Customer Relationship Management Strategies:** As could be seen in table 4.4 below, the mean (2.87-3.38) in all the items were higher than the 2.5 cut-off mean meaning that the respondents accepted that the customer relationship management strategies of the firm they buy from were effective. This result is further supported by the standard deviations (0.54-0.84) which are less than 1.0 and by far less than the mean showing that the mean could be accepted.

Table 3.5: Hosmer and Leme show Test

Step	Chi-square	Df	Sig.
1	2.050	2	.998

Table 4.4: Identified Effective Customer Relationship Management Strategies

Item description	N	Mean	Std. Deviation
Do you agree that the firm updates customer profile often?	70	3.3857	.83913
Do you agree that the approaches customers with a mix of innovative products and service opportunities?	70	2.9286	.54697
Do you agree that the firm chooses from the target customer for the first wave of CRM?	70	3.2000	.84442
Do you agree that the firm keeps track of customer behavior and needs over time?	70	2.9143	.63114
Do you agree that the firms treat each customer differently and uniquely?	70	3.2857	.80114
Do you agree that the values its customers and welcomes complaint?	70	2.8714	.58783
Do you agree that management shows that everything starts and ends with the customer?	70	3.3000	.80488
Do you agree that the firm rewards customers and gives concession since they are continuously buying from the firm?	70	2.9000	.61738
Do you agree that customer expectations are met by all standards?	70	3.2571	.81090
Valid N (listwise)	70		

Source: Field survey 2014

These strategies identified by the respondents include updating customers' profile, innovations, treating each customer uniquely, valuing customers and their complaints, meeting the expectation of customers, giving gifts and concessions to customers among others. This could imply that agribusinesses need to identify and apply effective strategies in their CRM approaches in our today competitive business environment in order to achieve the purpose of customer retention.

**The Extent to Which Effective Crm Can Lead to Customer Retention:** Based on table 4.5 below, it could be posited that to a great extent, effective CRM can lead to customer retention. This is because the means (2.97-3.32) of the items used to address the objective were higher than the mean cut-off of 2.5 and the standard deviations (0.63-0.88) were lower than 1.0 and by far lower than the mean. Hence, for businesses to retain their customers, they need to work on their customer relationship so that it will be customer centric and friendly.

Table 4.5: Showing the Extent to Which Effective CRM Can Lead to Customer Retention

Item description	N	Mean	Std. Deviation
Do you agree that you excellent customer care which gives satisfaction?	70	3.1857	.83913
Do you agree that the products always meet your expectation?	70	2.9714	.63637
Do you agree that if you were given the opportunity, you will recommend your colleague to buy from the firm because of the quality services and products they provide?	70	3.3286	.77500
Do you agree that the firms charges are relatively low compared to others that manufacture the same product?	70	3.0286	.65875
Do you agree that you were not intending to leave the firm?	70	3.2571	.84589
Do you agree that customers enjoy buying from the firm?	70	2.9714	.74155
Do you agree that customers purchase their products/goods from the firm always?	70	3.1857	.88944
Do you agree that the firm services towards customers are wonderful?	70	3.0000	.74211
Do you agree that CRM is the core policy for the existence of the firm?	70	3.2571	.86285
Valid N (listwise)	70		

Source: Field survey 2014

**The Effects of Crm on Agribusiness Firms:** Evidence from table 4.6 below shows that customer relationship management affects agribusiness firms. This is possible because the means (3.17-3.75) of the items used to tackle the objective were higher than the 2.5 mean cut-off point and their standard deviation (0.39-0.47) were by far less than the mean as none of the standard deviations was up to one.

Table 4.6: Showing the Effects of CRM on Agribusiness Firms

Item description	N	Mean	Std. Deviation
Do you agree that customer relationship management increases sales and profitability of the firm?	28	3.7500	.44096
Do you agree that customer relationship management increases retention and loyalty of customers?	28	3.1786	.39002
Do you agree that customer relationship management improves services without increasing the cost of such services?	28	3.7143	.46004
Do you agree that customer relationship management improves the firm ability to retain and acquire customers?	28	3.2143	.41786
Do you agree that customer relationship management increases the firm capacity in terms of increase in production, revenue and also brings about an increase in the number of customers?	26	3.6923	.47068
Valid N (listwise)	26		

Source: Field survey 2014.

Therefore the above result could imply that for an agribusiness to grow in terms of her production, number of customers, income, sales, profitability, chances of retaining their customers and reduce their cost of production, it must improve and make its customer relations effective. The findings here corresponds to the findings of Polous [35], who posited that agricultural firms benefits of successfully

from a well implemented CRM through increased sales, increased profitability, increased expansion of product, increased customer satisfaction and loyalty, increased employee satisfaction, reduced costs, increased retention of the existing customer base in time of economic uncertainty, increased chances of obtaining new customers among others.

**The Challenges of Agribusiness Firms in Their Practice of Crm:** As could be seen in Table 4.7, the means (3.14-3.82) of the various items used for this objective were higher than the cut-off mean of 2.5

and their standard deviations (0.35-0.62) were less than these mean which shows that the respective means were higher than their respective deviations from the true mean.

Table 4.7: The Challenges of Agribusiness Firms in Their Practice of CRM

Item description	N	Mean	Std. Deviation
Do you agree that customer relationship management is too expensive to run?	28	3.8214	.47559
Do you agree that poor implementation of customer relationship management is often the cause of losses in the volume of customers?	28	3.1429	.35635
Do you agree that customer relationship management system requires continuous maintenance and information?	28	3.7500	.44096
Do you agree that irregular customer profile hinders CRM practice?	28	3.2500	.44096
Do you agree that customer relationship management are so complex for agro based firms?	28	3.6429	.62148
Do you agree that customer relationship management coordination is difficult to sustain?	28	3.1429	.52453
Do you agree that customer relationship management is labour intensive and requires staff that can tolerate customers?	28	3.6429	.48795
Do you agree that not every firm has the expertise or skill to manage customer relationship management very effectively?	28	3.2500	.44096
Do you agree that customer relationship management requires a lot of time which most employees cannot afford?	27	3.6667	.62017
Valid N (listwise)	27		

Source: Field survey 2014

Hence this study concludes based on table 4.7 that high cost, poor implementation, irregular customer profile update, information unavailability, complex nature of CRM, difficulties in CRM coordination, labour-intensive nature of CRM, scarcity of resources to employ experts to handle CRM and its time requirement were the challenges agribusiness firms face in their practice of customer relationship management. The findings here contradict that by May *et al.*, (2007), [36], that discovered that lack of strategic focus and incomplete data were the major challenges facing agribusiness firms in their customer relationship management practice.

This study investigated the effects of customer relationship management on customer retention by Agribusiness firms in Aba metropolis of Abia State, Nigeria. The study developed six objectives which were structure to; determine the role of customer relationship management process in customer retention, to examine the effects of socioeconomic characteristics of both customers and firms on customer retention. This second objective was transformed into two hypotheses which tried to ascertain whether socio-economic characteristics of customers and Agribusiness firms in Aba metropolis of Abia State have effects on customer retention. The third objective was to ascertain effective customer relationship management in agribusiness firms in Aba metropolis. While the fourth one was to determine the extent to which effective CRM can lead to customer retention. The fifth objective tried to ascertain the effects of CRM on agribusiness firms. And finally, the study

examined the challenges of agribusiness firms in their practice of CRM.

The study adopted mean and standard deviation with the mean-cut of point set at 2.5 to answer the five objectives that has no hypothesis (objectives 1, 3, 4, 5 and 6). While a binary logistic regression was used for objective two which captures the two hypotheses in this study. The binary logistic model was chosen over others due to the binary nature of the dependent variables for the dependent variables (customer being retained or not being retained from the point of view of customers and the firm).

The study discovered that the roles of customer relationship management process in customer retention includes valuing of the customers complaints, making their customers priority in their decision making, formal complaints system which covers both written and oral complaints for customers, sending congratulatory messages to customers like during their birthdays and other events, given them prompt attention always, giving the customers bonuses among others. Experience of a customer was found to have effect on customer retention however, no explanatory variable of the firms was found to have effect on customer retention. On the overall effect of the socioeconomic characteristics of both customers and firms on customer retention, this study accepted the null hypotheses which posited that both customer and firms' socio economic characteristic have no significant effect on customer retention in the agribusiness in Aba metropolis.

Furthermore, it was identified that effective customer relationship management strategies of Agribusiness firms in Aba metropolis use were frequent updating of customer profile, innovations, treating each customer uniquely, valuing customers and their complaints, meeting the expectation of customers, making the customers see themselves as “the king”, giving them gifts and concessions and many more. On determining the extent to which effective CRM can lead to customer retention, the study discovered that to a very high extent, an effective customer relationship management can bring about an increase in customer retention in the agribusiness firms in Nigeria.

More so, the study discovered that for an agribusiness firms’ to grow and as well survive in our competitive business environment of today in relation of quantity of production, number of customers, income, sales, profitability and chances of retaining their customers and reducing their cost of production, it must improve and make its customer relations effective. Furthermore, this study discovered some of the challenges facing agribusinesses in Aba metropolis of Abia State in CRM application. This challenges include its perceived high cost, poor implementation, irregular customer profile update, information unavailability, complex nature of CRM, difficulties in CRM coordination, labour-intensive nature of CRM, scarcity of resources to employ experts to handle CRM and its time demanding nature.

### **CONCLUSION**

This study explored the effect of customer relationship management on customer retention by agribusiness firms in Aba metropolis of Abia State Nigeria. It emphasizes on how the customers are treated and whether such treatment fosters their long term commitment in patronizing the firms that is customer retention.

The rationale of customer relationship management is to offer what the customer requires, not what the organization can make or has to offer. It has come to a strategic stage everyone in agribusiness firms should place customers at the leading position of their minds. In the face of the competitive marketplace of today, customer retention presents increased profitability and sustainable protection against competitive inroads. To achieve this goal means considerable effort of agribusiness firms. Management has to make strong commitment to the process, setting the right environment and focus on

navigating the dynamic environment of customer needs, expectations and competitive choices.

Although agribusiness firms may have challenges in implementing an effective customer relationship management like cost of going into it, the results of the analysis in this work indicate that customer relationship management is a key variable that would affect customer retention with its essentiality for the survival of agribusiness firms in the study area. Therefore, this implies the need for proper planning for effective utilization of required resources to use effective CRM strategies to ensure retention of customers by agribusiness firms.

**Recommendations:** In a turbulent business environment, retaining customers becomes a priority and there are convincing arguments for service managers to carefully consider the factors that would increase customer retention rates, the fact that a good customer relationship management leads to increase in the number of customers retained by a firm, this study therefore recommends that firms should work seriously on their relationship with their customers as this is a sure way of them retaining most of their customers if not all.

Firms including agribusiness firms should train its staff members to be more optimistic particularly on interpersonal and business relationship such as complaint handling, devoting enough time to help and understand the dynamic individual customer needs and extend customer life time.

Finally firms including agribusiness firms must work effectively on business relationship and understanding the actions and reactions of customers as it is the key for a long term business relationship, also firms should go into innovations that will help them to always give their customers surprises as this will help them retain their customers over time because customers are the reason and purpose of what they do and rather than customers depending on them, they (firms) should very much depend on customers.

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