*IOSR Journal of Agriculture and Veterinary Science (IOSR-JAVS)*
*e-ISSN: 2319-2380, p-ISSN: 2319-2372. Volume 12, Issue 11 Ser. I (November 2019), PP 18-28*
*www.iosrjournals.org*

# Structural Equation Modeling of Relationship Marketing, Ethics and Performance of Soyabean Traders in Benue State, Nigeria

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***Abstract**: The objective of this study was to analyze the relationships between relationship marketing, ethics and performance of soyabean traders in Benue State, Nigeria. Multistage sampling technique was used in selecting 120 soyabean traders for the study. Primary data was used via the administration of questionnaire in the study area. Data collected was carried out with the aid of SEM. The Comparative Fit Index (CFI) of 0.846 was close to 1 which indicates a better fit for the relationship marketing, ethics and performance model. The standardized root mean square residual (SRMR) value of 0.076 is the difference between the observed correlation and the model implied correlation matrix. This value is close to 0, which indicates good model fit for the study. The three paths covariance (i.e., Cov [RMKT, ETHICS], Cov [ETHICS, PERF] and Cov [RMKT, PERF]) were significant at 1% level (p=0.000) with positive relationships. This indicates consistency in the paths movements which also entails that a unit increase in one variable leads to a corresponding increase in another. The Chi-square value of 82.45 is significant at 1% for the full model of the three paths and indicates significance for relationship marketing, ethics and performance respectively. The study concluded that, relationship marketing and ethics influence soyabean performance; this is exhibited by traders and it is pertinent for the survival of soyabean business in the various local markets in Zones A and B of Benue State, Nigeria. In order for soyabean traders to reduce costs, successful execution of relationship marketing orientation requires that soyabean traders and markets define their business, and understand how to create and manage total service offering. Relevant and timely information should be designed and made available to soyabean traders and markets as regards the current ethics codes of conduct and required market standards.*

***Keywords:** Ethics, relationship marketing, performance, soyabean traders, structural equation modeling*

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Date of Submission: 26-10-2019 Date of Acceptance: 11-11-2019

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## I. Introduction

Soybean has been described in various ways. Some call it the "miracle bean" or the "golden bean" because it is a cheap, protein-rich grain. It contains 40 per cent high quality protein, 20 per cent edible vegetable oil, and a good balance of amino acids. It has therefore, tremendous potential to improve the nutritional status and welfare of resource-poor people particularly in a developing country like Nigeria. Benue State is the largest producer of soyabean (*Glycine max*) in Nigeria (BNARDA, 2000). In 1985 Benue State was declared a special soyabean producing area by the Federal Government in order to concentrate efforts where comparative advantage is greatest in line with its ecological specialization policy. The importance of soyabean as a high protein, primary input in vegetable oil, dairy and feed industries is not in doubt. The International Institute for Tropical Agriculture (IITA) has enhanced its protein content to 40% level. This makes the crop a suitable substitute to animal protein (Ayoola, 2001).

Soybean can also contribute to enhanced sustainability of intensified cropping systems by improving soil fertility through nitrogen fixation, permitting a longer duration of ground cover in the cropping sequence, and providing useful crop residues for feeding livestock. However, soybean is a relatively new crop in Africa. Until recently, it was seen as being appropriate only for large-scale commercial farming where the crop can be utilized industrially and for formulation of livestock feed (Shannon *et al.*, 1995). With improvement in breeding and processing research however, soybean cultivation, domestic marketing, processing and utilization has grown considerably in Nigeria. Soybean has been recognized in the country as an important oilseed crop, as well as in indispensible source of protein in animal feeds. Industrial and domestic processing of soybean has given rise to numerous products utilized as food for both human and livestock. However, attitudes of traders turn away buyers as regards ethical and relationship marketing issues which affect performance of the traders.

Relationship marketing (RM) usually results in strong economic, technical and social ties among the soyabean stakeholder parties, thereby reducing their transactions costs and increasing exchange efficiencies

included in relationship marketing which are not only buyers/sellers exchanges but also business partnerships, strategic alliances, and cooperative marketing networks (Ogidi and Tondo, 2015; Ogidi, 2014a). The relationship typically involves seller-customer exchange, but it could involve any stakeholder's relationship (Morgan and Hunt, 1994, Gronroos, 1994). Rapidly changing markets, a complex array of technologies, shortages of skills and resources and more demanding customers present service organizations with an unprecedented set of challenges (Gummesson, 1994).

In the case of ethical practices, over the years, cash crop traders and retailers have engaged in unethical (sharp) practices by deceiving unsuspecting exporters (Ogidi and Tondo, 2015; Ogidi, 2014a). These unethical practices involve cash crop traders stuffing their packaging bags with stones and other stuffing other than the intended products displayed in the market (Ogidi, 2014a).

The emphasis placed on relationship marketing as opposed to transaction based exchanges, is today redefining the domain of marketing (Sheth, Gardner and Gareth, 1988). The dented relationship between buyers and sellers of cash crops such as soyabean influences market performance. Consequently, there is increased need for researchers to address issues surrounding relationship marketing drive and compliance to ethical standards by soyabean sellers. In view of these therefore, we shall in the course of this study analyze the influence of relationship marketing and ethics on the performance of soyabean as practiced by traders in Benue State, Nigeria.

## II. Conceptual Framework

### 2.1. Concept of Relationship Marketing

Relationship marketing is considered a true balance between "giving and getting" as a key benefit to encourage an active role and is conductive in delivering two-way value, where loyalty is based on trust and partnership, will prove to be one of the most significant policies to be pursued in development and sustenance of competitive advantage (Ogidi and Tondo, 2015; Gronroos, 1994). Clearly, making, enabling, and keeping promises are crucial parts of the relationship marketing process, but developing relationships requires more than promises. All relationships depend on the development of emotional links between the parties (Ogidi, 2014a). There are five key dimensions of relationship marketing: bonding, empathy, reciprocity, trust and shared value (Chris and Graham, 2007).

**(i) Bonding:** Two parties must bond together in order to develop a long-strong relationship. Stronger bonds increase each party's commitment to the relationship (Jobber and Fahy, 2006). Bonding refers to the development of an emotional relationship between the two partners acting in a unified manner toward a desired goal (Callaghan, Mcphail and Yau, 1995). Customers having a stronger relationship with their partners through such bonding are more satisfied than those who do not have one (Gutek, McGuire and Baldwin, 1999).

**(ii) Empathy:** Empathy is defined as seeking to understand the desires and goals of somebody else (Sin *et al.,* 2006). Firms that better understand what customers' desire are better able to satisfy customers. The ability to see situations from the perspective of the other party is another key emotional link in the development of relationships**.** An organization confident of the timescale for the planned rollout of changes should make as many of its customers aware, as soon as possible, that the changes are taking place; keeping your customers involved in your decisions and aspirations will promote empathy from them, promoting effective customer buy-in (Faulkner, Hurst and Tripp, 2003).

**(iii) Reciprocity:** Every long-term relationship includes some give-and-take between the parties; one make allowances and grants favors to the other in exchange for the same treatment when its own need arises. Reciprocity refers to the processes that enable customers to interact and share information with the firm and enables the firm to respond to customers (Jayachandran, Sirth and Barakran, 2005). Reciprocity occurs when actions taken by one exchange partner are matched by the other (De Wulf, Gaby and Dawn, 2001). Without the established reciprocal communications, firm may have lower customer satisfaction as customers are unable to communicate their needs and problems to the firm (Jayachandran *et al.* 2005).

**(iv) Trust:** Callaghan *et al.* (1995) describe trust as the belief of confidence in, or reliance on, the truth, goodness, character, power and ability of someone or something. Morgan and Hunt, (1994) argued that trust is the willingness to rely on an exchange partner in whom one has confidence. Trust is ultimately the glue that holds a relationship together over the long haul. Trust reflects the extent of one party's confidence in another party's integrity. When parties follow through on commitments, they enhance trust and strengthen relationships. Stronger trust leads to more cooperation between parties in a relationship.

**(v) Shared Value:** Shared value refers to the extent to which partners have beliefs in common about the propriety and importance of behaviors, goals and policies (Morgan and Hunt, 1994). The greater the enhancement of relationship via shared value, the more satisfied customers are likely to be.

### 2.2. Concept of Business Ethics

The key attributes that define a trader's essential character and the contemporary turn to values reflect an evolution in what has sometimes been called the personality of the trader or the trader's identity (Paine, 2003). Trader identity reflects who a seller really is. Ongoing commitment can derive from either economic self-interest (i.e., a solid business case) or from ethical grounding (i.e., the moral importance of sustainable development). The various parameters of Business Ethics used for this study are as follows:

i) Codes of Conduct: The cornerstone of any market's ethics program is its set of values; the key mechanisms for articulating those values are ethics codes, also known as codes of conduct and standards of business. Ethics codes help create globally consistent "fixed reference points" (Lacy, 2004). Ethical decision-making procedures, spelled out in an ethics code, arm traders with the information needed to act in accordance with the values that are at the core of a market; the code serves as a set of concrete statements about how the market conduct business (Business for Social Responsibility, 2001).

ii) Loyalty: Buyers often buy goods at great personal risks. Actions regarding improper market or seller behaviours that are harmful to buyers should be avoided in order to retain buyers (Dworkin and Near, 1992). It is important for markets to protect the rights of buyers and sellers and provide an anonymous open line of communication for those that have been exposed to violations of market policies or government laws; the reporting steps should be clearly laid out for all sellers and buyers should a sudden crisis occur.

iii) Transparency: Markets should understand the value of scheduled surveys conducted by experts to prevent sellers who try to short-change buyers (Hurst, 2004). Markets produce reports which show a commitment to the ethical issues and a willingness to be transparent. Markets and sellers should also disclose all of their information; this makes sellers aware of their policies and procedures. This practice builds trust and allows sellers to make informed decisions (Dworkin and Near, 1992).

### 2.3. Soyabean Performance

Most products are established at one of four performance levels: low, average, high or superior; a company must manage performance quality through time – continuously improving the product can produce the high returns and market share (Kotler and Keller, 2006). A product's performance should be gauged against the market's average, its major competitors and benchmarking (Ogidi, 2015; Ogidi, 2014a; Ogidi, 2014b; Ogidi, 2014c; Ogidi, Abah and Ezeorah, 2012).

**(i) Premium price:** The trader achieves premium price above the usual market price for high grade soyabean. Customers have preference for high quality soyabean in the market. Customers are willing to pay higher price for soyabean that meets approved standards.

**(ii) Customer Retention:** Most customers who buy soyabean are retained. An impression is created whereby customers are in total comfort and satisfaction. Customers remain loyal even in the face of competition (Ogidi, 2015; Ogidi, 2014a; Ogidi, 2014b; Ogidi, 2014c; Ogidi, Abah and Ezeorah, 2012).

**(iii) Volume of Sales:** There is a substantial increase in the volume of soyabean sold over the years. Large volumes are demanded by exporters. In order to meet up with demand, traders source soyabean from fellow traders.

## III. Methodology

### 3.1. The Study Area

Benue State is located in the North Central region of Nigeria. Benue State lies between latitudes 6°25'N and 8°8'N and longitudes 7°47'E and 10°E' (Ade, 2014). Benue is a rich agricultural region and grows crops such as; sweet potatoes, cassava, soya bean, guinea corn, flax, yams, sesame, rice, and groundnuts, Palm Tree. Benue State is blessed with a loamy-clay soil that is very suitable for earthen catfish production. The catfish production systems predominant in the study area include: earthen pond, concrete pond, plastic, tarpaulin and fiber systems.

### 3.2. Population of the Study

The population of soyabean sellers in Benue State consists of producers, retailers and wholesalers. However, the population is not known, but it is finite and includes, soyabean sellers from various Local Government markets in the State. Obviously, gathering data from every individual in this population would be nearly impossible and prohibitively expensive. It would be more practical to collect data from a subset or sample of the population.

### 3.3. Sample Size Determination

Multistage sampling technique was used in selecting respondents for the study. Using stratified sampling method in stage one, Benue State was divided into three agricultural Zones. In stage two, purposive sampling was used to select four Local Government Areas each from Zones A and B only. (i.e. Kwande, Vandeikya, Konshisha and Katsina-Ala L.G.As are representative of Zone A. Under Zone B, Gboko, Gwer West, Tarka and Makurdi were chosen. For stage three, stratified sampling method was used in selecting local/community cash crop markets which were grouped into the three framed zones in the State, from a population list obtained from Radio Benue (FM.95.0). In stage four, purposive sampling was used in choosing only local/cash crop markets in Zones A and B only. Simple random sampling was used in selecting one (1) major local/cash crop market in each L.G.A. in stage five. Fifteen (15) respondents (soyabean sellers) from each of the local/cash crop markets (in each L.G.A.) were selected in stage six via simple random sampling technique. This implies that 15 soyabean seller from each of the eight (8) L.G.As were chosen. Thus, a total sample size of 120 soyabean sellers was selected for this study.

### 3.4. Method of Data Collection

Primary data was used via the administration of questionnaire in the study area.

### 3.5. Method of Data Analysis

Data collected was carried out with the aid of SEM

## IV. Results and Discussion

### 4.1 Interrelationships Between Relationship Marketing, Ethics and Performance of Soyabean Traders

The study used Structural Equation Modeling (SEM) for purposes of analyzing the interrelationships between relationship marketing, ethics and performance of soyabean traders in Benue State, Nigeria. Objective of the general analysis is to reject or accept the null hypothesis of a set of specific paths. The estimation technique used for this SEM analysis is Ordinary Least Squares (OLS). In addition, by conducting SEM analysis, the study was able to model observed and latent variables. SEM was used as a confirmatory technique in testing several *a priori* expectations and the entire complex theoretical model in one analysis. Analysis was carried out with the aid of STATA version 14.2, software for Windows.

### 4.2 Validity, Reliability and Unidimensionality Tests

Before a latent variable model analysis is conducted, the validity and reliability of the constructs must be assessed (Ogidi, 2014). The unidimensionality and reliability of the scales must also be established before their convergent and discriminant validity are assessed. Unidimensionality measures the extent to which the items in a scale all measure the same construct.

#### (a) Factor loadings

To determine the minimum loading necessary to include an item in its respective constructs, Hair, Hult, Ringle and Sarstedt (2017) suggested that variables with loading greater than 0.30 are adequate. Not a single factor had been dropped out under this circumstance which means the factor analysis ran on an ultimate success.

The greater the loading of an item for a group, the stronger the affinity and affiliation of that item to the specific factor it belongs to. For this study, each of the three dimensions (i.e. relationship marketing, ethic and performance) was homogeneously loaded to the different factors. Each of the items that loaded into three different factors is significantly related to the study.

**Table 1:** Factor Loadings

| | Factor 1 | Factor 2 | Factor 3 |
|---|---|---|---|
| **Relationship Marketing** | | | |
| | 0.6705 | | |
| | 0.5294 | | |
| | 0.6009 | | |
| | 0.6162 | | |
| | 0.5953 | | |
| **Ethics** | | | |
| | | 0.7050 | |
| | | 0.6598 | |
| | | 0.4548 | |
| **Performance** | | | |
| | | | 0.4548 |
| | | | 0.4639 |
| | | | 0.5893 |

**Source***:* Field Survey (2019) Computation from STATA Version 14.2 for Windows

The loadings should be significant. In general, the larger the loadings, the stronger and more reliable the measurement model. Indicator reliability may be interpreted as the square of the measurement loading: thus, $0.708^2 = 0.50$ reliability (Hair *et al.,* 2014). Outer model loadings appear in the graphical model (above). They may be considered a form of item reliability coefficients for reflective models: the closer the loadings are to 1.0, the more reliable that latent variable. By convention, for a well-fitting reflective model, path loadings should be above 0.70 (Henseler, Ringle and Sarstedt, 2012).

**Table 2:** Principal Component Analysis – Total Variance Explained

| Factor | Eigenvalue | Difference | Proportion | Cumulative |
|---|---|---|---|---|
| Factor1 | 2.88914 | 2.43237 | 0.8733 | 0.8733 |
| Factor2 | 0.45676 | 0.03911 | 0.1381 | 1.0114 |
| Factor3 | 0.41765 | 0.20712 | 0.1262 | 1.1376 |
| Factor4 | 0.21053 | 0.07678 | 0.0636 | 1.2013 |
| Factor5 | 0.13375 | 0.12684 | 0.0404 | 1.2417 |
| Factor6 | 0.00691 | 0.05156 | 0.0021 | 1.2438 |
| Factor7 | -0.04465 | 0.16486 | -0.0135 | 1.2303 |
| Factor8 | -0.20951 | 0.03818 | -0.0633 | 1.1670 |
| Factor9 | -0.24770 | 0.05696 | -0.0749 | 1.0921 |
| Factor10 | -0.30466 | | -0.0921 | 1.0000 |

**Note:** LR test: independent vs. saturated: $chi^2(45) = 281.54$ Prob>$chi^2 = 0.0000$

**(b) Reliability coefficient test of Cronbach's alpha**

The reliability coefficient was tested using Cronbach's alpha (α) analysis. The construct reliability test for the three factors of relationship marketing, ethics and performance capability was analyzed. The reliability Cronbach's alpha of the three factors was substantial because their Cronbach's Alpha value was 0.8105.

**Table 3:** Cronbach Alpha Test

| | |
|---|---|
| Average iteration covariance | 0.1748389 |
| Number of items in the scale | 9 |
| Scale reliability coefficient | 0.8105 |

Cronbach's alpha is a common measure of internal consistency of constructs. By common rule of thumb, 0.60 or higher is adequate reliability for exploratory purposes. In this case, Cronbach's alpha is above 0.60, a sign that the indicators for the construct do cohere well.

**(c) Model Fit Statistics**

**i) Likelihood ration**

**Table 4:** Likelihood Ration

| Fit Statistics | Value | Description |
|---|---|---|
| **Likelihood ration** | | |
| $Chi^2$_ms(41) | 82.454 | model vs. saturated |
| P > chi2 | 0.000 | |
| $Chi^2$_bs(55) | 324.353 | baseline vs. saturated |
| P > chi2 | 0.000 | |

**Source***:* Field Survey (2019) Computation from STATA Version 14.2 for Windows

**Chi-square:** Assuming a multinormal distribution, the chi-square value of the STATA SEM path model for this study is 82.4543 which is significant. For the chi-square test to be valid, one important assumption is that the sample size (N) should be sufficiently large.

It has been generally believed that fitting a large SEM model (with many observed variables) to moderate or small samples results in an upwardly biased estimate for the chi-square statistic and, thus, an inflated Type I error rate. This upward bias in the LR-based chi-square statistic is known as the model size effect (Herzog, Boomsma & Reinecke, 2007; Moshagen, 2012; Shi, Lee & Terry, 2015; Shi, *et al.,* 2017; Yuan, Tian & Yanagihara, 2015), and it has important ramifications for empirical practices. In practice, the chi-square test is ''not always the final word in assessing fit'' (West, Taylor & Wu, 2012, p. 211). A major concern is that the LR chi-square test is the test of exact fit, meaning that the null hypothesis is tested such that there is no discrepancy between the hypothesized model and the true data-generating process. In practice, the model under consideration is almost always incorrect to some degree (Box, 1979; MacCallum, 2003). As a result, the chi-square test of exact fit often rejects the null hypothesis, especially in large samples like this study, even when the postulated model is only trivially false. As such, a host of goodness-of-fit measures have been developed in an attempt to provide additional information about the usefulness of the hypothesized model when the solution

is quite feasible and explains the observed data quite well. Many fit indices are developed based on the chi-square test or computed using the LR chi-square in their formulation.

**ii) Baseline Comparison**

**Table 5:** Baseline Comparison

| Fit Statistics | Value | Description |
|---|---|---|
| **Baseline comparison** | | |
| CFI | 0.846 | Comparative fit index |
| TLI | 0.794 | Tucker-Lewis index |

**Source***:* Field Survey (2019) Computation from STATA Version 14.2 for Windows

**Comparative Fit Index (CFI):** Table 5 above demonstrates the behaviors of population values and sample estimates of CFI as a function of model size (p), factor loading (l), and sample size (N) under the three conditions of model specification. The CFI (Bentler, 1990) measures the relative improvement in fit going from the baseline model to the postulated model. CFI is a normed fit index in the sense that it ranges between 0 and 1, with higher values indicating a better fit. The most commonly used criterion for a good fit is CFI _ 0.95 (Hu & Bentler, 1999; West *et al.,* 2012).

**Tucker–Lewis Index (TLI):** As shown, the value of TLI is virtually indistinguishable from the patterns of CFI in large models. The TLI (Tucker & Lewis, 1973) measures a relative reduction in misfit per degree of freedom. This index was originally proposed by Tucker and Lewis (1973) in the context of exploratory factor analysis and later generalized to the covariance structure analysis context and labeled as the nonnormed fit index by Bentler and Bonett (1980). This index is nonnormed in that its value can occasionally be negative or exceed 1. In general, TLI _ 0.95 is a commonly used cutoff criterion for the goodness of fit (Hu & Bentler, 1999; West et al., 2012).

**iii) Size of residuals**

**Table 6:** Size of residuals

| Fit Statistics | Value | Description |
|---|---|---|
| **Size of residuals** | | |
| SRMR | 0.076 | Standardized root mean squared residual |
| CD | 0.868 | Coefficient of determination |

**Source***:* Field Survey (2019) Computation from STATA Version 14.2 for Windows

**SRMR:** The standardized root mean square residual (SRMR) based on transforming both the sample covariance matrix and the predicted covariance matrix into correlation matrices on Table 6. The Table shows a value of 0.076 is the difference between the observed correlation and the model implied correlation matrix. If the fit is good, then SRMR (standardized root mean squared residual) will be close to 0. From findings, this study's SRMR value is close to zero with a value of 0.076, which indicates good model fit.

**CD:** CD refers to Coefficient of Determination. If the fit is good, then CD (the coefficient of determination) will be near 1. Our study's CD is very close to 1 with its value of 0.868. This indicates that our model is fit for analysis.

**iv) Population error**

**Table 7:** Population error

| Fit Statistics | Value | Description |
|---|---|---|
| **Population error** | | |
| RMSEA | 0.092 | Root mean squared error of approximation |
| 90% CI, lower bound | 0.063 | |
| upper bound | 0.121 | |
| Pclose | 0.011 | probability RMSEA <= 0.05 |

**Source***:* Field Survey (2019) Computation from STATA Version 14.2 for Windows

**Root mean squared error of approximation** (**RMSEA):** The RMSEA (Steiger, 1989, 1990; Steiger & Lind, 1980) measures the discrepancy due to the approximation per degree of freedom. The RMSEA is a badness-of-fit measure, yielding lower values for a better fit. An RMSEA _ 0.06 could be considered acceptable (Hu & Bentler, 1999), whereas a model with an RMSEA _ 0.10 is unworthy of serious consideration (Browne & Cudeck, 1993). This study's RMSEA value is 0.092; indicating good model fit for this research.

**v) Information Criteria**

**Table 8:** Information Criteria

| Fit Statistics | Value | Description |
|---|---|---|
| **Information criteria** | | |
| AIC | 3637.552 | Akaike's information criterion |
| BIC | 3737.600 | Bayesian information criterion |

**Source*:*** Field Survey (2019) Computation from STATA Version 14.2 for Windows

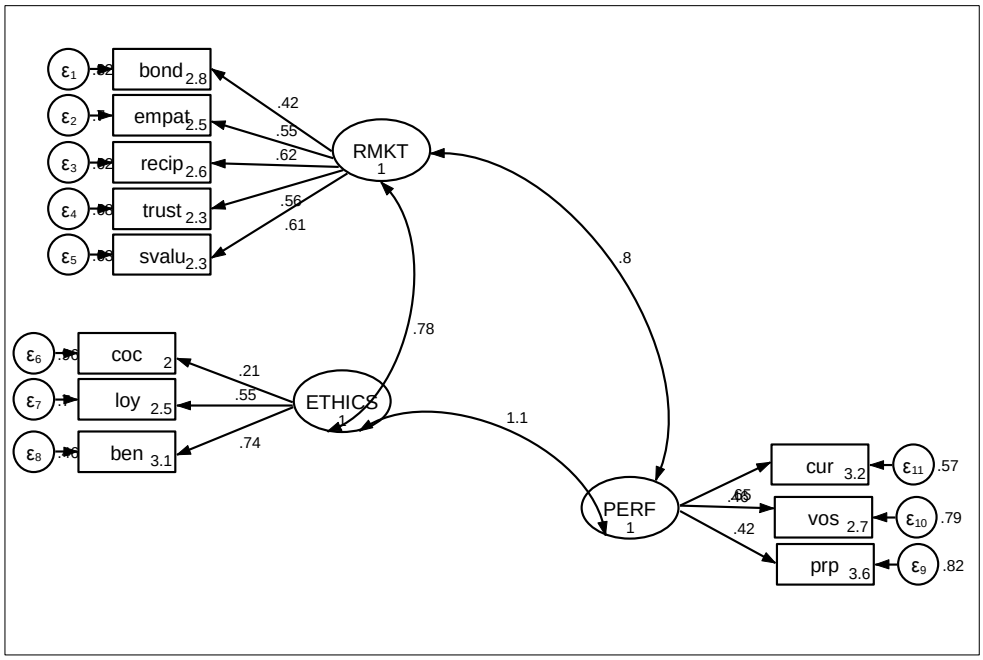
**Akaike's Information Criteria (AIC):** One of the most commonly used information criteria is AIC. The idea of AIC (Akaike, 1973) is to select the model that minimises the negative likelihood penalised by the number of parameters Specifically, AIC is aimed at finding the best approximating model to the unknown true data generating process and its applications draws from (Akaike, 1973; Bozdogan, 1987; Zucchini, 2000).

**Bayesian information criteria (BIC):** Another widely used information criteria is the BIC. Unlike Akaike Information Criteria, BIC is derived within a Bayesian framework as an estimate of the Bayes factor for two competing models (Schwarz, 1978; Kass and Rafftery, 1995). Superficially, BIC differs from AIC only in the second term which now depends on sample size n. Models that minimize the Bayesian Information Criteria are selected. From a Bayesian perspective, BIC is designed to find the most probable model given the data. Performance of the model selection criteria in selecting good models for the observed data is examined using simulation studies. Such a comparison is not straight forward and even its relevance could be questioned, given that the two criteria are based on different theoretical motivations and objectives. However, for application purpose, the Akaike Information Criteria and the Bayesian Information Criteria do have the same aim of identifying good models even if they differ in their exact definition of a "good model". Comparing them is thus justified, at least to examine how each criterion performs according to recovery of the correct model or how they behave when both should prefer the same model.

**4.3 Path coefficients**

A path coefficient is interpreted as follows: If the predictors change by one standard deviation the dependents changes by standard deviations (with b being the path coefficient). The path coefficient is interpreted like a standardized regression coefficient.

The sample mean in bootstrapping is the average coefficient over all bootstrapping runs. It indicates whether there exists some bias between original sample coefficient and sampling distribution. If the bias is large it is better to use bias-corrected confidence intervals for assessing the significance of the relationships. However path coefficient is the indicator for the relationship and effect size for the level of the effect (see Figure 1 below).




**Source*:*** Field Survey (2019) Computation from STATA 14.2 for Windows

**Figure 1:** SEM Estimates

**a) The regression results of the path analysis**

The regression analysis results retained most of the model variable items relationships because of their significant values. However, the nine variable item relationships were significant (i.e., bond <- RMKT, empat <- RMK, recip <- RMK, trust <- RMKT, svalu <- RMKT, coc <- ETHICS, loy <- ETHICS, ben <- ETHICS, prp <- PERF, vos <- PERF, cur <- PERF) indicating that z-values are significant. The LR test of model vs. saturated: chi2(41) indicate a value of 772.10 which was significant for the whole SEM model (see Table 9 below).

**Table 9:** Regression Results

| | **Estimates** | **SE** | **z-Statistics** | **P Values** |
|---|---|---|---|---|
| bond <- RMKT | 0.4222207 | 0.0911269 | 4.63 | 0.000*** |
| empat <- RMKT | 0.551103 | 0.0820825 | 6.71 | 0.000*** |
| recip <- RMKT | 0.6183447 | 0.0768414 | 8.05 | 0.000*** |
| trust <- RMKT | 0.5612879 | 0.0822068 | 6.83 | 0.000*** |
| svalu <- RMKT | 0.6103161 | 0,0774136 | 7.88 | 0.000*** |
| coc <- ETHICS | 0.211256 | 0.1017941 | 2.08 | 0.038* |
| loy <- ETHICS | 0.5472834 | 0.0752952 | 7.27 | 0.000*** |
| ben <- ETHICS | 0.7360618 | 0.0681894 | 10.79 | 0.000*** |
| prp <- PERF | 0.4208217 | 0.0851061 | 4.94 | 0.000*** |
| vos <- PERF | 0.4621887 | 0.0879432 | 5.26 | 0.000*** |
| cur <- PERF | 0.6536397 | 0.075612 | 8.64 | 0.000*** |
| *Parameters* | | | | |
| Cov (RMKT, ETHICS) | 0.7779485 | 0.1033614 | 7.53 | 0.000*** |
| Cov (RMKT, PERF) | 0.7965819 | 0.112473 | 7.08 | 0.000*** |
| Cov (ETHICS, PERF) | 1.138405 | 0.1157933 | 9.83 | 0.000*** |
| Log likelihood | -1782.7759 | | | |
| LR test of model vs. saturated: chi2(41) | 82.45 | | | 0.000*** |

**Note:** *** and * indicate that the parameter is significant at 1% and 10%, respectively
**Source*:*** Field Survey (2019) Computation from STATA Version 14.2 for Windows

**b) Full model of the three paths**

**Cov (RMKT, ETHICS):** highlighted relationship between RMKT and ETHICS path was significant at 1% level (p=0.000) with a positive relationship. This indicates consistency in the path movement between RMKT and ETHICS which also entails that a unit increase in ETHICS leads to a corresponding increase in RMKT.

**Cov (RMKT, PERF):** the path relationship between RMKT and PERF suggest a significant value at 1% level (p=0.000) and positive relationship. The significant relationship suggests that no discrepancy exist between the path of RMKT and PERF. However, the positive sign suggest that a unit increase in one leads to a corresponding increase in the other.

**Cov (ETHICS, PERF):** statistical findings also revealed that, the ETHICS and PERF path relationship is significant (i.e. at 1% level; p=0.000) with positive influence between the two. This suggests the existence of no conflict between ETHICS and PERF paths. However, a unit increase in ETHICS also leads to a corresponding influence on PERF.

**c) Test of hypothesis**

The SEM was examined to test the relationship among the constructs. For the whole model, the statistical result shows that Chi-square value of 82.45 is significant at 1% (see Table 9). Standard estimation of the full model of the three paths indicates significance for relationship marketing, ethics and performance respectively. Thus, the null hypothesis was rejected and the alternative hypothesis accepted, which states that, *"there is significant relationship between relationship marketing, ethics and performance of soyabean traders in Benue State, Nigeria".*

## V. Conclusion

The result of this study illustrates that relationship marketing and ethics determines soyabean performance in the market. This relationship is exhibited by traders and it is pertinent for the survival of soyabean business in the various local markets in Zones A and B of Benue State, Nigeria. The significant relationship between relationship marketing, ethics and performance is as expected and showed significant values for relationship marketing, ethics and performance dimensions. Relationship marketing is a time consuming, but effective strategy for marketing extension programs. Ethics on the other hand, brings to light the benchmarking processes required into sustaining approved standards and codes of conduct in the market.

## VI. Recommendation

From our findings, the study came to the following recommendations for stakeholders:

(i) in order for soyabean traders to reduce costs, successful execution of relationship marketing orientation requires that soyabean traders and markets define its business, and understand how to create and manage total service offering;

(ii) relevant and timely information should be designed and made available to soyabean traders and markets as regards the current ethics codes of conduct and required market standards;

(iii) customers' aspirations should be taken into consideration when carrying out transactions, and finally; and

(iv) Nigerian soyabean traders and markets have to improve on the level of empathy and reciprocity with customers in order to enhance customer retention.

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## APPENDIX

RESEARCH QUESTIONNAIRE

**Structural Equation Modeling of Relationship Marketing, Ethics and Performance of Soyabean Traders in Benue State, Nigeria**

**Section A1: Relationship Marketing**

(Note: Please tick [√] the appropriate choice [either, 1 = SA (strongly Agree), 2 =A (Agree), 3 = M (Moderately), 4 = D (disagree), 5 = SD (strongly disagree]).

| **Relationship Marketing Statements** | | **SA** | **A** | **M** | **D** | **SD** |
|---|---|---|---|---|---|---|
| **Bonding** | | | | | | |
| 1. | Stronger bonds increase buyer and seller commitment to the relationship | | | | | |
| 2. | There is development of emotional relationship between soyabean seller and buyer | | | | | |
| 3. | Customers with stronger relationship with sellers are more satisfied than those who do not have one | | | | | |
| **Empathy** | | | | | | |
| 1. | Traders that better understand what customers desire are better able to satisfy them | | | | | |
| 2. | The soyabean trader has the ability to see situations from the perspective of the other party | | | | | |
| 3. | The soyabean seller keeps customers involved in the decisions and aspirations related to the transaction | | | | | |
| **Reciprocity** | | | | | | |
| 1. | There exists long term relationship with most of the high profile customers | | | | | |
| 2. | The soyabean seller grants favours to buyers in exchange for same treatment | | | | | |
| 3. | Soyabean sellers share information and interact with buyers freely | | | | | |
| **Trust** | | | | | | |
| 1. | The soyabean seller has a belief of confidence in the buyer | | | | | |
| 2. | The soyabean seller has reliance on the character, power and ability of the buyer | | | | | |
| 3. | There is commitment to strengthen relationship between buyer and seller | | | | | |
| **Shared value** | | | | | | |
| 1. | Buyer and seller share value of contentment | | | | | |
| 2. | Enhancement of relationship between both parties increases the satisfaction level of both buyer and seller | | | | | |
| 3. | High quality, right price and right quantity are concerns shared by both seller and buyer | | | | | |

**Section A2: Business Ethics**

(Note: Please tick [√] the appropriate choice [either, 1 = SA (strongly Agree), 2 =A (Agree), 3 = M (Moderately), 4 = D (disagree), 5 = SD (strongly disagree]).

| **Business Ethics Statements** | | **SA** | **A** | **M** | **D** | **SD** |
|---|---|---|---|---|---|---|
| **Codes of conduct** | | | | | | |
| 1. | There are rules and regulations guiding the sale of sale of soyabean in the market | | | | | |
| 2. | Ethics codes help create globally consistent reference points | | | | | |
| 3. | Market codes serve as a set of concrete statements about how the soyabean seller should conduct business | | | | | |
| **Loyalty** | | | | | | |
| 1. | The soyabean trader correct improper actions that are harmful to him and | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | customers | | | | | |
| 2. | It is important to protect the rights of employees and provide an open line of communication between buyer and seller | | | | | |
| 3. | The soyabean trader should be easily accessible should a sudden crisis occur | | | | | |
| **Benchmarks** | | | | | | |
| 1. | The trader copy best practiced methods and processes in selling soyabean | | | | | |
| 2. | High quality soyabean are sold as requested by market and international standards | | | | | |
| 3. | Best practices are replicated to make sure buyers get value for money | | | | | |

**Section B: Performance of Soyabean Traders**

(Note: Please tick [√] the appropriate choice [either, 1 = SA (strongly Agree), 2 =A (Agree), 3 = M (Moderately), 4 = D (disagree), 5 = SD (strongly disagree]).

| **Performance of Soyabean Traders** | | **SA** | **A** | **M** | **D** | **SD** |
|---|---|---|---|---|---|---|
| **Customer Retention** | | | | | | |
| 1. | Most of the customers who buy soyabean are retained | | | | | |
| 2. | An impression is created whereby customers are in total comfort and satisfaction | | | | | |
| 3. | Customers remain loyal even in the face of competition | | | | | |
| **Volume of sales** | | | | | | |
| 1. | There is a substantial increase in the volume of soyabean sold over the years | | | | | |
| 2. | Large volumes are demanded by exporters | | | | | |
| 3. | In order to meet up with demand, trader source soyabean from fellow traders | | | | | |
| **Premium price** | | | | | | |
| 1. | The trader achieve premium price above the usual market price for high grade soyabean | | | | | |
| 2. | Premium price is achieve during time of scarcity and high demand | | | | | |
| 3. | The quality of soyaben is of high priority to exporters | | | | | |

Ashiko, F.T.G.. " Structural Equation Modeling of Relationship Marketing, Ethics and Performance of Soyabean Traders in Benue State, Nigeria. "IOSR Journal of Agriculture and Veterinary Science (IOSR-JAVS) 12.11 (2019): PP- 18-28.