## Determinants Of Market Participation And Constraints Faced By Soybean Marketers In Benue And Nasarawa States, Nigeria

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Abstract: Analysis of market participation and constraints faced by soybean marketers in Benue and Nasarawa States, Nigeria is aimed at solving the problems of soybeans marketing. The objectives are to assess factors that influence market participation and identify constraints faced by the marketers. Purposive and multi-stage sampling were used to select 481 repondents. Data were collected through structured questionnaire and analyzed using descriptive and inferential statistics. The study revealed that the determinants of market participation among small scale processors were sex of marketers, membership of market association and annual income with z values of -6.98, -1.67 and -3.34 respectively. The determinants of market participation among soybeans wholesalers were age, sex of marketers, marketing experience, education and income with z values of 2.61, -2.01, -2.09, 2.64 and 6.54 respectively. The determinants of participation among retailers were age, marketing experience, access to credit and annual income with z values of -1.75, 1.84, 1.68 and -3.52 respectively. The constraints found among processors were lack of market for soybeans, low profit, fluctuation of outputs, etc. Constraints found among wholesalers and retailers were poor marketing system, low profit, lack of market information and lack of credit. The producers are constraint by high transport cost, inadequate capital, lack of market information and poor infrastructure. The study recommends that government make soybeans marketing attractive by provision of amenities such as water, regular supply of electricity and provision of processing facilities. Soybeans marketers were encouraged to join market associations so as to have strong bargaining power and to make appreciable profit.

Keywords: Determinants of market participation, Multinomial logistics regression, Market constraints and Soybean marketers.

## I. INTRODUCTION

Agriculture has been of economic importance to Nigeria's economy. It the most neglected sector. The neglet of agriculture has lead to its low productivity. The factors militating againt agricultural productivity include poor land tenure, inefficient use of resources and lack of infrastructure especially in rural areas where agriculture is most practised. In other to tackle these challenges facing agriculure production, highly nutritious varieties of crops and livestock is advocated for world-wide. One of such crop is soyabeans (*Glycine max*). Soybean is an important crop produced mainly in the Guinea Savannah zone of Nigeria. Soybean is adjudged as adaptable crop which fits well into diverse vegetations and soil types. Its

cultivation is not too demanding in terms of cultural practise when compared to other crops such as yam. Soybeans can thrive in soil low in fertility because of its self-sustainning Nitrogen fixing ability. However, it was reported that the crop is grown in rather small holder farms in most African countries including Nigeria (Shalma, 2014).

Agricultural commodity marketing is a critical aspect that demand the attention of all market stackholders such as producers, middlement, consumers and policy makers. A market is any setting that allows buyers and sellers to exchange any type of goods and services (Heyne *et al.*, 2014). Market play a vital role of reducing the problem of food distribution, food security, poverty alleviation and tackling unemployment. Most farmers do not venture into large scale

production due to lack of market for output, price volatility and lack of insurance for farmers. Also availability of market is important to the farmers. Ouma et al. (2010) observed that one of the limiting constraints faced by smallholder farmers is linked to poor market access. High transaction cost is another barriers to market participation of smallholder farmers. In some instances, these transaction costs tend to be so high that markets can be said to be "missing" (Ouma et al., 2010).

The problems facing agricultural marketing in Nigeria have rendered the sector unproductive. According to Oparinde and Daramola (2014), market participation of the smallholder farmers is very low despite the fact that there are benefits of orientation and favourable trends commercialization of agriculture. Abu (2012) opined that until increase in food production are followed by steady supply all year round, increase in productivity will be made meaningless. Most empirical studies showed that socioeconomic factors usually determine the extent of market participation. Therefore, the contention of this study is whether socioeconomic factors such as age, sex, household size, education, experience, income, etc. significantly affect market participation of soybeans value chain. Several studies have been carried out in soybeans production, integration, utilization and acceptability. However, no research has been done on market participation among soybean marketers in Benue and Nasarawa States. The study is aimed at bridging the research gap.

The specific objectives of this study are to assess the determinants of market participation among soybean marketers and to identify constraints faced by soybeans marketers in the study area.

### II. METHODOLOGY

This study was conducted in Benue and Nasarawa States, Nigeria. Benue State is located between latitudes 6.5° and 8.5° N of the Equator and longitudes 7.5° and 10° E of the Greenwich Meridian. Benue State has a total land area of about 30,955km<sup>2</sup> and administratively it is divided into 23 Local government Areas (LGAs) and three Agricultural Zones (A, B and C). It has an estimated population of 5,741,815 inhabitants in 2016 (National Bureau of Statistics, 2017). Nasarawa lies between latitudes  $7.45^{\circ}$  and  $9.25^{\circ}$  N of the equator and between longitudes  $7^{\circ}$  and  $9.37^{\circ}$  E of the Greenwich Meridian. It has 13 LGAs and is also divided into three Agricultural Zones. Its land mass is 27,117km<sup>2</sup> and population of 2,523,395 inhabitants in 2016 (National Bureau of Statistics, 2017). The two States have similar soil type, vegetation and climatic condition, with vast arable land for commercial farming, fishery development, wildlife and forestry conservation. Agriculture is the mainstay of the economy of the two States with over 70% of the population involved in subsistence and semi-subsistence agriculture. The States are major producer of food and cash crops like soybeans, cassava, yams, rice, maize and cowpea, cashew and oil palm.

The sampling methods adopted include purposive, multistage and stratified sampling. In the first stage, the two states were stratified into three agricultural zones each. In the second

stage, purposive selection of two LGAs from zone A and zone B and three LGAs were selected from zone C in Benue. Furthermore, purposive selection of two LGAs from northern and western zones and one LGA from southern zone of Nasarawa state was also done. In the third stage, the marketers were divided into producer marketers, wholesalers, retailers and small scale processors and 25% of them were proportionately selected according to the population of Data for the study was soybean marketers in the LGAs. collected by the use of structured questionnaire and analyzed using descriptive and inferential statistic such as multinomial logistic regression and principal component analysis (PCA).

#### III. MODEL SPECIFICATION

#### MULTINOMIAL LOGISTIC REGRESSION

Multinomial logit model was employee to estimate the factors that influence market participation of soybean marketers which determines the odds of a marketer being in one of the four categories of participation, namely small scale processor; wholesaler, retailer and producer marketer. This is so because the dependent variable (participation) was coded with the following values: 1 for small scale processor; 2 for wholesaler, 3 for retailer and 4 for producer marketer. It is therefore of a categorical nature, with numbering arbitrarily assigned so that it does not imply order of magnitude. Additionally, in situations where the respondents participated in more than one operation, the major operation was considered. Enete (2003) reported that in multinomial logit model, a set of coefficients  $\beta^{(1)}$ ,  $\beta^{(2)}$ ,  $\beta^{(3)}$ ,  $\beta^{(4)}$  are estimated as;

$$\Pr(Z=1) = \frac{\ell^{x\beta(1)}}{\ell^{x\beta(1)} + \ell^{x\beta(2)} + \ell^{x\beta(3)} + \ell^{x\beta(4)}} \quad ------(1)$$

$$Pr(Z = 1) = \frac{\ell^{x\beta(1)}}{\ell^{x\beta(1)} + \ell^{x\beta(2)} + \ell^{x\beta(3)} + \ell^{x\beta(4)}} - \cdots (1)$$

$$Pr(Z = 2) = \frac{\ell^{x\beta(1)}}{\ell^{x\beta(1)} + \ell^{x\beta(2)} + \ell^{x\beta(3)} + \ell^{x\beta(4)}} - \cdots (2)$$

$$\Pr(Z=3) = \frac{\ell^{x\beta(3)}}{\ell^{x\beta(1)} + \ell^{x\beta(2)} + \ell^{x\beta(3)} + \ell^{x\beta(4)}} - \dots (3)$$

$$\Pr(Z=4) = \frac{\ell^{x\beta(4)}}{\ell^{x\beta(1)} + \ell^{x\beta(2)} + \ell^{x\beta(3)} + \ell^{x\beta(4)}} - \dots (4)$$

Multinomial logit model is a choice between two or more alternative response. The model however is unidentified in the sense that there is more than one solution to  $\beta(1)$ ,  $\beta(2)$ ,  $\beta(3)$ ,  $\beta(4)$  that lead to the same probabilities for Z = 1, Z = 2, Z = 3, and Z = 4. To identify the model, one of the  $\beta(1)$ ,  $\beta(2)$ ,  $\beta(3)$ , and  $\beta(4)$  is arbitrarily set to 0, which will be referred to as the reference or base category. That is, if we arbitrarily set  $\beta(4) =$ 0, the remaining coefficients  $\beta(1)$ ,  $\beta(2)$ ,  $\beta(3)$ . will measure the change relative to the Z = 4. In other words, we will compare the case of producer marketer participation (0) in soybean marketing to other possible market operations (1, 2, 3 and 4).

Therefore, using four category response as in the model

for this study and setting 
$$\beta^{(4)} = 0$$
, the equation becomes.  

$$Pr(Z = 1) = \frac{\ell^{x\beta(1)}}{1 + \ell^{x\beta(1)} + \ell^{x\beta(2)} + \ell^{x\beta(3)}} - -----(5)$$

$$\Pr(Z=2) = \frac{\ell^{x\beta(1)}}{1 + \ell^{x\beta(1)} + \ell^{x\beta(2)} + \ell^{x\beta(3)}} - \dots (6)$$

$$\Pr(Z=3) = \frac{\ell^{x\beta(3)}}{1 + \ell^{x\beta(1)} + \ell^{x\beta(2)} + \ell^{x\beta(3)}} - ----(7)$$

Enete (2003) citing Stratacorp (1999) reported that, the exponential value of a coefficient is the relative likelihood ratio for one unit change in the corresponding variable.

The explanatory variables for this study are:

 $X_1$  = age of marketer (years)

 $X_2 = \text{sex of marketer (Dummy,1 if male; 0 otherwise)}$ 

 $X_3$  = marketing experience (years)

 $X_4$  = access to credit (Naira)

 $X_5$  = membership of market association (Dummy,1 if member; 0 otherwise)

 $X_6$  = household size (number of people living together in a house)

 $X_7$ = level of education (number of years spent in formal education)

 $X_8$  = Annual income (in naira)

#### PRINCIPAL COMPONENT ANALYSIS (PCA)

According to Jollife (2002), the principal component variables are defined as linear combinations of the original variables  $X_1, ..., X_k, ..., X_m$ . It was depicted by the equation below

$$Y_k = C_k X_1 + C_{k2} X_2 + ... + C_{kM} X_m$$
 .....(8)

Where:  $Y_k$  = the kth principal component K

 $C_1$  = the coefficient to be estimated

 $X_1$ - $X_m$  = the variables (constraints) to be analyzed

### IV. RESULTS AND DISCUSSION

# DETERMINANTS OF MARKET PARTICIPATION AMONG SOYBEAN MARKETERS

The results of the market participation was analyzed and presented in table 1. It was discussed in terms of significant and sign of parameters. The socioeconomic variables also vary across all the categories of soybeans marketers. Among small scale processors, three factors were significant, these are sex of marketers, membership of market association and annual income. Sex of marketers (-6.98) was significant at 1% and negative determinant of market participation among processors. The negative value of sex (dummy male=1 and female=0), implied that being a male has less probability of participation as small scale processors of soybean relative to participation as soybean producer marketer. It could be attributed to female dominace of processing sector of agricultural value chain. This result tallied Egbetokun et al. (2017) where sex was significant and negative determinant of market participation among maize farmers in Ogbomoso zone, Ovo State, Nigeria.

Membership of market association (-1.67) was also significant at 5% but negatively influence the probability of being a small scale processor relative to being a producer marketer. This implied that the probability of market participation as processors decreases with membership of

market association. It also mean small scale processor are not enjoying the opportunity of exchange of skill and information found among social groups. This finding is in line with Shehu et al. (2010) who found that the coefficient of membership of association was significant and negatively influence market participation among yam farmers in Benue State, Nigeria. However, it contrast Egbetokun et al. (2017) who found that membership of a group positively influence participation as maize farmers. The coefficient of annual income (-3.34) was significant at 1% but negatively influence the probability of participation as processor of soybeans relative to being a producer marketer. It means that as annual income increases, soybean processors tend to abandon soybean processing and participate more as sovbean producer marketers. The finding contrast Alkali et al. (2019) where coefficient of income was positive and significant among women soybean farmers in Borno State, Nigeria.

Among soybean wholesalers, five factors were significant determinants of market participation. These are age, sex, marketing experience, education and annual income of soybean marketers. Age of market participant (2.61) was significant at 1% and positively influences the participation as soybean wholesaler relative to being a soybean producer marketer. It implied that as the wholesalers advanced in age they continue to participate more in soybean wholesale business than being a producer marketers. This could be attributed to the less labourious activities done by wholesaler when compared to producer marketer. This result tallied with Egbetokun et al. (2017) who noted that age was significant determinant of market participation but contrast to Moono (2015) who found that the age was significant but negatively influence market participation among rice farmers in western province of Zambia. The sex of marketer (-2.01) and marketing experience (-2.09) were found to be significant at 5% but negatively influence the probability of participation as wholesaler relative to being a producer marketer. It implied that being a female increases probability of market participation as wholesaler and discourages participate as soybean producer marketers. This result contrast Ohen et al. (2013) who found that being a male positively determine market participation among rice farmers in southern Nigeria. The negative influence of marketing experience on participation implied that as wholesaler gain more marketing experience, they tend to switch from soybean wholesale to producer marketers. This could be attributed to opportunity of making more profit as producer than as a wholesaler. This result differs with Egbetokun et al. (2017) who noted that experience positively determinine market participation among maize farmers.

The level of education (2.64) was significant at 1% and positive determinant of market participation among soybeans wholesalers in the study area. It implied that education favours probability of being a wholesaler relative to being a producer marketer. It is expected because wholesale business requires lot of knowledge and calculations than is required by producers. This result agree with Alkali (2017) where the coefficient of level of education was positive and significant determinant of market participation among women soybean producers in Hawul, L.G.A of Borno State, Nigeria. Onya *et al.* (2016) also found that education postively influence market

participation among cassava farmers in Abia State, Nigeria. The annual income of wholesalers (6.54) was significant at 1% and positively influences the probability of market participation as wholesaler relative to being producer marketers. It implied that as their income increases, their tendency of participation as wholesalers increases. It is expected since wholesale business requires lot of investment which can be enhanced by increased income. This result confirm Ojo *et al.* (2013) who found income to be positive and significantly associated with choice of enterprise among yam and cassava farmer in Niger State, Nigeria.

Variables	Small-scale	Wholesalers	Retailers
	processors		
Age	-0.114076	0.256175	-0.245933
	(0.144522)	(0.098104)	(0.140696)
	Z = -0.79	Z=2.61***	Z=-1.75*
Sex	0.272669	-0.052208	0.061606
	(0.039067)	(0.259451)	(0.038177)
	Z=-6.98***	Z=-2.01**	Z=1.61
Marketing	0.011573	-0.076289	0.093013
experience	(0.051270)	(0.036555)	(0.050471)
	Z=0.23	Z=-2.09**	Z=1.84*
Credit access	0.003440	-0.037948	0.053184
	(0.034744)	(0.029431)	(0.103173)
	Z=0.10	Z=-1.29	Z=1.68*
Association	-0.071280	0.028166	0.038950
membership	(0.042749)	(0.025806)	(0.040444)
	Z=-1.67**	Z=1.09	Z=0.96
Household size	-0.016366	0.001852	-0.011718
	(0.010022)	(0.003648)	(0.009739)
	Z=-1.63	Z=0.51	Z=-1.20
Educational	0.008831	0.034969	0.004918
level	(0.015994)	(0.013258)	(0.015901)
	Z=0.55	Z=2.64***	Z=0.31
Annual income	-0.087324	0.148578	-0.088739
	(0.026122)	(0.022728)	(0.025226)
	Z=-3.34***	Z=6.54***	Z=-3.52***
Constant	11.10345	-29.78774	12.73994
Observations	481		
LR Chi <sup>2</sup> (24)	198.97		
$Prob > Chi^2$	0.0000		
Pseudo R <sup>2</sup>	0.1583		

Source: Field Survey, 2019

\*\*\*significant at 1%, \*\*significant at 5%, \*significant at 10%

Table 1: Factors that Influence Market Participation Among Respondents

The figures in bracket are Standard Error; Producer-marketer is base category.

The analysis of determinants of market participation among soybean retailers revealed that age, marketing experience, access to credit and annual income were significant. Age of marketers (-1.75) and annual income (-3.52) were significant at 10% and 1% respectively but negatively influence participation as retailer relative to being a producer marketer. The negative influence of age implied that as participants advance in age, they tend to abandon retail business and tends towards direct production. It could be that they are trying to avoid frequent travelling involved in retail business. This result tallied with Moono (2015) where age was significant but negatively influence market participation among rice farmers. The negative coefficient of annual income also implied that an increase income makes the marketers to

abandon soybean retail business and participate more as producer marketer probably due to large income required as producer marketers. The marketing experience of retailers (1.84) and access to credit (1.68) were significant at 10% and positive influence market participation. It implied that marketing experience favour market participation as retailer relative to being a producer marketer. It could be that experience is required more as retailer due to their direct contact with consumers and understanding of market trend. This result agreed with Alkali (2019) where the coefficient of farming experience was signicant and positive among women soybean farmers in Born State, Nigeria. Access to credit positively determine market participation as retailer relative to being a soybean producer marketer. This result is expected because having access to credit facilities will allow marketers feature in business of their choice. This result agreed with Moono (2015) where access to credit was significant at 5% and positively influence participation among rice farmers in Zambia.

## CONSTRAINTS FACED BY SOYBEANS MARKETERS IN THE STUDY AREA

Soybeans marketers in the study area are constrained by so many factors. These factors were analyzed using principal component analysis (the varimax-rotated principal component analysis). First the KMO and Bartlett's test were carried out on all data and it was found among all categories of soybean marketers to be significant (0.000), it implied the mean of Eigen values along each principal component are equal and related to each other. Variables that have factor loading of less than /0.50/ were discarded, also variables that loaded in more than one constraints were also discarded (Madukwe, 2004). The communalities represent the relation between the variable and all other variables (i.e., the squared multiple correlation between the item and all other items). The result was presented in table 2.

Among soybean small scale processors, the factors that loaded under component 1 include, lack of market for soybean output (0.771), poor marketing system (0.649) and low profit to soybean marketers (0.586). This result revealed that small scall processors are constrained mainly by market related problems. This is expected because without assurance of availability of market, the processors cannot embark on processing. This result tallied with Alkali (2017) who reported poor market access as the major problem militating against women soybean farmer. Soybean processors are also constrained by seasonality or fluctuation of output (0.541). This fluctuation in output makes forecasting of market trend meaningless. Bakoji et al. (2013) noted that fluctuation in output was constraints faced by soybeans marketers in Toro LGA, Bauchi State, Nigeria. Nwalem et al. (2016) also realized seasonality as constraint militating against sesame production in Benue State, Nigeria.

High cost of transportation of soybean produce (0.702), high/multiple market levies (0.612) and poor infrastructure facilities (0.549) were the factors that loaded under component 2. High cost of transportation of soybean produce have been a reoccuring challenge to marketers. Similar study by Bakoji *et al.* (2013) found that high cost of transportation constitute as

serious constraints faced by soybeans marketers in Bauchi State, Nigeria. Inadequate processing facilities (0.86) and poor management practices (0.589) loaded under component 3. Inadequate capital (-0.824) and lack of market information (0.780) loaded under componet 4. Market information is very important, the lack of market information can lead to cheating and inefficiency among competing marketers. This result agreed with Ruttoh *et al.* (2018) who found lack of market information and inability of producer to raise adequate capital as critical constraint to tomatoes marketing in Kenya.

Soybean wholesalers have the following constraints loaded under component 1: poor management practices (0.861), poor marketing system (0.786) and inadequate processing facilities (0.619). Poor management practise and poor marketing system could be attributed to the nature of competition and lack of organization among wholesalers. The lack of processing facilities also affect wholesale by not allowing full utilization of produce leading to lack of market for output. This result also tallied with Otitoju and Arene (2010) where inadequate processing facilities ranked first among constraints faced by soybeans producers in Benue State, Nigeria. Low profit to marketers (0.731), high cost of transportation (-0.683), lack of market information (0.554) and lack of credit for expansion (-0.544) loaded under component 2 for wholesalers. It is expected that low profit should be a problem to soybean wholesaler since all trade is driven by profit. High cost of transportation also increase transaction cost and reduce profit. This result also tallied Alkali (2017) who reported lack of access to credits as constraint among soybean farmer. Lack of market for soybean output (0.696), inadequate capital (-0.673) and seasonality or fluctuation of output (0.538) were the factors that loaded under component 3. Lack of market has been a recurring and serious challenge to soybean marketing because soybean unlike other beans cannot be consumed directly, it required processing. Capital is very important to any viable business, because it enhance expanion and help in cushioning risk and other incidentals. Due to inadequate capital, soybeans wholesaler in the study area have not been able to develope the market to the required standard. High/multiple levies (0.877) and poor infrastructural facilities (0.778) loaded under component 4. This result agreed with Uwaoma (2015) who noticed high and multiple government taxes and levies as serious constraint affecting soybeans processing in Nigeria.

The constraint faced by soybean retailers was poor marketing system (0.699) loaded under component 1. The retailers are challenged by unorganized produce market just like wholesalers. Lack of credit for expansion (0.703) loaded under component 2. This tallied with Bosena et al. (2011) who confirmed that lack of access to credit was a major barrier to cotton marketing in Matema District, Ethiopia. Lack of market information (0.812) loaded under component 3. Information is very important to retailers in order predict market trend and source produce with ease. Inadequate capital (0.827) and processing facilities (0.524) loaded under component 4. Inadequate capital and processing facilities are critical challenges because they hinder expansion of retail business. This agreed with Bakoji, et al. (2013) who oberved that processing and storage facilities are critical constraint faced by soybeans marketers in Bauchi State, Nigeria.

Constraints		Co	omponent	S	
			mmonalit	•	
Constraints by Processors	1	2	3	4	
Lack of market for soybean	0.771				0.736
Poor marketing system	0.649				0.612
Low profit to marketers	0.586				0.476
Seasonality or fluctuation of output	0.541				0.422
High cost of transportation		0.702			0.576
High/multiple levies Poor infrastructural facilities		0.612 0.549			0.409 0.311
Inadequate			0.869		0.760
processing facilities Poor management practices			0.589		0.664
Inadequate capital Lack of market information				-0.824 0.780	0.728 0.678
Constraints by					
Wholesalers Poor management	0.861				0.758
practices Poor marketing	0.786				0.681
system Inadequate	0.619				0.563
processing facilities  Low profit to		0.731			0.658
marketers High cost of		-0.693			0.58
transportation Lack of market		0.554			0.407
information Lack of credit for		-0.544			0.654
expansion Lack of market for			0.696		0.500
soybean					
Inadequate capital Seasonality or			-0.673 0.538		0.478 0.526
fluctuation of output High/multiple levies				0.877	0.807
Poor infrastructural				0.778	0.749
facilities					
Constraints by					
Retailers	0.600				0.606
Poor marketing system	0.699				0.606
Lack of credit for expansion		0.703			0.536
High cost of transportation		0.679			0.534
High /multiple levies		0.634			0.441
Lack of market information			0.812		0.703
Inadequate capital Inadequate				0.827 0.524	0.779 0.546
processing facilities					

Constraints by					
Producers					
Poor marketing	0.674				0.617
system					
High/multiple levies		0.774			0.653
High cost of		0.709			0.515
transportation					
Poor management		-0.650			0.571
practices					
Inadequate capital			-0.690		0.483
Lack of credit for			-0.627		0.469
expansion					
Lack of market			0.534		0.394
information					
Poor infrastructural				0.767	0.658
facilities					
Inadequate				0.632	0.493
processing facilities					

Source: Field Survey, 2019

Table 2: Distribution of Constraints Faced by Soybeans

Marketers

Producer marketers are constrained by poor marketing system (0.674) loaded under component 1. The reoccurance of poor maketing system among all categories of marketers, implied that soybean marketing need to be re-organized and cordinated by existence of a functional market associations and government monitoring. High/multiple market levies (0.774), high cost of transportation (0.709) and poor management practices (-0.650) loaded under component 2. Multiple market levies and high cost of transportation have not allowed the producer marketer to fully enjoy soybean market dividend. This agreed with Nwalem et al. (2016) who realized high cost of transportation as a serious constraint to sesame production in Nigeria. Inadequate capital (-0.690), lack of credit for expansion (-0.627) and lack of market information (0.534) loaded under component 3. Capital is need by producer in order to run their business successfully. Information is also a key guideline for efficient marketing. infrastructural facilities (0.767) and inadequate processing facilities (0.632) were the two constraints that loaded under component 4. This result agreed with Biam and Tsue (2013) who noticed that storage/marketing facilities were important constraint faced by soybean farmers in Nigerian.

### V. CONCLUSION AND POLICY RECOMMENDATIONS

This study revealed that the determinants of market participation among soybean small scale processors were sex of marketers, membership of market association and annual income. The wholesalers have age, marketing experience, education and annual income as determinants of participation. The determinants of participation among retailers were marketing experience, access to credit, age and annual income. The study revealed that the constraints found among marketers are poor marketing system, inadequate processing facilities, inadequate capital, lack of market for output, poor infrastructures and high/multiple taxes etc. These constraints in most cases are found to be correlated with themselves and have negatively affected soybeans marketing in the study area.

This study recommend that the government and soybean entrepreneur should invest in provision of processing facilities

and revitalization of Benue State Taraku mills which will create employment and ensure full utilization of soybean and it by-product in the study area. Lack of market was a recurring constraint, government is advice to establish soybean marketing board and storage facilities so as to mop-up excess soybean produce during market peak at harvest period and resale during period of relative scarcity. There should be access to affordable and low interest rate credits to soybean marketers. This will allow for expansion of the business and encourage product availability and affordability.

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