Inventory Planning and Agricultural Productivity in Rivers State.

Elizabeth Ledisi Poi
Department of Marketing
Rivers State University
Port Harcourt
poibeth@yahoo.com

Abstract

Rivers State is endowed with enough fertile soil which is expected to be a catalyst for bountiful harvest of agricultural products. However, the major challenge is that there is growing food insecurity with a rising population highly dependent on imported foods. This paper therefore, examined the relationship between inventory planning and agricultural productivity in Rivers state. The study adopted a cross-sectional survey framework with a target population size of twenty three (23) Local Government Areas in Rivers State. A sample of 115 respondents was drawn from farmers in the area under our study. A self-administered, structured questionnaire was employed to obtain primary data and data was analyzed. The research hypotheses were tested with the Pearson product moment correlation statistical tool to establish the degree of relationship. The reliability of the research instrument was tested using the Cronbach's Alpha which revealed that all the scores of the variables satisfied the standard Cronbach's Alpha threshold of 0.7.With the aid of the statistical package of social sciences software (SPSS) version 22, frequencies were computed to establish sample characteristics. The study found that; inventory planning is positively and significantly affiliated to agricultural productivity. Based on the results of the analysis, the paper concludes that inventory planning has a positive and significant relationship with agricultural productivity. The paper therefore recommends that farmers in the 23 Local Government Areas in Rivers state should ensure that inventory items are planned to eradicate stock-out situations in order to meet up with production necessities and satisfy "customers' needs/wants at all times.

Keyword: Inventory Planning, Agricultural Productivity, Agricultural input, Agricultural Output, Buffer stocks, Out-stocking and Over-stocking.

1. Introduction

Before independence, revenue from agriculture was the catalyst of economic growth in Rivers state. Ehui and Tsigas (2013) indicated that Rivers State has a highly expanded agro-ecological condition, which enhances the production of an extensive collection of agricultural products. Over 75% of total annual earnings used for capital development projects were generated from the exportation of agricultural products like cocoa, palm kernel, coffee, cotton, groundnut, rubber and palm oil etc (Owonte & Ademe, 2017). Prior to the early 1970s; agricultural exports were the main source of foreign exchange earnings (Dontsop, Okoruwa, Adeoti & Adenegan, 2012). However,

since petroleum was introduced into the Nigerian export trade, the petroleum industry became the linchpin of her economy (NNPC 2018).But due to the crash in the international demand for the Nigerian crude oil and its dwindling price, academic scholars and business practitioners have suggested that the economy should focus its attention more on the agricultural sector and reduce its dependence on oil. Presently, Rivers State is struggling with the challenge of diversifying the framework of her economy to generate more revenue. With fears that the fall in oil price poses a threat to the economy, agriculture is one of the viable options to diversifying the economy (Adebayo, Akinwunmi, Aworinde & Ogunti, 2015). Albeit, the Nigerian domestic economy is governed by agriculture; it accounts for about 40% of its Gross Domestic Product (GDP) and employed over 86% of the rural households (Fan,Omilola, Rhoe & Sheu 2008; CBN, 2010; Akpan, 2012). Agriculture is the economic anchor of many of households in Rivers State as more than two-thirds of her population live in rural areas and more than 85% of people in these regions depend solely on agriculture for their livelihoods (Udoh & Ndaeyo 2000; World Bank Development Indicators, 2014). The Rivers State agriculture is primarily rain-fed and known for low productivity, low technology, and high labor intensity (Amare,Cissé, Jensen & Shiferaw,2017).

But the once prevailing subsistence-oriented farm economy is at risk of gradual relegation. The low agricultural productivity in the last three decades led to the initiation of some agricultural schemes and programs by the government they include; the River Basin Development Authorities, the National Accelerated Food Production Project, the Agricultural Development Project, Operation Feed the Nation, the Green Revolution, the National Directorate of Food, Roads and Rural Infrastructure, the Agricultural Credit Guarantee Scheme Fund, the National Special Programme for Food Security, Root and Tuber Expansion Project and the National Fadama I and II program (Dontsop,Okoruwa, Adeoti, & Adenegan,2012). Foster & Rosenzweig, (2005) indicated that there is still a huge majority of poor and small-scale farmers in Nigeria who directly depend on agriculture for their livelihoods. The farmers have no full control over the activities on their farmlands and environment due to a lack of inventory planning, which in most cases brings about low agricultural productivity. Bakare (2013) opined that in spite of the pronunciation of government plans, tactics and programs and the assurance of patrons to the wider agenda of

sustainable agriculture and pro-poor rural development, the rural communities in Rivers State are still underdeveloped due to food insecurity. In order to mend the truncated agricultural productivity in Rivers State, there is a need to plan inventory strategically and tactically (Gupta 1995).

2. Literature Review

2.1 Theoretical Foundation

This study is anchored on theory of the Resource Based View. Resource based view theory buttresses the importance of resources and its implications for organizational performance. The resource based view theory considers resources as the key to optimal organizational performance and the source of adequate competitive advantage for firms (Coase 1937; Penrose 1959; Williamson 1975). Lavassani, Movahedi & Kumar (2009) identified two main schools of thought in the development of resource based theory namely; classical and modern schools of thought. The classical school of thought explains that to achieve higher competitive advantage organizations should pursue the acquisition of better economic resources. Although, critics of the classical school of thought indicated that the theory was mostly concerned with organizations' tangible resources and they considered organizations as black boxes of operation where inputs and outputs of the system were the main focus (Foss 1999). The modern school of thought was birthed to proffer solutions to the flaws of the classical school of thought. Proponents insisted that resources could be tangible, intangible, heterogeneous and immobile. This school of thought is of the view that for organizations to achieve effective competitive advantage their resources should be valuable, unique, durable, transparent, transferable and replicable (Barney 1991; Prahalad & Hamel 1990).

2.2 Conceptualization of Inventory Planning and Agricultural Productivity

The commercial environment is hectic for all business practitioners due to its dynamism. The major objective of firms is to reduce cost without hurting the level of productivity (Brain 2000). In managing inventory it begins with a plan. Inventory planning is establishing the optimum level of inventory both for the present and the future (Geoff & Catherine 2015).Inventory planning involves understanding demand patterns, what value-add is required for each product and deciding what inventory categories each product should be in to achieve stated objectives. Priyadarshni,(2018) indicated that agricultural productivity is closely affected by "physiography,

climate, soil, water, socioeconomic, political, institutional and organizational factors" all of which require planning and adaptation to achieve high productivity. It is an input-output ratio, this 'input and output' is the inventory which Donald (2017) considered an archive of items retained in 'stock', they consist of; raw materials, work-in-progress, finished goods. Inventory planning is the systematic management of stock that includes creating forecasts to determine how much inventory should be on hand to meet organizational objectives (Osmond 2018). Agricultural productivity is a measure of the amount of agricultural output produced for a given amount of inputs in a particular period (Lal,2013 as cited in Koch, McBratney, Adams, Field,Hill, Crawford & Angers, 2013). Agricultural inventory planning is a subset of firms' corporate strategy drawn to eliminate all forms of irregularities. Planning also provides the chance to determine the ground reality, the real cause of agricultural backwardness and low productivity.

2.2.1. Inventory Planning

Adeyemi & Salami (2010) indicated that inventory planning is a process of recording and monitoring the level of inventory, forecasting future demand and mapping out ways on when and how order could be executed. Inventory planning is figuring out what an organisation's inventory should be (not just counting what is in stock).Accurate data and careful management of these activities is essential to the planning function to calculate a meaningful output. The essence of inventory planning is to determine and maintain the lowest stock levels possible and determine adequate buffer stocks that will satisfy customers' requirement at all times (Edward 2002). Scolari (2015) indicated that in planning inventory, demand forecasting is paramount to ensure that even with minimal stock levels, you never run out of products when the need arises. Holding onto too much inventory unnecessarily incurs cost and stocking too little inventory may lead to firm's inability to meet customers' needs and wants (Valogix 2015). Demand may fluctuate due to changes in taste, income, seasons and business trends; to adapt easily to these changes inventory planning is paramount.

2.2.2 Agricultural Productivity

Agriculture is the science or practice of farming, which includes tilling of the soil for growing of plants, rearing of animals for food, and the preparation and marketing of agricultural and agro-allied goods (Ewetan, Fakile, Urhie & Oduntan 2017). Priyadarshni, (2018) argued that agricultural productivity is a function of the attitudes of the farmers towards work and their ambitions for a better standard of living. Bakare (2013) studied the affiliation between sustainable agriculture and rural development in Nigeria and found that past values of agricultural output could be used to predict the future performance of rural development. Aminu & Anono (2012) examined the benefits of agricultural sector and petroleum sector to the economic growth and development of Nigerian and found that the agricultural sector contributes more than the petroleum sector. However, they both have a positive effect on the economic growth and development of the country. Christiensen & Yee (1964) studied agricultural productivity and economic growth of an imaginary country and found that growth in agricultural productivity comes from two main sources; use of additional inputs, and increased productivity resulting from improved technology. They indicated that increase in agricultural productivity contributes to national economic development and growth in the following ways: supply of an economic surplus for consumption, enhancing production in agro-allied organisations, for capital formation, rise in the purchasing power of rural people, expansion of markets for industrial goods and structural changes needed for national economic growth.

2.2.3 Agricultural Input

Agricultural inputs are goods permitted for use in organic farming (Easy-Cert,2019).Utilizing low input use is one of the reasons for low agricultural productivity in Nigeria. More than 80% of the households in Rivers State associate their poverty status to issues in agriculture and lack of agricultural inputs as well as lack of purchasing power to afford agricultural inputs(Oseni & Winters, 2009).According to the Michel Services Institute, (2017) agricultural input has been classified into the following;

1. Conventional Input; Land, labor, livestock, tractors, fertilizer

2. Labor Quality: Life expectancy, adult illiteracy,

3. Infrastructure: Road density.

It has long been established that restricted access of farmers to agricultural input due to hikes in prices and inadequate supplies are constraints to agricultural productivity in Nigeria (Phillip, Nkonya, Pender & Oni,2009; Oseni, McGee & Dabalen, 2014).

2.2.4 Agricultural Output

Agricultural output is the value of agricultural goods free of intra-branch consumption, are manufactured during an accounting period and before processing, are obtainable for export and consumption (Ewetan, *et al*.2017).According to the Organisation for Economic Cooperation and Development,(2019),livestock and crop are the foremost product classes of agricultural output. Agricultural output consists of output sold (including commercial transactions between agricultural holdings), output for own final consumption; output produced for further processing by agricultural practitioners; and intra-unit consumption of livestock feed products. High agricultural output contributes to better supply of food, reduces food prices, and aids both rural and urban poor (Grewal & Ahmed, 2011). Amare, Cissé, Jensen & Shiferaw (2017) indicated that agricultural output rises with increased input assigned to agriculture production measured in terms of labour, fertilizer use and the use of herbicide, which may indicate that high input use and farm technology adoption may have a significant role in increasing agricultural output.

2.4 Conceptual Framework

This study conceptual framework shows inventory planning (independent variable) directly linking to agricultural productivity (dependent variable), which is made up of agricultural input and output as its measures.

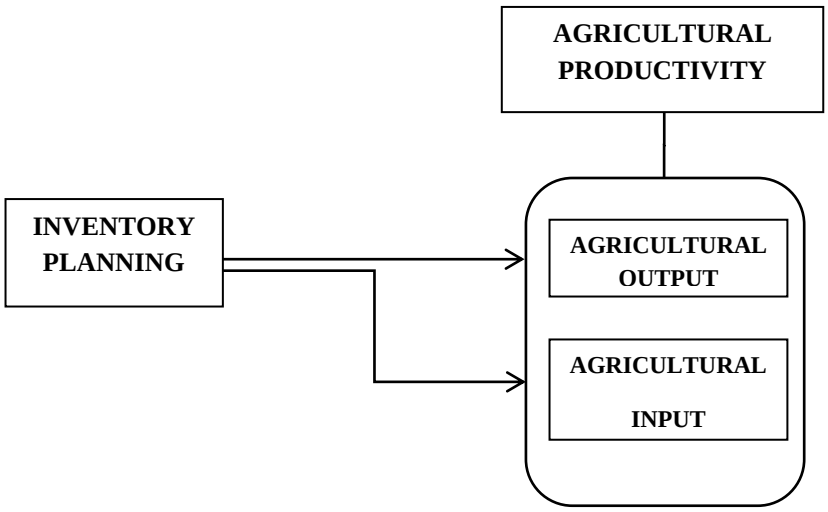

Figure 1: Conceptual Framework of Inventory Planning and Agricultural Productivity.
Source: Researcher's Review of Relevant Literature (2019)

2.4.1 Inventory Planning and Agricultural Productivity

Most businesses struggle to satisfy customers' demand due to inadequate planning. Inventory planning is the first step towards eradicating over stocking, under stocking and adequate determination of buffer stocks. Aluko, Odugbesan & Gbadamosi (2004) opined that planning is a necessity for every business and the responsibility of every management structure. Forecasting and demand planning applications can do more than help provide visibility into what lies ahead (Valogix 2015). Aarti & Dhawal (2013) indicated that inventory planning is ascertaining the kind and number of quantities of inventory items that would be required in the future to maintain production schedules and sales. Lu, Song,& Regan (2006) opined that inventory planning is basically focused on demand forecasting especially when the demand environment is highly volatile. Phillip,*et al.(*2009) indicated that some limitations to agricultural productivity in Nigeria include aged and incompetent processing equipment, high costs of industrial inputs; farm machinery, untimely financial aid of the agricultural sector etc. The establishment of effective infrastructure is considered an obligatory panacea to agricultural productivity (Fakayode, Omotesho, Tsoho & Ajayi, 2008).However, Liverpool-Tasie, Kuku, Ajibola,(2011) indicated that agricultural productivity in Nigeria can be improved without a change in the current level of input use. I think one way to achieve this increase in agricultural productivity is first through inventory planning. Like the saying goes "if you fail to plan, you plan to fail". Based on the above discussion,

examining the relationship between inventory planning and agricultural productivity, I therefore hypothesize the following:

Ho_1: Inventory planning has no significant relationship with agricultural input.

Ho_2: Inventory planning has no significant relationship with agricultural output.

2.5 Methodology

This study adopted a cross-sectional survey and a correlation investigation to establish the relationship between inventory planning and agricultural productivity in Rivers State. The target population for this study was twenty (23) Local Government Areas in Rivers State, and a sample of 115 respondents was drawn from farmers of the Local Government Areas under our study. A structured questionnaire was used to collect primary data; and the questionnaire was designed in Likert scale five point form- ranging from Strongly Disagree (SD) to Strongly Agree (SA). The testing of hypotheses was done using Pearson product moment correlation. With the aid of the statistical package for social sciences software SPSS version 22, frequencies were computed to show the sample features.

2.5.1 Reliability

The reliability of the research instrument was tested using the Cronbach's Alpha threshold of 0.7. To validate the factors proposed in this context.

Table 1: Result of Reliability Analysis

Variable	Cronbach's Alpha	Items	Acceptability
Inventory Planning	0.824	4	Accepted
Agricultural Output	0.719	4	Accepted
Agricultural Input	0.859	4	Accepted

Source: SPSS 22 Output (based on 2019 field survey data)

Descriptive Statistics

The descriptive analysis of inventory planning is shown in four items questions.

Table 2: Descriptive Statistics on Items of Inventory planning

Table 2: Mean Evaluation on Inventory Planning (IP)

S/N	Inventory Planning	Mean	SD	95%CI Lower	Upper
Q1.	Our corporate strategy supports inventory planning accurately.	4.8	.406	4	5
Q2,	We keeps accurate data on inventory items.	4.77	.426	4	5
Q3.	We are able to predict future demands.	4.06	.725	3	5
Q4.	Inventory is monitored and supervised continuously.	4.09	.086	3	5
	Grand mean	**4.43**	**.411**	**3.5**	**5**

Source: Researcher's Study Outcome, 2019

Table 2 demonstrates that the maximum item that accounts for inventory planning is the degree to which the farmers keep accurate data of inventory with a mean score of 4.77. This is in agreement with the views of Aarti & Dhawal (2013) who opined that inventory planning is determining accurately the kind and number of quantities of inventory items that would be essential in the future to sustain production plans and sales.

2.6 Test of Hypotheses

This segment of the study establishes a summary of the outcomes of the test of hypotheses. The test statistics used in testing the hypotheses is the Pearson Product Moment Correlation. All the analysis was carried out with the aid of the Statistical Package for Social Sciences (SPSS) version 22.

Ho_1: Inventory planning has no significant relationship with agricultural input.

Table 3: Pearson Moment Correlation (Inventory Planning and Agricultural Input)

Variables	Statistics	Inventory Planning (IP)	Agricultural Input (AI)
(IP)	Pearson Correlation	1.000	.944**
	Sig (2-tailed)		.000
	N	31	31
(PQ)	Pearson Correlation	.844	1.000
	Sig (2-tailed)	000	
	N	31	31

**correlation is significant at 0.01 level (2-tailed).

Table 3 shows that inventory planning and agricultural input does have an actively strong and positive relationship with (r = .944, p<.05) a Pearson correlation coefficient at 0.01 significant level. This relationship was significant at p = 0.000 which is less than the level of significance 0.05 accepted for the study. As the rate of inventory planning increases, so does the value of agricultural input. By virtue of this result, the null hypothesis one (H_{o1}) is hereby rejected and its alternate accepted.

Ho_2: Inventory planning has no significant relationship with agricultural output.

Table 4: Pearson Moment Correlation (Inventory Planning and Agricultural Output).

Variables	Statistics	Inventory Planning (IP)	Agricultural Output (AO)
(IP)	Pearson Correlation	1.000	.983**
	Sig (2-tailed)		.000
	N	31	31
(PV)	Pearson Correlation	.783	1.000
	Sig (2-tailed)	000	
	N	31	31

**correlation is significant at 0.01 level (2-tailed).

Table 4 shows that inventory planning and agricultural output has an actively strong and positive relationship with ($r = .983$, $p<.05$) a Pearson correlation coefficient at 0.01 significant level. This relationship was substantial at $p = 0.000$ which is less than the level of significance 0.05 accepted for the study. As the value of inventory planning increases, so does the rate of agricultural output. By virtue of this result, the null hypothesis two (H_{o2}) is hereby disallowed and its alternate accepted.

2.7 Discussion

This study examined the relationship between inventory planning and agricultural productivity in Rivers State. It was hypothesized that there is no relationship between inventory planning and measures of agricultural productivity which are; agricultural input and agricultural output. The outcome from the Pearson product moment correlation analysis indicates that an important relationship exist between them. A majority of the respondents are of the opinion that an actively, strong and positive relationship exists between inventory planning and measures of agricultural productivity. Based on that, the null hypotheses (Ho_1 and Ho_2) were rejected and the alternate hypotheses (Ha_1 and Ha_2) were accepted. The findings of this research is in agreement with the opinions of Aarti & Dhawal (2013) who studied "Inventory management delivering profits through stock management" and (Osmond 2018) who examined "What are the benefits of inventory

planning & control?" and indicated that inventory planning determines the kind, quality and number of inventory items that would be necessary in the future to maintain production plans, sales and satisfaction. The results also supports the view of Amare, Cissé, Jensen & Shiferaw (2017) who studied the "Impact of agricultural productivity on welfare growth of farm households in Nigeria" and found that agricultural output rises with appropriate amount of input assigned to agriculture production. Jonsson & Mattsson (2006) found that inventory planning is an integral part of the value chain and has a significant relationship with firm's productivity.

2.8 Conclusion

The outcome of the data analysis anchored on review of related literature shows that inventory planning has a strong, positive, significant relationship with agricultural productivity. Therefore, the study concludes that inventory planning has a significant, positive relationship with agricultural productivity. Farmers in Rivers State should ensure that inventories are planned to eradicate stock-out, over stocking situations and enhance the determination of accurate buffer stocks in order to meet up with production necessities, support broad-based poverty decline, create food security and increase employment opportunities in the rural economy.

.

References

Aarti, D., & Dhawal, M. (2013) Inventory management delivering profits through stock management.*Paper presented at 6th International Business & Social Science Research Conference.* Novotel Hotel, World Trade Centre, Dubai.

Adebayo, S., Akinwunmi, A.O., Aworinde, H.O & Ogunti, E.O. (2015) Increasing Agricultural Productivity In Nigeria Using Wireless Sensor Network (WSN*). African Journal of Computing & ICT*, 8, (3) 121-128.

Aluko,M. Odugbesan,O & Gbadamosi, G.(2004) *Business Policy and Strategy,* Nigeria, Longman.

Aminu, U. & Anono, A. (2012) An empirical analysis of the contribution of agriculture and petroleum sector to the growth and development of the nigerian economy, *International Journal of Social Science and Education,* 2(4), 1-11.

Amare, M., Cissé, J. D., Jensen, N. D., & Shiferaw, B. (2017). *The Impact of Agricultural Productivity on Welfare Growth of Farm Households in Nigeria: A Panel Data Analysis*. Rome, FAO.

Akpan, S. B. (2010) *Encouraging Youth Involvement in Agricultural Production and Processing in Nigeria.* Washington, D.C Policy Note, 29, International Food Policy Research Institute.

Bakare, A S. (2013) An econometric analysis of sustainable agriculture and rural development in Nigeria: A Vector Autoregressive Approach (VAR*). Journal of Agricultural Economics and Development*, 2(5), 184-193.

Christiensen, R P.,& Yee, Y. (1964) The mechanics of agricultural productivity and economic growth, *Journal of Farm Economics*, 46(5), 1051-1061.

Donald, L. (2017) Inventory management, in Ann M. Brewer, Kenneth J. Button, David A. Hensher(ed) Handbook of Logistics and Supply-Chain Management. *Handbook in Transport* (2),195-212.

Dontsop, N., P. Okoruwa, V. O., Adeoti, A. I., & Adenegan, K. O. (2012). Productivity impact differential of improved rice technology adoption among rice farming households in Nigeria. *Journal of crop improvement*, *26*(1), 1-21.

Easy-Cert,(2019) *Agricultural Inputs/Auxiliary Input* [Online] https://www.easy-cert.com/html Accessed 11th June,2019.

Ewetan, O., Fakile, A., Urhie, E.& Oduntan, E. (2017) Agricultural Output and Economic Growth in Nigeria, *Journal of African Research in Business & Technology*,11-22.

Fan, S., B. Omilola, V. Rhoe, & Sheu A.S. (2008) *Towards a Pro-Poor Agricultural growth strategy in Nigeria*. International Food Policy Research Institute.

Fakayode, B. S., Omotesho, O.A, Tsoho, A. B.& Ajayi, P.D.(2008) An Economic Survey of Rural Infrastructures and Agricultural Productivity Profiles in Nigeria, *European Journal of Social Sciences* ,7(2),158-171.

Foster, A. D., & Rosenzweig, M. R. (2007) Economic development and the decline of agricultural employment. *Handbook of development economics*, *4*, 3051-3083.

Gupta, C.B.(1995) *Corporate Planning and Policy*, New Delhi, Chand & Sons.

Koch, A., McBratney, A., Adams, M., Field, D., Hill, R., Crawford, J.& Angers, D. (2013). Soil security: solving the global soil crisis. *Global Policy*, *4*(4), 434-441.

Lavassanni,K.Movahedi,B. & Kumar,V.(2009) Transition to B2B e-marketplace enabled supply chain; readiness assessment and success factors. *The International Journal of Technology, knowledge and Society*,5(3),75-88.

Michel Services Institute, (2017) Agricultural Productivity, Resources and Related Terms[Online] instituitmichelserres.ens-lyon.fr/sAccessed 11th June,2019.

NNPC, (2018) *Development of Nigeria's Oil Industry* [online] http://nnpcgroup.com/NNPCBusiness/BusinessInformation/OilGasinNigeria/DevelopmentoftheIndustry.aspxAccessed 19th March,2018.

Nwajiuba, C. (2012) *Nigeria's Agriculture and Food Security Challenges* [Online] https://ng.boell.org/sites/default/files/uploads/2013/10/agriculture_green_deal_nigeria_study.pdf Accessed 10th May,2019.

Organisation for Economic Cooperation and Development (OECD)(2019) *Agricultural Output* [Online]https://www.oecd-ilibrary.org/agriculture-and-food/agricultural-output/indicator-group/english Accessed 11th June,2019.

Omobowale, A. O, Ephraim N, John L. P., Dayo, P.& Edward, K. (2009) *Trends And Drivers Of Agricultural Productivity In Nigeria* [online] http://www.ifpri.org/publication/trends-and-drivers-agricultural-productivity-nigeria Accessed 7th May,2019.

Owonte, L. H. & Ademe, D.T.(2017) Agribusiness Challenges and Marketing Performance of the Agricultural Sector in Nigeria. *RSUST Department of Marketing Academic Proceedings*,37-51.

Oseni, G., McGee, K.& Dabalen, A. (2014). *Can Agricultural Households Farm Their Way out of Poverty Development Research Group Poverty and Inequality* Team WPS7093.

Phillip, D., Nkonya, E., Pender, J.& Oni, O. A. (2009) *Constraints to Increasing Agricultural Productivity in Nigeria: A Review*.[online] dspace.africaportal.org/jspui/.../NSSP%20Background%20Paper%206.pd. Accessed 20th March, 2015

Priem, R. L., & Butler, J. E. (2001) Tautology in the resource-based view and the implications of externally determined resource value: Further comments.*Academy of Management review*, *26* (1), 57-66.

Lu, X ,Song,S.& Regan,A.(2006) Inventory Planning with Forecast Updates: Approximate Solutions and Cost Error Bounds. *Operations Research*, 54(6) 1079–1097.

Priyadarshni,(2018) *Measurement of Agricultural Productivity and Efficiency* [online] http://www.yourarticlelibrary.com/agriculture/measurement-of-agricultural-productivity-and-efficiency/44426 Accessed 10th June,2019.

Udoh, A. J., & Ndaeyo, N. U. (2000) Crop productivity and land use efficiency in cassava-maize system as influenced by cowpea and melon populations. *Tropical agriculture*, *77*(3), 150-155.

Valogix,(2015) *The Art of Inventory Planning*[online] https://www.E-book4theartofinventoryplanning.Retrieved 16th October,2018.

Osmond V.(2018) *What Are the Benefits of Inventory Planning & Control*?[online] Smallbusiness.chron.com/benefits-inventory-planning-control-2240.html Accessed on 26th March,2018.

World Bank (2014) *World Development Indicators 2014. Washington, DC.* [online] http://data.worldbank.org/data-catalog/world-development-indicators.Accessed 10th May,2019.

Liverpool-Tasie, L., Kuku, O.& Ajibola, A. (2011) *A Review of Literature on Agricultural Productivity, Social Capital and Food Security in Nigeria*. Nigeria Strategy Support Program Working Paper 21. Washington, DC: International Food Policy Research Institute.