Effective Management on Profitability of Agriculture Business in Nigeria: Evidence from JOF Ideal Family Farms Limited

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ABSTRACT
This study investigates the influence of effective management on profitability of Agriculture business in Nigeria using JOF Ideal Family Farms Limited as a case study. The study examines the contribution effect of inventory and materials management on profit maximization in agriculture business. A descriptive survey design was adopted and the study made use of primary source of data in which 125 copies of questionnaire were administered and 120 were retrieved through snowball sampling technique. Goal Setting Theory was the theory used in the study. Data generated was analysed using Correlations and ANOVA. The findings reveal that inventory management ($r = .296$, $P(0.000)<.05$) and material management ($r=.338$, $P(.000)<.05$) were positively and significantly related with business profitability. Findings also reveal that 1% increase level of profitability of the company is brought about by 41% increase in inventory management and 15% increase in material management. Findings deduce that effective management has significant influence on business profitability ($F_{(1,110)}= 22.705$, $R^2= .236$, Adj.$R= .226$, $P<.05$). The found out that 23.6% the variation in business profitability in JOF Ideal Farm Limited is accounted for by effective management of inventory and material in the company. The study concluded that effective management of inventory and materials significantly influence profit maximization in JOF Ideal Farm Limited. The study therefore recommended that the Nigeria agriculture companies should ensure that they maintain effective and reasonable level of inventory and material management so as to meet the expected customers demand.

Keywords: Agriculture business, Effective management, Inventory management, Material management, Profitability

I. INTRODUCTION
Business organizations strive to optimize their objectives which range from maximization of profit to cost minimization. One thing that is common to every organization is the desire for high profitability through employees whether in the manufacturing industry and service organization. Profit is a measure of excess amount earned over expenses. Organizations are formed, organizations are operated primarily to provide service, and make profit. It is the element of profit that ensures the substance of the business. This profit however is a function of the individual employee's performance. In other word, that determines how well the organization is able to achieve its goals. To make this work, the management must establish effective management of limited resources and materials. In farm producing firms, scarce resources actually call for effective use of all available management skills to put the resources into proper use for the growth and development of a company. Effective use of resource can be achieve through proper planning, organizing,
In Nigeria today, because we are a developing economy, there are many infant industries managing scarce resources and poor infrastructures, what attracts the research is to look into how effective management impact on the profitability of firm. Profit is the entrepreneur's reward and in fact, a major motive for doing business. Most often too, it is used as an index for measuring performance. It is usually what is left after all the costs have been removed from the accrued revenue from sales. Therefore, profit is a controllable factor to the extent that management can control his revenue through price on one hand and through costs on the other hand (Ogbadu, 2009). Low level of profitability in organization would not be unexpected given the rates at which costs rise. Profit, of course, represents the balance from revenue after all costs has been deducted. The success or otherwise of any organization be it profit or non-profit concern is based on the effective management of materials or resources in the organization. While some organizations find it difficult to achieve their objectives due to the lack of the basic knowledge and application of the materials management, some have succeeded due to the effective management. In every organization, materials management is that aspect of business activity that deals with planning for purchasing, receiving, handling, storing, and releasing of materials for use in production with effective control measures (Sitienei & Memba, 2015). Materials are industrial goods that will become part of another physical product.

Materials management is a tool that can be used effectively in promoting profit maximization in a company (Ogbadu, 2009). The objective of materials management is to maximize the use of the firms’ resources by ensuring adequate supply of materials for production process and also minimizing cost of holding excessive inventories. Furthermore, material constitutes a major portion of current assets especially in manufacturing companies and retail/trading firms (Mittal, 2014).

To a large extent, the success or failure of a business depends upon its effective management of materials and inventory. Inventory management, therefore, should strike a balance between too much inventory and too little inventory (Gupta & Gupta, 2012). The efficient material management and effective control of inventories help in achieving better operational results and reducing investment in working capital. It has a significant influence on the profitability of an organization thus inventory management should be a part of the overall strategic business plan in every organization (Gupta & Gupta, 2012). Furthermore, effective management is recognized as a vital tool in improving asset productivity and inventory turns, targeting customers and positioning products in diverse markets, enhancing intra and inter-organizational networks, enriching technological capabilities to produce quality products thereby imparting effectiveness in inter-firm relationships. Proper management even results in enhancing competitive ability and market share of small manufacturing units (Chalotra, 2013). Well managed materials and inventories can give companies a competitive advantage and result in superior financial performance (Isaksson & Seifert, 2013).

Management of organization’s inventory or materials is fundamental to the success and growth of organization as the entire profitability of an organization is tied to the volume of products sold which has a direct relationship with the quality of the product (Anichebe & Agu, 2013). Therefore, this study is undertaken to outline how profitability can be achieved through effective management of materials and inventory in JOF Ideal Family Farms Limited in Ondo State. In Nigeria, the farm producing sector is identified as one of the core industrial sectors, with ample scope to boost the economy through production and agricultural commodity exports. Among farm producing companies in Ondo State, JOF Ideal Family Farms Limited serves as a major player that engages in farming and agriculture business activities such as vegetable oil processing, production and agricultural commodity exports, and provides services on poultry and crop cultivation. With agricultural products ready market in Ondo State, among many other adjacent towns in Nigeria, there is really no doubt that farm producing companies in this part of Nigeria will continue to flourish hence increased production and high inventory levels. Therefore, the need to know the effect of effective management on profitability of farm producing companies needs scholarly attention.

In the quest to maximize profit, many organizations fail to examine their management functions particularly in managing materials and inventory. This is unfortunate because improving the way an
organization controls and manages materials and inventory may have the greatest potential for improving the organization’s bottom line (Schreibfeder, 2004). According to Temeng et al (2010), organizations have continuously ignored the potential savings from proper management of materials and inventory, treating inventory as a necessary evil and not as an asset requiring management. Farm produce is an essential component of human development and most important input of agricultural industry, particularly in the provision of foods, which are necessary for the human growth and development. Also, it is first most consumed products on the planet (WBCSD, 2002). Recently, Nigeria has experienced a tremendous growth which has led to increased needs of farm products as a result of increase in the price of foreign agricultural products. There has been a growing demand of farm products from, within and from outside the country from places such as Ghana and Cameroon (Kenya National Bureau of Statistics, 2012). As such, the increased demand has increased sales for farm producing companies but it poses a great challenge with regards to materials and inventory management of farm producing companies in the country. The rapid demand for farm products has augmented the inventory problem hence the need for effective and efficient inventory management. It is on this argument that this study aims to analyze the relationship between materials/inventory management and the profitability of agriculture business using JOF Ideal Family Farm Limited in Ondo State as a case study. The specific objectives are set to ascertain the influence of effective materials and inventory management on profitability of JOF Ideal Family Farm in Ondo State.

High profitability is an indicator organization’s survival; for that reason, managing both materials and inventory is an indispensable factor that will result in higher profitability and goal realization. By investigating effective management process as a tool for achieving higher profitability in JOF Ideal Family Farm in Ondo State, the study will help many agricultural producing companies to foster effective management strategy and limit waste of resources and inventory. The essence of this study was to build understandings regarding the effective management system and how this system constituted a tool to realizing higher productivity in Nigerian agricultural producing companies. The findings of this study serve as a pointer to policy options that should be adopt by stakeholders in agricultural export business and as well triggered further research and provide guidelines to other organizations that are eager to implement effective management in their organizations. As a final point, the findings of the study sealed a gap in the existing literatures by making a provision of empirical analysis of effective management and profitability of an organization and this will be useful for scholars and business managers.

II. LITERATURE REVIEW
2.1 Concept of Profitability
The word “profitability” is composed of two words, namely, profit and ability. The term “profit” has been explained above and the term “ability” indicates the power of a business entity to earn profits. The ability of an organization also denotes its earning power or operating performance. The profitability may be defined as the ability of a given investment to earn a return from its use. Profitability is a relative concept whereas profit is an absolute connotation. Despite being closely related to and mutually interdependent, profit and profitability are two different concepts. In other words, in spite of their generic nature, each one of them has a distinct role in business. Profitability means ability to make profit from all the business activities of an organization, company, firm, or an enterprise. It shows how efficiently the management can make profit by using all the resources available in the market (Tulsian 2014). According to Harward and Upton (2006), “profitability is the ‘the ability of a given investment to earn a return from its use.’” However, the term ‘Profitability’ is not synonymous to the term ‘Efficiency’. Profitability is an index of efficiency; and it is regarded as a measure of efficiency and management guide to greater efficiency. Though, profitability is an important yardstick for measuring the efficiency, the extent of profitability cannot be taken as a final proof of efficiency. Sometimes satisfactory profits can mark inefficiency and conversely, a proper degree of efficiency can be accompanied by an absence of profit. The net profit figure simply reveals a satisfactory balance between the values receive and value given. The change in operational efficiency is merely one of the factors on which profitability of an enterprise largely depends. Moreover, there are many other factors besides efficiency, which affect
profitability. Sometimes, the terms ‘Profit’ and ‘Profitability’ are used interchangeably. But in real sense, there is a difference between the two.

Profit refers to the total income earned by the enterprise during the specified period of time, while profitability refers to the operating efficiency of the enterprise. It is the ability of the enterprise to make profit on sales. It is the ability of enterprise to get sufficient return on the capital and employees used in the business operation. Furthermore, profit represents the balance from sales revenue after all costs have been deducted. It is a controllable factor to the extent that management can control his revenue through price on one hand and through costs on the other hand (Ogbadu, 2009). Ramakrishna (2005) articulated that profit can be obtained by deducting the manufacturing cost from the selling price. He emphasized that in the current competitive market situation, the selling price is determined by the market forces and as such, profit can be ensured only by reducing the manufacturing cost which can be minimized through reduction in the materials cost. Materials cost constitutes about 60 percent of manufacturing cost. As an absolute term, profit has no relevance to compare the efficiency of a business organization. A very high profit does not always indicate sound organizational efficiency and low profitability is not always a sign of organizational sickness. Therefore, it can be said that profit is not the prime variable on the basis of which the operational efficiency and financial efficiency of an organization can be compared. To measure the productivity of capital employed and to measure operational efficiency, profitability analysis is considered as one of the best techniques.

2.2 Conceptual Approach of Effective Management

2.2.1 Materials Management

Every organization invests a considerable amount of capital on materials. In many cases, the cost on materials exceeds fifty percent of the total cost of goods produced. Such a large investment requires considerable planning and control so as to minimize wastage which invariably affects the performance and profitability of organizations. Materials are the lifeblood and heart of any manufacturing system, in fact no industry can operate without them. They must be made available at the right price, at the right quantity, in the right quality, in the right place and at the right time in order to co-ordinate and schedule the production activity in an integrative way for an industrial undertaking. A manufacturing firm will remain shaky if materials are understocked, overstocked or in any way poorly managed (Lee et al., 1977 and Banjoko, 2000). Materials Management encompasses all operations management functions from purchasing of raw materials through the production processes to the final delivery of the end products. It brings together under one management responsibility for determining the manufacturing requirement, scheduling the manufacturing processes and procuring, storing and dispensing materials (Wild; 1995, Ondiek, 2009). Thus, Materials Requirements Planning (MRP), purchasing, procurement of materials, inventory management, storage, materials supply, transportation and materials handling are the activities of Materials Management (Monday, 2008).

Materials Management came to limelight at the advent of liberalization and globalization which posed intense competition on the business environment. Before that time, the concept was treated as a Cost Centre since Purchasing Department was spending money on materials while Store was holding huge inventory of materials, blocking money and space (Ramakrishna, 2005). With the process of liberalization, there has been a drastic change in the market which has forced manufacturing companies to devise strategies to minimize production costs in order to remain competitive. Since then, Materials Management has been recognized as a source of opportunities to reduce production costs and can be treated as a Profit Centre. Today, there are dramatic evolutions in the market environment and every organization must strive to keep itself in business. According to Arnold, and Chapman (2004), materials management can define as an organizing function responsible for planning and controlling the materials flow. This means that the materials management is a planned procedure that involves from the initial purchasing, delivery, handling and minimization of waste of the material with the purpose to ensuring the quality, quantity and time of the requirement should meet accordingly. Material management are the activities involved to plan, control, purchase, expedite, transport, store, and issue in order to achieve an efficient flow of materials and that the required materials are bought in the required quantities, time,
Most of the organization are having the same problem which is related to the managing the flow of the materials. Therefore, the efficient management of materials is the main keys issue to determine the success of a completion of a project. In addition, the control to the materials is subject to the difference company and should be handled effectively to complete the project.

### 2.2.2 Inventory Management

Inventory is defined as a stock of items kept on hand by an organization to be used in meeting customers demand (Russell and Taylor 2009). The importance of inventory to a firm stems from two point of views: financial and operational. Inventory represents a major financial investment for any company. On the other hand, from the operational perspective, inventories add an operating flexibility. Adequate inventories kept in manufacturing companies will smooth the production process. The basic objective of inventory management is to achieve a balance between the low inventory and high return on investment (ROT). According to Evans, Anderson, Sweeney and Williams (2010), the functions that inventory performs can be summarized as follows:

First of all, the fundamental function for carrying inventories is to meet customer demand for a product. In fact, it is physically impossible and economically impractical for each stock item to arrive exactly where it is needed exactly when it is needed. Therefore, a reasonable level of inventory is normally maintained that will meet anticipated or expected customer or user demand. Secondly, since demand is usually not known with certainty, additional amounts of inventory, called safety or buffer stocks, are often kept on hand to meet unexpected variations in excess of expected demand. Thirdly, additional stocks of inventories are sometimes built up to meet demand that is seasonal or cyclical in nature. Companies will produce items when demand is low in order to meet high seasonal demand for which their production capacity is insufficient. Correspondingly, retailers might find it necessary to keep large stocks of inventory on their shelves to meet peak seasonal demand, or for display purposes to attract buyers. Finally, inventory can also be carried out to take the advantage of price changes. A company will often purchase large amounts of inventory to take advantage of price discounts, as a hedge against anticipated price increases in the future, or because they can get a lower price by purchasing in volume.

### 2.3 Theoretical Review

The theoretical framework for this study is based on Goal Setting Theory developed by Edwin Locke and Gary Latham in 1990. This theory has two cognitive components of behaviour, these are: values and intentions (i.e. goals) (Lunenburg, 2011). According to Locke and Latham (2002), goal has a general effect on management practice and profitability in organization. Similarly, Lunenburg (2011) supports that goal influence profitability through other tools. In recent times, nearly all modern business organizations have some system of goal setting in their operations. Goal setting is the fundamental picture for all management theories such as motivation theories, whether Maslow Theory, or Herzberg Theory or Social cognitive Theory. As declared by DuBrin (2012), most HR managers consent with the goal setting practice and generally applied it as a tool to improve and sustain organizational performance. For Locke and his colleague, organizational goals direct employees’ actions and attentions. This theory has been widely used in areas like management and the foremost discovery of this theory deduced that organization who managed their limited resources or materials achieve better than their counterparts without non-specific goals. On the other hand, the individual employee must possess adequate management skill, admit the objectives set and obtain feedback that is associated to their performance (Latham, 2003).

In view of the above discussion, this theory is adopted in this study since goals stimulate organizations to design effective management and plans that will facilitate them to perform better at the required levels expected from them. Since goal setting and its achievement has great business value, achieving high organizational profitability as a can lead to business growth, but low profitability will not only lead low organization growth but business failure.
2.4 Empirical Studies

Effective management is a tool to optimize performance in meeting customer service requirements and at the same time adding to profitability by minimizing costs and making the best use of available resources. The basic objective of management as explained by Banjoko (2000) and Jacobs et al. (2009) is to ensure that the right item is bought and made available to the manufacturing operations at the right time, at the right place and at the lowest possible cost. They stressed that without adequate planning for material resources, the overall performance of an organization may be crippled. Barker (2009) articulated that improvement in continuity of supplies with reduced lead times, reduction in inventories with reduced obsolescence and surplus, improvement in cooperation and communications with reduced duplication of effort, reduction in material costs, improvement in quality control, improvement in status control, and quicker identification of problems are the main benefits of Materials Management in organizations. Ramakrishna (2005) suggested ways in which Materials Management via Purchasing can help to minimize materials cost and increase profitability. They include obtaining materials at lower prices through development of new sources, effective price negotiations with vendors and using cost-price analysis to determine the right price for materials; managing taxes payable; reducing the cost of packaging; optimizing transportation costs; ensuring right materials’ quality; and adopting import substitution.

Previous researchers (Whybark and William, 1996; Ramakrishna, 2005; Ogbadu, 2009; Ondiek, 2009, Inyang, 2013) have shown that materials account for more than fifty percent of the annual turnover in an organization. This shows clearly that priority given to material management should no longer be viewed as a drain-pipe, but as a serious stabilizing and economic growth potential factor. Materials management is a tool that can be used effectively in promoting profit maximization in a company. The objective of materials management is to maximize the use of the firms' resources by ensuring adequate supply of materials for production process and also minimizing cost of holding excessive inventories.

III. METHODOLOGY

This study adopts descriptive survey design. The study population is comprised of the staff of JOF Ideal Family Farm in Ondo State. Therefore, random sampling technique was adopted to select a sample size of 125 staff of JOF Ideal Farm in Ondo State. Questionnaire was used in data collection. Data collected were analyzed using Correlation Analysis and ANOVA to test the significance of the relationship and effects of effective management on profit maximization in the company.

IV. RESULT AND FINDINGS

Table 1: Pearson Correlation Showing significant relationship between the Effective Management Components (Inventory and Material management) on Profitability (N=120)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Inventory Management</th>
<th>Material Management</th>
<th>Profitability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inventory Management</td>
<td>Correlation(r)</td>
<td>.988</td>
<td>.296**</td>
</tr>
<tr>
<td>Sig.</td>
<td></td>
<td>.001</td>
<td>.000</td>
</tr>
<tr>
<td>Material management</td>
<td>Correlation(r)</td>
<td>.338**</td>
<td>1</td>
</tr>
<tr>
<td>Profitability</td>
<td>Correlation(r)</td>
<td>.296**</td>
<td></td>
</tr>
<tr>
<td>Sig.</td>
<td></td>
<td>.000</td>
<td>.000</td>
</tr>
</tbody>
</table>

Table 1 above shows that inventory management ($r = .296, P(0.000)<.05$) and material management ($r=.338, P(.000)<.05$) were positively and significantly related with JOF Ideal Family Farms Limited. The implication of this result is that, when inventory and materials are effectively managed, profitability will be positively influenced.
Table 2: Coefficient of Determination of Effective Inventory and Material Management on Business Profitability (N=120)

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>T</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>20.482</td>
<td>5.237</td>
<td>3.911</td>
<td>.000</td>
</tr>
<tr>
<td>Inventory management</td>
<td>.365</td>
<td>.070</td>
<td>.409</td>
<td>5.201</td>
</tr>
<tr>
<td>Material management</td>
<td>.106</td>
<td>.057</td>
<td>.145</td>
<td>1.850</td>
</tr>
</tbody>
</table>

As shown in Table 2 above, the result shows that inventory management (β=.409, P<.05) and material management (β=.145, P<.05) significantly contribute to the profitability of JOF Ideal Farm Limited. This implies that 1% increase level of profitability of the company is brought about by 41% increase in inventory management and 15% increase in material management.

Table 3: ANOVA of Influence of Effective Management on Profitability (N=120)

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean square</th>
<th>R</th>
<th>R²</th>
<th>Adj.R</th>
<th>F</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>1041.046</td>
<td>1</td>
<td>520.523</td>
<td>.486</td>
<td>.236</td>
<td>.226</td>
<td>22.705</td>
<td>.000</td>
</tr>
<tr>
<td>Residual</td>
<td>3370.048</td>
<td>119</td>
<td>22.925</td>
<td>.236</td>
<td>.236</td>
<td>.226</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>4411.093</td>
<td>120</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 3 above, shows the influence of effective management on business profitability (F(1,119)= 22.705, R²=.236, Adj.R=.226, P<.05). The implication of R² value of 0.236 signifies that about 23.6% of the variation in business profitability in JOF Ideal Farm Limited is accounted for by effective management of inventory and material in the company. This indicates that effective management of inventory and materials significantly influence profit maximization in JOF Ideal Farm Limited.

V. CONCLUSION AND RECOMMENDATIONS

The study investigated the influence of effective management on profitability of agriculture business in Nigeria using JOF Idea Family Farm in Ondo State as case study. Each of the hypotheses was based on determining the relationship and effect of effective inventory and material management on profitability of agriculture business. The findings of the study reveal that inventory and materials management have significant influence on profit maximization of agriculture business in Nigeria. Therefore, this study recommends that the Nigeria agriculture companies should ensure and maintain effective reasonable level of inventory and material management so as to meet the expected customers demand.

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Management Knowledge Bank.

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