Evaluation of Inventory Management and Control in Manufacturing Firms

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Abstract: The purpose of this study is to evaluate the inventory management and control in manufacturing firms. The specific objectives are to: examine the contributions of effective inventory management to the profitability of manufacturing firms, determine the effects of improper inventory management on the productivity of manufacturing firms and assess the effectiveness of the various tools and technique of inventory management in manufacturing firms. This study adopted descriptive research design. The area of the study is manufacturing firms' precisely Seven Up and Green Cork Seals in Lagos State. The instrument used for this study is from primary data. The primary data was obtained through properly structured questionnaire. A simple percentage approach was employed to analyze the questionnaire. The study found that the inventory management and control has contributed to profitability in manufacturing firms are effective; and that improper inventory management will affect the productivity of manufacturing firms. The study recommended that the manufacturing firms should diversify their inventory system to suit specific needs of production and at the same time ensure that maximum attention is paid to inventory management so as to avoid or reduce the amount of loss that would be gotten from damaged goods in inventory. This study concludes that the various tools and techniques tools and techniques of inventory management adopted in manufacturing firms are effective; firms are effective and inventory management has significant impact on manufacturing company.

Keywords: Inventory Management, Control, Manufacturing firms, Seven Up, Green Cork Seals

1. INTRODUCTION

Inventory management also becomes a fundamental part of supply chain management (SCM). A lot of research in SCM over the last two decades can be characterized as so called "multi-echelon inventory theory" (Quayle, 2003). SCM has in recent years become an important way to enhance the company's competitive strength and therefore an important issue for most companies. There is need for installation of a proper inventory technique in any business organization in developing country like Nigeria. Kotler (2002) said inventory management refers to all the activities involved in developing and managing the inventory levels of raw materials, semi-finished materials (work in progress) and finished goods so that adequate supplies are made available and the costs of over or under stocks are low.

Inventory represents a cost to their owner. The manufacturer has the expense of materials and labour. Therefore, the basic goal the manufacturer is to maintain a level of inventory that will provide optimum stock at lowest cost. Effective inventory management is essential in the operation of any business. Hankinson and Persson (2004) identifies three different trends in the development of logistics solutions within industry, one trend is concerned with the increased integration of logistics activities beyond organization boundaries with an aim to reduce cost items such as capital costs for inventory and handling costs of flows.

Drury (1996) defined inventory as a stock of goods that is maintained by a business in anticipation of some future demand. This definition was also supported by Schroeder (2000) who stressed that inventory management has an impact on all business functions, particularly operations, marketing, accounting and finance. He established that there are three motives for holding inventories, which are transaction, precautionary and speculative motives. The transaction motive is said to occur when there is a

need to hold stock to meet production and sales requirements. A firm might also decide to hold additional amounts of stock to cover the possibility that it may have under estimated its future production and requirements. This represents a precautionary motive, which applies only when future demand is uncertain. The speculative motive for holding inventory might entice a firm to purchase larger quantity of material than normal in anticipation of making abnormal profits. Advance purchase of raw materials in inflationary times is one form of speculative behavior.

Donald (2003), describe that holding stock is expensive and problems of inventory control almost universal. Over the past decades organizations have been trying to improve customer service while lowering stocks and increasing the speed of material flow through their supply chains. There is a need to review current thinking on inventory management, so as to emphasize on the growth of e-commerce, and the trend away models based on economic order quantities and towards dependent demand system.

Inventories are vital to the successful functioning of manufacturing and retailing organizations (Anichebe & Agu, 2013). They may consist of raw materials, work in progress, spare parts / consumables and finished goods. An efficient management of inventory is required because a substantial share of a firm's funds is invested in them. Every company must ensure that inventory is maintained at desired levels. Too much and too low inventories bring down the level of profitability of an organization. Whether it is a manufacturing organization or a merchandized organization, the goal should always be the same, that is, to ensure the inventory is ready and at the same time the inventory level should be low.

Inventory represents an important decision variable at all stages of product manufacturing, distribution and sales, in addition to being a major portion of current assets of many organizations. A substantial share of an organization's investment is in the inventories. Inventories, often represent as much as 40% of total capital of industrial organizations (Moore, Lee & Taylor, 2003). It may represent 33% of an organization's total assets and as much as 90% of working capital (Sawaya& Giauque, 2003). Inventory management refers to all activities involved in developing and managing the inventory levels, whether the inventory is raw materials, semi-finished materials or finished goods, so that adequate supplies must always be available and the form must make sure that the cost of over or under stocks are always low (Anichebe & Agu, 2013). According to Mohamad, Suraidi, Rahman and Suhaimi (2016) an effective inventory management to be effective there must be a system which directly affects the performance of the company. For an inventory management may argue for a large amount of stock but the finance department may on the other hand argue for a minimal amount of stock so that the spare finance can be utilized elsewhere (Anichebe&Agu, 2013). Whichever, the case the inventory level must be able to generate the highest profit possible.

1.1 Research Objectives

The main Objective of this work is to evaluate the inventory management and control in manufacturing firms in Nigeria, with case study of 7up and Green Cork seals, Lagos State. This are achieved with the following Specific objectives:

- i. To examine the contributions of effective inventory management to the profitability of manufacturing firms
- ii. To determine the effects of improper inventory management on the productivity of manufacturing firms
- iii. To assess the effectiveness of the various tools and technique of inventory management in manufacturing firms

1.2 Research questions

The study will be guided by the following research questions:

- i. What are the contributions of effective inventory management to the profitability of manufacturing firms
- ii. How effective are the various tools and techniques of inventory management in manufacturing firms?
- iii. To what extent has inventory contributed to profitability in manufacturing firms?

2. LITERATURE REVIEW

2.1 Conceptual Review

2.1.1 Inventory Management

There is need for controlling the inventories for any firm in developing countries like India. A firm must install some better inventory control techniques to improve their financial condition. According to Kotler, inventory management is the technique of managing, controlling and developing the inventory levels at different stages i.e. raw materials, semi-finished goods and finished goods so that there is regular supply of resources at minimum costs. According to Coyle, inventory management is the management of the materials in motion and at rest. According to Rosenblatt, the inventory management costs are the price which is paid by the customer but it is the cost to the owner. Different authors defined inventory management in different way. Sometimes, inventory and stock are considered as the same thing. But there is a slight difference between them. Stock is the storage of material kept in specified place only. Inventory management involves all activities which are done for the continuous supply of materials with optimal costs.

Basically, inventory management has two goals. First goal is to avail the goods at right place in right time. Because it is very important to keep operations running to give specific service. Second goal is to achieve the service level against optimal cost. It is very difficult to achieve goal against optimal cost. All items cannot be stocked, so there is need to specify the important goods to be stocked. The supplies inventories involves the materials required for the maintenance, repair and operating that do not go to the final product. But it is also considered as the types of inventories. Thus, inventory management is also defined as it is the science and art of managing the level of stock of group of items which incurred least costs and also reach the objectives set by the top management. So, on the final note the primary objective of inventory management is to improve the customer satisfaction level. For this one has to keep adequate amount of inventory for demand fluctuations and variability. The secondary objective is to increase the production efficiency. Increasing production efficiency means that the production control, maintaining the level of inventory for efficient materials management.

2.1.2 Inventory Level

In the management of inventory the firm is always faced with the problem of meeting two conflicting needs: - maintaining a large size of inventory for efficient and smooth production and sales operations and maintaining a minimum level of inventory so as to maximize profitability (Pandey, 2008). Both excessive and inadequate inventories are not desirable. The dangers of excessive inventories are that stockholding costs are too high and as a result the firm's profitability is reduced. According to Mohammad (2011) managers can create value for shareholders by means of decreasing inventory levels. However, maintaining inadequate level of inventory is also dangerous because ordering costs are too high. It may also lead to stock out costs. Saleemi (1993) asserts that there are advantages of maintaining an ideal level of inventory. This includes economies of scale to be gained through quantity and trade discounts, less risks of deterioration and obsolescence, and reduced cost of insurance among others. A study carried out by Mathuva (2010) on the influence of working capital management components on corporate profitability found that there exists a highly significant positive relationship between the period taken to convert inventories into sales and profitability. This meant that firms maintained sufficiently high inventory levels which reduced costs of possible interruptions in the production process and loss of business due to scarcity of products. Nyabwanga, Ojera, Lumumba, Odondo and Otieno(2012) found that small scale enterprises often prepare inventory budgets and reviewed their inventory levels. These results were in agreement with the findings of Kwame (2007) which established that majority of businesses review their inventory levels and prepare inventory budgets. These findings had already been stressed by Lazaridis and Tryponidis (2006) that enhancing the management of inventory enables businesses to avoid tying up excess capital in idle stock at the expense of profitable ventures. Nyabwanga et al. (2012) assert that good performance is positively related to efficiency inventory management.

2.1.3 Inventory Control System

A firm needs a control system to effectively manage its inventory (Pandey, 2008). There are several control systems in practice that range from simple to very complicated systems. A firm must ensure that the system it adopts must be the most efficient and effective. Pandey (2008) argues that small firms may opt to adopt simple two bin systems and the very large firms may choose to adopt very complicated systems such as ABC inventory control systems or Just in Time (JIT) systems. A study carried out by Grablowsky (2005) found that only large firms had established sound inventory control systems for determining inventory re-order and stock levels. The firms used quantitative techniques such as EOQ and Linear Programming to provide additional information for decision making. Small firms on the other hand used management judgement without quantitative back up.

2.2 Theoretical Review

2.2.1 Inventory Control Theory

Zappone (2014) stated that managing all kinds of assets in an organization can be viewed as an inventory problem. For the large companies they use a variety of inventory control theories and mathematical formulas to help them optimize the production and

storage of many thousands of units of products and to help them minimize costs. At the same time the small-business owners can use ideas from several inventory control methods to manage their production and storage based on their cost-containment and customer service needs.

Any inventory manager's goal within an organization is to minimize cost and maximize profit while satisfying customer's demands. Too much inventory consumes physical space, creates a financial burden, and increases the possibility of damage, spoilage and loss (Zappone, 2014) further explains that excessive inventory frequently compensates for sloppy and inefficient management, poor forecasting, haphazard scheduling, and inadequate attention to process and procedures. Too little inventory often disrupts manufacturing operations, and increases the likelihood of poor customer service. In many cases good customers may become dissatisfied and take their business elsewhere if the desired product is not immediately available. Companies with very high inventory ratios have more possibilities to be bad financial performers. Shah and Shin (2007), reported a strong negative relationship between the cash conversion cycle and corporate profitability for a large sample of public American firms.

Firms with abnormally high inventories have abnormally poor stock returns, firms with abnormally low inventories have ordinary stock returns while firms with slightly lower than average inventories perform best over time. Shah and Shin (2007) also stated that reducing inventories has a significant and direct relationship with a firm's financial and operational performance

2.3 Empirical Review

Sekerolgu and Altan (2014) investigated the effect of inventory management on the profitability of Turkish firms which operated in weaving industry, eatables industry, wholesale and retail industry, in between 2003-2012 years. Research data consists of profitability ratios and inventory turnovers ratio calculated by using balance sheets and income statements of firms which operated in Borsa Istanbul (BIST). In this research, the relationship between inventories and profitability was investigated by using SPSS-20 software with regression and correlation analysis. The results achieved from three industry departments which exist in the study interpreted as comparatively. Accordingly, it is determined that there is a positive relationship between inventory management and profitability in eatable industry. However, it was founded that there is no relationship between inventory management and profitability in the weaving industry and wholesale and retail industry.

Lwiki, Ojera, Mugend, and Wachira (2013) reported that Manufacturing firms apply various techniques in the management of their inventories. The practices adopted have a significant impact on returns, profitability and volume of sales. Manufacturing firms that efficiently apply these practices have an excellent financial performance. This paper examines the impact of inventory management practices on the financial performance of sugar manufacturing firms in Kenya, by analyzing the extent to which lean inventory system, strategic supplier partnership and technology are being applied in these firms. The research survey was conducted in all the eight operating sugar manufacturing firms from the period 2002- 2007. The results indicate that there exists positive correlation between inventory management and Return on Sales (r = 0.740) and also with Return on Equity (r = 0.653) which were found to be statistically significant at 5% level.

Augustine, Trenkel, Wood and Lorance (2013) reports on investigation of the impact of proper inventory management on organizational performances. The study suggests a link between inventory management and productivity and concludes that highly positive correction between good inventory management and organizational cost reduction. However, he noted that management should closely monitor and manipulate inventory system to maintain production consistency for organizational productivity.

3. METHODOLOGY

3.1 Research Design

This work adopted the descriptive research design to evaluate the inventory management and control in manufacturing firms in Nigeria. The data used in this study was obtained through questionnaire from primary sources.

3.2 Area of the study

The area of study considered is manufacturing firms. Two factories chosen for this work are Seven (7) up and green cork seals, Lagos, Nigeria.

3.3 Population of the Study

The population of the study is staffs of Seven (7) Up and green cork seals, Lagos, Nigeria. The category of staffs considered includes top senior staff, middle management staff and lower level management staff. Population of one hundred and fifty five

(155) was considered and administered with questionnaire but only one hundred and forty four (144) respondents' return the questionnaire.

3.4 Sampling Method

The sampling denotes the portion of the entire population in order to ensure conclusion about the population, in a bid to bring out accurate and perfect information about the research work. This study used judgmental sampling techniques. This method is a non-probability sampling technique and the researcher used knowledge and professional judgment to determine and selects units as well as quantity to be sampled and considered for the work. Three important units in both firms were considered in this study and they are: Senior. Middle and Low management staffs.

| Firm(s) | Management rank | Population | TOTAL |
|------------------|-----------------|------------|-------|
| Seven Up | Senior | 20 | |
| | Middle | 50 | |
| | Low | 30 | 100 |
| Green Cork seals | Senior | 10 | |
| | Middle | 30 | |
| | Low level | 15 | 55 |
| | | | |
| Total | | | 155 |
| | | | |

Table 1: Quantity of Questionnaire Distributed among Selected staffs of 7up and green cork seals

Source: Field Survey 2020

3.5 Research Instrumentation

The research instrument for the study is the questionnaire. This was designed to elicit vital information in line with the stated objectives of the work. The questionnaires were distributed to one hundred and fifty five (155) respondents in both firms (Table 1). The completed (filled) questionnaires were retrieved back after some days they were giving to the respondents to answer the questions. Total number of one hundred and forty four (144) questionnaires was collected back out of one hundred and fifty five (155) administered (Table 1).

3.6 Validity and reliability of research Instrument

The constructed questionnaire was submitted to the experts for critical, analytical and logical appraisal and assessment of contents and statements in the instruments and this then made the instrument valid for the study. To ensure proper reliability of the instrument, the questions were not ambiguous to respondents in order to avoid the impression of different interpretation or constructed in a way that give different meaning that could generate inaccurate and inconsistent responses when instrument is repeatedly objectivity with no leading question as to answer desired.

3.7 Method of data collection

The primary data was obtained using properly structured questionnaire administered to the respondents from both firms. The questionnaire contained multi –choice question so that the respondents can answer and fill it without much problem, and to know the opinions, ideas and experiences of the respondents.

Method of data analysis

A simple percentage approach was used for the analysis of the questionnaire. The table and percentage method data analysis was employed with below formula:

| ٠ | | Q% | = | <u>b</u> x <u>100</u> |
|---|-------|----|---|---|
| • | | | | n 1 |
| ٠ | Where | n | = | total number of response to a question |
| • | | b | = | number of respondents ticking a particular Answer |
| • | | Q% | = | "a" expressed as a percentage of N |

Analysis and interpretation were done using 5 likert scale have followed respectively in the tables below: SA= Strongly Agreed, A= Agreed, U=Undecided, D= Disagree, SD= Strongly Disagree.

4. RESULTS AND DISCUSSION

From the sample size of the study above, a total of 155 questionnaires was distributed to entire respondents and only 144 were returned representing 90% returns.

| Table 2: Quantity of Questionnaire Returned by staffs of /up and green cork s |
|---|
|---|

| Firm(s) | Response Option | Total | Total Returned |
|---------------------|-----------------|-------|----------------|
| Seven Up | Returned 93 | | |
| | not returned | 7 | 93 |
| Green Cork Seals | Returned | 51 | |
| | Not returned | 7 | 51 |
| Total Sample return | | | 144 |
| | | | |

Source: Field survey, 2020

From the above (Table 2) out of 155 questionnaire distributed, 144 were returned. Therefore, the analysis is based on 144 returned questionnaire.

Table 3: Education Background of Respondent

| Response option | Number of response | Percentage (%) |
|-----------------|--------------------|----------------|
| WAEC/GCE/SSCE | - | - |
| OND | 20 | 13.9 |
| HND/B.SC | 60 | 41.6 |
| MBA/M.SC | 40 | 27.8 |
| OTHER /ACCA/ACA | 24 | 16.7 |
| Total | 144 | 100 |

Source: Field survey, 2020

The above analysis of data on academic qualification of respondent shows that there were no WASSCE holder, OND were 20 represented 13.9% and HND/B.SC were 60 representing 41.6% while MBA/M.SC were 40 representing 27.8 and ACCA/ACA were 24 represented 16.7% (Table 3).

Table 4: Length of work experience

| Response option | Number of response | Percentage |
|-----------------|--------------------|------------|
| under 5 years | 20 | 13.9 |
| 5-10 years | 36 | 25.0 |
| 11-15 years | 34 | 23.6 |
| 16-20 years | 44 | 30.6 |
| above 20 years | 10 | 6.9 |
| Total | 144 | 100 |

Source: Field survey, 2020

The age categories distributed as really show that the ranges from under 5 years are 20 representing 13.9%, 5-10 years are fully completed and returned questionnaires with number of 36 representing 25.0%, 11-15 years returned 34 representing 23.6% and 16-20 years returned 44 representing 30.6%, above 20 years returned 19 representing 6.9% (Table 4).

Table 5: Level of management of the respondents

| Response option | Number of response | Percentage (%) |
|-----------------|--------------------|----------------|
| Top level | 46 | 31.9 |
| Middle level | 72 | 50.0 |

| Lower level | 26 | 18.1 | |
|-------------|-----|------|--|
| Total | 144 | 100 | |

Source: Field survey, 2020

The Level of management of the respondents distributed show that the top management are 46 representing 31.9%, 72 are middle level representing 50%, 26 respondents are representing 18.1% (Table 5).

Table 6: Responses on contribution of inventory management to profitability in manufacturing firms

| S/N | Statement | No. of Respondents/ Percentage (%) | | | | |
|-----|--|------------------------------------|---------|--------|---------|--------|
| | | SA | А | U | D | SD |
| 1 | Inventory contributed significantly to the | 84 | 36 | 12 | 9 | 9 |
| | growth and survival of an organization | (58.3%) | (25%) | (8.3%) | (4.2%) | (4.2%) |
| 2 | Inventory are critical to an organization's | 60 | 54 | 12 | 12 | 6 |
| | success in today's competitive and dynamic | (41.7%) | (37.5%) | (8.3%) | (8.3%) | (4.2%) |
| | market | | | | | |
| 3 | Inventory ensures successful running and | 54 | 48 | 6 | 24 | 12 |
| | survival of a business firm | (37.5%) | (33.3%) | (4.2%) | (16.7%) | (8.3%) |
| 4 | Inventory contributes to achieve a balance | 72 | 42 | 12 | 12 | 6 |
| | between the low inventory and high return on | (50%) | (29.2%) | (8.3%) | (8.3%) | (4.2%) |
| | investment | | | | | |
| 5 | Inventory system maintained consistency will | 66 | 48 | 6 | 24 | - |
| | lead to organizational profitability and | (45.8%) | (33.3%) | (4.2%) | (16.7%) | |
| | effectiveness. | | | | | |
| | | | | | | |

Source: Filed Survey, 2020

In the table above: SA= Strongly Agreed, A= Agreed, U=Undecided, D= Disagree, SD= Strongly Disagree. The table 6 above shows response on inventory has contributed to profitability in manufacturing firms and indicates that 84 (58.3%) strongly agreed that Inventory contributed significantly to the growth and survival of an organization 36 (25%) agreed and 12 (8.3%) undecided while 9 (4.2%) disagree and strongly disagreed were 9 (4.2%); Inventory are critical to an organization's success in today's competitive and dynamic market 60 (41.7%) strongly agreed, 54 (37.5%) agreed, 12 (8.3%) undecided, 12 (8.3%) disagree and 6(4.2%) strongly disagreed; inventory ensures successful running and survival of a business firm 54 (37.5%) strongly agreed, 48 (33.3%) agreed, 6 (4.2%) undecided, 24 (16.7%) disagree and 12 (8.3%) strongly disagreed; Inventory contributes to achieve a balance between the low inventory and high return on investment 72(50%) strongly agreed, 42 (29.2%) agreed, 12(8.3%) undecided and 12(8.3%) disagree and (4.2%) strongly disagreed; inventory system maintained consistency will lead to organizational profitability and effectiveness 66 (45.8%) strongly agreed, 48(33.3%) agreed, 6(4.2%) undecided,12(16.6%) disagreed.

| Table | 7: Respondents | View on effects of improper inventory management on the productivity of manufacturing Organization |
|-------|----------------|--|
| S/N | Statement | No. of Respondents/Percentage (%) |

| 3 /1N | Statement | No. of Respondents/ Fercentage (%) | | | | |
|--------------|---|------------------------------------|---------|--------|---------|---------|
| | | SA | А | U | D | SD |
| 1 | Lack of inventory (supply) when needed | 72 | 42 | 12 | 12 | 6 (4.2) |
| | | (50) | (29.2%) | (8.3) | (8.3) | |
| 2 | Firm loses customers | 78 | 48 | 12 | 6 | - |
| | | (54.2) | (33.3%) | (8.3%) | (4.2%) | |
| 3 | Procurement performance will be hindered | 78 | 36 | 12 | 12 | 6 |
| | | (54.2) | (25) | (8.3) | (8.3%) | (4.2) |
| 4 | Decline in sales | 66 | 36 | 6 | 24 | 12 |
| | | (45.8) | (25) | (4.2) | (16.7) | (8.3) |
| 5 | Low productivity and Reduce profitability | 60 | 42 | 6 | 24 | 12 |
| | | (41.7%) | (29.2%) | (4.2%) | (16.6%) | (8.3) |

Source: Field Survey, 2020

In the table above: SA= Strongly Agreed, A= Agreed, U=Undecided, D= Disagree, SD= Strongly Disagree. From the Table 7 above, 72 (50%) respondent strongly agreed that they will lack inventory (supply) when need arises while 42 (29.2%) respondents agreed but 12 (8.3%) respondents are undecided, 12 (8.3%) of respondents disagreed and another 6 (4.2%) strongly disagreed with the statement; 78 (54.2%) of respondents strongly agreed that Firms loses customers while 48 (33.3%) of respondents agreed but

12 (8.3%) are undecided while 6 (4.2%) Disagree and strongly disagreed were none; 78 (54.2%) of respondent strongly agreed that procurement performance will be hindered, 36 (25%) agreed, 12 (8.3%) undecided and 12 (8.3%) disagree and 6 (4.2%) strongly disagreed; 66 (45.8%) respondents strongly agreed that sales will declined, 36 (25%) agreed, 4.2% undecided, 16.7% disagree and 8.3% strongly disagreed; 60 (41.7%) respondents strongly agreed that there will be low productivity and reduce profitability, 42 (29.2%) agreed, 6 (4.2%) of respondents are Undecided, 24(16.6%) disagreed, and 12(8.3%) undecided

Table 8: Responses on effectiveness of the various tools and techniques of inventory management in manufacturing firms

| S/N | Statement | No. of Respondents/ Percentage (%) | | | | | |
|-----|---|------------------------------------|---------|--------|---------|--------|--|
| | | SA | А | U | D | SD | |
| 1 | Help in maintaining adequate inventory level | 72 | 48 | 12 | 6 | 6 | |
| | | (50%) | (33.3%) | (8.3%) | (4.2%) | (4.2%) | |
| 2 | Assist to reduce cost of managing inventory | 60 | 54 | 12 | 12 | 6 | |
| | | (41.7%) | (37.5%) | (8.3%) | (8.3%) | (4.2%) | |
| 3 | Effective in ensuring that production is not | 66 | 36 | 6 | 24 | 12 | |
| | interrupted | (45.8%) | (25%) | (4.2%) | (16.7%) | (8.3%) | |
| 4 | Used to monitor and maintain operating | 78 | 36 | 12 | 12 | 6 | |
| | standards | (54.2%) | (25%) | (8.3%) | (8.3%) | (4.2%) | |
| 5 | Ensure that stock is neither overstocking nor | 60 | 42 | 6 | 24 | 12 | |
| | under-stocking. | (41.7%) | (29.2%) | (4.2%) | (16.6%) | (8.3%) | |

Source: Field Survey, 2020

In the table above: SA= Strongly Agreed, A= Agreed, U=Undecided, D= Disagree, SD= Strongly Disagree. The table 8 above shows that response on effective of the various tools and techniques (Economic order quantity and Economic Batch Quantity) of inventory management in manufacturing firms that 50% strongly agreed that they help in maintaining adequate inventory level, 33.3% agreed, 8.3% undecided, 4.2% disagreed and another 4.2% strongly disagreed; they assist to reduce cost of managing inventory 41.7% strongly agreed, 37.5% agreed, 8.3% undecided, 8.3% disagreed and 4.2% strongly disagreed; they are effective in ensuring that production is not interrupted 45.8% strongly agreed, 25% agreed, 4.2% undecided, 16.7% disagreed and 8.3% strongly agreed; they are used to monitor and maintain operating standards 54.2% strongly agreed, 25% agreed, 8.3% undecided , 8.3% disagreed and 4.2% strongly disagreed; They ensure that stock is neither overstocking nor under-stocking 41.7% strongly agreed, 29.2% agreed, 4.2% undecided, 16.6% disagreed and 8.3% strongly disagreed.

5. CONCLUSION AND RECOMMENDATIONS

5.1 Summary of findings

Based on the above finding, the study empirically came out with the followings: That inventory management and control has contributed to profitability in manufacturing firms examined; that the various tools and techniques of inventory management adopted in manufacturing firms are effective; and that improper inventory management will affect the productivity of manufacturing firms. Other findings of the study are: That some of the reasons why organization evolve inventory control management system include the need to smoothening operational requirements; maintain accountability and transparency, the need to optimize resources and meeting up operational requirement. The study also found out that flexibility in inventory control management is an important approach to achieving organizational performance. Flexible inventory services are associated with minimizing stock holding cost, minimizing waste and encouraging high inventory utilization. In addition, it was found that organizations benefits from inventory control management by way of easy storage and retrieval of material, improved sales effectiveness and reduced operational cost.

5.2 Conclusion

The profitability of manufacturing firms is hinged on the volume of products sold which has a direct links and relationship with the quality of the product. Good inventory management in any manufacturing organization saves the organization from poor quality production, disappointment of seasoned customers, loss of profit and good social responsibility. This is done by ensuring timely delivery of raw materials to the factory and distribution of finished goods, in order of production to the warehouse. Thus, if inventory management is not adequately maintained, production cannot meet the aspirations of customers which are loss of revenue to the organization. Right from procurement to the time of processing, quality of raw material is the chief determinant of the productive efficiency of any manufacturing concern. This study concludes that the various tools and techniques of inventory

management adopted in manufacturing firms are effective and inventory management has significant impact on manufacturing company.

5.3 Recommendations

Based on the findings of the study, the researcher made the following recommendations: The manufacturing firms should diversify their inventory system to suit specific needs of production and at the same time ensure that maximum attention is paid to inventory

management so as to avoid or reduce the amount of loss that would be gotten from damaged goods in inventory; Inventory management should maximize space and timely delivery to avoid staying off production and closely monitor and manipulate their inventory system to maintain production consistency for organizational profitability and effectiveness; Nigeria manufacturing firms should not take the issues of inventory management lightly because it has the power to make or mar the future of the organization liquidity position.

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