Inventory Fraud and Financial Reporting: A Review of Literature

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Abstract: This paper investigates the effect of inventory fraud on financial reporting by taking into consideration some key elements inventory fraud such as double counting, capitalizing cost, cut-off problems, over estimating, bill and hold sales, and consigned inventory. This study carried out this conceptual work by considering and reviewing prior literatures from different continents extant literatures. The findings showed that once a closing inventory is misstated in the current year, it will be carried forward to the next year in which it will have a negative effect on the coming year profit. Therefore, the managers tends to continuously giving wrong value of inventory in order to meet up with the shareholders and potential investors expectations and thereby presenting a financial reporting that is bias because it’s not showing the true position of the company’s affairs. This will in turn having a negative effect on the company as a whole. The study recommends a constant rotation of employees handling inventory, a strong system of internal control, constant physical stock taking, installation of electronic surveillance and a good inventory fraud management system.

Keywords: Financial Reporting, Fraud, Inventory Fraud, Inventory Fraud Management, Inventory Fraud Red flags

I. INTRODUCTION

Many business organisations around the world really depends on inventory in order to survive, this inventory items ranges from raw materials used in manufacturing the products up to the extent of finished goods for sales. This inventory, if not well managed, have a way of disappearing from the workshop, worksites, warehouse and even shops which can in-turn having an adverse effect on financial report of such organisation. The good news here is that, managing inventory to guide against lasting fraud occurrence through timely detection and effective preventive measures can guide against inventory fraud and its resultant repercussion on financial reporting.

Generally, inventory fraud includes theft of physical inventory items to re-sale or for personal use and secondly, misstating inventory figure by means of overstating the closing inventory balances in other to lower cost of sales and thereby increasing profit figure unnecessarily. This will artificially or deceitfully smoothening the company’s general performance and shows management has performed excellently well in order to gain undue advantage (Association of Certified Fraud Examiners [ACFE], 2007). Chris (2017) noted that inventory schemes are majorly perpetrated by the employees of an organisation and that a strong system of internal control can enhance its earlier discovery. He also pointed that financial statement manipulations is one of the red flags of inventory fraud which includes recording expenses as inventory, timing schemes and valuation schemes that are usually facilitated through senior management because of the need to meet some targets or goals.

Management of an organisation, in a bid to report very a high earning so as to satisfy shareholders, achieving a compensation target, and or maintaining bank lending agreement can overstate inventory figure. In other words, some management tends to lower their profit through inventory manipulations in order to pay lesser tax majorly in a country where there is a killing-tax or that the company itself has a fraudulent intention towards evading tax (Chris, 2017). Chris (2017) further posited that inventory fraud can trigger financial losses which can result into litigation since in a public company, shareholders have the right to sue the company, and this is in-turn having an adverse effect on the report in the financial statements and the company at large.

Jeniffer (2014) observed that geographical expansion, globalization of business activities and the continuous demand for transparent information among shareholders and stakeholders at large give rise to the need for a qualitative financial reporting since it’s their main source of information on the company’s strategies and performances. Therefore, financial reporting is not only the end result but its’ quality is relying on each segment of the report which includes every disclosure made on company’s transactions, selections and application of accounting policies, the knowledge earned and the conclusion drawn which if deceitfully stated can have a negative effect on the quality of financial report (Jonas & Blanchet, 2000).

Many fraud investigators and professionals have done so many researches on what determines a qualitative financial reporting or in other word some common fraud schemes that may impair the quality of information provided in the financial report. Battini, Faccio, Persona and Sgarbossa (2009) opined that majorly, firms that involves in manufacturing of goods tends to face inventory fraud challenge if no control or appropriate management of fraud is
in place. Naliaka and Namusonge (2015) also noted that in order to be able to compete in the global world, a manufacturing firm must put in place a control that can mitigate inventory fraud because the more inventory is kept, the more exposing it to the cost of uncertainty that is associated with them, which can be the challenge of fraud or other fraudulent inventory schemes. Liou and Yang (2008) observed that financial statement is either presented in a good manner or otherwise have some material misstatement resulting from mismanagement of inventory such as omission of existing figures or inclusion of fictitious figures through inventory manipulations. Whichever, they noted that the most important thing here was that a fraudulent financial report is nothing but absolute injustice to the users of the information contained in the report. Despite all these researches and findings, none of them have carried out research on inventory management fraud and its effect on financial reporting. Therefore, this study is essentially a library exploratory survey of extant literature on inventory fraud and financial reporting.

II. LITERATURE REVIEW

2.1. Financial Reporting

Financial reporting simply means disclosing the information about an entity’s financial performance and financial position to its shareholders and stakeholders over a defined period of time usually a year. The stakeholders in this regard includes: governments, financial analyst, creditors, banks, public, investors, employees and so on. In other word it is the end product of accounting which components that includes: statement of financial position, statement of profit or loss and other comprehensive income, statement of cash flow and state of changes in equity among others (Charles, 2009).

International Accounting Standard Board [IASB] (2011) pointed that the objective of financial reporting is “to provide information about the financial position, performance and changes in financial position of an enterprise that is useful to a wide range of users in making economic decisions”. IASB (2011) noted that the objectives and purposes of financial reporting include providing information: to shareholders and the general public should in case it’s a quoted company about the performance of the organisation in making investment decision which will affect the confidence of the investors and thereby affect the organisation’s negatively at the long run.

2.2. Concept of fraud

Fraud connotes different meaning to different people based on the conditions or circumstances they found themselves. Most people who truly involved in battling fraud have their own businesses or involvement and they have their own definition of what fraud is and what it isn’t. As a result of this, there are so many definitions, observations conclusions and assertions as regard the fraud concept. Some are academic definitions; some are legal while some are based on personal experiences.

Association of Certified Fraud Examiners [ACFE] (2012) defines fraud as “any illegal acts characterized by deceit, concealment, or violation of trust. These acts are not dependent upon the application of threat of violence or of physical force. Frauds are perpetrated by individuals and organisations to obtain money; or to secure personal or business advantage. The American Institute of Public Accountants (AICPA) (2002) defines fraud as “a broad legal concept that is distinguished from error depending on whether action is intentional or unintentional” they further break fraud down into different element and concluded that fraud will only occur only if and if the elements are present. These elements are as follows: A representation; about a material point; which is false; and intentionally or recklessly so; which is believed; and acted upon by the victim; to the victim’s damage.

Fraud sometimes can be in form of misappropriation of assets, theft and even records manipulation which are mostly backed-up by concealment of the theft. In other word, it is the conversion of stolen properties or resources to personal property. Onibudo (2007) noted that if fraud must occur there must be three elements which he termed to as “WOE”. This
“WOE” mean the will, opportunity and exit (escape route), that is in-turn referring to fraud triangle, which is pressure, opportunity and rationalization.

Kristoffer, Daniel and Dave (2010) noted that some researchers broadly classify fraud into two broad categories names financial statement fraud and occupational fraud. They posited that financial statement fraud is majorly by the top level managers who unethically try to make company appear more profitable than it is through window dressing or creative accounting. Employee fraud on the other hand is usually perpetrated by the employee of an organisation at any level majorly when there is a weakness in the internal control system, money or other assets are stolen or diverted for personal use.

Power (2003) noted that financial reporting is the legitimate aspect of any good management since it provides required information needed to the entire stakeholders of the company. National Commission on Fraudulent Financial Reporting (1987) defined financial reporting fraud as the intentional distortion or misrepresentation of organisation’s financial records. Ramos (2003) concluded that fraud committed on financial report always have an adverse effect on individuals, organisations and society at large.

2.3. Inventory Management

Inventory management influences and enhances decision making process of firms so many times. Extensively, inventory management has been studied both in academic and corporate organisations (Fry & Fiedler, 2011). De Reyck (2010) posited that the key questions inventory management tends to answer are: when to order? How many stocks to order? How much stock to be kept as buffer stock? Wanke (2011) defined inventory management as a set of decision which focuses at linking the current demand to the expected supply of the products and materials over a specified period of time so as to achieve a certain cost and service level objectives, operations and demand characteristics.

Naliaka and Namusonge (2015) noted that an effective inventory management gives opportunities for the creation of sustainable competitive advantage and also engenders the company’s competitive position. This involves the reduction in cost of holding inventories by maintaining only enough inventories at the right place and the right time alongside with the amount of product needed per time. Pong and Mitchell (2012) also concluded that in order to meet the continuous demand of consumers, inventory management plays a vital role by ensuring that only that only just enough inventories is held in stock.

Inventory is the largest and most tangible investment any retailer or manufacturing industry could involve in, therefore careful inventory management techniques can be helpful in boosting profit and enhances business survivals (Naliaka & Namusonge, 2015). Therefore, Zipkin (2000) concluded that inventory held at the lowest possible cost with ensuring that there is an uninterrupted supply for continuous operation is the goal of inventory management.

2.4. Inventory Fraud

Unless an organisation is a service company that has few or no physical assets, it will have to store and make use of various forms of physical supplies and materials. These assets are collectively referred to as inventory which includes raw materials, work in progress inventory and finished goods. As it may be, inventory as a current asset always attracts the desirable targets of dishonest employees.

The most common inventory scheme is the conversion of inventory for private use, which is usually known as theft or inventory shrinkage. This theft is mostly committed either by an employee finding ways to have the items walk out the door or by means of orchestration which involve falsification of sales, delivery and inventory records. Theft occurs in so many and varied forms which might involve delivery and receiving personnel colliding together. The clerk or store officer receiving this will sign for more items than were actually received and the difference of which will eventually be sold to third parties and thereby sharing the monies between them (Craig, 2019).

Craig (2019) noted that another form of theft is the ordering of more than enough inventory items and then converting the excess to personal use. The items are most times shipped directly to the person’s residence or another firm. Another inventory fraud scheme involves the use of proceed from scrap. Majorly, scrap sales are usually not controlled and where inventories not well kept, officer-in-charge can under-cast the amounts received through the sales. Also, good inventory items can be designated as scrap and selling them to another party whom will then resell the item and share the gain (Craig, 2019).

The key determinant of inventory related fraud as stated by Albrecht, Albrecht Albrecht and Zimbelman (2009) are basically potential inventory related schemes which includes; double counting, capitalizing of costs, cut off problems, overestimating inventory, Bill-and- hold sales and consigned inventory which are discussed as follows:

i. Double counting

This is inventory fraud scheme that occurs by the ways of counting inventory items twice. This are normally perpetrated by moving inventory from the company or divisions that it has been counted before to another location where inventory is yet to be counted, therefore leading to double counting of inventory items. Apart from the double counting of inventory double counting, the figure of inventory count may also be altered by the officer in charge of the inventory count or store keeper (Albrecht et. al., 2009).

ii. Capitalizing costs

This is done when cost that should be expensed is capitalized. The management of a company tends to inflate the value its
closing inventory by the way adding some cost such as administrative expenses and for sales expense to this closing inventory instead of inviting it off as an expense in the income of statement for the period incurred. This inventory increase the value of the company’s profit thereby deceiving the stakeholders since the position of the financial reprinting is not time (Albrecht et. al, 2009).

### iii. Cutoff problems

This scheme occurs when an organisation or industry delays writing-down an outdated inventory, also delaying the record of returns from an earlier period, delay also in recording purchases made in a cater period in order to steal or give wrong fake value of the inventory in stock.

### iv. Overestimating inventory

This is majorly perpetrated by importing wrong sampling methods. Since some company uses sampling or projection techniques when estimating or valuing inventory, they may intentionally apply wrong methods in valuing closing inventory in order to overestimate it. The logic is that when the closing inventory is overstated, the profit tends to increase and thereby deceitfully indicating that the company is performing whereas the financial report has been window dressed.

### v. Bill-and-hold sales

This type of fraud is also common in revenue related fraud. It usually entails seller holding some goods on behalf of the buyer, the reason being that the buyer itself is not ready or having the ability of accepting the shipment of the goods as at the time when order was placed. These goods held are later counted as inventory and as a sale at the same time, therefore the value of sales, receivables and closing inventory are overstated while cost of goods sold is understated. When cost of goods sold is unnecessarily understated, there will be unnecessary overstatement of profit which will be having an adverse effect on financial reporting (Albrecht et.al., 2009).

### vi. Consigned Inventory

A consigned inventory is defined as the goods that a company is holding and later sold on behalf of another company. The company holding such inventory is not the owner, they may decide to inflate the closing inventory value by including the value of the consigned inventory in its physical stock counts towards the end of the year in order to increase the value of the closing inventory thereby overstating the profit value (Albrecht et.al., 2009).

#### 2.4.1. Inventory Fraud Red Flags or Symptoms

It is of great importance for a forensic accountant or auditor to quickly sense the red flags or symptoms of inventory related fraud so that it be quickly prevented or detected before much damage was done since prevention is better than cure. Albrecht, Albrecht, Albrecht and Zimbelman (2009) categorize inventory related fraud symptoms into four major categories which are: Analytical symptoms; Accounting or Documentary symptoms; Behavioral or Verbal symptoms; and Control symptoms. They further stated that analytical symptoms of inventory fraud involve: (i) reporting an inventory closing balance that is too high or that are increasing too fast (ii) reporting cost of goods sold that is too low (iii) reporting a purchase return that appears too low (iv) reporting a discount on purchase that is too high (v) reporting purchases that is too low compare to sales level (vi) capitalizing inventory that should be expensed. Secondly, Accounting or Documentary symptoms of inventory fraud include: (i) inventory transaction which are not recorded completely or to time as to the amount involved, accounting period and classification (ii) unauthorized inventory related transactions (iii) end of the period inventory adjustment that changes the entity financial results significantly (iv) missing documents that relates to inventory (v) purchase from supplier that is not approved (vi) missing inventory during physical stock taking process (vii) purchases order, purchases figures, receiving records and inventory records showing different figures. Thirdly, Behavioral and Verbal symptoms include: (i) inconsistent responses arising from employee or management as regard their inventory movement (ii) unusual delay on the part of management or employee in providing inventory related information (iii) suspicious behavior from the part of employee or management when asked about inventory related transaction. Lastly, Control symptoms as stated by them mainly involve management overriding significant internal control activities and also weakness in the counting process of inventory.

#### 2.5. Review of prior literatures on the relationship between the variables

The understanding of the importance of financial reporting is in its ability to give true financial position of the company’s statement of affairs and how the information contained in the financial report can be of great importance to differs users of the accounting information, such as managers, government, shareholders, potential investors, financial analyst, bankers and so on (Rezaee, 2005).

Prior studies have identified that fraud in the financial reporting takes several ways of which there is an inventory related fraud that could be inform of overstating the value of closing inventory by managers of the company in order to deceive the shareholders and the potential investors of the company to believe that the company is performing or to cover up the menace of inventory theft (Everette, 2012).

According to Kwok (2005), he stated that looking at it from the area of financial information presented, incomes or properties which might be overcassted while expenses, loss and debt are mostly undervalued or under-reported in order to deceitfully show that the company is financially healthy.

Aburime (2012) noted that as long as fraud occurs in the financial report, it will surely continue to re-occur every year because revenue that is deliberately increased in a particular
year through inventory scheme would make the following year profit to be smaller, therefore managers tends to continuously involve in this fraudulent act year by year which will at the long run have negative effect on the financial reporting.

Odunayo (2014) observe that a fictitious income through inventory manipulation is one of the major fraud committed in financial reporting. Olornsegun (2010) also posited that the major challenge of the information presented in the financial reporting is the deceptive nature of the information presented. Okoye and Alao (2008) also noted that the widespread of financial reporting fraud due to inventory manipulations arose from the need for management to meet up with the expectation of the shareholders and also failure on the part of the external auditors who covers such mess.

Profitability is what shows the performance level of any business organisation. But most times, using profit as a basis for measuring performance will not be reliable if variables used in determining the profit are manipulated; such as inventory. This will in turn having a negative effect on the reliability on profit as a basis for measuring company's performance and affect financial reporting negatively (Agbaje & Dare, 2018).

III. THEORETICAL REVIEW

This paper focuses on two theories which agency theory and the fraud triangle theory which is discussed as follows:

3.1. Agency Theory

Jensen (2002) stated that what agency theory really entails is the principal and agency relationship, where the principals are the represented while the agents are those ones who represent. In this regard, shareholders are the one refers to as the principal while managers are referred to as the agents. This theory assumes that these two different groups have different functions and attitude towards risk, therefore their interest in the company are not the same (Donaldson & Davis, 1991).

Eisenhardt (1989) noted that there are two major problems associated with managers which are: managers hiding germane information that involve their ambition and traits from the shareholders; also agents acting with self interest without necessarily considering the goal congruence of the entire company.

Bohren (1998) posited that there are typically uncommon goals and interest among people involved in agency relationship. He noted that agency theory assumes those individuals involved are opportunistic in nature because they frequently aimed maximizing their own interest. Therefore, there might not be an assurance that the managers (who are the agents) will perform their duties in the best interest of the shareholders (the principals). The agent tends to maximize their own interest at the expense of the principals suffering loss on their expected return on investment.

Since the reward for being a shareholders is maximization of wealth through return gotten from their investment in such company. The return will be derived if the company makes profit in a fiscal year, this return is want shows that the managers has performed excellently well and will make shareholders and potential investors to investment more in such company and even give those sets of management credence. In order way, a company that not realizing expected return on investment might find it difficult to pay dividend to its shareholders which shows that the set of management appointed are not performing as expected if their performance is to be evaluated. In view of this, management tends to smoothening or inflates the book value of the profit and thereby showing a window dressed value which might have been perpetrated through the use inventory scheme, which will in-turn having a negative effect on the information presented in the financial report. Therefore, agency problem is the reason while management involve in inventory fraud because their interest will be catered for.

3.2. Fraud Triangle Theory

This theory examines key determinants of fraud in an organisation. The reason why people commit fraud was first looked into by Donald Cressey (1973) a criminologist, in which he called it fraud triangle or triangle cheating. Within duration of six months, he interviewed two hundred and fifty criminals on what trigger people to violate trust. He used two basic criteria in determining what really motivate people to violate trust, these are: that the person must have accepted the position of trust with good faith; and secondly that the trust must have been violated by the person. In order to explain the existence of fraud in financial reporting, he formulated the following function:

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\text{Fraud} = f(\text{Pressure/Motive, Opportunity, Rationalization})
\]

Therefore he developed the diagram called The Fraud Triangle below:

Pressure is what motivates people to perpetuate fraud. This pressure can be in form of the need to pay medical bills, high level of debt; children school fees, personal greed, and taste for expensive items and so on. Most time, this pressure always comes as a result of the need to satisfy frequent financial...
needs (Wuerges & Borba, 2010). Okoye (2014) posited that most times, a low level of performance is what motivates managers to defraud their company by inflating their results, hide the problem and increase the overall performance of the company.

Opportunity to commit this fraud can come as a result of ineffective or weak system of internal control or ineffective corporate governance which has given managers or individual that has fraud intent to perpetrate the act. Kelly and Hartley (2010) posited that a person with fraud intent will always make use of a little loophole or opportunity available to commit this unethical act and that fraud is likely to be committed where there is lower risk of being caught. Okoye, Okafor and Ijeoma (2009) noted that opportunity to commit fraud is created through poor management oversight, weak system of internal control and unethical abuse of position and authority to override control.

Rationalization as the third element indicates that people who commit fraud will always look for one reason or the other to justify their crime. Williams (2005) noted that an individual who cannot justify his acts of committing fraudulent act might not likely involve in it. He therefore suggested some justifications that people gives as follows: “I was only borrowing the money”, “I had to steal so as to provide for my family pressing need”, “my employer is underpaying me”, “it is common everywhere”. Hooper and Pornelli (2010) also buttress this claim that people who commit fraud always have a particular notion or mind-set that allows them to justify or give excuses for their crime.

The fraud triangle theory basically justifies the reason behind the existence of fraud in an organisation. There will always be motive or pressure for an individual to the act and also that person committing the act would have gathered some tenable justifications or excuses to be tendered if being caught eventually. This will occur if the company or organization is structured in such a way that it gives room for individual to commit fraudulent act. Therefore, managers who are greedy or having performance evaluation pressure will likely commit fraud if there is opportunity to do so.

IV. CONCLUSION, RECOMMENDATIONS AND STUDY LIMITATION

This topic conceptually reviews studies in inventory management fraud and its effects on financial reporting. It was noted that a company preparing statement of profit or loss account and statement of financial position can only prepare an accurate report if closing inventory is free of bias and correctly valued. On the income statement, there is a need to determine costs of goods sold in order know the gross profit; therefore cost of goods sold affects company’s net profit and also the retained earnings in the statement of financial position. Incorrect figure of closing inventory will not but have effect on the statement of financial position since closing inventory will be recorded under current asset and also retained earnings as part of reserves.

The net profit for any accounting period is a reflection of how inventory been managed and valued. Therefore, company must be sure that inventory is managed and valued properly, failure to do so means that, there will be a negative impact on financial reporting. If the closing inventory is overstated, cost of goods sold will be at a reduced value which will lead to overstated gross profit and net profit; this will also affect the value of current assets, total assets and reserves to be overstated. Meanwhile, once a closing inventory is misstated in the current year, it will be carried forward to the next year in which it will have a negative effect on the coming year profit. Therefore, the managers tends to continuously giving wrong value of inventory in order to meet up with the shareholders and potential investors expectations and thereby presenting a financial reporting that is bias because it’s not showing the true position of the company’s affairs. This will in turn having a negative effect on the company as a whole.

This study therefore has the following recommendations in order to control, minimize, manage and probably eradicate inventory fraud occurrence:

i. There should be constant rotation of employee in charge of receiving, storing and distributing inventory in order to ensure control and minimize inventory related fraud;

ii. A strong system of internal control internal control should be instituted within the organisation to guide against inventory related scheme;

iii. Constant physical stock count and cross-checking it against the inventory record should be mandated;

iv. There should be proper and appropriate vigilance through the use of electronic surveillance (e.g. CCTV) on the nook and cranny of the organisation in order to discourage and scare-away people who would have involved in inventory theft;

v. A good inventory fraud management mechanism should be established in order to ensure quick prevention and early detection of inventory related fraud so that financial report won’t be misleading;

vi. Investors should have the awareness that financial reporting could be fraudulently stated in order to mislead the users, therefore there is a need for them to be more skeptical on the area exposed to misstatement, such as inventory items;

vii. External auditors and forensic accountant should carefully and without bias represent the interest of the shareholders by ensuring accuracy and correctness of records;

viii. More empirical studies should be done on inventory related fraud and its effect on financial reporting.

The major limitation of this study is that, the area under study has not been examined by researchers of recent. Due to this, it’s very difficult to review some recent journals that cover this area of inventory fraud and financial reporting.
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