

An assessment of the Inventory Management Practices of Small and Medium Enterprises (SMEs) in the Northern Region of Ghana

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Abstract

The purpose of this study was to assess inventory management practices and its effect on the financial performance of SMEs in the Northern Region of Ghana. The study adopted a descriptive cross-sectional survey research design which allowed the collection of primary quantitative data through structured questionnaires. The target population was 1000 owner/ managers of SMEs. Stratified random sampling technique was used to obtain a sample of 300 SMEs comprising 164 trading 26 manufacturing, 10 hairstyling, 62 dressmaking, and 38 carpentry enterprises. The data was analyzed using both descriptive and inferential statistics. The study revealed that SME financial performance was positively related to efficiency of inventory management (EIM) at 1 per cent significance level. The study concluded that stock management practices have influence on the financial performance of SMEs, hence there was need for SME managers to embrace efficient stock management practices as a strategy to improve their financial performance and survive in the uncertain business environment.

Keywords: Inventory Management Practices, Financial Performance, SMEs

Introduction

It is widely recognized that at all levels of development, Small and Medium-Sized Enterprises (SMEs) have a significant role to play in economic development in general and industrial development in particular. Storey (1994) notes that small firms, however, they are defined, constitute the bulk of enterprises in all economies in the world. According to the United Nations and industrial Development Organisation (UNIDO), SMEs form the bedrock of the private sector, make up over 90 per cent of enterprises in the world and account for 50 to 60 per cent of employment.

One of the significant characteristics of a flourishing and growing economy is a vibrant and booming Small and Medium Enterprises (SME) sector. The world economy arguably, is riding on the crest wave of the success of small- and medium- scale enterprises. SMEs continue to spring up in almost every part of the globe. Even countries like Croatia, Slovenia, China, Russia, Vietnam and many others whose economies were controlled by the state are now providing favourable environments for the setting up of small businesses and their growth (Zimmerer and Scarborough, 2008). Fida (2009) stated that, "...According to statistics, in industrialized countries, SMEs are major contributors to private sector employment. SMEs contribute to over 55 per cent of Gross Domestic Product (GDP) and over 65 per cent of total employment in high income countries.account for over 60 per cent of GDP and over 70 percent of total employment in low income countries, while they contribute about 70 per cent of GDP and 95 per cent of total employment in middle income countries"

Ch'ng Hak Kee and Chang Zeph-Yun (1986) also notes that, Small firms play a critical role in providing job opportunities, nurturing a culture of entrepreneurship and opening up new business opportunities. Small scale enterprises are acknowledged as vital and significant contributors to economic development through their critical role in providing job opportunities, reducing poverty levels, nurturing the culture of entrepreneurship and are a vital link in the economy through their supply chain and intermediary role in trade (Oketch, 2000). They are recognized and acknowledged worldwide as vital and significant contributors to economic development, introduction and diffusion of new technology, ability in generating potential entrepreneurs and skilled workers for the industrialization process both nationally and internationally. Despite their significance and the increased efforts to ensure the success of small scale enterprises, the International Labour Organization (2010) estimates that two-thirds of the enterprises were generating incomes equal to or below the minimum wage, a sobering finding that must temper one's enthusiasm for the growth of SSE's as a solution to the country's poverty and employment problems.

In Ghana, just like many developing economies, SMEs occupy a central place in the economy and play an important role in engendering growth and development. In an article by Abor and Adjasi (2007), it was stated that SMEs contribute about 85 per cent of manufacturing employment and account for 92 per cent of businesses in Ghana. Agyei-Mensah (2012) notes that, available data from the Registrar General department in Ghana indicates that 90 per cent of companies registered in 2006 are small and medium enterprises. This target group has been identified as the catalyst for the economic growth of the country as they are a major source of income

and employment. Data from the Social Security & National Insurance Trust (SSNIT) reflects that, by size classifications, the Ghanaian private sector is highly skewed, with 90 per cent of companies employing less than 20 persons, and a small number of large-scale enterprises. It noted further that in a developing economy like Ghana, the share of business activity represented by the SME sector has increased considerably over the last decade of the 20th century.

Appah (2011) also stated that SMEs account for significant share of major economic activities in Ghana and play an important role in achieving the Millennium Development Goals (MDGs). The long-term goal is for SMEs to maximize their contribution to the country's economic and social development with respect to production, income distribution and employment and the closer integration of women and people in rural areas within the national economy. According to Abor and Quartey (2010), SMEs provides 85 per cent of manufacturing employment, contributes about 70 per cent to Ghana's GDP and account for about 92 per cent of businesses in Ghana. The enterprises, both small and medium scale have been described as the bedrock of every developing country (Ghartey, 1988). The SMEs have also been described as "missing middle" that must be developed to serve as a basis for sustainable growth of industrial production in large firms (Enthoven, 1977). Given their importance to a nation's economic growth and the role that they play in poverty reduction (Nyabwanga & Ojera, 2012), an understanding of the problems negatively affecting small businesses is a vital first step in managing and avoiding the massive failure of these small businesses (ILO, 2010). Baron et al. (2010) suggests that, to improve the performance of businesses, wise demand management which is anchored in effective inventory management needs to be practiced. This study therefore intends to study the relationship between inventory management practices and firm financial performance in the Northern Region of Ghana.

Research gaps

Several research works have already been conducted on working capital management practices of SMEs in Ghana such as Kweku Agyei and Marfo-Yiadom (2006) in the Central region, Agyei-Mensah (2012) in the Ashanti region and Appah (2011) in the Secondi Metropolis of the Western region. However, Specific research studies exclusively on inventory management and financial performance of small Medium Sized enterprises are scanty, especially for the case of the Northern region of Ghana. The inventory management practices of small businesses in Ghana, and in particular, the northern region, a small scale businesses dominated region, is an ignored area of research. Keeping this in view and the wider recognition of the potential contribution of the SME sector to the Ghanaian economy, the study is a modest attempt to explore effective inventory management practices on financial performance of sampled SMEs in the Northern region of Ghana, and its results are expected to contribute to the existing literature on inventory management practices of SMEs. This study would be useful not only to small scale businesses in the Northern region but also to all owner/managers of small scale businesses throughout the country. This will also help stakeholders in business to formulate and implement policies as well as practices that will help them to manage inventory better. It will also be useful to the academia and thus form the basis for further research.

LITERATURE REVIEW

Inventory management

Inventory to many small business owners is one of the most visible and tangible aspects of doing business. Raw materials, goods in process and finished goods all represent various forms of inventory. Each type represents money tied up until the inventory leaves the company as purchased products. Likewise, merchandise stocks in a retail store contribute to profits only when their sale puts money into the cash register (Pandey, 2004). In a literal sense, inventory refers to stocks of anything necessary to do business. These stocks represent a large portion of the business investment and must be well managed in order to maximize profits. In fact, many small businesses cannot absorb the types of losses arising from poor inventory management. Unless inventories are controlled, they are unreliable, inefficient and costly. Inventory is an idle stock of physical goods that contain economic value, and are held in various forms by an organization in its custody awaiting packing, processing, transformation, use or sale in a future point of time.

Ballon (2004) defined inventories as stockpiles of raw materials, supplies, components, work in process, and finished goods that appear at numerous points throughout a firm's production and logistics channels. Inventory is the stock of any item or resource used in an organization. It is defined as the stored accumulation of materials resources in a transformation system. An inventory system is the set of policies and controls that monitor levels of inventory and determine what levels should be maintained, when stocks should be replenished, and how large orders should be. Any organization which is into production, trading, sale and service of a product will necessarily hold stock of various physical resources to aid in future consumption and sale. While inventory is a necessary evil of any business, it must be noted that organisations hold inventories for various reasons, which include speculative purposes, functional purposes, physical necessities and among others.

As already noted, Inventory is an important and valuable asset which constitutes substantial portion of

the total current business. Inventory covers a wide variety of items which are meant to be procured, used up and sold in an ordinary course of business. It covers the whole range of items starting from input of material and ending with output of finished products. The first component of cash conversion cycle is the average age of inventory. The objective of Inventory management is to turn over inventory as quickly as possible without losing sales from stock-outs. It is an important aspect of working capital management because inventories themselves do not earn any revenue. Holding either too little or too much inventory incurs costs.

Starr and Miller (1962) identified three motives for holding inventories which are similar to Keynes' three motives for holding cash. the transaction motives which emphasizes the need to maintain inventories to facilitate smooth production and sales operation, the precautionary motive which necessitate holding of inventories to guard against the risk of unpredictable changes in demand and supply forces and other factors; and the speculative motive which influences the decision to increase or reduce inventory levels to take advantage of price fluctuations.

Inventory is generally made up of three elements such as raw materials, work-in progress (WIP) and finished goods (Arnold, 2008; Cinnamon, Helweg-Larsen, & Cinnamon, 2010; Gitman, 2009). Raw materials are concerned with the goods that have been delivered by the supplier to purchaser's warehouse but have not yet been taken into the production area for conversion process (Cinnamon et al., 2010). Work in progress (WIP) concerns are when the product has left the raw material storage area, until it is declared for sale and delivery to customers. In this process the working capital must be considered in terms of reducing the buffer stocks, eliminating the production process, reducing the overall production cycle time. The raw materials and finished goods must be minimised in the production area. WIP must be carefully examined to justify how long it takes for products to be cleared for sale. This stage is normally done by the quality control (QC) procedures (Birt et al., 2011; Cinnamon et al., 2010).

Finished goods refer to the stock sitting in the warehouse waiting for sale and delivery to customers. They could be sitting in the warehouse or on the shelf for quite some time. The owner/manager of the business should find what options are available to dispose of the slow moving items. Should the stock be repacked or reprocessed, and sold at lower discount prices. Sales and operations planning can reduce or eliminate the need for finished goods. The best example of stock management is car manufacturing. The manufacturers normally used the JIT system to deliver finished products. In this way they minimize or eliminate both raw material stock and work in progress, as the stock is now in finished goods (Brealey, Myers, & Allen, 2006; Cinnamon et al., 2010; Van Horne & Wachowicz, 2008).

Inventory management is a management cum operations function. It requires operational processes to be followed and maintained on the floor and in inventory management systems. Coupled with operations, it entails continuous study, analysis and decision making to control and manage inventory levels. The aim of inventory management is to hold inventories at the lowest possible cost, given the objectives to ensure uninterrupted supplies for ongoing operations. When making decisions on inventory, management has to find a compromise between the different cost components, such as the cost of supplying inventory, inventory-holding costs and costs resulting from insufficient inventories.

According to Wild (2002), inventory controls is the activity which organizes the availability of items to the customers. It coordinates the purchasing, manufacturing and distribution function to meet the marketing needs. This role includes the supply of current sale items, new products, consumables, spare parts, obsolescent items and all other supplies. Inventory enables a company to support the customer service, logistic or manufacturing activities in situations where purchasing or manufacturing of the items is not able to satisfy the demand. Lack of satisfaction could arise either because of the speed of purchasing or manufacturing is too protracted, or because quantities cannot be provided without stocks.

Clodfelter (2003) added that a good inventory controls system offers a wide range of benefits as the proper relationship between sales and inventory can better be well maintained. First, without inventory control procedures in place, the stores department can become overstocked or under stocked. Next, inventory control systems provide a business with information needed to take markdowns by identifying slow-selling merchandise. Discovering such items early in the season will allow a business to reduce prices or make a change in marketing strategy before consumer demand completely disappear.

Marfo-Yiadom et al. (2008) also added that holding large quantity of inventory offers wide range of benefits to an organisation and can as well be associated with certain costs. They noted among other things that, holding large inventory helps to ensure that: possibility of disruption to production from a stock out is remote, large stocks mean that large orders can be placed so that buyers can negotiate favourable prices and thus get trade discounts, material drawn from a large stock will maintain a constant quality whereas if stocks are replenished frequently, separate batches may have slight differences, large stock protects the firm against price increases for a few months, large stocks mean fewer and less frequent orders, which will cut the cost of buying inventory. They further asserted that the associated cost of holding excessive inventory includes obsolescence, deterioration, increased cost of storage and store operation and Interest charges. They concluded that if proper

stock control is not put in place to balance the benefits and the cost associated with holding large stock, then this can have devastating consequences to an organization.

Emphasizing the pertinence of the study, Gourdin (2001) noted that inventory is one area of logistics that has received a great deal of management attention over the decade. Executives now realize that holding excessive stocks is simply too expensive. Therefore, a great deal of effort has been expended to eliminate unnecessary inventory without compromising customer service. However there are numerous situations where inventory simply must be held, particularly when meeting the needs of global customers. Management's goal should be to hold only what is necessary to satisfy customer requirements and manage it effectively.

According to Joshi (2000), the objectives of inventory management are as follows: to reduce cost of holding stock, to avoid investment in stock outs (running out of stock) so as to ensure that production cycle operates smoothly. The first aim persuades the business to reduce the levels of inventory whereas second one prompts it to increase the same. Marfo-Yiadom et al (2008) also noted that the main objectives of stock control are two: first, to maintain adequate sock to avoid production stoppages and consequent customer dissatisfaction, loss of revenue and increase cost of emergency action and second to avoid excessive stock levels and consequent tying up of capital. Deloof, (2003), concluded that the inventory conversion period has a negative effect on a business's performance. He posited that, shortening the inventory conversion period could increase stock out costs of inventory which results in losing sales opportunities and leads to poor performance. Managers of firms should therefore keep their inventory to an optimum level since mismanagement of inventory will lead to tying up excess capital at the expense of profitable operations (Lazaridis and Dimitrios, 2005).

Efficient inventory management practices should answer the questions: how much should be ordered? And when should it be ordered? These questions relate to the problem of determining the economic order quantity and the problem can be solved by the analysis of the costs of maintaining certain levels of inventory as there are costs involved in holding too much stock and there are also costs involved in holding too little, hence the need to put in place an effective stock management system to ensure reliable sales forecasts to be used in stock ordering purposes (Atrill, 2006).

Every organization that is engaged in production, sale or trading of Products holds inventory in one or the other form. While production and manufacturing organizations hold raw material inventories, finished goods and spare parts inventories, trading companies might hold only finished goods inventories depending upon the business model. Raw material inventory management function is essentially dealing with two major functions. First function deals with inventory planning and the second being inventory tracking. As inventory planners, their main job consists of analyzing demand and deciding when to order and how much to order new inventories. Traditional inventory management approach consists of three models namely: Economic Order Quantity (EOQ), Continuous Ordering and Periodic Ordering (Hedrick et al 2005).

The EOQ method which is based on the forces of demand and supply, determines the optimal order quantity that will minimize the total inventory cost. It is also referred to as the reorder quantity which is the level at which total cost of ordering and of holding stock is at minimum. The cost of holding stock tends to increases with the stock level and so could be reduced by ordering a small amount from suppliers each time. As Ross et al. (2011) observed the Economic Order Quantity model as one of the approaches of determining the optimal inventory level takes into account the inventory carrying costs, inventory shortage costs and total costs which help in the determination of the appropriate inventory levels to hold. The diagram below illustrates the relationship existing among the various components of the EOQ and how they interrelate to achieve the optimal quantity of inventory desired by a firm.

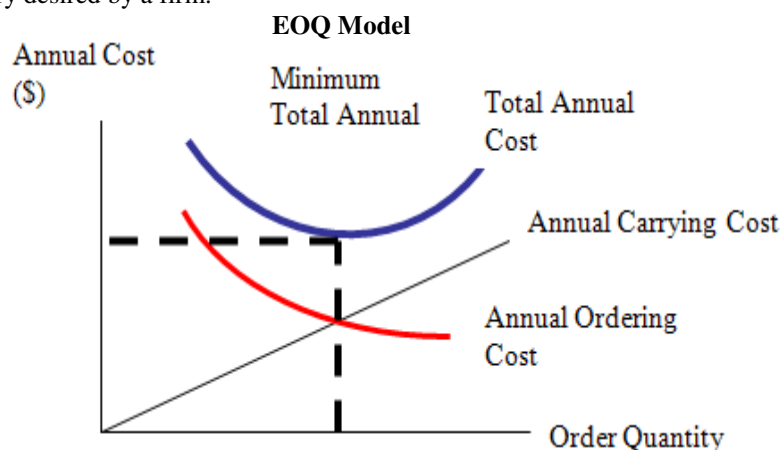


Figure 1: EOQ Model
Source: Adapted from Ross et al 2011

Continuous Ordering model is based on the perpetual inventory also referred to as continuous inventory taking, which as a control mechanism, records every receipt and issue of inventory into and out of store on a continuous basis by keeping two sets of records. The first being a bin card for showing the physical balance of stock at any time and the second being a store ledger card which shows both physical units of inventory and also their valuation. The essence of the continuous inventory system are to; ensure that deficiencies and losses are revealed sooner than later, serve as a moral check and act as a deterrent to dishonesty, avoid disruptions caused by annual stock taking, ensure timely action on serious shortages (Marfo-Yiadom, et' al 2008). The Continuous Order Model works on fixed order quantity basis where a trigger for fixed quantity replenishment is released whenever the inventory level reaches predetermined safety level and triggers re ordering.

Periodic Ordering is the last inventory control method which is based on the Periodic stock taking is the physical verification of inventory at the end of every year as opposed to the perpetual stock taking which is done on continuous basis. The essence is to ensure that the physical stocks agree with the quantity in store records. The Periodic System Model therefore works on the basis of placing order after a fixed period of time. Maintaining optimal inventory levels reduces the cost of possible interruptions or of loss of business due to the scarcity of products, reduces supply costs and protects against price fluctuations. The inventory conversion period has a negative effect on a business's performance. For instance, shortening the inventory conversion period could increase stock out costs of inventory which results in losing sales opportunities and leads to poor performance (Deloof, 2003). Managers of firms should therefore keep their inventory to an optimum level since mismanagement of inventory will lead to tying up excess capital at the expense of profitable operations (Lazaridis & Dimitrios, 2005).

Inventory management remains a serious concern for businesses wishing to remain competitive and survive in the marketplace (Wallin et al., 2006). Monczka et al., 2002 estimate that typical manufacturing firms spend 56 percent of revenue to cover the direct cost of purchased goods; this figure is even higher for the typical wholesaler and retailer. Chase et al., (2004) also noted that the indirect cost of having to manage the purchased goods is also estimated to be between 30-35 percent of the value of the purchased goods. Ordering and maintaining inventory has several costs. These include capital cost, administrative charges, storage charges, shrinkage, taxes and insurance (Holdren and Hollingshead, 1999; Ross et al., 2011). Most of these costs vary directly with the average quantities of inventories held and the obvious strategy of cost avoidance is to reduce or eliminate inventories.

METHODOLOGY

The study area

Ghana is divided into ten administrative regions. The Northern Region, which occupies an area of about 70,383 square kilometers, is the largest region in Ghana in terms of land area. It shares boundaries with the Upper East and the Upper West Regions to the north, the Brong Ahafo and the Volta Regions to the south, and two neighbouring countries, the Republic of Togo to the east, and La Cote d' Ivoire to the west.

The private informal sector absorbs 83.4 per cent of the economically active population. An additional 11.5 per cent are in the private formal sector leaving the public sector with only 4.3 per cent. Majority (40.5%) of the not economically active inhabitants are homemakers and just under a quarter (24.4%) is students. Those who are not working because of old age constitute 14.8 per cent. A small proportion is not working because of disability (2.2%) or are pensioners who are on retirement (1.2%) while 16.9 per cent are classified as others. Even though majority of the people working in the informal sector are farmers, a large proportion of them are also engaged in small scale businesses. These traders form the nucleus of the local entrepreneurs and thus form the basis of the current study.

Research design

The study was conducted using the descriptive survey design in the form of a cross section. The research design was preferred for the study since it provided a quick, efficient and accurate means of accessing information about the population and it is more appropriate where there is a lack of secondary data. In this case, secondary data on inventory management practices of small scale enterprises in the Northern Region was not available thus conducting a survey to gain such information was necessary (Oso and Onen, 2005). The descriptive survey is meant to elicit owner manager of small businesses' opinions and perceptions on inventory management practices.

Population and sampling

The target population of the study consisted of 1,000 SMEs whose owners have attended training programmes of the Business Advisory Centres (BACs) of National Board for Small Scale Industries (NBSSI) or belonged to an association and operating in six towns of the Northern region. The six towns considered among other things were

Tamale, Yendi, Savelegu, Tolon, Kumbugu and Damongo. The principal factor considered in the selection of the six towns was their commercial nature. This criterion was used to ascertain the target population due to the lack of credible database and also because it was difficult to obtain the population of small scale enterprises in the Northern Region. The associations', categorized into five sectors based on the nature of their operations are: Ghana traders Association 546; Ghana manufacturers Association 87; Wood and Furniture Workers Association of Ghana 127; Ghana National Tailors and Dressmakers Association 207 and Ghana Hairdressers and Beauticians Association 33.

In all, a total of 1000 members registered with the associations were obtained from the local NBSSI office at Tamale. Out of the 1,000 SMEs, 300 SMEs consisting of 164 trading, 26 manufacturing, 62 Tailors and Dressmakers, 10 Hairstyling and 38 Carpentry enterprises were selected to constitute the study sample size. The sample size was determined using (Saunders, Lewis & Thorn hill, 2007), which states that a population of 1000 should use a sample size of 278 to 300. As with confidence intervals, it suggested 95 per cent while the error of margin is 5 per cent.

The study utilised the stratified random sampling technique to draw the appropriate sample of 300. Stratification ensured that the sample accurately reflected the population on the basis of the criteria used for stratification whereas random sampling ensured that each member of the target population had an equal and independent chance of being selected (Oso and Onen, 2005).

Data sources and research instruments

In undertaking this study, both primary and secondary data sources were used. Secondary sources consisted of SMEs annual financial statements, budgets and monetary records, cash flow statement, asset register, tax schedule et cetera. Other sources of secondary data included books, journals, articles, magazines, newsletters and the internet. The primary data sources were predominantly utilized to generate the requisite data for the research. The data was collected through printed survey instrument in questionnaire, administered by the researchers to owner managers of SMEs in the six selected towns of Northern Region of Ghana.

ANALYSIS OF RESULTS AND DISCUSSION

Inventory is a major component of working capital. Because of the significant investment, a typical business must make in inventories, the proper management of this asset can have a significant effect on the profitability of the firm. Grawblowsky and Rowell (1980) noted that there are several types of inventory (for instance, finished goods, work-in-progress, raw materials, components and parts) which a business can keep depending on the nature of its operations.

Nature of Inventory Kept

Figure 2 presented below shed lights on the nature of inventory maintained by the various SMEs surveyed.

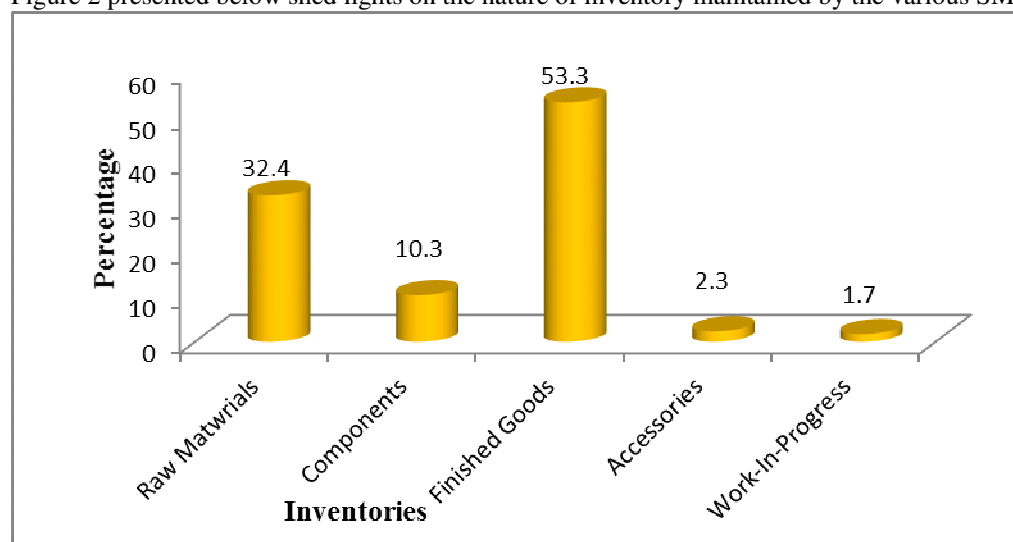


Figure 2: Nature of Inventory

Source: Field Study

Figure 2 shows that 53 percent of inventory kept were on finished goods, 32 percent on raw materials, 10 percent on components and Parts. This is largely due to the fact that a high percentage of the respondents were engaged in trading. The finding is line with Marfo –Yiadom and Kweku Agyei (2006), and Appah (2011) findings that majority of owner/managers of Small firms kept inventory in the form of finished goods due to the

retailing nature of their operations.

System of Controlling Inventory

Table 1 shows the systems that were employed by owner/managers of the sampled SMEs to control their inventory

Table 1: System of Controlling Inventory

System	Frequency	Percent
Tally Cards	26	8.7
Occasional Surprise count	53	17.8
Computer software	2	0.6
Note Books	152	50.6
Non Response	68	22.5
Total	300	100

Source: Field Study July, 2013

Table 1 above shows that note books were the predominant form of records kept by the SMEs, accounting for 50.6 percent of all respondents. About 18 percent used surprise checks and 9 percent used Tally Cards. Less than one per cent (0.6%) of the SMEs uses computer software in tracking inventory. This situation is so because the SMEs felt that their scale of operation was too small to keep detailed records of the business. It can be inferred that the small firms did not use complex methods for managing inventory. The firm's surveyed used past experience such as the demand for and the price of their products to determine the level of inventory held by the businesses at any point in time. According to Sathyamoorthi (2001), control over inventory should be exercised by any business as this is a major area calling for strict control by the proprietor. A small business owner has to be careful in this as inventory can easily be stolen by his employees if there are no controls. The need to keep records on inventory cannot be overemphasized. Pilferage of various items of inventory makes records on inventory important. Regardless of the scale of operation, a good record system on stock will do the more good.

Problems Encountered in Managing Inventory

Inventory management is difficult no matter the scale of operation especially in retailing or merchandising, where varieties of items are dealt with. Figure 3 below depicts the problems that confront some of the respondents in managing their inventory. A high percentage of 61 mentioned pilfering as their major problem; other problems mentioned included low inventory (24.4%) and use of inventory by family members (14.5). Pilfering is the significant problem associated with inventory management. Another problem is with obsolete and slow moving stock. It is common in business especially where no proper forecast of demand is done for an entrepreneur to have slow moving items and /or obsolete inventory. The respondents indicated that they get rid of slow moving items through price reduction and selling on credit. One of the respondents remarked "this is a better strategy than keeping the items and tying –up funds." This finding is in consonance with the finding of Marfo –Yiadom and Kweku Agyei (2006), in their study on working capital management practices of small scale enterprises in the central region where majority of the respondents reported pilfering as the main problem associated with inventory management.

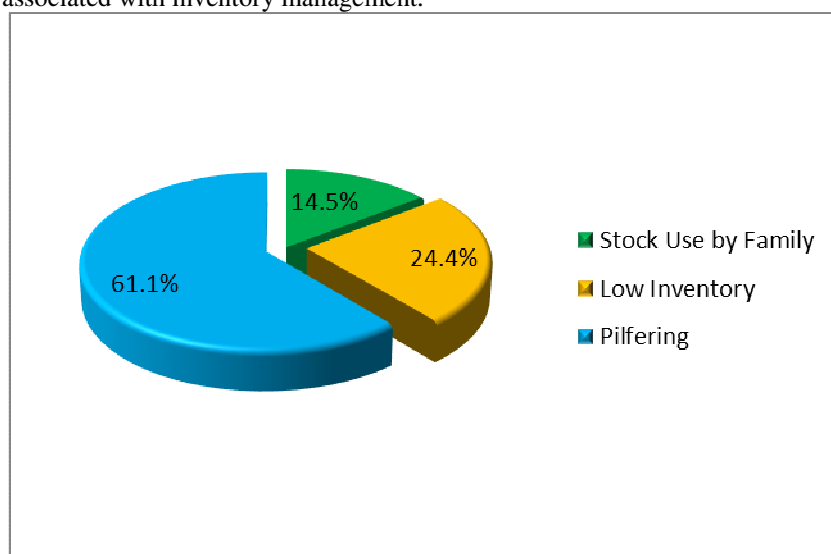


Figure 3: Problems Encountered in Inventory Management

Source: Field Study

Frequency of occurrence of inventory management practices

Tables 2, 3 and 4 show the frequency of occurrence of general inventory management practices employed by owner /managers of SMEs operating in the Northern Region of Ghana.

Table 2: Frequency of occurrence of inventory management practices

Management practice	Never 1		Rarely 2		Sometimes 3		Often 4		Very Often 5		Mean
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%	
Preparation of inventory budget	25	8.2	11	3.6	63	20.9	117	39.1	85	28.2	3.755
Review of inventory level	5	1.8	19	6.4	55	18.2	128	42.7	93	30.9	3.945

Source: Field Study

Table 3: Basis for determining inventory levels

Parameter	Frequency	Percent
Theories of inventory	17	5.5
Historical data	27	9.1
Owner/ managers experience	213	70.9
No inventory levels	43	14.5
Total	300	100

Source: Field Study

Table 4: Frequency of stock replacement orders

Very infrequently 1		infrequently 2		frequently 3		Very frequently 4		Most Mean frequently 5		
Freq	%	Freq	%	Freq	%	Freq	%	Freq	%	
0	0.0	35	11.8	142	47.3	85	28.2	38	12.7	3.418

Source: Field Study

On inventory management practices, respondents were asked how frequently they prepared inventory budgets and reviewed their inventory levels; and basis upon which they determined their inventory levels as well as their frequency of stock replacement. Table 2 shows that majority of the SMEs (67.3% of all the SMEs) often prepared inventory budgets (score 4 and 5 on the scale). Seventy four percent of all the SMEs often reviewed their inventory levels (score 4 and 5 on the scale). These findings suggest that preparation of inventory budgets and review of inventory levels are regularly carried out by SMEs' owner/ managers and are in agreement with findings of (Kwame 2007, and Nyamao et'al, 2011) which established that majority of small businesses always review their inventory levels and prepare inventory budgets and which is as stressed by Lazaridis and Dimitrios (2005) that enhancing the management of inventory thus enable businesses to avoid tying up excess capital in idle stock at the expense of profitable ventures.

Although, the SMEs regularly reviewed inventory levels and prepared inventory budgets, the ability to apply theories of inventory management in inventory budgeting is very limited with a substantial number of SMEs (70.9% of all SMEs) indicating that they determined their inventory levels based on owner-manager's experience (Table 3). A study by Kwame (2007) established similar results which showed that up to 90 percent of small businesses relied on manager's experience in their management of working capital. The finding also concurred the findings of (Appah, 2011 and Nyamao et'al, 2011) that majority of SMEs relied on the owner/manager's experience in managing their working capital. The finding that majority of SMEs determined their inventory levels based on managers' experience could be the basis for the findings that 88.2 percent of respondents regularly replenished their stock (score 3, 4 and 5 on the scale), an indication that majority of the SMEs do not stock optimal quantities of stock and do not determine appropriate re-order points (Table 4).

Financial performance of the small business enterprises

The study was also to evaluate the financial performance of SMEs in Northern Region of Ghana. To achieve this, respondents were asked to rate their perceived extent of growth in their businesses' sales, total assets, net income and market share. This was necessary because there were no financial statements on the basis of which these financial performance indicators could have been determined, hence the need to rely on the perceptual

responses and experience of owner managers. Table 5 indicates that on the average, the extent of growth of sales, total assets, net income and market share was moderate and had weighted averages of 2.67, 2.62, 2.94 and 2.98 respectively. However, as shown in Table 5, a greater number of SMEs had a growth rate that could be considered low (score 1 and 2 on the scale) as compared to the number of SMEs whose growth rate could be considered high (score 4 and 5 on the scale). The various ratings of the extent of growth of each financial indicator were summed up to obtain a single financial performance index which ranged from 4 (lowest) to 20 (highest). The higher the points a business scored, the higher its financial performance was.

Table 6 shows the descriptive statistics for financial performance of the SMEs. The results show that the financial performance ranged from a minimum value of 6 to a maximum value of 15. The results also show an average financial performance index of 11.6545 with the scores deviating from the mean score by 2.0157. This average score is less than 12, hence the conclusion that the financial performance of SMEs in the Northern Region of Ghana was on a low average. Similar results were established by Bowen et al. (2009) who established that over 50.9 percent of the businesses studied reported a deteriorating or failing performance. Similarly, Nyamao et al (2011) also concluded from their investigation of working capital management practices and financial performance of SMEs in the Kisi District that over 70 percent experienced deteriorating financial performance as a result of poor management of their inventory.

Table 5: Respondents perception on the extent of growth of financial performance

Financial performance	Not at all		Little Extent		Moderate Extent		Large Extent		Very Large		Mean
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%	
Growth in total sales	27	9.1	101	33.6	123	40.9	41	13.6	8	2.7	2.67
Growth in total assets	47	15.5	93	31.0	107	35.5	38	12.7	16	5.4	2.62
Growth in net income	5	1.8	87	29.1	137	45.5	63	20.9	8	2.7	2.94
Growth in mkt share	11	3.6	79	26.4	131	43.6	63	20.9	16	5.5	2.98

Source: Field Study

Table 6: Descriptive statistics for financial performance

Variable	Frequency	Mean	Standard Deviation	Minimum	Maximum
Financial performance	300	11.6545	2.015	6	15

Source: Field Study

The relationship between working capital management practices and financial performance

Finally the study was an attempt to establish the relationship between the inventory management practices and the financial performance of SMEs. Pearson's correlation coefficients and regression analysis techniques were used to address this objective. The normality of the dependent variable was checked by the use of normal probability plots (histogram and normal P-P plot) which both indicated that the residuals were normally distributed. The test for the linearity assumption was done by the use of scatter plots and none of the plots demonstrated a non-linear pattern.

Pearson's correlation coefficient results

The correlation results as shown in Table 7 shows that there was a strong positive relationship between SMEs' Financial Performance and Inventory Management practices ($R=0.742$, $p<0.01$). Generally and as reflected in the empirical review, most researchers have showed that businesses' performance is correlated positively to the working capital management practices (Padachi, 2006; Kotut, 2003; Sushma and Bhupesh, 2007; Raheman and Nasr 2007; Nyamao et al 2011; Azam and Haider 2011, and Lazaridis and Tryfonidis 2005.) and are therefore supported by this research finding.

Table 7: Correlation results

Parameters	Variables		FP	EIM
Spearman rho	FP	Correlation co-efficient Sig.(2 tailed)	1.000 -	
	EIM	Correlation co-efficient Sig.(2 tailed)	0.742 0.000	1.000

Correlation is significant at 0.01 level (two tailed)

Source: Field Study

Findings

Even though majority of the sampled SMEs takes stock of their goods and services, there were no proper inventory management practices among them. Owner managers relied on experience and best judgment to manage the enterprise inventory. The enterprises do not use any mathematical model such as the Economic Order Quantity to determine the re-order quantity, but rather rely on experience and current demand to determine the re-order quantity. On inventory control, only 0.7 percent of respondents used computers while majority (52.9%) used notebooks. Pilfering was mentioned by 61 percent as the major problem in managing inventory. This is a common problem with retail businesses because different items of inventory are kept. Majority of the SMEs (67.3% of all the SMEs) often prepared inventory budgets. Seventy four percent of all the SMEs often reviewed their inventory levels, suggesting that preparation of inventory budgets and review of inventory levels were regularly carried out by SMEs' owner/managers. Although, the SMEs regularly reviewed inventory levels and prepared inventory budgets, the ability to apply theories of inventory management in inventory budgeting was very limited with a substantial number of SMEs (70.9% of all SMEs) indicating that they determined their inventory levels based on owner-manager's experience. About eighty-eight percent of respondents regularly replenished their stock an indication that majority of the SMEs do not stock optimal quantities of stock and do not determine appropriate re-order points.

Conclusions

The study can be concluded that SMEs in Northern Region of Ghana are not good at managing their inventory since they seemed not to have embraced and implemented efficient inventory management routines in their business operations. This was envisaged in their low means of the efficiency levels inventory management and their limited application of theories of inventory management in their operations. The study revealed that SMEs relied on manual methods of inventory and majority does not know anything about economic order quantity model (EOQ). Owners/managers experience was found to be more important than application of theories of both inventory and cash balances in majority of the SME in the study.

In the light of this assertion by previous researchers, the current researcher would like to suggest to owners /managers that careful management of inventory is vital for the survival of their firms. Poor management of inventory means that funds are unnecessarily tied up in idle assets hence reducing liquidity and also reducing the ability to invest in productive assets such as plant and machinery, and thus affecting financial performance.

Recommendations

The study found out that efficient inventory management practices have a significant influence on the financial performance of SSEs and therefore recommends that SSEs embrace efficient inventory management practices as a strategy to improve their financial performance and gaining competitive advantage over other competitors. SMEs should pay attention to the management of inventory since it has a large effect on their financial performance. The study therefore recommends that SMEs ensures that stocks are sufficient to meet customer demands at all times while at the same time avoiding holding unnecessary surplus stocks that may increase holding costs. SMEs should seek knowledge on the use of stock optimization techniques so as to be able to determine right quantities of stock to hold at any given time. The SMEs should use their associations in a co-operative manner to procure inventory. By so doing they can take advantage of bulk purchase and also reduce cost of operations especially, the cost of transportation. It is further recommended that, SMEs in the region goes beyond using manual inventory control techniques to more modern sophisticated techniques such as the Economic Order Quantity model to ensure control of inventory.

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