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THE IMPACT OF INVENTORY MANAGEMENT ON ORGANIZATION PERFORMANCE OF TANZANIA PUBLIC SECTORS: A CASE OF NATIONAL FOOD RESERVE AGENCY (NFRA)

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Abstract

Inventory management is vital to the successful functioning of organizations. Therefore, the main objective of the study was to determine the impact of inventory management on organization performance of Tanzania public sectors. The study was guided by four objectives; to assess the techniques of inventory management, competence possessed by the staff, to determine the challenges faced in managing the inventories, and to determine the technology used on effective implementation of inventory management system in Tanzania public sectors. The descriptive aspect of the research design was used; the primary data was collected by the use of questionnaires, purposive sampling method was used with a sample size of 40 respondents. The findings revealed that, 72.5% agreed that Economic Order Quantity Model is used in all decision making when NRFA is in need of acquiring the materials; 90% of the respondents agreed that that at NRFA there is a technological use of inventory management and control; also the findings further revealed that NRFA uses qualified staffs in inventory management and control as 50% of respondents agreed that stores personnel are highly skilled; furthermore, the respondents agreed that by 95% that there are challenges in managing the inventories at the organization. The study recommended to the organization that it should carryout continuous

stocktaking; stock management functions should be handled by skilled staffs; the organization should consider investing and implementing Morden technology as well establishing proper communications with the departments.

Keywords: Inventory, Inventory management, Public sector, Performance, Inventory control

INTRODUCTION

Inventory is critical to the success of organization functions and includes all items belonging to customer satisfaction. It is not necessary that an organization has all these inventory classes, but whatever may be the inventory items, they need efficient management as, generally, a substantial share of its funds is invested in them. Since inventory constitutes a major segment of total investment, it is crucial that good inventory management be practiced to ensure organizational growth and better performance.

Historically, according to Temeng et al (2010), organizations have ignored the potential savings from proper inventory management, treating inventory as a necessary evil and not as an asset requiring management. As a result, many inventory systems are based on arbitrary rules. Unfortunately, it is not unusual for some organizations to have more funds invested in inventory than necessary and still not be able to meet customer demands because of poor distribution of investment among inventory items.

Previous studies have shown that great cost savings and potential revenue can be generated with the enhanced management of distribution and inventory. It was estimated that a company could reduce its total expenses by at least two percent through better inventory management and distribution of finished goods. This represents a percentage of total expenses, not just the amount providers spend on supplies (Schmidt, 2009). Inventory range includes lead time, inventory rate, asset management, inventory carrying cost, inventory valuation, inventory effectiveness, prediction price inventory, inventory space, inventory Returns and forecasts of sub-standard goods and demand (Lau and Snell, 2006). Ogbo (2011) posits that the major objective of inventory management and control is to inform managers how much of a good to re-order, when to reorder the good, how frequently orders should be placed and what the appropriate safety stock is, for minimizing stock-outs. Hence, it is important that both Public and private sectors in Tanzania embrace good inventory management practices as a tool of enhancing the performance. The current research is focused on the Public sector and investigates the impact of inventory management on performance.

LITERATURE REVIEW

The term Inventory: According to Morse (1997), inventory is a general term describing goods which are held in the store house and stock yards, the bulk of which is usually intended for the connection with production or operation activities and also finished products awaiting dispatch to customers.

Theoretical viewpoint: This study is guided by the following theories namely Structural Contingency Theory, Economic Order Quantity (EOQ) and Re-Order Level

Structural Contingency Theory

The theory of structural contingencies says that “there is no better way”, which means that one structure or type of structure is optimal for all organizations. This structure most effectively responds to certain factors called emergency situations. Consequently, the effectiveness of the structure depends on how far it responds to unforeseen situations. Some organizational structure conditions represent levels of uncertainty about the organization, organizational strategy, and size of the organization (Donaldson, 2001) and (Long 2019).

Economic Order Quantity (EOQ)

Bachetti et al, (2010) argues that inventory management need to be organized in a logical way so that the organization can be able to know when to order and how much to order. This can only be achieved through the Economic Order Quantity (EOQ) computation. Economic order quantity enables organizations to plan their inventory replenishment on a timely basis such as monthly, quarterly, half yearly or 18 yearly basis. By so doing, it enables firms to have minimal storage costs or zero within their warehouses since inventory is coming in and going out immediately. Thus, this tends towards the just in time concept of supply chain management adopted by Toyota motor Corporation in Japan which helps in having zero holding costs, (Schonberger, 2008). Thus, as organizations try to improve on the inventory management, the Economic Order Quantity (EOQ) and Re-order Point (ROP) are important tools that organizations can use to ensure that inventory supply does not hit a stock out as explained by Gonzalez and Gonzalez (2010). Over time, organizations have been maintaining their inventory in a haphazard manner which has necessitated a change in the way firms conduct their business. Stock outs have been experienced adversely leading to customer dissatisfaction hence; firms are changing their approach to be able to remain relevant by employing Economic Order Quantity (EOQ) and Re-order Point (ROP) for customer satisfaction.

Re-Order Level

Re-order level is defined as a point when replenishment should be ordered with inventory. There is always a time lag between placing an order for new stock and the receipt of this will be made nearly when the stocks are still available. The implication of this is to ensure smooth operation of the company or else this will mean excess stock and its related costs.

As organizations strive to achieve efficiency, they should be able to understand their Re-Order Levels (ROL) which enables them know when to order and when not to order. This can be achieved through the use of quantitative methods which necessitate proper inventory management (Apte, 2010). Re-Order level is critical for NGOs to achieve optimal efficiency and be effective leading to high supply chain performance and customer satisfaction, then they need to have two reorder levels one that is normal whereas the other is an emergency one in case of disaster (Beamon and Kotleba, 2006).

Inventory management in public sectors

Public sector organisations focus on improving the management of their stocks. The importance of public sector inventory management is based on the need to demonstrate accountability for public funds; improve the transparency and credibility of the information used for policy making; and improves efficiency. (National Treasury stock Management Framework, 2009) Www.treasury.gov.za.

A public entity also seeks to maximise the return on investment in order to provide more services or a higher level of service to the community and other stakeholders being served. When the services are paid by tariffs, taxes, tariffs or fees, the issue of accountability arises in relation to public funds.

METHODOLOGY

The study used a descriptive research design which aims at generating information after the event has occurred. It was undertaken in Tanzania's public entity. According to Mugenda and Mugenda (2003) descriptive survey design is appropriate because it involves collecting data in order to answer questions concerning the current status of subjects of the study. Kothari (2004), the research design describes the abstract of an organization in which in investigation is to be conducted. So, given the type of the research design, size of the sampled population were 40 percent of the accessible population. The target population consisted of employees from various departments of inventory management and those who are indirectly involved including respondent's staff from purchasing officers, store keeper, site foreman, site workers, accountant, technical manager and the general manager.Questionnaires were distributed to the

respondents and time was given to them to complete them.Purposive sampling used in the study because it assumes to allow and select a sample with experience and knowledge about the study variables and respondents were informed permission for their participation, confidentiality was taken care by those questionnaires, and high attentions were applied in selecting sample and avoid all bad acts such as fraud and corruption to the respondents.

RESULTS AND DISCUSSION

Respondents were of different age categories between 20-60, both male and females were involved with their positions and experience, and level of education was categorized from certificate to postgraduate. The background information of the study was considered by the study so as to establish how different characteristics of the people, could differently understand the impact of inventory management on performance of the company. Regarding the information, the following data was revealed by the study as follows:

Responses of research objectives

Techniques of inventory management used at an organization

The study implies that majority of 29(72.5%) of the respondents use EOQ, this indicates the optimal level of inventory that an organization should keep to reduce the ordering such as air time and carrying cost. 8(20.0%) of respondents suggests the use of FIFO method which indicates that, inventory that was received first must be issued first and3(7.5%) of respondents suggest the use of LIFO technique which was not achieve the required performance. Therefore, in order to manage inventory effectively, an organization needs to use inventory control methods such as EOQ model to obtain reasonable ordered quantities for its raw materials as compared with Akarro, (2011). See table 1 below.

Table 1: Showing techniques of inventory management

Responses	Frequency	Percent	Valid Percent	Cumulative Percent
first in first out	8	20.0	20.0	20.0
last in first out Valid	3	7.5	7.5	27.5
economic order quantity	29	72.5	72.5	100.0
Total	40	100.0	100.0	

Table 2: Showing competence and skill possessed by staff in inventory management

	1	2	3	4	5
A responsible official authorizes purchase?	20(50.0%)	19(47.5%)	1(2.5%)	_	_
Goods are inspected on receipt?	22(55.0%)	11(27.5%)	6(15.0%)	1(2.5%)	_
The staffs pay maximum attention to those inventories whose value is highest.	15(37.5%)	16(40.0%)	7(17.5%)	2(5.0%)	_
All store staffs of the company are highly skilled.	7(17.5%)	12(30.0%)	19(47.5%)	2(5.0%)	_
The staff of the company experiences under stocks situations.	15(37.5%)	14(35.0%)	11(27.5%)	_	_
The company gets damaged goods from its stored?	4(10.0%)	11(27.5%)	_	16(40.0%)	9(22.5%)
Have you continually received any training concerning to inventory management?	14(35.0%)	12(30.0%)	_	7(17.5%)	7(17.5%)

From the table 2 above, 20(50%) of the respondents strongly agreed on the responsible official authorizes purchase, 19(47.5%) agreed, and 1(2.5%) not sure. This implies a responsible official authorizes purchase in an organization. 22(55.0%) of the respondents strongly agreed that Goods are inspected on receipt, 11(27.5%) agreed, 6(15%) were not sure, 1(2.5%) disagreed. This implies that Goods are inspected on receipt.

Table 3: Showing challenges in managing inventories

Response	Frequency	Percent	Valid Percent	Cumulative Percent
Yes	38	95.0	95.0	95.0
No	2	5.0	5.0	100.0
Total	40	100.0	100.0	

From the table 3 above, the study objective sought of understanding challenges faced by the company in managing the inventories and findings from the study respondents indicated that the corporation was facing challenges in the process of managing inventories. Regarding the same issue, 38(95.0%) of the respondents selected during the study agreed with the statement that

there are Challenges faced by the organization in managing inventories as 2(5.0%) of the study respondents disagreed with the same statement. The study on further findings established the following challenges among others faced by the organization in managing inventories.

Table 4: Showing challenges faced by the company in inventory management

Response		Frequency	Percent	Valid Percent	Cumulative Percent
Specification poorly done		5	12.5	12.8	12.8
not adequate space for storage		19	47.5	48.7	61.5
Valid	Theft	7	17.5	17.9	79.5
Irregular customer orders		8	20.0	20.5	100.0
Total		39	97.5	100.0	
Missing	System	1	2.5		
Total		40	100.0		

The table 4 above shows that, 19(48.7%) of the study respondents revealed inadequate space for storage was among the challenges faced by an organization in the process of inventory management. This followed by irregular customer orders that was reported as 8(20.5%) of the respondents because there seem to take very long to order and the changes in stock levels and replacement made by suppliers. 07(17.9%) of the respondents reported theft in relation to the people responsible for the managing inventories. Specification poorly done as indicated by 05(12.8%) of the study respondents each. The results show the big challenge that affects the store department was inadequate space as sometimes reduce greatly on the performance.

CONCLUSION

Generally, the findings of the study indicates that, many respondents may understand well the term inventory management, it hold different types of inventories, implement inventory management in effective and decisions made in the process of managing inventories deal with FIFO and EOQ method as a means of getting required performance of an organization, and the staff of the organization satisfied with these techniques. Similarly, competent and skilled workers employed as a result of greater performance of an organization. Additionally, it was concluded that, despite of the big challenge that faced the company, (inadequate space for storage), staff members recommended in minimizing the bad practices to ensure the higher level of performance is acquired. Lastly, the study concluded that, the common technologies of

inventory management used at the company include electronic data interchange (EDI) and simplified accounting package (SAP) for the management of information system in making serious decisions on inventory requirement, records, and arrangements to achieve its goals (Cost minimization).

RECOMMENDATIONS

Since inventory management techniques do not normally lead to immediate efficiency of the Corporation for improved performance, the study recommends that, management in Tanzania public sectors always forward inventory planning, centralize the purchase and store function, carry out stock taking exercise periodically, develop a policy framework to facilitate faster implementation of the best inventory management practices such as MRP, minimize inventory expenses by using skilled labour as if such factors are adopted together then performance and efficiency of the public organization will be greatly obtained and will be able to minimize inventory management costs.

In addition, the study recommends that the Government should ensure that the stock management function is handled only with competent and well-trained procurement and supply management officers. In addition, inventories at Tanzania public sectors should be continuously checked with actual stocks held by independent officials and inquires made into all reconciling differences. If this done, challenge associated with inventory management will be minimized at the corporation premises.

Additionally, the study recommends that, public organization to consider investing in modern technology and implement EDI because it forms a platform for ease of evaluating risk in which the organization invest a lot of money in purchasing of inventory, this will reduce inventory costs and improve returns.

Finally, the study findings recommend proper communication within the organization must be established. This should be done effectively in order to work effectively. This will enable the organization to succeed some issues like stock out; this is because all the staffs that are responsible in different departments will be able to report in case of any change. For example when the stock is reducing in the stores, the staff responsible should be in a position to inform the procurement manager for requisition and reorder of more stock.

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