
Inventory Management And Its Impact On Performance Of Manufacturing Industries In Uganda. A Case Study Of Bidco Company Ltd Jinja

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Abstract

The main objective of the study was to examine the impact of inventory management on performance of manufacturing industries in Uganda using BIDCO Company as the case study. As recommended by other scholars, the literature was compiled from various journals, Google magazines, and books. A convenience sampling method was used to select a sample of 35 respondents for the study that had a cross-sectional survey research design. The company staff members completed self-administered questionnaires that served as the investigation's data collection tools and instruments. The STATA and SPSS software packages were utilized in the study's analysis of the field data. A dummy variable model also aided in analyzing data. The findings showed that most of the employees in BIDCO Company limited were male, between the age brackets of 30-35 years old. Since they regarded as more productive. The findings also indicated that BIDCO Company maintains reasonable stock levels required by the organization to prevent over and under stocking, and they use various techniques like lead time, and Inventory Turnover ratio inventory management system. The findings further showed that frequent performance appraisal of the employees also strongly contributed to BIDCO Company's good performance. The study concluded that there was a proportionate relationship between inventory management and performance of BIDCO Company limited. BIDCO Company should also involve employees in decision making especially in their respective fields for example in the stores Department.

Keywords: Inventory, Management, Performance and Manufacturing Industries

Background of the study

According to (Deus, 2023) he refers to inventory management as inventory management and explains that no cost accounting system can become an effective inventory control. He went on to classify the types of inventory as follows: Raw material as basic inputs that are inventory into finished products through the manufacturing process (Annet et al., 2023). Work in progress (WIP) is work-in-progress that goes through the manufacturing process before becoming finished goods. Finished products are products that have gone through the manufacturing process and are ready for consumption. Supplies include office plant cleaning materials such as detergents, brooms and packaging materials (Faridah et al., 2023). In addition, inventory management affects the performance of the organization in that the inventory levels fields should correspond to the ordered stock, warehouse and space to enable sufficient performance of the organization (Ntirandekura et al., 2022). (Christopher, Moses, Muhindo, & Komunda, 2022b) defined performance as accomplishing, carrying out, carrying out and working on anything ordered or undertaken. The different types of performance that take place in an organization were further explained, which include: Role performance consists of a function or combination required by a job description or quality contractually for compensation from the organization's reward system (Paul & Kazaara, 2023). Extra-role

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performance consists of those functions in combination that are not required by the system and for which increased remuneration is not contractually guaranteed. (Christopher, Moses, Muhindo, & Nturanabo, 2022) defined performance as the completion of a given task measured against known standards of accuracy, cost completeness and speed (Kazaara & Kazaara, 2023). According to the Annual Proposal of Supply and Logistics Managers (2019) of BIDCO Company Limited, it was clearly stated that although BIDCO Company Limited fulfills its duty in distributing its supplies, there is a high level of fraudulent practices in the outlets (Ronet et al., 2023), a high level pilferage, increased rate of irregularities, insufficient stock which has led to delays in delivery to their respective destinations which has forced some customers to resort to Mukwano products in their respective areas. If the management of BIDCO limited does not adopt appropriate inventory management techniques, performance will remain a challenge in the organization (Racheal, Kazaara, et al., 2023).

Statement of the problem.

BIDICO's inventory management practices have emerged as a significant challenge, potentially limiting the industry's overall performance and competitiveness. Failure to effectively manage and optimize inventory levels leads to various problems, including overstocking, understocking, increased operating costs, production delays, and potentially lost sales opportunities (Musaibah et al., 2023). These problems require a comprehensive investigation of the factors affecting inventory management of BIDCO Uganda limited to identifying the root causes, assessing their consequences and proposing effective solutions (Christopher, Komunda, & Milton, 2022).

The problem includes a lack of standardized inventory management systems and procedures, inadequate forecasting techniques, ineffective supply chain management, and limited access to modern inventory management technology (Frank et al., 2023). These problems not only prevent cost-effective production, but also lead to wasted resources, missed delivery times and potentially affect the quality of manufactured goods (Turyatemba et al., 2022). Moreover, they could hinder BIDICO's competitiveness in local and international markets. This therefore prompted the researcher to conduct the research (Turyatemba et al., 2022).

To address these challenges and increase the performance of BIDICO Limited Uganda, it is essential to delve deeper into the root causes and develop strategies and recommendations that will enable these industries to optimize inventory management (Wegulo et al., 2023), streamline supply chain processes, reduce operating costs and improve overall production efficiency (Ntirandekura & Alex, 2022). This research aims to offer practical insights and practical recommendations for improving inventory management practices, which will ultimately enhance the competitive advantage and growth potential of Uganda's manufacturing sectors (Moses et al., 2022)

Objectives of the Study.

1. To investigate how the efficiency of production and operational process can be optimized at each stage of the product life cycle.
2. To assess the relationship between lead time in decision-making processes and the quality of decisions made.

3. To investigate the impact of technology adoption and integration on cost reduction strategies within organizations.

Methodology

The researcher used qualitative Research Design and explanatory type of research in particular case study (Nafiu et al., 2012). Research design was used because it enabled the opportunity to collect data from a number of respondents in the selected case study with in a short period of time. The area of study was BIDCO Uganda Limited walukuba Masese division Industrial area in Jinja district (A & Ahmed, 2019). This is because it was where the problem was observed and it is easily accessible by the researcher (Nafiu et al., 2012). The study was directed to the Administrative staff, Employees and customers making a total population of 100 people. They were interviewed, sent questionnaires, observed and their activities is under close supervision. Selective sampling technique was used to collect information from the General Manager and two Casual workers heads as they represented the whole group thus the questions were given to them directly (Nafiu et al., 2017). The researcher used simple random technique to get information from other Department heads where questionnaires were given either to managers themselves or their assistants to answer the required questions.

Sample Size**Table showing sample size**

CATEGORY OF POPULATION	POPULATION SIZE	SAMPLE SIZE	SAMPLING TECHNIQUE
Administrative staff	20	02	Purposive sampling
Employees	35	08	Simple Random Sampling
Customers	45	25	Purposive Sampling
TOTAL	100	35	

The researcher got an introductory letter from the University Administration, the letter of introductory was presented by the researcher to his area of study where it was evidenced to derive the statement of problem of the study then the researcher prepared data collection tools which included (Nafiu et al., 2013): interview guides, questionnaires guides that were used to investigate the validity of the research topic (Nafiu et al., 2017). The researcher employed a number of techniques in collecting data for the study as follows: These were questions that were distributed by the researcher to the respondents to fill in correct answers, the researcher used structured questionnaires typed with questions to be answered by the respondents with predetermined response like strongly agree, agree strongly disagree (Rasheed et al., 2022), disagree and not sure this helped him to get the required information. This involved the use of eyes by the researcher to observe what was exactly happening in the area of study and the organization as a whole (Lu et al., 2013). The researcher was able to observe the inventory management staff and what took place

on the stock in the store and this supplemented the information got from other methods. This also employed correlation analysis to analyze data got from respondents. The data was edited and analyzed in form of tables, frequencies and percentages using SPSS & STATA (Nelson et al., 2022)

RESULTS

Table 2 showing percentage responses whether production life cycle in BIDCO leads to maintenance of reasonable stock levels required by the Organization to prevent under and overstocking respectively.

Item	Response number	Percentage (%)
Strongly Agree	40	40
Agree	35	35
Not sure	25	25
Strongly Disagree	00	-
Disagree	00	-
Total	100	100

Source: Primary data

Table 2 above showed that 40% and 35% of the respondents strongly agreed and agreed respectively, 25% of the respondents were not sure. The majority of 75% of the respondents agreed that BIDCO maintains reasonable stock levels required by the Organization to prevent under and overstocking (Musaibah et al., 2023). This was supported by Bogallath (2019) “inventory management leads to maintenance of reasonable stock levels required by the Organization”

Table 3 showing percentage responses whether BIDCO Company applies inventory management techniques like lead time, ABC analysis, Inventory turnover ratio and economic order quantity.

Item	Response number	Percentage (%)
Strongly Agree	35	35
Agree	40	40
Not sure	00	-
Strongly Disagree	00	-
Disagree	25	25
Total	100	100

Source: Primary data

According to **table 3** above indicated that 35% and 40% of the respondents strongly agreed and agreed respectively, while 25% of the respondents disagreed. This showed that majority of 75% of the respondents agreed that BIDCO apply lead time inventory management system (Alex et al., 2023).

High rates of stock discrepancies are caused by employees in the warehouse of BIDCO Ltd.

Table 4 below showing percentage response whether BIDCO company has high rate of stock discrepancies in the warehouse by employees leading to poor inventory management.

Item	Number of responses	Percentage (%)
Strongly Agree	10	10
Agree	30	30
Not sure	40	40
Strongly Disagree	00	-
Disagree	20	20
Total	100	100

Source: Primary data

Table 4 above showed that 10% and 30% of the respondents strongly agreed and agreed respectively, 20% disagreed and 40% of the respondents were not sure. This reflected that majority of the respondents were not sure whether high rate of stock discrepancies had led to the poor inventory management in BIDCO company limited (Nelson et al., 2023).

Table 5 below showing percentage response on whether obsolete technology has led poor inventory management in BIDCO Company limited.

Item	Response number	Percentage (%)
Strongly Agree	45	45
Agree	20	20
Not sure	25	25
Strongly Disagree	00	-
Disagree	10	10
Total	100	100

Source: Primary data

From the above table, indicated that 45% and 20% of the respondents strongly agreed and agreed respectively, 10% of the respondents disagreed and 25% were not sure. Therefore 65% of the respondents as majority agreed that obsolete technology had led to poor inventory management in BIDCO Company limited (Benard, 2023).

Table 6 below showing percentage response on whether BIDCO performance was based on innovation and efficiency in product quality?

Item	Response number	Percentage (%)
Strongly Agree	46	46
Agree	20	20
Not sure	8	08
Strongly Disagree	26	26

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Disagree	00	-
Total	100	100

Source: Primary data.

According to **table 6** above, 46% and 20% of the respondents strongly agreed and agreed respectively, 26 % strongly disagreed and 8% of the respondents were not sure.

The majority 60% of the respondents agreed that BIDCO Company's performance was based on innovation and efficiency in product quality (Racheal, Enock, et al., 2023). This was in agreement with Wikipedia (2017) "Performance is linked with innovation through improvement in efficiency, Quality products or services".

Table 7 below showing percentage response on whether high level of effectiveness and efficiency of staff had led to good performance of BIDCO Company limited.

Item	Response number	Percentage (%)
Strongly Agree	40	40
Agree	34	34
Not sure	00	-
Strongly Disagree	13	13
Disagree	13	13
Total	100	100

Source: Primary data

According to **table 7** above indicated that 40% and 34% of the respondents strongly agreed and agreed respectively, 13% and 13% of the respondents strongly disagreed and disagreed respectively. Thus 74% of the respondents as the majority agreed that high level of effectiveness and efficiency of staff had led to good performance of BIDCO Company limited. This indicated that high level of effectiveness and efficiency of staff had led to high output in BIDCO Company limited (Christopher, Moses, Muhindo, & Komunda, 2022b).

Table 8 below showing percentage response whether the performance of BIDCO Company strongly depended on control on ordering rates, storage and regulations in the use of components in production of goods or services.

Item	Response number	Percentage
Strongly Agree	55	55
Agree	16	16
Not sure	00	-
Strongly Disagree	6	6
Disagree	23	23
Total	100	100

Source: Primary data

Table 8 above revealed that 55% and 16 % of the respondents strongly agreed and agreed respectively, 6% and 23% strongly disagreed and disagreed respectively.

The majority 71% of the respondents agreed that BIDCO Company performance strongly depended on control on ordering rates, storage and regulation in the use of components during production of goods and services. This agreed with (Christopher, Moses, Muhindo, & Komunda, 2022a). “Control on ordering rates; storage and use of components directly affect the performance of an Organization. Frequent performance appraisal of staffs has contributed to the high level of performance of BIDCO Company limited?

Table 9 below showing percentage response on whether frequent performance appraisal of employees had contributed to BIDCO Company’s performance?

Item	Response number	Percentage (%)
Strongly Agree	65	65
Agree	35	35
Not sure	00	-
Strongly Disagree	00	-
Disagree	00	-
Total	100	100

Source: primary data

According to the **table 9** above showed that 65% and 35% of the respondents strongly agreed and agreed respectively, whereas None of the respondents Disagreed nor Not sure.

This clearly reflected that all the respondents agreed that frequent performance appraisal of employees in BIDCO strongly contributed to its performance (Winny et al., 2023). This was in line with the interview conducted with the Human Resource Personnel who agreed that the frequent performance appraisal is conducted in order to ensure quality performance

Table 10 below showing percentage response on whether proper inventory management had led to high level of consistence in production in BIDCO Company limited?

Item	Response Number	Percentage (%)
Strongly Agree	45	45
Agree	30	30
Not sure	15	15
Strongly Disagree	10	10
Disagree	00	-
Total	100	100

Source: Primary data.

Table 10 above indicated that 45% and 30% of the respondents strongly agreed and agreed respectively. 10% strongly disagreed whereas 15 % of the respondents were not sure.

This proved that, majority 75% of the respondents agreed that proper inventory management had led to high level of consistence in production of BIDCO Company limited (Kazaara & Christopher, 2023).

This was supported by Lucy (2017) and (1993). “Stock control contributes to a direct relationship with marketing, purchasing and production which in turn contribute to the performance of an Organization”.

Table 11 showing percentage response on whether BIDCO Company’s continuous physical checking and system of preventing absolute supply alongside opening and balancing inform of receipts and issues had led to high level of inventory management leading to high rate of productivity?

Item	Response Number	Percentage (%)
Strongly Agree	30	30
Agree	30	30
Not sure	15	15
Strongly Disagree	25	25
Disagree	00	-
Total	100	100

Source: Primary data

The findings from **table 11** indicated that 30% and 30% of the respondents strongly agreed and agreed respectively, 25% strongly disagreed, and 15% of the respondents were not sure.

The majority 60% of the respondents agreed that continuous physical checking of items in BIDCO stores and preventing absolute supply contributed to high level of inventory management which had led to high performance in production (Ntirandekura et al., 2022). This was in line with Kamukama (2019) who asserted that management of inventory on stock control of an Organization must deal with continuous physical checking of items and records, identification system of preventing absolute supply in addition to opening and closing balances in form of receipts and issues. Well trained staffs employed in the stores of BIDCO Company limited has contributed to high rate of inventory management leading to high performance in production

Conclusion of the Findings.

In conclusion BIDCO Company maintained reasonable stock level required by the Organization, applies lead time as inventory control techniques.

Furthermore, BIDCO's performance depended on inventory and efficiency in product quality, high level of effectiveness and efficiency of employees and control of purchases, storage and regulations in the use of components in the production of goods and services.

There was a proportionate relationship between inventory management and performance of BIDCO Company limited.

Recommendation.

There is need to improve on the inventory management system especially in overstocking and under stocking.

BIDCO Company should also improve on the communication skills between the different Departments for example Inventory and supply Department and production.

BIDCO should also employ more staff in the inventory management Department to improve on the level of performance.

BIDCO Company limited should also improve on the technology used in the inventory management for instance the use of stock cards and stock register.

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