

The Impact of Inconsistent Tracking on Inventory Management Case Study SOCIETE BUNS-Cameroon

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Abstract

As a result of a rapid increase in inventory management and the time required to manage inventory management, many organizations have resulted to the tracking of inventory. Due to this, there should be some means of accurately tracking inventory. Due to this, there should be some means of accurately tracking inventory in order to ease the management of inventory. Some of the most useful methods of tracking inventory are barcodes where every item carries a label that gives information on the items, stock books and the Kanban system. It is against this background that the main endeavour of this project is to investigate if inconsistent tracking has an impact of inventory management with specific objective being to find out the impact of documentation on inventory management. From these objectives the following questions were asked; what impact inconsistent tracking has on inventory management. The theories adapted to back this work were The Just In Time theory by Taiichi Ohno (1984), The Wilson's Model for Inventory Management by R.H Wilson (1934) and the Theory of Constraints by Dr Eliyah Goldrath (1984). Conclusions were drawn from the data collected, and recommendations were made, such as using the available tracking software properly.

Keywords: Inconsistent, Tracking, Inventory and Inventory Management

INTRODUCTION

Getting your products to your customers on time is the lifeblood of any business.. And according to (Abby J. 2022), staying on top of your inventory and controlling it effectively and efficiently helps you meet demand and satisfy customers [1]. Inventory management is a difficult task. The process and outcomes have an impact on every aspect of your business.

Inventory control, according to (L. Tundura et al. 2016), is one of the essential management areas in organizations because it plays an internal role in the organization such as facilitating continuous production, smoothing operations, and improving customer service [2]. Inventory control is an integral aspect of the inventory management process (ABBY J. 2020). It is the daily routine of stock management in the warehouse.

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Received Date: August 29, 2022

Accepted Date: September 05, 2022

Published Date: September 09, 2022

Citation: EYONG AKO. The Impact of Inconsistent Tracking on Inventory Management Case Study SOCIETE BUNS-Cameroon. NOLEGEIN Journal of Supply Chain and Logistics Management. 2022; 5(1): 34-47p.

Inventory tracking is very vital in most organizations as it helps in enhancing business operations. Tracking and traceability should be easily done but that is not always the case [3]. Taking SOCIETE BUNS as case study, some project directors are adamant to change and do not follow the company's stated procedures for inventory management making tracking difficult. Also, the fact that most store keepers do not send all documents used at the sites back to the central store keeper makes inventory recording and tracking difficult. Base on the above challenges,

the main reasons for carrying out this research was to investigate the impact of inconsistent tracking on inventory control and specifically we have-To find the impact of documentation on Inventory Management:

- To determine whether inventory tracking software has an effect on inventory management.
- To find out if coding has an impact on inventory management

LITERATURE REVIEW

Theoretical Review

Theories are assumptions formulated to better explain concepts. We will expand on the theories mentioned in chapter one of this work in the context of Inventory Management.

Taiichi Ohno's Just in Time Theory (1984)

Just in Time (JIT) is a Japanese management philosophy that has been used in many Japanese manufacturing organizations since the early 1970s. Taiichi Ohno pioneered and perfected it within TOYOTA manufacturing plants as a means of meeting customer demand with minimal delays.

The JIT method is an inventory strategy in which materials are ordered and received only as they are required in the manufacturing process [4]. The goal of this method is to save money on overhead inventory expenses in order to reduce costs. This allows the automaker to save money on inventory storage and reduce waste

The RH Wilsons Inventory Management Model (1934)

The Wilsons Model, also known as the EOQ (Economic Order Quantity) system, is a well-known stock management strategy for lowering warehouse inventory costs. It is one of the simplest stock management models to implement, which explains its popularity. It is concerned with calculating the appropriate quantity of each product or raw material order placed by a company in order to minimize inventory costs [5]. It is concerned with calculating the appropriate quantity of each product or raw material order placed by a company in order to minimize inventory costs.

This model gained popularity in 1934 after the publication of an article by R.H. Wilson. Engineer Ford Whitman Harris originally developed the model while he was working for the Westinghouse corporation.

The model was developed with the explicit goal of systematizing the goods that are regularly held in the warehouse and defining the quantity and date on which orders must be placed with suppliers. This system is mostly used to systematize the purchase of raw materials, it can be used to enhance the purchase of any product that the company requires by the company as long as purchasing costs can be determined in order and storage terms.

Dr. Eliyah Goldratt's Theory of Constraints (1984)

The Theory of Constraints (TOC) first appeared in a book written by Dr Eliyah Goldratt in 1984. "The Goal" is designed to assist organizations in achieving their objectives. This theory, which aims to eliminate bottlenecks and other issues that clog the supply chain, can be a huge help to lean manufacturing efforts [6]. The TOC, like many other theories, strategies, and practices, is intended to improve manufacturing processes so that production runs more smoothly and efficiently. However, before you can use it in your factory, you must first understand what TOC is, its benefits, and the issues it can reduce and prevent.

What Precisely is the Theory of Constraints?

The TOC is a method of organizational change that focuses on profit enhancement. A constraint is any factor that prevents an organization from obtaining more of what it seeks, which is usually profit.

The theory of constraints defines a set of tools that change agents can use to manage constraints and, as a result, increase profits [7]. Most businesses can be thought of as a network of processes that

convert inputs into saleable outputs. TOC views this system as a chain, with the belief that a chain is only as strong as its weakest link.

-MRO (Maintenance, Repair, and Operations) Supplies

MRO is inventory that is frequently in the form of supplies that aid in the production of a product or the operation of a business.

Inventory Tracking and Inventory Management are Related

Inventory tracking has a direct relationship with inventory management because proper and consistent inventory tracking results to better inventory management which goes a long way to reduce cost, promote accountability and for better decision making [8].

Examine by Objectives

Some objectives will be discussed in the following paragraphs.

Effect of Inconsistent Inventory Management

Accurate inventory tracking allows brands to fulfill orders on time and accurately, tracking has a significant impact on inventory management. It also permits warehouse managers to know exactly where goods are found at a given point in time in the supply chain. Inconsistent tracking makes inventory management more complex and accountability very difficult.

Here the researcher finds out the various impacts inconsistent tracking has on inventory management with the case of Société BUNS SA

This situation of inconsistent tracking comes from the fact that most store keepers at the various sites do not send the various documents necessary for tracking at the appropriate time. They do not send their bon de receptions and bordereaux de livraisons back to the store keeper at the head quarter for tracking and accountability [9]. It is also due to the fact that most Project directors at the various project sites do not respect of the Company's inventory procedures. Some even mishandle the company's

The Impact of Documentation on Inventory Management

Documents are a very vital part of Inventory Management. These documents are used for inventory-related actions and transactions, regardless of whether the transactions affect the quantity or value of the stock (transit, internal transit, consumption, composition, production, destruction, shortage, surplus).

Documentation is a very sensitive part of inventory management and needs to be seriously looks upon by BUNS. Documentation influences inventory Management in the company positively when all the necessary documents needed to control inventory are available. It facilitates the central storekeeper's work. But with Société BUNS, the central storekeeper doesn't have all the documents needed to record and keep track of inventory making it difficult to manage inventory from the various construction sites. This goes a long way in influencing inventory management negatively.

The effects of Inventory Tracking software's on Inventory Management

Inventory tracking software have a significant impact on inventory Management. With Inventory tracking software inventory management is carried out easily [10].

With the Case of Société BUNS, software is not used for all their inventory operations even though they have a common software in all sites and at the base to record the flow of material. It is therefore very difficult for the central storekeeper to easily predict the number of materials which have been

received at a given site and the quantity of goods which have left one site for another. This complicates inventory recording and accountability.

Inventory Management and the Effects of Coding

The goal of coding is to identify goods in a unique way (no two products can have the same code). Coding has significant effects on inventory management as seen in the case of Société Buns SA

The company has a practice of creating codes for every new item or equipment purchased by the company and are placed as tickets on the equipment such as computers, photocopying machines and other machines used at the various sides. Some Project directors and storekeepers at the construction site do not follow this inventory procedure [11]. When new company items are purchased at the sites, some of them are not given codes and tickets making tracking and traceability difficult for those items. At the end of the construction projects, some workers throw some of the company materials and equipment's with the codes making traceability difficult.

METHODOLOGY

The research design used in the course of this study at Société BUNS was the non-experimental design through the use of questionnaires and interview. The data collection sources are classified as primary and secondary data collection sources. The researcher used the descriptive analysis where in, tables and charts will be used in order to have the various percentages upon which conclusions will be made with respect to the research.

DATA PRESENTATION, ANALYSIS AND INTERPRETATION OF FINDINGS

Presentation and Analysis of Data

Section A Gender Distribution of The Respondent

Table 1 and Figure 1 shows that the workers present in the company are mostly made up of males as seen from the analysis from SPSS with a valid percent of 60%. This implies that the decision of inconsistency tracking inventory are mostly determined by the male workers.

Analysis from SPSS shows that most of the workers are in the range 20–25 and 31–40 with valid percent of 36.7%. This analysis explains that the workers are not really verse with the inventory system thus making them to be inconsistent in their reports and work (Table 2 and Figure 2).

Table 1. Gender of workers.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	females	30	40.0	40.0	40.0
	Males	50	60.0	60.0	100.0
	Total	80	100.0	100.0	

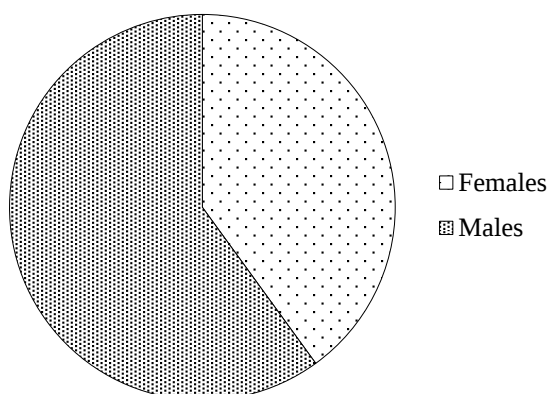


Figure 1. Showing Gender of workers.

Table 2. Age of workers.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	20–25	11	36.7	36.7	36.7
	26–30	1	3.3	3.3	40.0
	31–40	11	36.7	36.7	76.7
	above 40	7	23.3	23.3	100.0
	Total	30	100.0	100.0	

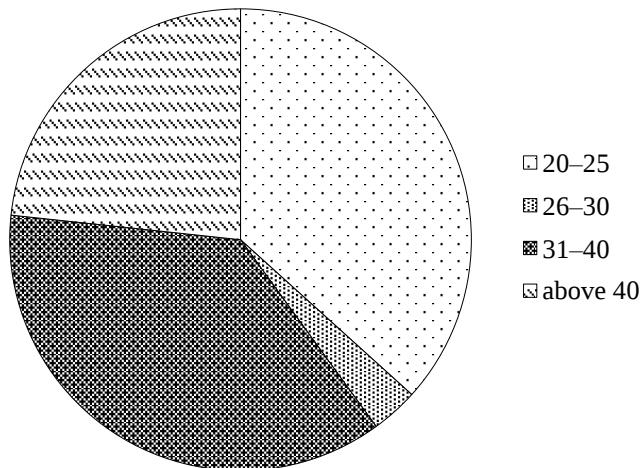


Figure 2. Age of workers.

Figure 3 and Table 3 explains the marital status of the workers. This can be seen from statistics that most of the workers the company employs are married thus will not really affect the output of the company as they will be full concentration at jobsite.

Table 3. Marital status.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	married	30	30.0	30.0	30.0
	Single	34	20.0	20.0	50.0
	widow	8	26.7	26.7	76.7
	widower	8	23.3	23.3	100.0
	Total	80	100.0	100.0	

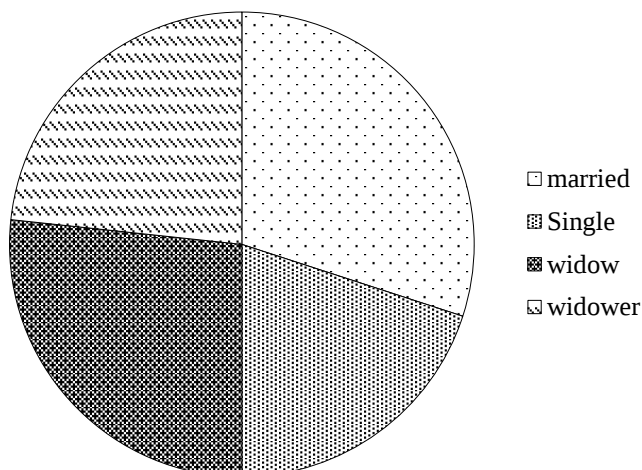


Figure 3. Showing marital status.

Here, that statistics shows that most of the workers that been employed by the company are qualified workers with high certificate as shown in Table 4. The company has most of its workers with master's level. (Figure 4)

Table 4. Educational level.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	diploma	5	16.7	16.7	16.7
	HND	20	16.7	16.7	33.3
	degree	25	26.7	26.7	60.0
	master	30	40.0	40.0	100.0
	Total	80	100.0	100.0	

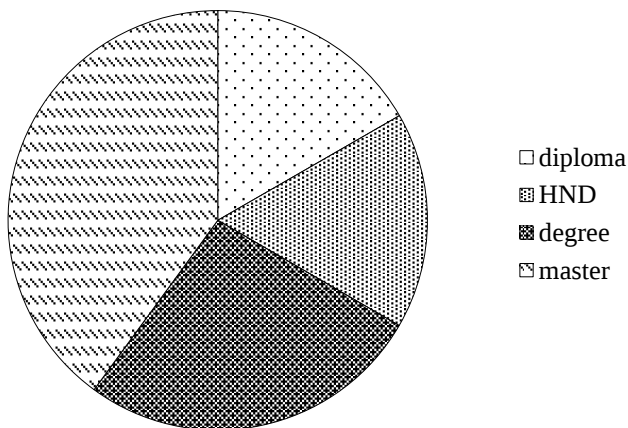


Figure 4. Showing educational level.

Analysis from SPSS and response from respondent shows that most of the workers employed by the company have working experience between the range of 3-5years with valid percent of 46.7%. Therefore, it indicates that most of the workers at the company have no clear cut mastery of inventory system. (Table 5 and Figure 5)

Table 5. Duration of workers.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than 2 yrs	20	26.7	26.7	26.7
	3-5 yrs	20	46.7	46.7	73.3
	above 6 yrs	40	26.7	26.7	100.0
	Total	80	100.0	100.0	

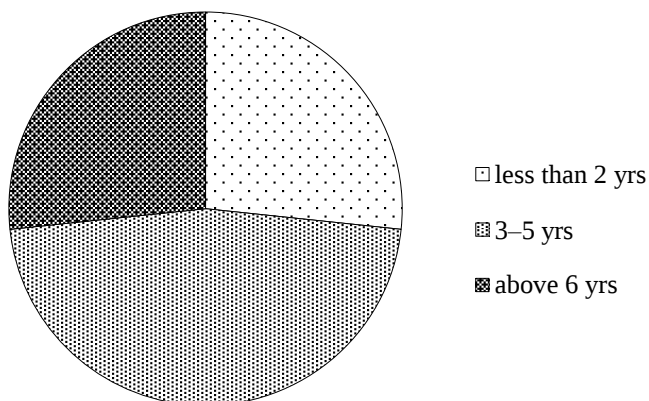


Figure 5. Showing duration of workers.

Section B; Tracking (TR)

Figure 6 shows that respondent disagree with the fact that the organization practices good inventory tracking methods as this can be from the percent given which is 36.7%. This therefore affirms the inconsistency in inventory management system. (Table 6)

Table 6. TR1.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SA	25	33.3	33.3	33.3
	A	25	16.7	16.7	50.0
	SD	15	13.3	13.3	63.3
	D	15	36.7	36.7	100.0
	Total	80	100.0	100.0	

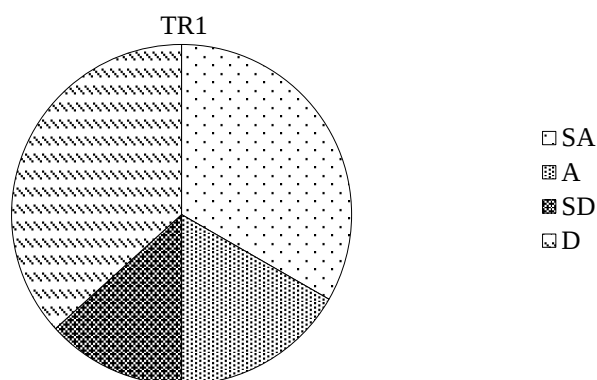


Figure 6. Showing inventory tracking methods.

From data collected and analysis from the software SPSS, we can clearly see that respondent to this question strongly disagree to the fact that inventory Procedures are followed to the latter by project directors and storekeepers. (Table 7) This can be seen above from Figure 7 as it shows that 43.3% of the respondent affirms the fact of inventory procedures not followed to the latter

Table 7. TR2.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SA	20	23.3	23.3	23.3
	A	20	23.3	23.3	46.7
	SD	30	43.3	43.3	90.0
	D	10	10.0	10.0	100.0
	Total	80	100.0	100.0	

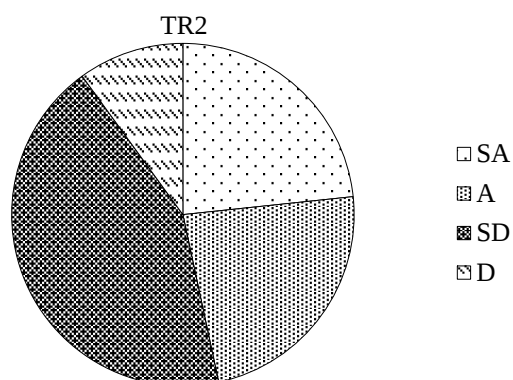


Figure 7. Showing Inventory Procedures.

Indications from analysis shows that the respondent disagree with the fact that the company Tracking procedures are flexible as this can be seen from Table 8 with a valid percent of 46.7 and same with Figure 8 portraying a great section of the disagree respondent.

Table 8. TR3.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SA	25	20.0	20.0	20.0
	A	11	16.7	16.7	36.7
	SD	11	16.7	16.7	53.3
	D	33	46.7	46.7	100.0
	Total	80	100.0	100.0	

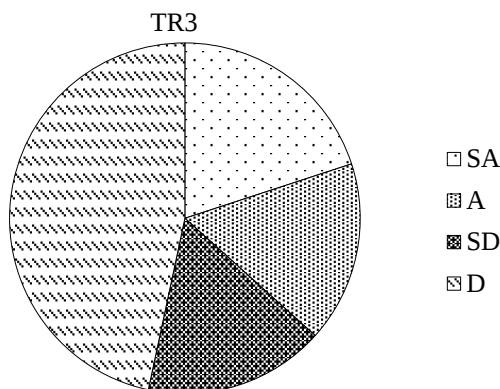


Figure 8. Showing tracking procedures are flexible.

Section C: Softwares (SW)

SPSS analysis and data imputed from respondent indicates that the organization uses inventory tracking software's for inventory Management as we can see from the above table having valid percent of 40% as the agree to the fact. (Table 9 and Figure 9)

Table 9. SW1.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SA	11	20.0	20.0	20.0
	A	47	40.0	40.0	60.0
	SD	11	20.0	20.0	80.0
	D	11	20.0	20.0	100.0
	Total	80	100.0	100.0	

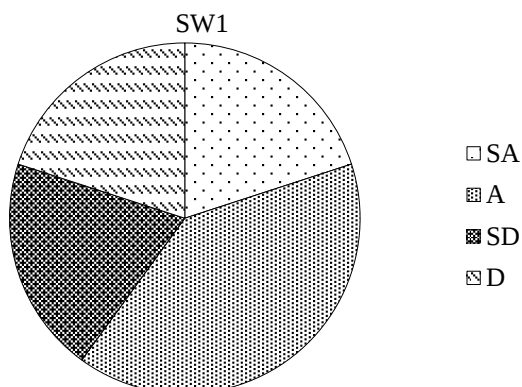


Figure 9. Showing inventory tracking software's for inventory Management.

Analysis shows that the respondents strongly disagree with that aspect that the organizations software's are properly used by all company storekeepers as we can see that they have a valid percent of 33.3 percent of the total percent and total respondents responded to the question. (Table 10 and Figure 10)

Table10. SW2.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SA	18	23.3	23.3	23.3
	A	14	20.0	20.0	43.3
	SD	30	33.3	33.3	76.7
	D	18	23.3	23.3	100.0
	Total	80	100.0	100.0	

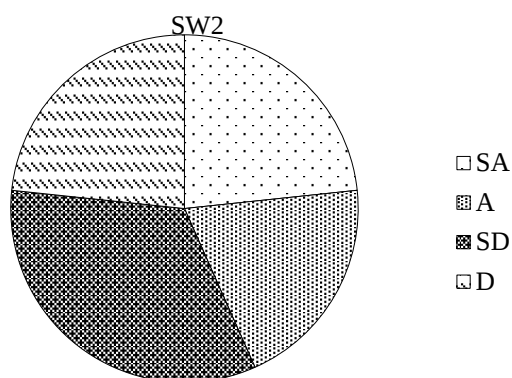


Figure 10. Showing how software's are properly used.

Table 11 shows that the respondent strongly agree to the fact that the company's software's are efficient in the tracking of inventory as this gives us a valid percent of 40% out of the total respondent. This can also be seen from Figure 11 showing a greater portion of those who strongly agree to the fact that the software's are efficient in the tracking of inventory.

Table 11. SW3.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SA	50	40.0	40.0	40.0
	A	10	20.0	20.0	60.0
	SD	10	20.0	20.0	80.0
	D	10	20.0	20.0	100.0
	Total	80	100.0	100.0	

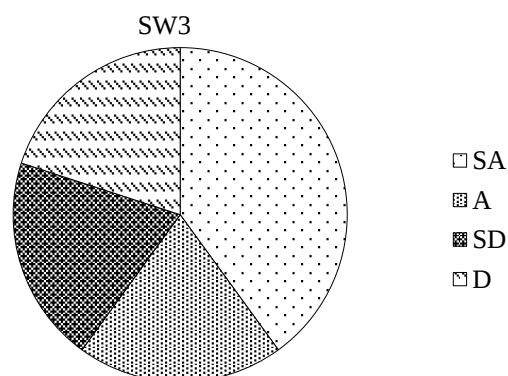


Figure 11. Showing software's are efficient in the tracking of inventory.

Respondent to this question strongly disagree to the fact that the organization practices good inventory tracking methods as Figure 12 from SPSS analysis show us a valid percent of 43.3% of the total percent.(Table 12)

Table 12. SW4.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SA	7	23.3	23.3	23.3
	A	6	20.0	20.0	43.3
	SD	13	43.3	43.3	86.7
	D	4	13.3	13.3	100.0
	Total	80	100.0	100.0	

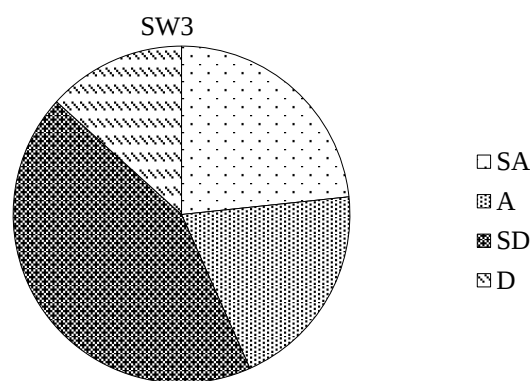


Figure 12. Showing organization practices good inventory tracking methods.

Section D: Documentation (DC)

Statistics from SPSS (Table 13) shows that the respondent made up of 30 with a valid percent of 100, 46.7% strongly agree that documents play a vital part in inventory management as we can also see from Figure 13 indicating portion of strongly agree respondent.

Table 13. DCI.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SA	40	46.7	46.7	46.7
	A	15	20.0	20.0	66.7
	SD	15	23.3	23.3	90.0
	D	10	10.0	10.0	100.0
	Total	80	100.0	100.0	

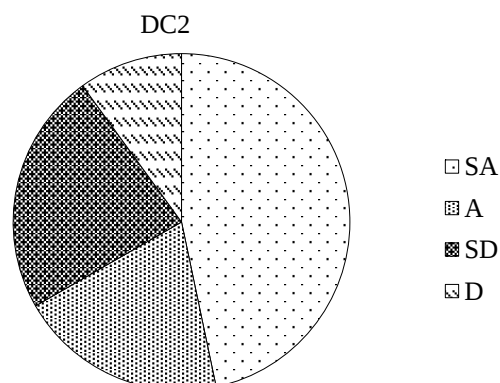


Figure 13. Documents play a vital part in inventory management.

Analysis shows that respondents agree to the fact that incomplete documents disturb the inventory management process as we can see from the statistics from SPSS table which gives us a valid percent of 46.7% and Figure 14 showing a greater proportion of those who agree to the aspect of incomplete document disturb inventory management process (Table 14).

Table 14. DC2.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SA	10	16.7	16.7	16.7
	A	40	46.7	46.7	63.3
	SD	20	20.0	20.0	83.3
	D	10	16.7	16.7	100.0
	Total	80	100.0	100.0	

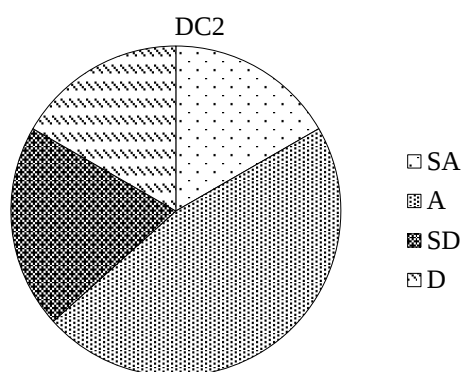


Figure 14. Showing incomplete documents disturb the inventory management process.

Here, analysis from SPSS indicate that the respondent strongly disagrees to the fact that too many documents required in recording inventory as we can see from the table showing us a valid percent to this question of 46.7%. (Table 15 and Figure 15)

Table 15. DC3.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SA	12	20.0	20.0	20.0
	A	14	16.7	16.7	36.7
	SD	40	46.7	46.7	83.3
	D	14	16.7	16.7	100.0
	Total	80	100.0	100.0	

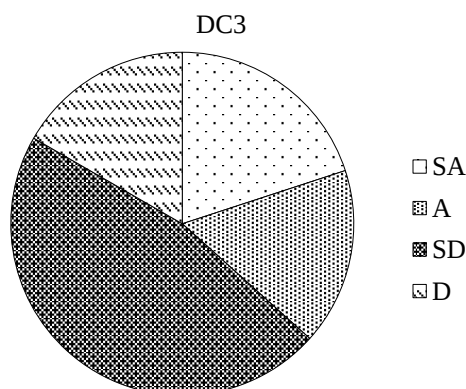


Figure 15. Showing too many documents required in recording inventory

Hypothesis Testing

Significance level = 0 which is below 0.05 which means we reject the null hypothesis of the mean being equal to 5 which therefore implies the mean is not equal to 5. Better still, we are 95% sure that the level of tracking on inventory management is not equal to 5 (Table 16 and 17)

Table 16. One-Sample Statistics.

	N	Mean	Std. Deviation	Std. Error Mean
Documentation has a significant impact on inventory management	12	1.50	.674	.195
Inventory tracking software's have a link with inventory management	12	1.75	.866	.250
Coding has a significant impact on inventory management	12	2.00	.853	.24g6

Table 17. One-Sample Test.

	Test Value = 5					
	T	Df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Documentation has a significant impact on inventory management	-17.983	11	.000	-3.500	-3.93	-3.07
Inventory tracking software's have a link with inventory management	-13.000	11	.000	-3.250	-3.80	-2.70
Coding has a significant impact on inventory management	-12.186	11	.000	-3.000	-3.54	-2.46

DISCUSSIONS, CONCLUSIONS, RECOMMENDATIONS

Discussion of Findings and Implications

The main focus of this study was to verify if inconsistent tracking has an impact on inventory management of Société BUNS, if documentation has an impact on inventory management in BUNS SA, if inventory tracking software's have an impact on inventory management and if coding has an impact on inventory Management and equally if inventory procedures are respected. These four hypotheses resulting from the four objectives which were formulated.

Documentation Has A Significant Impact On Inventory Management

From the statistics from SPSS table, we have a valid percent of 46.7% who strongly agreed showing a greater proportion of those who agree to the aspect of incomplete document disturb inventory management process. This therefore shows that documentation plays a vital role in inventory management. This implies that every organization has to pay special attention to documentation for accountability and for traceability.

Inventory Tracking Software's Have An impact on Inventory Management

In the case of Société BUNS, it is more of a negative impact the respondents strongly disagree with that aspect that the organizations software's are properly used by all company store keepers as we can see that they have a valid percent of 33.3 of the total percent and total respondent who actually responded to the question. These responses go a long way to show that inventory tracking software have an impact on inventory management and its more of a negative impact in the case of Société BUNS since it's not properly used. This implies that the company has to take all measures to make sure that the storekeepers and controllers use the inventory tracking software properly.

Coding has a Significant Impact on Inventory Management

From the analysis above. It shows that respondent strongly agree to the fact that coding has a significant impact on inventory management as most of the respondents strongly disagree to the fact that coding and its procedures are respected by the employees in charge as the percentage is at 43%.

CONCLUSIONS

After investigations on this research study, we can conclude that the purpose of the study was to educate on the Impact of inconsistent tracking on inventory management and the necessity to accurately track inventory in order to carry out inventory management properly. It should be noted that most organisations do not pay much attention to assessing their levels of inventory tracking. According to the first hypothesis, statistics show that documentation has a significant impact on inventory management, with 46.7% of respondents strongly agreeing. It impacts inventory management negatively at Société BUNS as incomplete documentation disrupts inventory recording and tracking. Also, it is very important for the organization to ensure that the tracking software be used properly and in case of any issue it should be arranged. It is also important for the organization to constantly check and make sure storekeepers and controllers use the software properly.

In addition, it is also important that workers respect the coding procedures so it remains easy for the storekeepers to track inventory. Therefore, in a nut shell, it is but normal that Inconsistent tracking will have an impact on inventory management.

Policy Implications

Société BUNS SA should use both long term and short-term measures to implement new policies which will solve the inconsistency in Inventory tracking in order to ease inventory management and increase organizational performance.

Recommendations

After carrying out this research, the following recommendations were made to help the organization reshape her Inventory tracking methods and inventory management method.

1. The Company should use more of inventory software so that it can ease traceability of inventory.
2. Management should try to arrange the existing software used by the company in such a way that all the storekeepers at the various sites will be able to record Material flows in the system making it visible to all other storekeepers and controllers.
3. The company should sanction employees who do not submit the necessary documents needed to record inventory after 48hours.
4. Management should sensitize workers especially project directors on the importance of codes and the importance of respecting inventory procedures.
5. The Central storekeeper should give good estimates for the purchase of office equipment's in order to avoid constantly running out of stock.

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