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The Effect of Inventory Management Strategies on Business Growth in Manufacturing Companies: A Case of Gisakura Tea Factory Ltd

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Abstract

This study assesses the effect of inventory management strategies on the business growth on manufacturing companies in Rwanda especially at Gisakura tea factory ltd. determining the effect of demand forecasting, establish the effect of lead time, examining the effect of reorder and analysing the effect of safety stock, on business growth in Gisakura Tea Company, from 2020 up to 2023. The literature review defined key concepts and developed conceptual review, theoretical review, empirical review and conceptual framework regarding the effect of inventory management strategies on business growth. This study was conducted on 102 staff members of Gisakura Teak Factory, who were purposively selected due to their small number to respectively answer to questionnaire for data collection to be descriptively and correlatively analysed, with the help of SPSS computer packages, version 20. A mixed survey design, being both descriptive and correlative, was used in this study where, in the inventory management strategies and business growth, this study involved gathering and analyzing data to describe the current state of invetroy management strategies and correlate it with the business growth within a company. The study revealed that the demand forecasting with (β=0.506; p=028); lead time with (β=-0.512; p=024); reorder point with (β=0.906; p=011) and safety stock with data (β=0.840; p=018) indicated its significant positive effects on various aspects of business growth in Gisakura Tea Company Ltd, including contributing to customer retention rates, impacting Net Promoter Score (NPS), and enhancing a reliable and customer-centric brand. Consequently, the study concluded that inventory management strategies positively affect the business growth in manufacturing companies in Rwanda. Therefore, it was recommended, particularly focusing on Gisakura Tea Factory, to invest in cutting-edge demand forecasting techniques. This includes the incorporation of predictive analytics, machine learning algorithms, and thorough analysis of historical data, to optimize it supply chain processes for efficient lead time management, to avoid overstocking, as this can tie up capital and lead to issues such as product obsolescence, and to invest in comprehensive training programs to educate their staff about the holistic impact of inventory management on business growth.

Key words: *Demand Forecasting, Lead Time, Reorder Point, Safety Stock And Business Growth*

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1. Introduction

In global point of view, stock administration frames the way to each part of associations. Silver, Pyke and Peterson (2016) contend that profitability improvement has been sought after by diminishing the measure of direct assembling work spent per yield unit in the U.S. also, other Western Countries. This was a substantial technique in many fabricated items because of high work content. Regardless of this, as of late, the extent of unit work costs has been relentlessly diminishing. The proportion of bought materials to deals (in dollars) for US firms in 2015 really achieved 60 percent. This suggests stock administration of crude materials is a territory that is profoundly encouraging for improving efficiency. Because of their striking execution in quality and stock administration, Japanese firms got much-merited consideration in the mid-to-late 1980s. The incredible enthusiasm for Just-in-Time fabricating shows that work-in-advance stock administration is additionally a zone ready for development Kolias et al, (2011). Similarly, as with numerous other western nations, there have been a relative decrease in execution of ventures in Australia and subsequently, it's Gross Domestic Product is not exactly 50% of the normal. This was credited by poor stock administration prompting expanded expenses of generation.

In European business, the inventory management is vital in the control of materials and goods that have to beheld (or stored) for later use in the case of production or later exchange activities in the case of services. The principal goal of inventory management involves having to balance the conflicting economics of not wanting to hold too much stock. Thereby having to tie up capital so as to guide against the incurring of costs such as storage, spoilage, pilferage and obsolescence and, the desire to make items or goods available when and where required (quality and quantity wise) so as to avert the cost of not meeting such requirement. Inventory problems of too great or too small quantities on hand can cause business failures. If a manufacturer experiences stock-out of a critical inventory item, production halts could result (Schroeder, 2000). Inventory Management is, therefore, the system of recording, forecasting and monitoring stores movement. It also involves the purposeful concentration of responsibility and authority for the control of all activities leading up to the production and eventual shipment of finished materials (Kotler, 2002).

In Sub-Saharan Africa, inventory management strategy are designed to monitor product availability, determine purchasing schedules and cycle out obsolete or unsold product. The availability of product is just one way in which an inventory management system attempts to create business growth. A comprehensive understanding of the impact of inventory control on business growth helps you to create an effective inventory management system (Gilmore, 1997). Inventory management is essential for a business to succeed. Good management of your company's stock decreases excess inventory and ensures that you have enough product on hand to meet customer demand. Develop an inventory management plan to streamline ordering and reduce wasted time on inventory control.

One of the goals of inventory management is to keep products safe. Inventory should be kept in a safe area, where it is protected against theft. Depending on the size of your company, this could mean using surveillance equipment, guards or alarm systems. The inventory should be handled carefully, as well, to avoid breakage. Broken or lost inventory means a financial loss for your company. Track and review company sales on a regular basis as part of your inventory management plan. Note the items that don't sell and have a tendency to sit for prolonged periods of time. Also, track the best sellers and seasonal items that experience increased sales at different times of the year. Use this data to manage the quantity of items

and when to order them. Although you want to avoid excess stock, don't be too safe with ordering inventory. You don't want to be out of stock when new orders are requested (Donald, 2003).

Inventory plays a significant role in the growth and survival of different African organizations, specifically in Rwanda, in the sense that in effective and inefficient management of inventory will mean that the organization loses customers and sales will decline. Prudent management of inventory reduces depreciation, pilferage, and wastages while ensuring availability of the materials as at when required (Ogbadu,2009).

In Africa as well as in Rwanda, inventory management is critical to an organization's success in today's competitive and dynamic market. This entails a reduction in the cost of holding stocks by maintaining just enough inventories, in the right place and the right time and cost to make the right amount of needed products. High levels of inventory held in stock affect adversely the procurement performance out of the capital being held which affects cash flow leading to reduced efficiency, effectiveness and distorted functionality (Koin, Cheruiyot , and Mwangangi , 2014).

Problem statement

Poor inventory management is a pervasive challenge affecting the performance of manufacturing firms, exemplified by the low output ratios on resources expended. Nearly 60%-70% of total funds in manufacturing companies are often tied up in current assets, with inventory being a significant and problematic component. The absence of scientific inventory classification methods and a reliance on rule-of-thumb strategies lead to poor business outcomes, low return on investment, and diminished overall productivity. (Prempeh, 2015)

In Rwanda, the impact of poor inventory management on business growth is quantified at 23.1%, according to data from the Rwanda Development Board (RDB) in 2018. Additionally, the method of inventory counting and its record as a data source is identified as a critical factor, with a 25% impact on business growth according to respondents from Gisakura Tea Company Ltd. This underscores the enduring consequences of fundamental problems in inventory management, emphasizing their potential to cost businesses time, money, and long-term growth, (Gisakura tea Factory, 2021)

The problem extends beyond financial aspects to encompass challenges like inventory surpluses and shortages, leading to depreciation, pilferage, obsolescence, spoilage, and breakages. Shortages of raw materials disrupt production, causing stockouts, idle facilities, and low-capacity utilization. These challenges prevent manufacturing firms from meeting performance objectives and delivering quality customized orders. In response to these issues, business growth emerges as a crucial solution, highlighting the need to supply inputs and outputs effectively. The study aims to address these challenges by examining inventory management strategies and their direct impact on business growth.

Research objectives

The general objective of this study was to examine the effect of inventory management strategies on the business growth on manufacturing companies. Specifically, the study aimed to:

i. To determine the effect of demand forecasting on business growth in Gisakura Tea Company Ltd
ii. To establish the effect of lead time on business growth in Gisakura Tea Company Ltd

iii. To examine the effect of reorder point on business growth in Gisakura Tea Company Ltd
iv. To analyse the effect of safety stock on business growth in Gisakura Tea Company Ltd

2. Literature Review

Aamir Rashid, (2016), explored the relationship between inventory management and business growth in the downstream of manufacturing firms in Pakistan. A quantitative research design was used to found the said relationship. The study consisted of total sample size of 160 respondents with 100 respondents from retailers and 60 were from distributors. The findings of this research specified a significant positive relationship between business growth and inventory management. The Pearson correlation coefficient values for retailers and distributors were .889** with $p < 0.01$ and .801** with $p < 0.01$ after using the variables named business growth and inventory management respectively. Inventory management had significant influence on business growth and this was also shore up by the value of adjusted R square. The adjusted R square value indicated that independent factors anticipated the dependent factors by 71 %. In conclusion, this research discovered that chain members required using enhanced and superior information systems for better inventory management and well-coordinated customer collaboration consequently leading to higher levels of business growth.

Dieter K. Tscheulin, (2017), examined on the extent to which seat inventory control and denied boarding influence business growth. The effects of these core components of revenue management were analyzed within dummy regression models and ANOVAs. Our empirical analyses show that the effect of seat inventory control varies across booking classes. Reactions to cross-individual price differences caused by seat inventory control were more distinct in lower-priced booking classes. The same did not hold true for the impact of denied boarding on business growth, however, where there was no variation across booking classes. Furthermore, we found that favorable deviations from expected service performance (e.g. favorable cross-individual price differences) did not result in distinct satisfaction responses. Thus, it must be assumed that revenue management practices have a net negative effect on business growth. Based on the results of the empirical analyses, implications for management and starting points for further research are presented.

Muhammad Asif, (2012), examined how inventory management puts positive impact on business growth and how easily we can check the performance. It also helps retailers to put their inventories in proper order which tells them about demand and supply of their inventories. Proper inventory management system reduces the risk of short of inventories which reduce the cost of lost customers. The objective of the study is to minimize the risk of dissatisfaction of customers and found how to sustain business growth with the help of proper inventories system. This paper also outlines significant relationship between Customer needs, Quality with variable of prime interest. Poor association has been found between performance and business growth.

Chituru Ogonuchituru Ogonu, (2018), investigated the effects of inventory management on business growth with lead time as a moderator variable in government-owned hospitals in Delta State, Nigeria. It aims to contribute to the extant literature on inventory management and business growth in developing countries, focusing on Delta State in Nigeria. Two hundred and sixty-five (265) questionnaires were distributed, comprising one hundred and five to measure inventory management variables administered among Medical Doctors, Nurses, Pharmacists, and Medical Laboratory Scientist. Similarly, one hundred and sixty questionnaires designed to measure business growth were administered to Patients. The study adopts multiple regression and structural equation modeling to analyze the data. Also,

studying the impact of inventory management on customers` satisfaction some marketing analysis approaches were used. The obtained results support the appropriateness of the model as lead time possesses the qualities of a moderator between strategic supplier partnership, lean inventory, and information technology that are proxies of inventory management and business growth. Besides, the results record a positive and statistically significant relationship between strategic supplier partnership, lean inventory, and business growth at a 5 percent level of significance, respectively.

Rukiya Amina Mohamed, (2019) examined effect of inventory management on business growth in public institutions of higher learning in Kenya. This study was carried out within Moi University Main Campus. A questionnaire was used to collect primary data. A good response rate of 85% was witnessed. To ascertain the reliability of the research instrument, the results from the pilot study was subjected to Cronbach Coefficient Alpha. The study adopted the lowest alpha value as 0.5 upward and the results for all the variables were above 0.7 threshold with overall mean value of 0.856. The target population was the procurement unit staff of Moi University; heads of schools, heads of departments and registered suppliers of Moi University. The sample size of 232 was used. Data was analyzed using Quantitative analysis with both descriptive and inferential statistics. The finding was presented in tabular, graphs, pie charts and percentages. Data was analyzed using descriptive statistics and statistical package for social studies (SPSS). Correlation analysis was used to find the correlation between the variables and this revealed there was a positive and significant correlation between all independent variables and dependent variable; inventory control system(r=0.493, p=0.000),variable demand (r=0.575, p=0.000), Economic Order Quantity (r=0.679, p=0.000) and ABC analysis (r=0.576, p=0.000). Multiple regression analysis with ANOVA technique was used to determine the effect of independent variables on the dependent variable. The findings showed that 84.4 % of the business growth is explained by the four variables that are inventory control system, variable demand, economic order quantity and ABC analysis and the remaining 15.6 % can be accounted by the standard error.

Theoretical review

Several theories and frameworks can be developed or utilized to guide the research and analysis. Here are some potential theories and frameworks that can be relevant to this study: Supply Chain Management Theory, Operations Management Theory, Customer Satisfaction and Loyalty Theory and Expectancy Disconfirmation Theory.

Supply Chain Management Theory

Supply Chain Management (SCM) Theory is a comprehensive framework that focuses on the coordination and optimization of various activities involved in the production, distribution, and delivery of goods and services from raw materials to end consumers. It encompasses the management of inventory, transportation, suppliers, manufacturers, distributors, retailers, and customers. In the context of the study on "The Effect of Inventory Management Strategies on business growth," SCM Theory plays a crucial role in understanding how inventory management strategies impact business growth.

CM Theory emphasizes the importance of collaboration and coordination among various entities in the supply chain. This includes suppliers, manufacturers, distributors, and retailers. Effective integration ensures smooth information flow and efficient handling of inventory, leading to improved business growth. A critical aspect of SCM Theory is inventory management, which involves making decisions on how much inventory to carry, where to store it, and when to replenish stock. Proper inventory management ensures that products are available when customers need them, avoiding stockouts and enhancing business growth.

SCM Theory includes the management of transportation, warehousing, and distribution. Efficient logistics ensure timely and accurate delivery of products to customers, contributing to business growth. Accurate demand forecasting is essential for effective inventory management. SCM Theory emphasizes the need to forecast customer demand to ensure that the right products are available in the right quantities, meeting customer expectations.

In conclusion, Supply Chain Management Theory is highly relevant to this study. The theory highlights the interconnectedness of inventory management with other elements in the supply chain, emphasizing the need for efficient coordination, accurate demand forecasting, and effective supplier management. Properly applying SCM Theory can lead to improved inventory management practices, ultimately enhancing business growth through better product availability, on-time delivery, and efficient order fulfillment.

Operations Management Theory

Operations Management Theory, as developed by Frederick W. Taylor, (1911), is a field of study that focuses on designing, planning, and controlling the processes and systems that produce goods and deliver services. It plays a crucial role in optimizing business operations to improve efficiency, reduce costs, and enhance overall performance. Within the context of this study, Operations Management Theory offers valuable insights into how inventory management practices can impact business growth.

Operations Management Theory recognizes inventory management as a critical component of business operations. It involves decisions about inventory levels, order quantities, safety stock, and inventory control techniques. Capacity planning is another essential element of Operations Management Theory. It deals with determining the appropriate capacity to meet customer demand efficiently, which can impact inventory management decisions. Ensuring product or service quality is integral to Operations Management. Effective inventory management practices contribute to maintaining quality by reducing the risk of stockouts and ensuring the availability of the right products.

Operations Management Theory emphasizes designing efficient processes and continuously improving them. Effective inventory management is a part of this process optimization to ensure smooth flow and timely delivery. Lead time management is vital in Operations Management. It involves reducing the time taken to fulfill customer orders, which can be influenced by inventory management strategies. Accurate demand forecasting is essential for Operations Management. It guides inventory management decisions and helps in meeting customer demands effectively.

In conclusion, Operations Management Theory plays a crucial role in understanding the impact of inventory management strategies on business growth. It provides a comprehensive framework for optimizing inventory-related processes, improving delivery performance, and enhancing overall business growth. By integrating Operations Management principles into inventory management strategies, businesses can strive to meet customer demands efficiently, leading to higher business growth.

Customer Satisfaction and Retention Theory

Customer Satisfaction refers to the extent to which customers' expectations and needs are met or exceeded by a company's products, services, or overall experience. It is a fundamental concept in marketing and customer behavior research. In the context of the study on "The Effect of Inventory Management Strategies on business growth," Customer Satisfaction and Retention plays a crucial role in understanding how inventory management strategies can influence business growth and ultimately impact business growth.

Customer Satisfaction and Retention emphasize that inventory availability is a critical factor influencing business growth. Effective inventory management ensures that products are in stock when customers want to purchase them. Satisfied customers who find the products they need readily available are more likely to have positive experiences and, in turn, become loyal to the brand. On-Time Delivery is an important aspect of inventory management. Delivering products to customers within promised timeframes enhances business growth. Loyal customers who consistently experience on-time delivery are more likely to make repeat purchases and remain committed to the brand.

Though not a theory, NPS is a metric used to assess customer loyalty and satisfaction. A positive relationship exists between NPS and effective inventory management. Satisfied customers are more likely to recommend the company to others, leading to higher NPS scores and increased business growth.

In summary, business growth and Loyalty Theory provides valuable insights into the impact of inventory management strategies on business growth. Effective inventory management, which ensures inventory availability, on-time delivery, and positive customer experiences, leads to higher levels of business growth and fosters customer retention. The study can benefit from considering these theories and frameworks to develop hypotheses, analyze data, and draw meaningful conclusions about the relationship between inventory management strategies and business growth in the specific context of the Gisakura Tea Company Ltd.

Assimilation Theory

Assimilation theory is based on the dissonance theory by Festinger's (1957). Dissonance theory states that consumers make cognitive comparison between the expected product expectations and the perceived performance of the product (Peyton, Pitts and kamery, 1979). According to Anderson (1993), consumers try to reduce and avoid disagreement by making adjustments concerning their perceptions about a certain product and try to bring them more in line with their expectations (Peyton, Pitts and kamery, 1979). It is linked to business growth because consumers try to reduce the worry between their expectations and the actual performance of the product by raising the level of satisfaction through the minimization of the importance of the experience that have been disconfirmed or by distortion of the expectations so that they can match widths the product performance perceived.

Expectancy Disconfirmation Theory

Expectancy disconfirmation theory is a theory developed by Oliver in 1980. It is most encouraging the structure for evaluating consumer loyalty in that it is expand on client desire by building a solid client relationship so as to meet their desire for acquiring products and ventures with assumptions regarding the foreseen execution Oliver (1980). This theory according to Oliver (1977) propose that when desires and the real item execution do not fit, the client will feel some level of strain and so as to dispose of this pressure, the buyer will endeavor to make changes either in desires or in the view of the real item execution or administration. Oliver demonstrated his theory on the supposition that one buys products and enterprises with the pre-buy assumption regarding the foreseen execution. The desire level at that point turns into the standard against which the item is judged. When the item or administration has been utilized, the results are looked at against desires. In the event that the result matches desire affirmation happens and when there is a distinction among desire and result disconfirmation happens, buyers can likewise lessen the pressure coming about because of error among desires and item execution either by misshaping desires, so they agree with apparent item execution or by raising the dimension of fulfillment by limiting the general significance of the disconfirmation experienced Olson and Dover (1979). Expectancy

disconfirmation theory is linked to variable demand because it works towards customer fulfillment and increase consumer loyalty.

In conclusion, the Expectancy Disconfirmation Theory offers valuable insights into the relationship between inventory management strategies and business growth. Effective inventory management that aligns with customers' expectations results in positive disconfirmation and higher business growth levels. On the other hand, inventory-related experiences that fall short of expectations lead to negative disconfirmation and lower satisfaction. By understanding this theory, researchers can better assess how inventory management practices impact business growth in the specific context of the Gisakura Tea Company Ltd.

3. Research methodology

A mixed survey design, being both descriptive and explanatory, were used in this study where, in the context of inventory management strategies and business growth, this study involved gathering and analyzing data to describe the current state of inventory management strategies within Gisakura Tea Factory and their effect on business growth. The researcher typically collected data from Gisakura Tea Factory, in Nyamasheke district, and focused on describing and explaining the existing inventory management strategies and their outcomes.

The population under this study is 102 staff of Gisakura Tea Factory. In this study researchers decided to use non-probability sampling to select the population for this study due to their small number, to minimize cost and for relevant information about the research study. In this study the researcher selected 102 participants being the staff of the factory. This sample size was assumed by the researcher to be representative of the entire population.

The research instruments were tested for validity and reliability. Questionnaires, as a primary data collection method, were designed to align with the research objectives, utilizing a mix of close-ended and open-ended questions, primarily based on a Likert scale. Documentary review supplemented the primary data collection process, enhancing the depth of information acquired. For reliability, the Cronbach's alpha values for various variables were calculated, all surpassing the acceptable threshold of 0.7, indicating strong internal consistency. Editing, coding, and tabulation processes were employed to ensure data quality, consistency, and organization.

Data analysis involved Statistical Package for Social Science (SPSS V 21.0) for quantitative analysis. Descriptive statistics like frequencies, percentages, mean scores, and standard deviation were employed. Inferential statistics, including Pearson correlation analysis and multiple regression analysis, were conducted to establish relationships between inventory management strategies and the business growth on manufacturing companies. Ethical considerations were a priority, ensuring confidentiality by avoiding the disclosure of respondents' identities and maintaining strict confidentiality of sensitive information throughout the study.

4. Findings

This chapter delves into the study's findings and provide their interpretation, drawing from the analysis of the data gathered through questionnaires. The study scrutinizes the influence of between inventory management strategies and the business growth on manufacturing companies, employing correlation analysis to unveil the associations between inventory management strategies and the business growth on manufacturing companies. Additionally, regression analysis is leveraged to elucidate both the individual and collective impacts of

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between inventory management strategies on the business growth of Gisakura Tea Company Ltd.

Correlation analysis Results

The correlation between inventory management such as forecasting, lead time, reorder point and safety stock and business growth namely, customer retention, net promoter score and brand reputation, had to be analysed. This matrix quantifies both the strength and direction of the connections between these crucial variables, offering a clearer understanding of their interconnected nature.

Table 1. Correlation between inventory management and business growth

		Demand forecasting to improve customer retention rate.	Lead times to enhance customer retention rate	Reorder point to influence brand reputation.	Safety stock to impact Net Promoter Score
Demand forecasting to improve customer retention rate.	Pearson Correlation	1	.559	.635	-.077
	Sig. (2-tailed)		.057	.017	.039
	N	102	102	102	102
Lead times to enhance customer retention rate	Pearson Correlation	.559	1	663	.542
	Sig. (2-tailed)	.057		.012	.065
	N	102	102	102	102
Reorder point to influence brand reputation.	Pearson Correlation	.635	.663	1	.500
	Sig. (2-tailed)	.017	.012		.0.19
	N	102	102	102	102
Safety stock to impact Net Promoter Score	Pearson Correlation	-.077	.542	.500	1
	Sig. (2-tailed)	.039	.065	.019	
	N	102	102	102	102

Source: Primary data, August, 2023

As indicated in table 1., the analysis of the correlations between inventory management variables and business growth metrics reveals several significant relationships. Demand forecasting for improved customer retention shows a moderate positive correlation with both lead times to enhance customer retention (Pearson Correlation = 0.559, p = 0.057) and reorder points to influence brand reputation (Pearson Correlation = 0.635, p = 0.017). Similarly, lead times to enhance customer retention have a strong positive correlation with reorder points for brand reputation (Pearson Correlation = 0.663, p = 0.012). These correlations suggest that companies focusing on demand forecasting or lead times often consider their impact on each other and may align with efforts to enhance reorder points and brand reputation. However, safety stock to impact Net Promoter Score exhibits weaker correlations with other variables, indicating less alignment in strategies (e.g., negative correlation with demand forecasting for customer retention, Pearson Correlation = -0.077, p = 0.039). Overall, these findings emphasize the interplay between different inventory management strategies in influencing business growth metrics in Gisakura Tea Company Ltd.

Therefore, the correlations in the table reveal various degrees of alignment between different aspects of inventory management and business growth metrics. Companies that focus on improving customer retention rate through demand forecasting or lead times often consider their impact on each other and may also consider reorder points. Additionally, reorder points seem to strongly correlate with efforts to enhance brand reputation. However, there is less alignment between safety stock strategies and these other variables, except for its correlation

with lead times to enhance customer retention rate. These findings suggest that different inventory management strategies can have varying impacts on business growth metrics, and companies should consider these relationships when formulating their strategies.

Regression statistics

To analyse the effect of inventory management on business growth, the regression statistics had to analysed for hypothesis testing.

Table 2. Analysis Of Variance (ANOVA)

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	17.933	4	4.483	3.851	.006
Within Groups	112.939	97	1.164		
Total	130.873	101			

Source: Primary data, August, 2023

Table 2. presents ANOVA table examining the belief that demand forecasting, lead time, reorder point, and safety stock significantly affect business growth at Gisakura Tea Factory. The ANOVA results show that there is a statistically significant difference in the belief that these inventory management factors affect business growth ($F = 3.851$, $p = 0.006$). The between-groups variation (17.933) is larger compared to the within-groups variation (112.939), indicating that there are meaningful differences in the belief across different groups.

The significance level (p-value) being below the conventional threshold of 0.05 suggests that the variation in the belief about the impact of demand forecasting, lead time, reorder point, and safety stock on business growth is statistically significant. This means that participants' beliefs regarding the effects of these factors on business growth differ significantly among the groups.

Consequently, based on the ANOVA results, there are significant variations in the belief that demand forecasting, lead time, reorder point, and safety stock significantly affect business growth at Gisakura Tea Factory.

Table. 3. Summary model

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.368[a]	.135	.100	1.08001

a. Predictors: (Constant), Safety stock, Reorder point, Lead time, Demand forecasting.

Source: Primary data, August, 2023

Table 3. reveals that the combined independent variables, including Safety stock, Reorder point, Lead time, and Demand forecasting, collectively account for a statistically significant portion of the variance in business growth. The model demonstrates a significant relationship ($R = 0.368$, R Square = 0.135) between the chosen independent variables and the dependent variable. The adjusted R Square of 0.100 suggests that approximately 10% of the variance in business growth can be explained by these inventory management factors. The standard error of the estimate, at 1.08001, represents the average variability between the observed and predicted values. Overall, this analysis indicates that the combination of Safety stock, Reorder point, Lead time, and Demand forecasting has a statistically significant on the business growth outcomes in Gisakura Tea Company Ltd.

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Table 4. Regression model

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	46.644	.423		110.269	.000	-.195	1.483
	Demand forecasting	.506	.124	.305	4.081	.028	-.240	.252
	Lead time	-.512	.118	-210	-4.339	.024	-.247	.223
	Reorder point	.906	.151	.259	6.001	.011	.106	.706
	Safety stock	.840	.141	.236	5.957	.018	.060	.619

a. Dependent Variable: Business growth

Source: Primary data, August, 2023

Table 4. shows that the intercept is 46.644. This value represents the predicted business growth when all other predictors are zero. These coefficients show the effect of each independent variable on the dependent variable (business growth) without considering their different scales. For example: For a unit increase in demand forecasting, business growth is predicted to increase by 0.506 units, for a unit increase in lead time, business growth is predicted to decrease by 0.512 units, for a unit increase in reorder point, business growth is predicted to increase by 0.906 units and for a unit increase in safety stock, business growth is predicted to increase by 0.840 units.

Moreover, these coefficients show the effect of each independent variable on the dependent variable when they are all scaled to have a standard deviation of 1. This allows for a comparison of the relative importance of each predictor's impact. Demand forecasting has a small standardized coefficient of 0.005, indicating a very minor impact on business growth while Reorder point and Safety stock have larger standardized coefficients (0.259 and 0.236, respectively), suggesting a more significant impact on business growth. The t-value measures the strength of the relationship between the independent variable and the dependent variable. The significance level (Sig.) indicates whether the relationship is statistically significant.so, Reorder point and Safety stock have t-values of 6.001 and 5.957, respectively, both with p-values less than 0.05 (Sig. < 0.05), indicating a statistically significant impact on business growth. Furthermore, the 95% confidence intervals provide a range within which the true coefficient value is likely to fall. This means that for Reorder point, the 95% confidence interval (0.106 to 0.706) and for Safety stock, the 95% confidence interval (0.060 to 0.619), indicate a significant positive impact. Therefore, Y=46.644+0.506X1-0.512X2+0906X3+0.840X4

Based on the provided findings, the analysis can deduce that there is evidence to reject the null hypothesis (Ho1), which speculates that there is no significant effect of demand forecasting on business growth in Gisakura Tea Company Ltd. The statistical regression (β=0.506; p=028), indicate that demand forecasting positively impacts various aspects of customer satisfaction within the company. Given that customer satisfaction is often closely linked to business growth and success, the findings strongly suggest that effective demand forecasting practices play a significant role in influencing favorable customer satisfaction outcomes. Therefore, it is reasonable to conclude that there is indeed a significant connection between demand forecasting and certain key aspects of business growth, particularly

customer satisfaction, which indirectly implies a potential positive influence on overall business growth.

Based on the findings and considering the null hypothesis "Ho2: There is no significant effect of lead time on business growth in Gisakura Tea Company Ltd," the analysis can deduce that there is strong statistical evidence to reject the null hypothesis. The results of (β=-0.512; p=024), as an independent variable, has a significant and negative effect on business growth in various aspects. Therefore, the analysis supports the alternative hypothesis that lead time does have a significant effect on business growth in Gisakura Tea Company Ltd. Specifically, the evidence suggests that improving lead time strategies can lead to enhanced business growth, which, in turn, contributes to improved customer retention, higher Net Promoter Scores (NPS), and a stronger brand reputation. These factors collectively promote business growth.

Based on the analysis of the data and considering the null hypothesis "Ho3: There is no significant effect of reorder point on business growth in Gisakura Tea Company Ltd," the findings strongly suggest that there is substantial evidence to reject the null hypothesis. The data (β=0.906; p=011) demonstrate statistically significant positive in various aspects of business growth, including customer retention rate, net promoter score and brand reputation, and overall business growth, all of which are associated with a well-defined reorder point. Therefore, the analysis indicates that reorder point practices do indeed have a significant effect on business growth in Gisakura Tea Company Ltd, contrary to the null hypothesis.

The data (β=0.840; p=018) indicates that safety stock has a significant positive effect on various aspects of business growth in Gisakura Tea Company Ltd, including contributing to customer retention rates, impacting Net Promoter Score (NPS), and enhancing a reliable and customer-centric brand. Therefore, based on the analysis of the findings and the null hypothesis "Ho4," the analysis would conclude that there is significant evidence to reject the null hypothesis.

Consequently, the analysis suggests that Safety stock, Reorder point and Demand forecasting have statistically significant positive impacts on Business growth while and Lead time do appear to have a hardly significant effects on business growth based on the provided information.

5. Conclusion

Overall, when considering the research's overall focus on the effect of inventory management strategies on business growth in the context of manufacturing companies in Rwanda, the findings consistently underscore the significance of efficient inventory management practices. While the relationships between certain inventory management factors and business growth may exhibit varying degrees of complexity and statistical significance, the overarching consensus remains that strategic inventory management contributes positively to promote business growth. This study contributes valuable insights to the body of knowledge, shedding light on the multi-faceted dynamics that support the relationship between inventory management strategies and the growth of manufacturing companies in Rwanda. As conclusion, it should be concluded that inventory management strategies positively affect the business growth in manufacturing companies in Rwanda.

6. Recommendations

Based on the comprehensive findings and the general conclusion drawn from this study on the effect of inventory management strategies on the business growth of manufacturing companies, particularly focusing on Gisakura Tea Factory in Rwanda, the following recommendations can be made:

- Gisakura Tea Factory is advised to invest in cutting-edge demand forecasting techniques.
- Collaborative efforts with both customers and suppliers should be encouraged, as they can contribute to the refinement and optimization of demand forecasts.
- Manufacturing companies should strive to optimize their supply chain processes for efficient lead time management.
- Manufacturing companies are recommended to optimize their supply chain processes.
- The study recommends that manufacturing companies invest in comprehensive training programs to educate their staff about the holistic impact of inventory management on business growth.

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