

According to Table 1, respondents contacted 20% were found to be aged below 30 years while 48% were aged between 31 – 40 years and 25% were aged between 41 – 50 years. Only 7% were aged above 50 years. This led the researcher to the understanding that the respondents contacted were of reasonable age and could therefore be relied upon in making necessary and relevant conclusion related to the study topic. Therefore the collected data in this research is more reliable in as far as making conclusions is concerned.

Table 2: Gender of Respondents

Gender	Frequency	Percent
Male	21	51
Female	19	49
Total	40	100

Source:Primary data, 2022

Results in Table 2, most of the contacted respondents 51% were found to be male as compared to their female counterparts who were only 49%. This led the researcher to the understanding that the gender differences were in relation to the nature of work done in Muhabura Multichoice company Ltd, it may also depend on the choice of employers. The views given in this research were therefore from both male and female employee respondents, are therefore multiple, and diversified enough to be relied upon in making relevant conclusions.

Table 3: Respondents Level of Education

Level of education	Frequency	Percent
Certificate	7	17
Diploma	11	27
Bachelors degree	18	46
Masters degree and above	4	10
Total	40	100.0

Source:Primary data, 2022

Results in Table 3, respondents contacted 46% were holders of bachelor’s degrees while 27% of respondents were qualified with diplomas of education, 17% of respondents had certificates of education and 10% were qualified with master’s degrees. This led the researcher to the realization that most of the respondents contacted had at least certificates of education and considered knowledgeable enough to understand issues related to inventory management and performance of institutions. The views they gave were considered to have paramount significance in making conclusions related to the study.

Table 4: The period respondents have worked in Muhabura Multichoice Company Ltd

Period (Years)	Frequency	Percent
Less than 2	9	23
2 – 4	10	25
5 – 7	18	45

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Above 7	3	7
Total	40	100.0

Source: Primary data, 2022

According to Table 4, respondents contacted 23% revealed that they had worked in MMC Ltd for the period less than 2 years while 25% said for the period between 2 – 4 years and 45% had worked in MMC Ltd for the period between 5 – 7 years. 7% had worked in MMC Ltd for the period above 7 years. This led the researcher to the understanding that they had worked with MMC Ltd for the period long enough to make them have enough information regarding the contribution of inventory management on the performance of institutions

Analysis of Specific Objectives

Assessment of the contribution of stock review on performance of Muhabura multichoice company Ltd.

The researcher sought to assess the contribution of stock review on performance of manufacturing firm in Rwanda. The strategies at hand include; Stock review, JIT approach and ABC analysis, research findings are as in the Table 4.1

Table 4.1 Assessment of the contribution of stock review on performance of muhabura multichoice company Ltd.

Response Item	1	2	3	4	Mean	Std. Dev.
There is regular analysis of the stock as the contribution of the stock review	70%	26%	-	6%	4.254	.451
There is streamlining activities as the indicators of the performance of the firm	56%	15%	9%	4%	4.253	.874
There is improvement in production and operations on the performance of the firm	21%	-	7%	-	4.124	.652
Facilitating planning and forecasting of raw materials and goods necessary	66%	16%	7%	6%	3.985	.461
Contribute to specify the quantity and amount of stock of goods and raw materials required	59%	5%	5%	-	3.641	.658
Helps improving the firm’s total performance as contribution of stock reviews on the performance of the firm	72%	8%	9%	11%	3.487	.823

Source: Primary Data, 2022

From the findings in the above table shows that the respondents agreed to a great extent ($3.487 \leq \text{mean} \leq 4.254$, with a significant standard deviation) that stock review enhances performance of the company, stock reviews contribute to performance of manufacturing companies such as MMC Ltd. When asked to give reasons for their answers, to a great extent with an overall mean of (3.95), respondents said stock reviews help companies to know the available stock, when to replace stock and how much stock to be ordered, it also helps to reduce stock holding costs. This led the researcher to the understanding that stock reviews contribute to the performance of manufacturing companies through enhancing stock management, monitoring and use.

Assessment of contribution of JIT approach on performance of Muhabura Multichoice Ltd

This section sought to assess the contribution of JIT approach on performance of Muhabura Multichoice Ltd. The research findings are as in the Table 4.2

Table 4.2 Assessment of contribution of JIT approach on performance of Muhabura Multichoice Ltd

Response Item	1	2	3	4	Mean	Std. Dev.
Reduction of stock holding costs as indicators of JIT importance	80%	16%	-	4%	4.347	.685
The right time line from the time Customer place the order	76%	11%	7%	6%	4.225	.464
Better handling wastes as indicators of JIT	91%	-	9%	-	4.201	.541
The quality production as indicators of project performance	66%	19%	5%	11%	3.984	.320
Turning company assets with improved quality products,	89%	4%	7%	-	3.968	.396
Helps organization to reveal activities which add no value to the firm	77%	9%	8%	6%	3.862	.321

Source: Primary Data, 2022

The respondents agreed to a very great extent ($4.354 \leq \text{mean}$, with a significant standard deviation) that there is a significant contribution of JIT approach, When asked to give reasons for their answers, respondents said to a great extent with an overall mean of (4.02), JIT time approach facilitates cost reduction since is bought only when it is needed. This led the researcher to the understanding that JIT approach leads to reduction of costs related to holding stock since the company only acquires stock when it is needed which leads to increase in performance. This led the researcher to the understanding that JIT approach is important in enabling companies to accomplish the set targets in time since all activities are timely done.

Determination of contribution of ABC analysis on the performance of Muhabura multichoice company Ltd.

The researcher sought to determine the contribution of ABC analysis on the performance of Muhabura multichoice company Ltd. The research findings are as in the Table 4.3

Table 4.3 Determination of contribution of ABC analysis on the performance of Muhabura multichoice company Ltd.

Response Item	1	2	3	4	Mean	Std. Dev.
Different products and better management are relevant for ABC analysis	50%	32%	-	8%	4.621	.682
Set price strategically for the products of high value as indicators of ABC analysis	46%	13%	9%	6%	4.600	.667
Different planners to set different measures based on product classification as indicators of ABC analysis	31%	-	7%	-	4.411	.545
Facilitates increase of the company performance based on product as indicators of ABC analysis	86%	19%	7%	11%	4.354	.354
Setting strategic price for the company as indicators of ABC analysis are relevant	56%	8%	5%	-	4.324	.564
Classification and value of the organization for different measures as indicators of ABC analysis	57%	4%	9%	6%	4.251	.524

Source: Primary Data, 2022

From the findings in the above table shows that the respondents agreed to a very great extent ($4.411 \leq \text{mean} \leq 4.621$), with a significant standard deviation on the response, respondents said helping inventory planners to make forecasts of demand for the different products and better management of stock as indicators of ABC analysis is relevant in company performance because forecasts facilitate reduction in shortages. This led the researcher to the understanding that helping inventory planners to make forecasts of demand for the different products and better management of stock as indicators of ABC analysis is relevant in company performance.

Inferential Statistics and Analysis

The inferential statistic and analysis shows how changes in independent variables result into changes in the dependent variable. The Pearson correlation and multiple linear regression analysis were used to determine the relationship and the significance of inventory management practices on financial performance of Muhabura multichoice company Ltd between 2018 and 2021. The multiple linear regression model helps to demonstrate how much of the changes in the satisfaction rate of MMC Ltd's performance between 2018 and 2021 is attributed to

stock review (X_1), Just in time approach (X_2) and ABC analysis (X_3) which are the predictor variables for this research.

Pearson Correlation Analysis

The analysis of the findings in this research constituted descriptive and inferential statistics. Correlation analysis is one of the inferential statistics that the study conducted. Correlation analysis involves determining the degree and direction of association between two variables. This study conducted correlation between the three Inventory management practices and production performance.

Correlation between Trust and Production Performance

The researcher conducted correlation between Stock review and Production performance by computing Pearson's correlation coefficient. The findings indicated Pearson's correlation value of 0.75 with a significance value of 0.01. This implied that there is a strong positive significant association between Stock review and Production performance.

Table 4.5: Correlation between stock review and Production performance.

		Stock review	Production performance
Stock review	Pearson Correlation	1	.750**
	Sig. (2-tailed)	.	.001
	N	150	150
Production performance	Pearson Correlation	.0*	1
	Sig. (2-tailed)	.000	.
	N	150	150

Source: Primary data,(2022)

Correlation between Just in time approach and Production performance .This was assessed by computing the Pearson's correlation coefficient. From the findings, the Pearson's correlation coefficient for just in time approach and Production performance was found to be 0.71. The significance value was reported as 0.01. This is an indication of a strong positive correlation between just in time approach and Production performance. The findings are summarized in the following table.

Table 4.6: Correlation between just in time approach and Production performance.

		just in time approach	Production performance
just in time approach	Pearson Correlation	1	.710**
	Sig. (2-tailed)	.	.001
	N	150	150
Production performance	Pearson Correlation	.710**	1
	Sig. (2-tailed)	.001	.
	N	150	150

Source: Primary data,(2022)

Correlation between ABC analysis and Production performance

Lastly the researcher conducted correlation analysis between ABC analysis commitment and production performance. The Pearson’s correlation coefficient was found to be 0.68 with a significance value of 0.01. This is an indication that there is a strong positive significant relationship between ABC analysis and production performance. The results are summarized in the following table.

Table 4.7: Correlation Between ABC Analysis and Production Performance.

		ABC analysis	Production performance
ABC analysis	Pearson Correlation	1	.680**
	Sig. (2-tailed)	.	.001
	N	150	150
Production performance	Pearson Correlation	.680**	1
	Sig. (2-tailed)	.001	.
	N	150	150

Source: Primary data,(2022)

Relationship of Variables

Table 4.6: Regression Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	SE	Beta		
(Constant)	3.544	.425		8.545	.045
1 Stock review (X ₁)	.541(β ₁)	.154	.656	5.574	.035
JIT approach(X ₂)	.644(β ₂)	.874	.241	2.486	.049
ABC analysis(X ₃)	.148(β ₃)	.441	.282	1.031	.038

a. Dependent variables: Production Performance

The following regression result was obtained:

$$Y = 3.544 + 0.541X_1 + 0.644X_2 + 0.148X_3 \quad P=0.039a$$

From the model, when other factors stock review based on Partnership are at zero, the performance of manufacturing firms will be 3.544. Holding other factors constant, a unit increase in would lead to 0.541 (p=.035) increase in performance of manufacturing firms. However, holding other factors constant, a unit increase in JIT approach would lead to a 0.644 (p=0.049) increase in production performance of manufacturing firms. The table above also shows that holding other factors constant, a 30 unit increase in ABC analysis to Suppliers would lead to a 0.148 (p=0.038) increase in performance of large manufacturing firms.

The study sought to assess the contribution of inventory management and financial performance of manufacturing firm in Rwanda and was carried out in Muhabura Multichoice Company Ltd. The researcher conducted a regression analysis to assist explain this contribution. The study adopted the following linear regression model to depict the expected relationship between the variables: $Y=(X_1, X_2, X_3)$:

Whereby: Y represents Production performance, which was measured using the responses on the effect of inventory management – manufacturing firm variables. ; x1 is stock review; x2 JIT approach; and x3 is ABC analysis to manufacture and inventory management; B0 is the model’s constant, and $\beta_1 - \beta_3$ are the regression coefficients while ϵ is the model’s significance from f-significance results obtained from analysis of variance (ANOVA). All the three independent variables were also measured using the responses on each of the variables obtained from the respondents. The results are illustrated and explained next.

Table 4.7: Model's Goodness of Fit Statistics

Table 4.7: Model Summary^b

Model	R	R Square	Adjusted R Square	SE of the Estimate
1	.734 ^a	.539	.503	.1752

a. Predictors: (Constant), Inventory management practices

b. Dependent Variable: Production performance

Predictors: (Constant), Stock review, JIT approach and ABC analysis to inventory management.

Table 4.7 Shows that there is a linear association between the dependent and independent variables as shown by a correlation (R) coefficient of 0.734. The determination coefficient as measured by the adjusted R-square presents a moderately strong relationship was 0.50, depicting that the model accounts for 50.3% of the total observation.

Table 4.8: Analysis of Variance (ANOVA^a)

Model		Sum of Squares	Df	Mean Square	F	Sig.
	Regression	2.164	4.541	11.657	12.118	0.039a
1	Residual	9.775	115	0.085		
	Total	11.939	119			

a. Predictors: (Constant), Stock review, JIT approach, and ABC analysis to inventory.

b. Dependent Variable: Production Performance

The ANOVA statistics presented in the table above show the model was significant as $p = 0.039$ was established.

Hypotheses Testing

Hypothesis 1

The first null hypothesis (H_01) states that Stock review (X_1) has no statistically significant effect on Production performance in Muhabura Multichoice Company Ltd between 2018 and 2021. However, hypothesis test based on the multiple linear regression produced a coefficient of $\beta_1=.241$, with $p=0.002<.05$ at a 5 percent level of significance as in Table 4.1 which shows that stock review (X_1) had a statistically significant and positive effect on production performance in MMC Limited between 2018 and 2021. Therefore, the researcher rejects the stated first null hypothesis (H_01) as false by adopting the alternative hypothesis (H_a1) that: *Ha1: Stock review has a statistical significant and positive effect on production performance in Muhabura Multichoice company Ltd between 2018 and 2021.*

Hypothesis 2

The second null hypothesis (H_02) stated that JIT approach (X_2) have no statistically significant effect on Production performance in Muhabura Multichoice company Ltd between 2018 and 2021. However, the regression coefficient ($\beta_2=.311$, with $p=.001<.05$ at a 5% level of significance) in Table 4.2 shows that JIT approach (X_2) had a positive and statistically significant effect on production performance in Muhabura Multichoice company Ltd between 2018 and 2021. Thus, the researcher rejects the second null hypothesis and adopts the second alternative hypothesis (H_a2) by stating that: *Ha2: JIT approach (X_2) had a positive and statistical significant effect on production performance in Muhabura Multichoice Company Ltd between 2018 and 2021.*

Hypothesis 3

The third null hypothesis (H_03) stated that ABC analysis has no statistically significant effect on production performance in Muhabura Multichoice Company Ltd between 2018 and 2021. However, the regression coefficient ($\beta_3=.402$; with $p=0.000<0.05$ at a 5 percent significance level) shows that ABC analysis (X_3) had a positive and statistically significant effect on production performance in Muhabura Multichoice Company Ltd in the period covered by this study. Hence, the researcher rejects the third null hypothesis and adopts the third alternative hypothesis (H_a3) by stating that: *Ha3: ABC analysis has a statical significant and positive effect on production performance in Muhabura Multichoice Company Ltd between 2018 and 2021.*

vii. Discussion of Findings

Inventory management is a critical task that involves the tracking of the flow of goods and services in and out of the organization stock, inventory planners are charged with ensuring that ware houses are carrying enough stock that can be used to fulfill customer requirements and effective production flow. Every product within the manufacturing company has costs related or attached to its production or holding for example the costs of storage therefore inventory planners ensure that they reduce costs of storage, have the right stock in the right time and meet customer demands on time. Inventory management facilitates better planning and forecasting of raw material and stock needs within the organization. It facilitates optimal management of stock levels and forecasting predictable adjustments in these tock levels so that performance can be guaranteed through efficient and effective performance within the organization. The first objective focused on assessing the contribution of stock review on performance of muhabura multichoice company Ltd. Findings show that the company will be able to produce all the good needed by customers hence leading to improved performance. This led the researcher to the understanding customer needs are easy to be met when the company has all the available stock required and this is facilitated by stock reviews, through stock reviews companies are able to improve meeting the targets set in production. The meeting production target is facilitated by the fact that review facilitate ascertainment of all requirements to meet the set targets.

The second objective concentrated on assessing the contribution of JIT approach on performance of Muhabura Multichoice Ltd. JIT time approach facilitates cost reduction since is bought only when it is needed. This led to the understanding that JIT approach leads to reduction of costs related to holding stock since the company only acquires stock when it is needed which leads to increase in performance. JIT approach is important in enabling the company to reduce wastages through timely ordering which in the end promotes performance and that JIT approach contributes to performance of companies through reduction in wastages..

The third objective drew attention towards determining the contribution of ABC analysis on the performance of Muhabura multichoice company Ltd. Inventory planners to make forecasts of demand for the different products and better management of stock as indicators of ABC analysis is relevant in company performance because forecasts facilitate reduction in shortages. Helping inventory planners to make forecasts of demand for the different products and better management of stock as indicators of ABC analysis is relevant in company performance the company to set price very strategically for the products that have more value in the company as indicators of ABC analysis is relevant in company performance. This led to the understanding that setting the price for strategic products is more important in improving performance.

This part presents the summary of the research findings in view of the objectives of the research. The researcher found out that stock reviews help companies to know the available stock, when to replace stock and how much stock to be ordered, it also helps to reduce stock holding costs, through stock reviews, the company is able to know the available stock, how long it has been kept and when the next order should be made and well trucking the state of the available stock in the store, stock reviews facilitate putting company work in order and having Cleary streamlined activities which in the end lead to improvements in performance, respondents said production will have to flow smoothly since there will be clear monitoring and use of stock as well as its storage, planning and forecasting in production is made possible through stock reviews since monitoring of stock movement is possible which in the end leads to improved performance of the institution and that specifying the quantity and amount of stock to be ordered is made possible through stock reviews hence leading to performance improvements.

It was also found out that JIT approach is important in improving performance of companies through reduction in wastages as well as meeting customer targets, JIT approach leads to reduction of costs related to holding stock since the company only acquires stock when it is needed which leads to increase in performance, JIT approach looks at the need for stock in relation to when good are needed or orders placed it facilitates performance through customer

satisfaction and fulfillment of orders, JIT approach is important in enabling the company to reduce wastages through timely ordering which in the end promotes performance and that since production and stock management are done timely there is limited expiry of good hence leading to improved performance.

viii. Conclusion

The researcher concluded that the contribution of stock reviews on production performance in Muhabura Multichoice Company Ltd is that it facilitates regular analysis of stock. facilitates streamlining of activities, improving production and operations of the company, facilitates planning and forecasting of raw material, specifying the quantity and amount of stock of goods and raw materials required and that it leads to improved the firms total performance

JIT approach to contribute to performance of Muhabura Multichoice company Ltd through reduces costs of holding stock, the right time line from the time customers place the order, better handling of wastes, quality production, turning company assets, with improved quality products, helps manufacturing firms to reveal the activities which add no value to the firm, right things in the right quality and amount in the correct place as well as opportune time and leading to accomplishment of zero stock at the end of the period. The role of ABC analysis on production performance in Muhabura Multichoice Company Ltd is that it facilitates identifying importance of each category of stock, it involves the tracking of the flow of goods and services, reduce costs of storage, classifying products on the value of importance, helps inventory planners to make forecasts of demand for the different products and better management of stock, helping the company to set price very strategically for the products that have more value in the company and that it allows different planners to set different measures based on product classification.

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