



Effect of Logistics Activities on Operational Performance the Case of Bedele Brewery Share Company

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Abstract: Nowadays, the role of logistics is increasingly recognized worldwide & its management was vital for the competitiveness of any firms' weather manufacturing or service. An overall logistics activity was crucial for the day to day activities of any firms. The purpose of this study was to investigate the effect of logistics activities on operational performance of Bedele Brewery Share Company. The study has used explanatory and descriptive research design with both qualitative and quantitative approach. The study used both probability and non- probability sampling techniques. From the total of 395 employees working in the company's production (operation), sales and transportation management, materials management, quality assurance, and warehousing departments; primary source of data were used. Questionnaire was distributed for 195 employees out of them 186 was returned and analyzed with the help of SPSS version-25. Reliability of the instrument was tested by using Cronbach Alpha coefficient and pilot testing. Correlation analysis was used to determine the relationship between operational performance and logistics activities. In addition, regression analysis was used to analyze the effect of logistics activities on operational performance. The findings of the study revealed that transportation and inventory management, procurement practice, information flow and warehousing have significant positive effect on operational performance. In order to improve operational performance of the company, Bedele Brewery Share Company should upgrade investment on infrastructure for transportation of raw materials within Company. Using principle of economic order quantity that enables effective inventory management is also recommendable.

Keywords: Logistics, Logistics Activities, Operational Performance, Effect, Brewery Company

1. Background of the Study

Logistics encompasses all of the information and material flows throughout an organization. It includes everything from the movement of a product or a service that needs to be rendered, through to the management of incoming raw materials, production, the storing of finished goods, its delivery to the customer and after-sales service. It is stated that the USA gross domestic production in the year of 2003 was approximately 12,400 billion \$, so this logistics cost reduction results in 954.8 billion \$ saving [5]. This cost indicates that greater than the combined annual USA government expenditure in social security, health services and defense. It is similar to those observed for the other North America Free Trade Agreement (NAFTA) countries

and for the European Union (EU) countries. Thus, logistics activities management represents a significant part of a company's operations [13].

African continent was not performing well in logistics compared to other continents as the report confirmed that the top four countries were from Europe, the fifth one was from Asia. However, the bottom five were all from Africa. Especially in Sub-Saharan African countries, the infrastructures were poorly managed and maintenance was lacking. Consequently, inefficient transport and communication formed a major obstacle in achieving efficiently organized flows of goods and services [34].

Ethiopian logistics system is also characterized by poor logistics activities management system and lack of coordination of goods transport, low level of development of

logistics infrastructure and inadequate fleets of freight vehicles in number and age, damage and quality deterioration of goods while handling, transporting and in storage and this coupled with lack of sea port resulted in poor linkage of producers (farmers) to the consumers (market) and non-competitiveness of Ethiopian goods on global market.

Having the above facts in mind which showed the necessity of logistics excellence to exist in the market, it is inevitable to measure performance of logistics in terms of its activities parallel with its effects on level of firms operations to give organized insight to logistics management for a better decision making. This in turn allows seeing where the company is in terms of its logistics activities; i.e., warehouse, procurement practice, inventory management, information flow and transportation, and further effects on operational performance which deals with profit creation capacity of the firm.

Logistics management enhances the operational performance of the organization through; reducing operating costs, improving customer satisfaction, productivity improvements, on time delivery of goods & services to customers, lesser lead times and profit improvements, providing quick response to customer demands by using modern technology during service offerings [30]. Procurement practices have great impact on operational performance (flexibility). For instance; the advent of procurement practices also integrates various firm's operations and support functions, synchronizing production with new orders, purchasing with demand, scheduling and shipping with customer requirements [23]. On the other hand, the success of any organization is measured by the operational performance of that organization.

Following the liberalization of certain sectors in Ethiopia, like beer industry, the country becomes a battle of strong competition among multinational beverage companies for a bigger share in the expanding market [18]. The history of Ethiopian brewery industry dates back 1922, more than 90 years ago, called St. George Brewery situated near the Mexico, Addis Ababa, and occupies an area of 20000 Sq. Meters of land. It was fairly big building and it started off as one of the pioneers in Ethiopia's industrial development. However, the factory was started with machineries that were operated by hand and foot and work was done by direct human labor.

Over two decades passed, since Ethiopia has started privatization of its most government owned business sectors by transferring ownership to local investors and international companies. This privatization policy put the current market in a fierce competition between companies. Especially, the brewery industry is the most affected industry by the privatization policy. Global brands like Heineken and Diaggio has joined the beer industry following BGI Ethiopia and Bedele S.C was owned and one of Heineken Brewery Share Company.

Currently the beer industry is the biggest sector of the Alcoholic Beverage industry in Ethiopia. In this competitive market, all the companies are trying to deliver a more quality

and valuable products to the customer compared to their competitors. Taking all the above consideration into account, the researcher took Bedele breweries S.C as where the details in practice were analyzed to investigate the effect of logistics activities on operational performance at Bedele breweries S.C, Ethiopia. Bedele breweries S. C is one of Heineken, Ethiopia breweries S.C, producing Walia, Bedele Regular, Bedele Special, and Sofi brands from 100% natural ingredients and refreshing natural water on 250,000 m2 surface coverage in major market in north west, west, south, central and south west of Ethiopia and from abroad USA, Canada, Australia, Israel and Sudan.

The study is guided by four theories such as resource based view, game theory, stochastic inventory theory and theory of constraints. For this study, the employees of production (operation), sales and transportation management, materials management, quality assurance, and warehousing departments were vital in providing data on five logistics activities mentioned because in one or other way they practice logistics activities. Finally; earlier studies have a dearth to investigate the effect of these activities (procurement practice, inventory management, transportation, information flow, and warehousing) on the operational performance (flexibility). Therefore the reason why the researcher selected Brewery Share Company, specifically Bedele Breweries S.C from the nine registered beer industry is that; This study purposively selected Bedele Breweries S.C, Ethiopia under the below criteria's in mind:-

Logistics Activities Implementation: beer companies' logistics department lacks a proper categorization to operate the operation by using the logistics activities; which means almost all companies are practicing logistics activities for their day to day operations not in formal categorization but in the traditional way of considering logistics activities especially in terms of transportation and warehousing and others [25]. Therefore the researcher's is going to investigate the effects of logistics activity and identify the degree of the relationship ship between above mentioned five logistics activities and operational performance and to identify what measures should be taken to improve the effect of above five mentioned logistics activities on operational performance of the company and recommend them.

Operational Performance: it is obvious to say as production capacity increases related activity density will also increases. Africa produces 145 mhl and Ethiopia who is the fourth largest beer producer country in Africa after South Africa, Nigeria, and Angola contributes 9.95mhl. Bedele Brewery S.C is one of Ethiopian beer Share Company which has been controlled by Heineken brewery Share Company with production capacity of 486,000HL of beer per year. From top 15 Beer brands in Ethiopia according to RateBeer.com (as of 2017) Dashen Beer has scored 2.04, Raya Beer 2.69, St George Amber Beer is 2.72 but Bedele Beer has scored 2.60 and Bedele Special Beer 2.24 [3]. Production capacity to produce the beer products, which indicates that Bedele Brewery Share Company's capacity to produce the beer, is less than its competitor's capacity to

produce.

Accordingly the researcher selected Bedele Brewery S.C to identify and describe the internal operation of the company in relation to logistics activities practiced to produce beer production more and more than its competitors in a flexible way. In fact as the researcher points of view and depth investigation, the logistic activity of this company varied with the other. So, taking all the above consideration into account, the researcher took Bedele Breweries S.C.

Therefore it inspired the researcher to fill these gaps with concentration to investigating the effect of logistics activities on operational performance of Brewery Share Company specifically in Bedele Brewery Share Company with the desire to investigate how these activities (procurement practice, warehousing practice, inventory management, transportation management and information flow) affect operational performance of the company and to identify which logistics activities highly influence Bedele Brewery S.C and to show advantage of having efficient logistics activities on operational performance of the Bedele Brewery share company and recommend them.

1.1. Statement of the Problem

Nowadays, deciding right decision in a dynamic business environment is the major challenge for any manufacturing firm all over the world. Brewery Share Company is an important commodity and there are numerous challenges and opportunities that exist in Africa as a whole for Brewery Share Company. The problem was more intensified for developing countries like Ethiopia because they are characterized by poor infrastructure, weak logistics management, limited research and development practice, and technological obsolescence [7, 11].

Even though logistics is a decisive factor to channel what the company owns to the rest, companies gave little attention to in and out material movements which ensures the company output to market [8]. A collection of activities performed by an organization to promote an effective management of supply chain is called procurement practices [42]. The main goals of proper procurement practice is purchasing competitively, and gaining quality materials. Procurement is critical for an organization and procurement strategy can become a part of business success. The result of inflexible and bureaucratic systems of procurements are; delay of contracts, increment of costs, and absence of fair competition among firms, all such things are the effect of poor procurement practice of the organization.

Producing Walia, Bedele Regular, Bedele Special, and Sofi brands and sell its products locally & abroad were the main objective of the company (Unpublished Company Document, 2017). The literature of logistics research shows that many researches had been conducted about how logistics activities affects performance such as logistics practice affects supply chain Performance [4, 10]. The other researches also indicate that logistics activities had impact on operational efficiency, logistics competency and financial performance of the firm [29, 41].

The above mentioned researches have gaps as the first two were focused on the impact of logistics practice on supply chain performance. The later researches were focused on operational efficiency, logistics performance, financial performance and operational performance in terms of competitive advantage, level of profitability, provision of error free goods and increased output. The research conducted by Muluneh, (2017) [32] focuses on impact of logistics performance on organizational performance in Lion International Bank S.C.

The above raised study lacks to see the operational performance in line with flexibility, and not addressing major logistics activities like inventory management, warehousing practice, information flow, transport management as well as procurement practices. Empirical study in retail industry which was held outside of Ethiopia showed that logistics practices operation has a significant impact on operational performance in line with sales level with empirical validation framework that identifies three constructs of logistics performance; i.e., customer service, operation metrics, and logistics costs taking in to consideration [15].

The result showed if logistics activities are properly managed, the level of sales would also increase. Another study made by [16] on the implication of logistics service quality dimensions on operational performance the case of Jumia online market in line with customer satisfaction under seven dimensions of logistics service quality model; i.e., information quality, order procedure, timeliness, order condition, order accuracy, order discrepancy handling and personnel contact quality, found out that there is a positive correlation between the dimensions of logistics service quality and customer satisfaction but, both of the study lacks to see the operational performance in line with flexibility dimension. The study finding by Kassim Workicho, (2020) [21] on the effects of logistics management practice on operational performance at Bahirdar Textile factory, Ethiopia has revealed (concluded) that transportation management, procurement practice, information flow and inventory management have positive relationship significant effect on operational performance of the factory, but on his finding warehousing practice doesn't have an effect on operational performance of Company and he has recommended that all the concerned body should well practice logistics activities responsibly to get better improvements on operational performance of the company and to be competitive enough.

The research work of Abreham [1]; Muzeyin [33], (2017) were also related with the topic of the study, but the study was focused on service industry not on manufacturing industry, specifically in Beer Company. The other research conducted by [34] assessed influence of logistics such as inventory management from perspective of impact of inventory management systems and models on performance, information flow from use of electronic order processing and use electronic customer feedback and did not assessed any supporting practices like procurement practice. The research conducted by

Jiregna, (2016) [19] on factors affecting warehousing practice in case of Arjo Didesa sugar factory was not addressed the effect of warehousing on operational performance, and this research is conducted in sugar factories not in Brewery Company. Additionally, all the above mentioned study unable to show the effect (negative or positive) of logistics activities on operational performance in line with flexibility.

From the above literature it is possible to understand that, the above study lacks to found out that the effect of logistics activities on flexible operations of the firm and focusing on Brewery Company. Finally; earlier studies have dearth to investigate the effect of these activities (procurement practice, inventory management, transportation management, information flow, and warehousing) on operational performance in line with operational performance dimension (flexibility) in Brewery Share Company specifically in Bedele Brewery Share Company. Therefore it inspired the researcher to fill these gaps with concentration to Bedele Brewery Share Company.

Likewise, it is a researchable gap and required to investigate the logistics activities of Bedele Brewery Share Company with the desire to investigate how these activities (procurement practice, warehousing practice, inventory management, transportation management and information flow) affect operational performance of the company and to show advantage of having efficient logistics activities on operational performance of the company. Therefore, to fill the above mentioned gaps in terms of the effect of variable under study on operational performance and to concentrate on Bedele Brewery S.C, the researcher inspired to investigate the effect of logistics activities on operational performance (flexibility dimension) of the Company. Hence, after investigation, the researcher will tries to provide possible recommendation for Bedele Brewery Share Company to enable the company to be competitive.

1.2. Research Objectives

The general objective of the study is to investigate the effect of logistics activities on operational performance of Bedele Brewery Share Company with the specific objectives include;

1. To describe the operational performance in Bedele Brewery Share Company
2. To assess the logistics activity practiced in Bedele Brewery Share Company
3. To investigate the relationship between logistics activities and operational performance in Bedele Brewery Share Company
4. To identify the logistic activity that is/are highly influences operational performance of Bedele Brewery Share Company
5. To identify the measures taken to improve the effect of logistic activities in relation to operational performance of Bedele Brewery Share Company.

2. Review of Related Literature

2.1. Theoretical Framework

2.1.1. Resource Based View (RBV) Theory

The RBV developed as a complement to the industrial organization view with [2] and (Porter, 1985)[39] as some of its main proponents. With its focus on the structure conduct-performance paradigm, the industrial organization view put the determinants of firm performance outside the firm, in its industry's structure. Being positioned against this view, the RBV explicitly looks for the internal sources of sustained competitive advantage and aims to explain why firms in the same industry might differ in performance. As such, the RBV does not replace the industrial organization view; rather it complements it [38].

RBV proponents argue that simultaneously valuable, rare, inimitable and non-substitutable resources can be a source of superior performance and may enable the firm to achieve sustained competitive advantage.

The RBV of the firm is therefore a suitable approach to understanding the competitive dynamics whereby resources are intangible and tangible assets linked to the firm in a semi-permanent way, including: technological, human and physical assets. However, having resources alone is not sufficient; therefore, RBV theory adds a category of capabilities which result from complex patterns of interactions and coordination between resources [44].

2.1.2. Game Theory

Game theory is the formal study of decision-making where several players must make choices that potentially affect the interests of the other players; it is official study of conflict and cooperation [37]. Game theoretic concepts apply whenever the actions of several agents are interdependent [9]. These agents may be individuals, groups, firms, or any combination of these. The concepts of game theory provide a language to formulate structure, analyze, and understand strategic scenarios [9].

In game theory, horizontal cooperation in logistics was proved efficient to reduce global cost and improve the performance level of the firm [6]. However, despite these advantages, horizontal cooperation is not considerably employed in logistics. One main obstacle in the implementation of horizontal cooperation is the absence of an appropriate cooperation decision making model [37]. In this study cooperative-game-theoretic approach was used to facilitate the decision making in measuring logistics activities efficiency on firm's operational performance.

2.1.3. Theory of Constraints

The theory of constraints is a management philosophy that seeks to increase manufacturing throughput efficiency or system performance measured by sales through the identification of those processes that are constraining the manufacturing system [14] and [22] argues that theory of constraints is based on the principle that a chain is only as strong as the weakest link or constraint and to elevate and

manage the constraint as necessary. This theory is founded on the belief that an organization that maximizes the output of every machine will not perform as well as one that ensures

optimization of the flow of materials and value created through its operational performance.

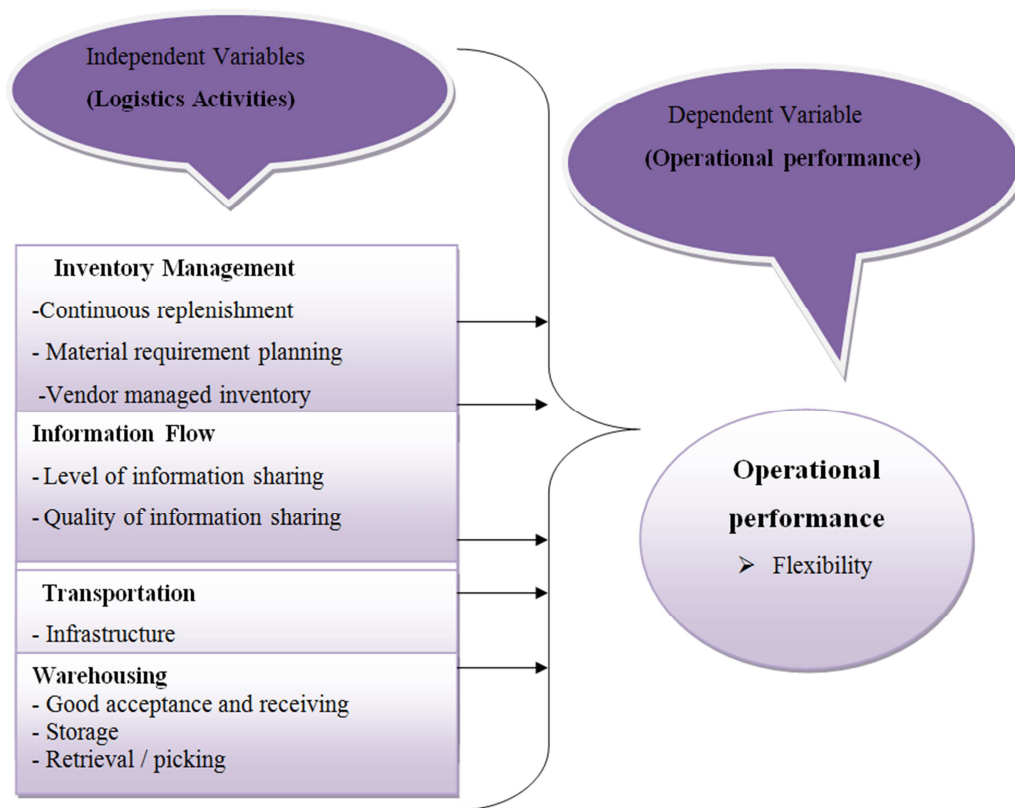


Figure 1. Conceptual framework of the study developed by researcher, 2023.

Theory of Constraints views organizations as systems consisting of resources, which are linked by the processes they perform. The goal of the organization serves as the primary judge of success. Within that system, a constraint is defined as anything that limits the system from achieving higher performance relative to its purpose [27]. For this study the researcher is more of focus highly on the theory of constraints to investigate the effect of logistics activities on operational performance in line with flexible operation of Bedele Brewery Share Company, Because from among three of the theory raised above, theory of constraint accessibility in five logistics of the activities (transportation, Inventory management, warehouse practice, information flow and procurement practice) can limit the organizations from achieving higher performance in relative to its purpose and others can also focused and inculcated while dealing and looking for the effect of logistics activities on operational performance of the company.

2.2. Conceptual Framework

This study were focused to investigate the effect of transportation, information flow, inventory management, warehousing and procurement activities on operational performance in line with operational flexibility which is illustrated as follows:-

3. Research Methodology

This study was employed both explanatory and descriptive research design as the study aims to explain the effect of logistics activities on operational performance.

To arrive on appropriate conclusion about the issue and in order to answer research objectives the necessary data were collected through both quantitative and qualitative research approach as the study aims to explain the effect of logistics activities on operational performance.

The target populations for this study is 395 employees of Bedele Brewery Share Company working in company's five working departments; production (operation), sales and transportation management, materials management, quality assurance, and warehousing because these departments are more concerned with topic of the study.

The sampling technique for determining the sample size for this study were by adopting stratified random sampling where the population is grouped into stratus, because the researcher select respondents from concerning department for topic of the research by using simple random sampling techniques.

For this study purposive sampling is used for selecting managers and team leaders for seeking more information. Therefore the studied populations were stratified into a

number of non-overlapping groups, (i.e. strata) and sample items are selected from each stratum by using proportional allocation procedure. The stratified sampling is more appropriate, which further facilitates comparisons strategy. Therefore, the number of people was first stratified and then proportional allocation was done.

The sampling frame is the lists of 395 employees working in the six departments and excluding fixed property preservation and security team as members of this team may be considered to have lesser knowledge about topic of the study. In order to determine the sample size from total population, the following formula was used:

$$n = \frac{z^2 pqN}{e^2 (N-1) + z^2 pq}$$

The researcher were taken sample by determining the sample proportion success and not success based on the experience from previous survey research response rate [36] the return or success rate 50% is “adequate”; 60% response rate is “good” and 70% rate or higher is “very good”. For this study 50% response rate and remaining 50% non-response rate were used and sample size is determined at 95% confidence level.

Thus, sample size is calculated based on below formula; Where,

p = proportion of success (probability to be included in the sample) = 50%

q = proportion of fail = 1-p=50%

n = sample size,

z=confidence level (Standard variate for given confidence level (1.96 for 95 confidence interval) =1.96

e = standard error (Precision error (0.05 for 95% confidence interval) = 5%

N= total population = 395

$$n = \frac{z^2 pqN}{e^2 (N-1) + z^2 pq} = \frac{(1.96)^2 * 0.5 * 0.5 * 395}{(0.05)^2 (N-1) + (1.96)^2 0.5 * 0.5} = \frac{379.358}{1.9454} = 195.0025 \approx 195.$$

Table 1. Department/position of respondents.

Name of selected departments	Number of employees	Selected sample size
production (operation)	266	[266/395*195],131
Sales and transportation management	65	[65/395*195],32
Material management	32	[32/395*195],16
Quality assurance	26	[26/395*195],13
Warehouse management	6	[6/395*195],3
Total	395	195

Therefore, n = 195 respondents

The researcher usually followed the method of proportional allocation under which the sizes of the samples from the different strata are kept proportional to the sizes of the strata by dividing the total population of the size “N” into K strata of size N1, N2, N3...NK and take sample from each stratum randomly with the following sample size proportional allocation formula.

$$N_i = \frac{N_i}{N} * n; \text{ Where } N_i = \text{total population of single strata}$$

$$I=1, 2, 3...K$$

$$n = n_1 + n_2 + n_3 ... n_k$$

$$n = \text{total size of strata}$$

$$N = \text{total population}$$

This study basically was depend on primary data sources from employees of the company in which the researcher were prepared the questionnaires that is to be distributed to employees of Bedele Brewery Share Company’s working in Company’s production (operation) department, Sales and transportation management department, material management department, quality assurance department and warehouse management department and these types of data was collected with the researcher’s purpose in mind.

The researcher were collected through self-administered questionnaires with closed ended questions with some open ended questionnaires and a 5-point likert scale. Unstructured interview was also conducted with respective managers for seeking more information.

The designed questionnaires in this study were analyzed with the help of Statistical Package for Social Science (SPSS) Version 25 that is used to aid in the analysis. In order to analyze the data, the two sets of Statistics: Descriptive and Inferential statistics was used.

Descriptive statistics summarizes and describes quantitative information in the form of frequency distribution and measures of central tendency (mean and standard deviation), whereas inferential statistics (multiple linear regression) were taken from this tool. The correlation analysis was used to analyze the relationship between logistics activities and operational performance. Multiple regression analysis was used to see the effects of the independent variable on the outcome variable and it is used to analyze the effect of logistics activities on the operational performances and operational performance is dependent variable while logistics activities is independent variables.

The model built around two sets of variables, specifically dependent variable (operational performance) and independent variables (transportation, information flow, and inventory management, transportation management and procurement practice). The following regression model is formulated with five independent variables and one dependent variable.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \epsilon_i \text{ and for this study; } Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5.$$

Where;

Y=dependent variable=Operational performance

β_0 =constant

$\beta_{1, 2}$ =coefficients of the independent variable

X1=Transportation, X2 = Information flow, X3 = Inventory management, X4 =Procurement practices, X5=Warehouse practice and ϵ_i =error The significance of the analytical model was tested by the use of ANOVA statistical model which is analysis of variance and a multiple linear regression analysis as well as correlation statistics were done to find out the effect and relationship between logistics activities and operational performance.

4. Discussions and Result

4.1. Constructs Reliability Issue, N=186

Table 2. Collected Data Reliability.

Constructs	Items	Cronbach Alpha
Procurement practice (PMP)	5	0.756
Inventory management activities (IMP)	5	0.874
Transportation management activities (TMP)	5	0.822
Information flows (IF)	5	0.717
Warehousing (WP)	6	0.822
Operational performance (Flexibility)	6	0.818
Total	9	83.4

A Cronbach's Alpha reliability test is a test which determines the internal consistency of the construct item. As depicted table 2 above, the reliability coefficient shows that all the constructs confirmed the acceptable level of internal consistency because their alpha value was above 0.7.

4.2. Descriptive Statistical Analysis of the Study

Table 3. Descriptive Statistics for Factor and Outcome Variables, N=186.

Item	Mean	Std. Deviation
Operational performance	3.6744	.86538

4.2.1. Operational Performance

Table 4. Mean score and Standard Deviation value of responses regarding operational performance=186.

Item	Mean	Std.Deviation
The company has flexible production system to meet to gain unique benefits than meet to changes in market and needed orders made by Customers.	3.52	1.218
The company is able to respond rapidly to changes (confusion of instruction, conflict with co-worker, etc) in the work Environment.	3.31	1.335
It takes many times in your company until goods are ready for packaging	3.55	1.217
Bedele Brewery is flexible in delivery schedule	3.27	1.240
Timely delivery of services to clients is biased(as not requested)	3.58	1.451
In the company production of beer to accommodate an increase /decrease in demand change the forecasted quantity is/are in bit by bit.	3.97	1.397
The time required for manufacturing process is long in the company	3.9	1.397
For your company procurement lead time (time required for supplier selection based on past experience than time, cost priority considerations, etc)	3.98	1.433
The company is characterized by openness to new ideas at work	3.93	1.482
Grand (total) mean and Std.dev.	3.675	1.186

Source: own survey, 2023

From the above results the respondents were agree to the items of the company has flexible production system to meet to gain unique benefits than meet to changes in market and needed orders made by Customers, it takes many times in your company until goods are ready for packaging, timely delivery of services to clients is biased(as not requested, in the company production of beer to accommodate an increase /decrease in demand change the forecasted quantity is/are in bit by bit, time required for manufacturing process is long in the company and company's procurement lead time (time required for supplier selection based on past experience than time, cost and priority considerations, etc) the results of the each items shows that the company has given priority for gaining unique benefits than meeting the satisfactions of the customers, which made a problem to the company to

Item	Mean	Std. Deviation
Procurement practice	3.5086	.95433
Inventory management	3.4935	1.23414
Information flow	2.5663	.94078
Transportation management	3.4484	1.03267
Warehousing practice	3.5027	1.13138
Grand (total) mean and Std.dev.	3.4	1.026

Source: Researcher's Survey Result, 2023

From the table 3 above, the mean value of inventory management, procurement practice, transportation management practice, warehousing practice and operational performance shows that the attitude of respondents toward the question falls on the mean range of agreement by the approximate value of 3.4935, 3.5086, 3.4484, 3.5027 and 3.6744 respectively.

Thus it shows that respondents were agreed on the idea requested with respect to each variable. On the other hand, the mean value of information flow falls between the ranges of disagreement by the approximate value of 2.5663 which shows that respondents were disagree on the idea requested with regard to information flow in Bedele Brewery Share Company.

accommodate demand changes slowly than flexibly in well manner.

The result also show that there is a problem in manufacturing the beer product because in the company time required for supplier selection is based on past experience than time, cost priority considerations which made the company low performance. As depicted in table 4 above surprisingly respondents agree with statement that company is characterized by openness to new idea at work with mean score of (3.93) with the idea requested. Even though the implementation of this new idea is poor, they applied new idea such as kaizen, balanced score card, etc. This shows that the company is open to new idea at work.

The results of the study also infer that the operational performance of Bedele Brewery share company is low and

interview made with production manager has told that, the reason for low performance of the Bedele Brewery Share Company are; such as shortage of enough barley inputs, problem of transportation infrastructure, delayed delivery of procured goods due to inefficient management of procurement practice, inadequate storage space for raw material inventory as well as used property, problem of telecommunication services such as internet, mobile network that hindered contacts with responsible body at operation, etc and this results low production delivery time in a flexible way meet the market demand of the customers.

4.2.2. The State of Logistics Activities Practiced in the Bedele Brewery Share Company

(i). Procurement Practices

Table 5. Mean score and Standard Deviation Value of Response Regarding Procurement Practice, N=186.

Item	Mean	Std.Deviation
The company maintains strong buyer-supplier relations with its suppliers	3.61	1.303
In your company Supplier selection is done as per the act and regulations of Procurement	3.34	1.273
There is improper supplier prequalification process in the company	3.53	1.430
The procurement process is managed out of sorts in the company	3.42	1.280
There is no well skilled and professionally qualified employees in procurement staff	3.65	1.415
Grand (total) mean and Std.dev.	3.51	1.34

Source: own survey, 2023

Table 5 above indicated that Bedele Brewery Share Company have somehow of strong buyer-supplier relations with its suppliers and this implies that the companies have energized for maintaining the strong buyer-supplier relationship practices in place which contributed to the on time deliveries reported from suppliers on a regular basis. The interview made with sales managers has told that there is/are a strong buyer-supplier relation with its suppliers even though the number of suppliers is small which may results late deliveries just on time. On the second item the respondents' response were averagely dropped averagely to the mean of neutral (neither agree nor disagree).

The interview made with the sales department team leader has respond that the supplier selection is done as per the act and regulations of procurement made by Heineken Brewery Share Company and inverse to this the average number of respondents responded that there is the problem of selecting the right suppliers and it were done as per their previous experience relationship than selecting new capable suppliers. Therefore the above result indicates that the respondents response to the average mean of neutral doesn't mean that the respondents didn't know to the item asked, rather than the degree response agreement of the respondents were on mean level of neither agree nor disagreement, the result on the third item depicted that there is no proper supplier prequalification process in the company.

In the interview session, researcher asked questions to the

manager of material management department regarding supplier selection, supplier prequalification and skill and qualification of employees of procurement staff, the manager respond that there is process of supplier selection process in the company but the process is ineffective because the employees in the procurement staff is not much skilled as the they face challenge while conducting product specification because they join the company from other public sectors as result they have less knowledge about material needed for beer company. Procurement practice has a significant influence on operational performance. The influence of procurement practices arises from different dimensions. In Bedele Brewery share company, selecting suppliers based on the their past experience rather than act and regulations of procurement and less skilled and professionally qualified employees in procurement staff are the critical company which had been overseen by the management of the company.

The results of the study also infer that, there is an inefficient management of procurement process and improper supplier prequalification process which in turn results for poor operational performance. Generally, the results emphasized that the procurement practice of the company need to be considered deeply in order to enhance the operational performance of the company because, the proper functioning of procurement practice had a great contribution in the enhancement of the operational performance.

(ii). Inventory Management

Table 6. Mean Score and Standard Deviation Value of Response Regarding Inventory Management=186.

Item	Mean	Std.Devn
The company effectively Controls supply and demand of inventory	3.13	1.420
There is improper Continual Stock replenishment in the company	3.54	1.539
The company is vain in Material requirements scheduling	3.55	1.567
There is fruitless integration of vendor managed inventory in the organization	3.63	1.498
A regular reduction of idle time of production machine improves the management of inventory in the organization	3.62	1.535
Grand (total) mean and Std.dev.	3.494	1.511

Source: Own survey, 2023

The above result clearly shows that there is inadequate inventory management in Bedele Brewery Share Company which in turn has significant effect on operational performance of the company. Based on the reflection of results obtained from BBS.c, inefficient continual stock replenishment and lack of regular reduction of production machine critically affects the operational performance of the company resulting production stoppage which leads to high company down time. Moreover, there are also ineffective Material requirements scheduling and lack of integration of supply chain in vendor managed inventory which are the reflections of poor inventory management.

The interview also shows that the inventory management

of the company is not more organized and materials needed for the operations of the company are hold by the budget and also there is lack of suppliers in the country. Inventory management significantly influences the operational performance which aligns with the finding [31].

(iii). Information Flow

Table 7. Mean Score and Standard Deviation Value of Responses Regarding Information Flow, N=186.

Item	Mean	Std.Dev.
Your company use logistics information system (computer-based information system) that support management of vehicle scheduling, inventory replenishment, etc)	2.64	1.401
Your Company's level of internal information sharing is adequate	2.74	1.406
The company share accurate information to your department	2.28	1.398
There is enough inter walk -talk radio in your company	2.45	1.517
Your company invest on information communication technology	2.55	1.444
The company make available up-to-date information to your department	2.74	1.594
Grand (total) mean and Std.dev.	2.56	1.46

Source: Own survey, 2023

As depicted in item Respondents also show their disagreements on the presence of enough inter walk -talk radio in your company and Sharing of accurate information to all departments that used inform unexpected situation at company operation through internally connected network within company with a mean value of (M=2.45, M=2.28) and std. deviation (1.517,1.398) respectively. As the interview made with the sub-quality assurance leader and the operational manager also shows that there is inadequate investment on information technology as well as not enough inter walk-talk radio the departments are not inter connected through information communication network.

The effect of information flow is reflected in various ways in BBS.c: Inadequate of level of internal information sharing and sharing of inaccurate information to all departments, lack of sufficient inter-walk radio, insufficient investment on information communication technology and not making available up-to date data to every departments. However, [24] states that information flow through implementation of information system helps to obtain tangible and intangible benefits which in turn operational performance.

(v). Warehousing

Table 9. Mean Score and Std. Deviation Responses Regarding Warehousing, N=186.

Item	Mean	Std.Devn
Your company has a suitable loading gates and in-house labels in warehouse	3.16	1.384
There is inadequate goods acceptance and receiving process in your company	3.42	1.586
There is adequate automatic storage systems in your company	3.13	1.544
The right material stored dispersly than in the right place in the warehouse	3.76	1.577
Your companies applying inventory Retrieval strategies(First in-First out, Last in-First out, quantity adaption, Time phased, etc) to improve utilization of storage area is vain.	3.70	1.623

(iv). Transportation Management

Table 8. Mean Score and Std. deviation Value Regarding Transportation Management, N=186.

Item	Mean	Std.dev
The company applies economy of scale for transportation to reduce transportation cost per unit like outsourcing strategies	3.71	1.557
There is an inadequate infrastructure for transportation within the company	3.66	1.600
Your company have adequate Vehicle scheduling for transportation	3.40	1.258
There is an adequate vehicle inspection schedule in the company	3.13	1.357
Your company can sustain appropriate preventive vehicle maintenance	3.34	1.278
Grand (total) mean and Std.dev.	3.448	1.41

Source: Own survey, 2023

The above result clearly shows that there is a problem of transportation management in the company. As the results acquired from respondents response of the BBS.c indicated that, company applies economy of scale for transportation to reduce transportation cost per unit like outsourcing strategies which very recommendable and useful one for the reduction of the cost and the organization should have to maintain it even though it is risky in terms of service delivery - which may fall behind time or below expectation. The result on the second item shows that there is inadequate infrastructure for transportation within the company due to insufficient investment on the transportation infrastructure. The interview made with transportation sub team leader shows that the weight bridge which is one of transportation infrastructure is not adequate in which the size of hand craft sent from Heineken Brewery share company is greater than size of Bedele Brewery Share company weight bridge of the company there is a risky in terms of service delivery - which may fall behind time or below expectation making to outsource the transportation management.

The Vehicle scheduling for transportation, vehicle inspection schedule and appropriate preventive vehicle maintenance was the major issues in transportation management; however these issues are given no emphasis in company. Transporting is required in the whole production procedures, from manufacturing to delivery to the final consumers and returns. Only a good coordination between each component would bring the benefits to a maximum. Therefore transportation significantly influences operational performance of the company which confirms with the study [43].

Item	Mean	Std.Devn
The company has no fixed retrieval schedule	3.85	1.604
Grand (total) mean and Std.dev.	3.503	1.55

Source: Own survey, 2023

The result from the table above on effect of warehousing is reflected in various ways in BBS.c: inadequate goods acceptance process in the company, storing inventory at place where materials exposed to damage and spoilage, inadequate retrieval strategies and not having fixed retrieval schedule influence operational performance of the company. Generally, the results emphasized that warehousing of the company need to be considered deeply in order to enhance the operational performance of the company because; the proper management of warehousing had a great role in the enhancement of the operational performance. Therefore in lines with analyzing warehouse productivity involves identifying a set of inputs and outputs and estimating efficiency. Often, there are variables that are contextual to the warehouse process in the sense that they are neither inputs nor outputs, i.e. they characterize the operational practices in turn affect operational performance which confirms with the study [20].

4.3. Inferential Statistical Analysis of the Study

In this section, Questionnaire Pilot Testing, Correlation Analysis analyzing the relationship between independent

variables and dependent variable objective, Regression Analysis for the effect of independent variables on dependent variable objective, Assumptions for Testing Regression Analysis and multiple linear regression coefficients would be reported and interpreted by using SPSS version-25.

4.3.1. Questionnaire Pilot Testing

In business research, a questionnaire is a common tool used to collect data. This questionnaire should be piloted. The pilot test aims to refine the questionnaire to ensure that respondents have no problems answering the questions. It assesses, also, the validity and reliability of the questions [40]. Generally, 10–20% of the main sample size is a reasonable number for conducting a pilot study [17]. For this study 15% of questionnaires were tested and passed the assumption of pilot testing. The response has shown the general ease of completion of the questionnaire, and there were no comments or improvement suggestions from the respondents. Therefore, no further adjustments were needed. In addition, a reliability test was conducted to examine the internal consistency of the instruments employed in this study.

4.3.2. Relationship Between Logistics Activities and Operational Performance in the Bedele Brewery Share Company

(i). Test of Association of Variables (Correlation Analysis)

Table 10. Correlation Matrix among Logistics Activities and Operational Performance, N=186.

Correlations	Operational Performance(OP)	
Procurement practice (PP)	Pearson Correlation	.717**
	Sig. (2-tailed)	.000
Inventory management (IMP)	Pearson Correlation	.669**
	Sig. (2-tailed)	.000
Information flow (IFP)	Pearson Correlation	.424**
	Sig. (2-tailed)	.000
Transportation management (TMP)	Pearson Correlation	.710**
	Sig. (2-tailed)	.000
Warehousing practice (WMP)	Pearson Correlation	.647**
	Sig. (2-tailed)	.000

** . Correlation is significant at the 0.01 level (2-tailed).

Source: Own Survey, 2023

Table 11. Correlation Matrix among Logistics Activities and Operational Performance.

Range of value for Pearson's coefficient (r) Level of Association/relationship	
r = 0.10 to 0.29 or r = -0.10 to -0.29	Small
r = 0.30 to 0.49 or r = -0.30 to -0.49	Medium
r = 0.50 to 1.00 or r = -0.50 to -1.00	Large

*Source: Adopted from pallant (2003, p. 120)

In this study all correlation results are interpreted in light of this rule;

Procurement practice and Operational performance: In the

above table we can see the relationship between the procurement practice and operational performance. The value of correlation is 0.717 which is significant at the 0.000 level.

This shows that there is a strong positive relationship between the procurement practice and operational performance. These findings are consistent with the findings of [28, 32, 21] who have concluded that procurement practice is statically significant positive relationship with operational performance of the organization.

Inventory management and Operational performance: In the above table we can see the relationship between the inventory management and operational performance. The value of correlation is 0.669 which is significant at the 0.000 level which shows that there is a large positive relationship. These findings are consistent with the findings of (Mogere, Oloko, & Okibo, 2013) [26]; (Otundo & Bichanga, 2015) [35] and (Kassim, 2020) [21] who have concluded that inventory management practice have statically significant positive relationship with operational performance of the organization.

Information flow and operational performance: In the above table we can see the relationship between information flow and operational performance. The value of correlation is 0.424. The Correlation is significant at the 0.000 level. This shows that there is a medium positive relationship between procurement and inventory management. This finding is consistent with the findings of (Lipaj & Davidaviciene, 2013) [24]. (Kassim, 2020) [21] And (Muluneh, 2017) [32] who have concluded that information flow is statically significant positive relationship with operational performance.

Transportation and operational performance: There is large positive relationship between transportation and operational performance as the table above shows that the correlation value is 0.710 and significant 0.000. This finding is consistent with the findings of (Kassim, 2020) [21], (Tseng & Yue, 2005) [43] who have concluded that Transportation management practice is statically significant positive relationship with operational performance.

Warehousing and operational performance: The correlation matrix result in table 4.14 shows that there is also medium positive relationship between warehousing and operational performance. The correlation value is 0.647 and significant at 0.000. This findings are consistent with the findings of (Moses & Nondi., 2017) [28]; (Muluneh, 2017), [32], (Johnson, 2012) [20] who have concluded that warehousing practice is statically significant positive relationship with operational performance of the

organization.

However, warehousing does not significantly determine operational performance of the Company. This might be due to lack of knowledge about the activities of warehousing (Kassim, 2020) [21] which contradicts the result of the respondents feedback on the effect of warehousing practice on operational performance of the BBS.c that warehousing practice have positive significant effect and relationships with operational performance, because adequate storage facilities with modern handling tools are necessary to ensure continuous supply of raw materials and correct handling of stored materials and It also ensures guarantee in quality and warehousing practice has impacts on Operational Efficiency and if, it enhances accuracy, reduces wastages and enhances speed of operations thereby improving warehouse efficiency in improving the company's performance [7].

The correlation analysis result above on the level of relationship between the dependent variable and the independent variables showed that all the five independent variables possess medium and large (strong) level of relationship. The correlation between Procurement practice and operational performance; Transportation and operational performance resulted the highest correlation value ($r=0.717$ and $r=0.710$) respectively followed by correlation output for Inventory management and Operational performance ($r=0.669$) and the correlation between Warehousing and operational performance is 0.647 and lastly Information flow and operational performance ($r=0.424$). Therefore both Procurement practice and Transportation management practice can highly influence the operational performance of the BBS.c than others independent variables.

Linear regression estimates the coefficients of the linear equation, involving one or more independent variables that best predict the value of the dependent variable [12]. Multiple linear regressions were conducted in order to determine the explanatory power of the independent variables (transportation, information flow, and inventory management, warehousing activities and procurement practice) to identify the relationship and to determine the most dominant variables that influenced the Operational performance was simultaneously. The significance level of 0.05 with 95% confidence interval was used. The reason for using multiple regression analysis was to investigate the effect of logistics activities on Operational performance.

Table 12. Normality of Distribution Using Descriptive Statistics (Skewness and Kurtosis).

Descriptive Statistics	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
Procurement practice	186	-.218	.178	-.922	.355
Inventory management	186	-.448	.178	-1.161	.355
Information flow	186	.049	.178	-.965	.355
Transportation management	186	-.699	.178	-.309	.355
Warehousing practice	186	-.946	.178	-.186	.355
Operational performance	186	-1.073	.178	.544	.355
Valid N (listwise)	186				

Source: Survey Result, 2023

Table 13. Collinearity Statistics.

Model	Collinearity Statistics		
	Tolerance	VIF	1/VIF
Procurement practice	.708	1.412	0.7082
Inventory management	.566	1.765	0.566
Information flow	.864	1.157	0.864
Transportation management	.632	1.582	0.632
Warehousing practice	.604	1.656	0.603

Source: Survey Result, 2023

Therefore the three assumptions of multiple regressions were tested and the test result indicated that the data have passed all the assumptions and thus, the researcher can proceed with the evaluation of multiple regression analysis

results. Accordingly, by using the IBM SPSS Regression outputs, the researcher evaluated the multiple regression models on the next sections.

(ii). Model Summery

Table 14. Model Summary of Regression Analysis.

Model Summary ^b									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.906 ^a	.821	.816	.37154	.821	164.723	5	180	.000

a. Predictors: (Constant), Warehousing practice, Information flow, Procurement practice, Transportation management, Inventory management
b. Dependent Variable: Operational performance

Source: Output of the Survey Data, 2023

4.3.3. ANOVA

Table 15. ANOVA Model Fit.

ANOVA ^a						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	113.696	5	22.739	164.723	.000 ^b
	Residual	24.848	180	.138		
	Total	138.544	185			

a. Dependent Variable: Operational performance
b. Predictors: (Constant), Warehousing practice, Information flow, Procurement practice, Transportation management, Inventory management

Source: Survey Result, 2023

(i). Standardized Regression Coefficient (Beta Coefficient)

Standardized regression coefficients are useful when you want to compare the effect that different predictor variables

have on a response variable. Since each variable is standardized, you're able to see which variable has the greatest effect on the response variable [45].

Table 16. Summary of Coefficients of Independent Variables.

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	.217	.126		1.714	.088
1	Procurement practice	.343	.034	.378	10.070
	Inventory management	.158	.029	.225	5.364
	Information flow	.114	.031	.124	3.665
	Transportation management	.259	.033	.309	7.779
	Warehousing practice	.148	.031	.194	4.764

a. Dependent Variable: Operational performance

Source: Survey Result, 2023

(ii). Unstandardized Beta Coefficient (β)

Unstandardized regression coefficients are useful when you want to interpret the effect that a one unit change on a predictor variable has on a response variable without

comparing in terms of effect on the dependent variable [45]. Unstandardized coefficient denotes the change in the dependent variable with a unit change in the independent variable. But they are not comparable in terms of effect on

the dependent variable [36]. Unstandardized coefficients “ β ” are the estimated regression coefficients which are used to complete the model for the operational performance developed on chapter three, which can now be written by including the results obtained for the unstandardized coefficients and the error term (see table 4: 20 above for the β coefficient result). As stated in chapter three, the study used the following multiple regression model to establish the statistical significance of the independent variables on the dependent variable. Therefore the specified regression equation takes the following form:

$$Y = 0.217 + 0.343 X_1 + 0.158 X_2 + 0.114 X_3 + 0.259 X_4 + 0.148 X_5 + \epsilon_i$$

Where Y= operational performance

X1=Procurement practice, X2= Inventory management, X3= Information flow, X4=Transportation, X5=Warehousing and ϵ_i =error

5. Summary of Major Finding, Conclusions and Recommendations

5.1. Summary of Major Findings

The study was attempted to cover the effect of logistics activities on operational Performance in Bedele Brewery Share Company in relation to procurement practice, transportation management, inventory management practice, information flow and warehousing practice. The study tried to explore detail important concepts in relation to the research objective in consideration. It included review of related literatures regarding concepts and advancement of logistics, logistics activities, operational performance as well as theoretical and empirical literature reviews in relation to the study.

Data for the study was obtained through distribution of questionnaires to a pre-determined sample of employees in Bedele Brewery Share Company. From the total distributed survey questionnaire, 95% were returned. An overall value of Cronbach alpha ($\alpha = 0.834$) was obtained. In relation to the general information of respondents, this study revealed that 33.9% of the respondents were female while 66.1% of them were male employees. Regarding employees' age bracket, 111 (59.7%) of them are found between 21-40 years old. With regard to workers' departments' production department accounts 128 (68.8%). In reference to workers' experience with the company, 105 (56.5%) of them have been worked from 6 to 10 years. In connection to educational level, first degree holders represent 83 (44.6%) of the respondents and was followed by college diploma holders which account for 67 (36%).

The first objective of the study was to describe the operational performance in Bedele Brewery Share Company through descriptive statistical analysis and an overall mean score was computed with level of agreement ($M=3.675$, $SD=1.186$). The second objective of the study was to assess

the logistics activities in Bedele Brewery Share Company. Through the descriptive statistical analysis, an overall mean score was computed for each independent variable (logistics activities). The study revealed that procurement practice ($M=3.51$, $SD=1.34$) was relatively the logistics activity practiced in Bedele Brewery share company followed by warehouse management ($M=3.503$, $SD= 1.55$), inventory management ($M=3.494$, $SD= 1.511$), Transportation management ($M=3.448$, $SD= 1.41$) and information flow ($M= 2.56$, $SD= 1.46$)

The third objective of the study was to investigate the relationship between logistics activities and operational performance in Bedele Brewery Share Company. Pearson correlation coefficients were determined to obtain information about the relationships between the dependent (operational performance) and independent variables (logistics activities). The study revealed that there is a positive and statistically significant relationship between each independent variable and the dependent variable.

Furthermore the correlation test of the variable under study shows that procurement practice have strong positive relationship ($r=0.717$, $p=0.000$) level followed by transportation management practice ($r=0.710$, $p=0.000$), inventory management practice ($r=0.669$, $p=0.000$) and warehousing ($r=0.647$, $p= 0.000$), information flow ($r=0.424$, $p=0.000$). This implies that all the above correlation result is significant at the 0.000 and has an association with operational performance with the p- value less than 5%. The finding of this study shows all variable under study:- warehousing practice, procurement practice, inventory management, information flow and transportation management have positive significant relationship with operational performance.

The study also further discovered from Pearson correlation analysis that the relationship between each independent variable and the dependent variable according to Pallant, (2003) [36] magnitude of correlation. Multiple regression analysis was used to determine whether the independent variables influence the dependent variable. R square value from the regression model summary ($R^2 = 0.821$) indicated that 82.1% of the variation in the operational performance of BBS.c can be explained by the logistics activities (independent variables included in the model).

The ANOVA test result revealed that the independent variables statistically and significantly predict the dependent variable ($F = 164.723$, $p < .001$). Coming to the variable under study The regression analysis result further revealed that the predictor variables of independent variables are statistically significant in predicting operational performance because all their p-values are less than alpha level of 0.05 and the respondents provide positive responses regarding to the effect of procurement practice with regression analysis (standardized beta coefficients are 0.378, $p=0.000$, inventory management practice (standardized beta coefficients are 0.225, $p=0.000$, transportation management practice (standardized beta coefficients are 0.309, $p=0.000$, information flow (standardized beta coefficients are 0.124, $p=0.000$,

warehousing practice(standardized beta coefficients are 0.194, $p=0.000$) on operational performance of the company. From the above regression analysis procurement practice makes the strongest unique contribution to explaining the dependent variable (operational performance) followed by transportation management practice, inventory management practice and warehousing practice.

5.2. Conclusions

This study was attempted to investigate the effect of logistics activities on operational performance of Bedele Brewery Share Company. The finding of descriptive statics revealed that relatively male respondents were more than females in Bedele Brewery Share Company and all employees were matured and at a productive age in age level. The majority of employees in case company were 1st degree holders, from this it is possible to observe that they perform their activities in their respective department well because they may have a good carrier progression. Majority of Bedele Brewery Share Company employees have enough work experience due to that they have better understanding about logistics activities of the company. On the other hand, majority of respondents were from production department.

In this study multiple linear regression models were applied. Furthermore, the finding of this study revealed that procurement practice, warehousing practice, inventory management practice, transportation management, and information flow has significant positive effects on operational performance of Bedele Brewery Share Company with 95% confidence interval or p - value of less than 0.05 and also all the independent variables have a very high and strong positive relationship with operational performance of Bedele Brewery Share Company.

Generally the researcher's has concluded results of regression and correlation analysis that; procurement practices have a unique effect and positive relationship followed by transportation management practice, inventory management practice and warehousing practice with operational performance of the company. Therefore, the logistics activities are important to the contemporary companies, gaining them more value relative to their costs. The logistics activity is the area where companies should pinpoint and improve in order to be between the most successful companies on the market. Collectively, logistics activities influence the operational performance of Bedele Brewery Share Company.

5.3. Recommendations

Based on the above findings the study therefore recommends the following:

The findings of the study showed that Bedele Brewery Share Company adopted logistics activities regularly. Moreover, the study confirmed that logistics activities had strong positive relationship with operational performance of Bedele Brewery Share Company. Therefore, the study recommends Bedele Brewery Share Company to give

priority and enhance the logistics activities because if properly practiced, they can significantly improve its operational performance from the current position for making the company to be competent.

In addition, the study confirmed that logistics activities namely warehousing practice, procurement practice, inventory management, information flow and transportation management practices and information flow management activities significantly influence the operational performance of Bedele Brewery Share Company. As it can be seen from the finding of this study, all the five logistics activities mentioned under study have positive relationship with operational performance of the company; therefore Bedele Brewery Share Company should well practice them responsibly to get better improvements on operational performance of the company and to be competitive enough.

It is also recommended that the company should deliver theoretical and practical training for employees, managers and decision makers for further improvement and development of efficient modern logistics activities to make know how of Bedele Brewery Share company's employees more competent. For this purpose different concerned institutions who have well know how about logistics activities, researchers and governments and other business decision makers are advised to provide appropriate trainings and Bedele Brewery Share Company is better to learn from those and work together. Then logistics activities would practice well and implemented practically leads to improve operational performance.

Bedele Brewery Share Company should improve its operational performance through investment on infrastructure for transportation of raw materials within Company. It is also better and advisable to employ the professional workers who were required for same position to make the company more competent. It is also better and recommendable to maintain the outsourcing strategies to reduce the transportation cost while focusing on core works and to use principle of economic order quantity that enables effective inventory management respectively.

In order to achieve advancement in delivery time performance in the long run through enhancing operational performance, it is better for the organization to give due emphasis on logistics activities. The case company needs to focus on major logistics activities in its operation in order to improve and augment their flexibility performance. The case company's sales department is suggested to improve customer relationships and. Thus, give attentions on the level of information sharing, and quality of information sharing with customers, and the company advised to allocate particular investment in information technology which make good information sharing especially on using up to date information of the 21st century's to deliver the order made from world's customers by using just on time(JIT) principles. Lastly, the company advised to provide any assistance that satisfies customers, improving compliance management through conducting marketing research flexibly.

5.4. Limitations and Suggestions for Future Research

Acknowledging the limitation of this study was important for future researchers which may provide opportunities for further research. This study was concluded only on the effect of logistics activities on operational performance of Bedele Brewery Share Company by considering selected activities and departments excluding fixed property preservation and security team as respondent. Therefore, researchers investigate logistics activities in depth by considering six departments who are very close to the title: Company's production (operation), sales and transportation management, material management, quality assurance, warehouse management departments for questionnaires as a respondent. And, only survey questionnaire was used in this research. So, future researchers consider other means of data collection including secondary data with different departments, managers, and decision makers who were close to logistics activities workers to obtain deep insights. Finally, future researchers incorporate other logistics activities like customer response, physical distribution, material handling, order processing, packaging etc activities and considering other manufacturing firms like sugar factory, dry port, textile factory, etc.

References

- [1] Abreham, D. (2017). Assessment of Logistics Performance of the Ethiopian Electric Power (EEP). Unpublished Master's Thesis, Addis Ababa University. Addis Ababa.
- [2] Bain, J. (1968). Industrial organization. New York: John Wiley.
- [3] Birhaner. (2017). Beer in Ethiopia.
- [4] Bwari, e. (2016). Effects of Third Party Logistics on Supply Chain Performance in Kenya (A Case of East African Breweries Limited Company). Journal of Applied Management Science, 2(5).
- [5] Cooke, J. (2006). National logistics costs In: 17th annual state of logistics report.
- [6] Cuijssen, e. (2007). Horizontal Cooperation in logistics: Opportunities and Pediments. Transportation Research Part: Logistics and Transportation Review, 4(2), pp. 129-147.
- [7] CSA. (2008). Report on Large and Medium Scale Manufacturing and Electricity Industries Survey. Addis Ababa.
- [8] Cui, & Hertz. (2011). The role of third-party logistics providers (TPLs) in providing innovative logistics solutions for Brazilian importations. Innovation and management review, 15(1).
- [9] Dai, B., & Chen, H. (2012). Profit allocation mechanisms for carrier collaboration in pickup and delivery service: Computers & Industrial Engineering, 3(3), 45-52.
- [10] David, G. k., & Shalle, M. N. (2014). An Assessment of the effect of Reverse Logistics Adoption on Supply Chain Performance in THE Manufacturing Sector in Kenya. European Journal of Business Management, 2(1).
- [11] Fasika. (2015). Education for Human Capacity Building: Achievements and Shortcomings in the Ethiopian Experience. ADDIS ABABA UNIVERSITY.
- [12] Field, A. (2005). Regression; Discovering statistics using SPSS.
- [13] Ghiani, e. (2004). Introduction to Logistics Systems Planning and Control.
- [14] Goldratt, M. (2004). The Goal: a process of ongoing improvement. New York: North River Press.
- [15] Hadi, S., & Setiawan, M. (2013). The Impact of Logistics Performance on the Sales Level an Empirical study in Retail Sector. International Conference on Information Systems for Business Competitiveness.
- [16] Hana, A. (2016). Implication of logistics service quality on customer satisfaction. AddisAbaba University, School of Business and Economics.
- [17] Hazzi, A., & Maldaon. (2015). A pilot study: vital methodological issues. Vilnius Gediminas Technical University. Business: Theory and Practice, 16(1), 53-62.
- [18] Jeffrey. (2014). The battle of the brewers:. Ethiopia.
- [19] Jiregna, A. (2016). Factor affecting warehousing practice. research report, wollega university, commerce.
- [20] Johnson, A. L. (2012). Evaluating The Effect of Operational Conditions and Practices On Warehouse Performance. Industrial and Systems Engineering.
- [21] Kassim, W. (2020). The effect of logistics management practice on operational performance: The case of Bahidar textile factory. Ethiopia.
- [22] Kazim, S. (2008). inventory inaccuracy and performance of collaborative supply chain practices. Industrial management and data systems.
- [23] Kiare, K. M. (2015). Influence of Procurement practices on organization performance in private sector in Kenya. International Journal of Business & Law Research, 3(2).
- [24] Lipaj, & Davidaviciene. (2013). Influence of Information Systems on Business Performance. journal of Business Management, 5(1), 38-45.
- [25] Melkamu, A. (2016). Logistics practices in Ethiopian medium and large leather footwear manufacturing firms.
- [26] Mogere, K. M., Oloko, D. M., & Okibo, D. W. (2013). Effect Of Inventory Control Systems On Operational Performance Of Tea Processing Firms: A Case Study Of Gianchore Tea Factory Nyamira County, Kenya. International Journal Of Business & Management, 1(5).
- [27] Moore, R. (1998). Theory of Constraints and Lean Manufacturing.
- [28] Moses, T., & Nondi, R. (2017). Effect of Logistics management on the organization performance of Shipping firms in Mombassa county. The strategic journal of business and change management, 4(3), 821-839.
- [29] Mukolwe, G. A. (2015). An Assessment of the Effects of the Effect of Logistics Management Operational Efficiency at Mumias Sugar Company Limited, Kenya. International Journal of Economics, Commerce and Management, 3(6).

- [30] Mulama. (2012). understanding industrial distributors expectation of benefits from relationships. *Journal of business and industrial marketing*, 433-443.
- [31] Mulugeta, A. (2017). Determinants of multimodal transport effectiveness: the case of Ethiopian shipping and logistics service Enterprise. A thesis in Addis Abeba University in school of commerce.
- [32] Muluneh, Y. (2017). The Impact of Logistics Performance on Organizational Performance in the case of Lion international bank. Addis Abeba.
- [33] Muzeyin, Y. (2017). The influence of Logistics Management on Service Quality Effectiveness and Customer Satisfaction: The Case of Addis International Bank, Unpublished Master's Thesis. Addis Ababa.
- [34] Mwangi & Nyambura, M. (2015). The role of inventory management on performance of food processing companies: a case study of Crown Foods Limited Kenya. *European Journal of Business & Social sciences*, 64-78.
- [35] Otundo, & Bichanga. (2015, Octobe). the effect of inventory management operational performance of Kisii county Government, Kenya. *International Journal of Social Sciences and Information Technology*
- [36] Pallant, J. (2003). *A Step By Step Guide to Data Analysis Using SPSS for Windows (Version 10 and 11)*. Philadelphia: Open University Press.
- [37] Pan, e. (2013). A sharing mechanism for super additive and non-super additive logistics cooperation. *International Conference on Industrial Engineering and Systems Management (IESM)*. RABAT – MOROCCO.
- [38] Peteraf, M., & Barney, J. (2003). Unraveling the resource-based tangle. *Journal of Managerial and Decision Economics*, 24(4), 309-323.
- [39] Porter, M. (1985). *Competitive advantage: Creating and sustaining superior performance*. New York: Free Press.
- [40] Satish, C. R. (2005). *Logistics Management*. Prentice hall of india.
- [41] Shang, & Marlow. (2005). Logistics capability and performance in Taiwan's major manufacturing firms. *Transportation Research Part E: Logistics and Transportation Review*, 41, 217-234.
- [42] Sollish, F., & S. J. (2012). *The procurement and supply managers' desk reference (2nd Ed.) (SECOND ed.)*. NEW JERSEY, USA: Wiley & Sons.
- [43] Tseng, Y. L. (2005). The role of transportation in logistics chain. *Proceedings of the Eastern Asia Society for Transportation Studies*. 5, 1657–1672.
- [44] Wong, C. Y., & Karia, N. (2010). Explaining the competitive advantage of logistics providers: A resource-based view Approach. *International Journal of Production Economics*, 51-67.
- [45] Zach, B. (2020). Standardized vs. Unstandardized Regression Coefficients.