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THE EFFECT OF LOGISTICS MANAGEMENT PRACTICE ON ORGANIZATIONAL COMPETITIVENESS: A CASE STUDY OF DASHEN BREWERY SHARE COMPANY GONDAR, ETHIOPIA

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ABSTRACT

In today's highly competitive business environment, organizations are striving to achieve effectiveness, cost efficiencies and economies of scale. Most of these organizations perform various logistical operations so as to meet their customers' needs. However, managing these operations in order to achieve their objectives has posed a great challenge to the firms. Many firms have not yet established how much to invest in logistics and the right balance between responsiveness and efficiency. The main purpose of the study is to determine the effect of logistics management practice on organizational competitiveness. The study employed explanatory research design and used purposive sampling technique to select 125 samples. Primary data were collected through survey questionnaire. The data were analyzed using descriptive and inferential statistics by using (SPSS) version 22. The result of the study has shown that transportation management practice, inventory management practice, supply management practice and warehouse management have positive and significant effect on organizational competitiveness; however, customer service management and information flow management have insignificant effect on organizational competitiveness. The study suggested that the management should accurately understand and meet customer needs by addressing customer service strategies through integration, adaptation, logistical precision and provision of standard service level. It also suggested that information flow management should be addressed through the implementation of different application systems like system for order entry, order processing, electronic data interchange (EDI), vehicle routing, scheduling and inventory replenishment system and other new technological applications.

Key words: Competitiveness, Customer service management, Dashen Brewery Share Company, Information flow management, Inventory management, Logistics management, Supply management, Transportation management, Warehouse management.

Background of the study

In a global economy, competitive and dynamic environment, logistics managements is an important strategic factor for increasing competitiveness (Roman, Parlina & Veronika, 2013). The significance of logistics management had evolved from a more passive and cost minimization oriented activity to a key success factor for firm competitiveness (Spillan, 2013). There was an emerging consensus about the need for companies to handle logistics issues together with economic and business issues (Tuttle, 2008).

Logistics is increasingly playing an important role in everyday business, and becoming a major factor of differentiation in the market, as referred to by Bowersox (2002). In the current competitive climate there is strong pressure, on one hand, to operate in product and service differentiation, and on other hand, operate on the price factor allowing its reduction. As Melnyk (2009) mention, logistics can manage these aspects, constituting a strategic or value-creation tool.

Logistics system is made up of logistics services, information systems and infrastructure/resources. Logistics services is made up of activities such as warehousing and transportation that support the movement of materials and products from point of origin to point of consumption, and vice versa. Information systems include modeling and management of decision making, and more important issues are tracking and tracing. On the other hand, infrastructure comprises human resources, financial resources, packaging materials, warehouses,

transport and communications (Btre, 2001).

Logistics, previously viewed as a classical function, which involves adversarial relationships among suppliers, customers and transportation providers, is emerging as a key source of competitive advantage and a leading reason for strategic alliance relationship between companies and their logistics providers. A logistical system is made up of a large number of stakeholders. They include the suppliers, manufacturers, wholesalers or distributors and retailers who have to be managed strategically in order to deliver final products in the right quantities at the desired time and quality at the right place and at a reasonable cost to the final consumers (Hai, 2002).

In Sub-Saharan African countries, infrastructures were, if present, poorly managed and maintenance was lacking. Consequently, inefficient transport and communication formed a major obstacle in achieving efficiently organized flows of goods and services. If farmers and manufacturers were to take advantage of reforms in agriculture and other productive systems, dependable transport and communication systems were indispensable. Such systems were of major importance for the facilitation of internal and external trade. Investments in infrastructure would improve distribution logistics, increase productivity and lower production costs (World Bank, 2010).

Ethiopian logistics system is characterized by poor logistics 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 storage. Presence of road of high density and quality makes efficient distribution of goods easy, customer orientation, low level bureaucracy at customs and trade facilitations expedite goods flow. Availability of skilled manpower, conducive labor regulations and business environment promotes economic activities. On most of these criteria, Ethiopian logistics system is found poor (Debela, 2013).

The main objective of this study is to determine the effect of logistics management practice for organizational competitiveness, the core activities in the company depend on logistics as they are distributing beer products through retail network stations to their customer. The state of logistical management practices and its effect on competitiveness was not explored in the Dashen brewery share company. Therefore, this study has examined the following research objectives.

Objective of the Study

The main objective of the study was to determine the effect of logistics management practices on organizational competitiveness of Dashen brewery Share Company.

The specific objectives were:

To ascertain the effect of transportation management on organizational competitiveness.
To examine the effect of customer service management on organizational competitiveness.
To determine the effect inventory management activity on organizational competitiveness.
To ascertain the effect of supply management on organizational competitiveness.
To determine the effect of warehouse management on organizational competitiveness.
To determine the effect information flow management practice on organizational competitiveness.

Hypothesis:

H1: Transportation management has a significant and positive effect on organization competitiveness.
H2: Customer service management has a significant and positive effect on organization competitiveness.
H3: Inventory management practice has a significant and positive effect on organizational competitiveness.

H4: Supply management practice has a significant and positive effect on organizational competitiveness.
H5: Warehouse management has a significant and positive effect on organizational competitiveness.
H6: Information flow has a significant and positive effect on organizational competitiveness.

Review of Related Literature

Logistics Management

The management of logistics activities in the function of satisfying the consumer has become one of the most attractive areas of the strategic management in the last ten years, therefore, managers seek for strong competitive weapon in the development of own logistic system in order to differentiate their offers in comparison to others (Spillan,2013).

Logistics management is treated as a part of the supply chain management that deals with management of goods in an efficient way. It is the management process that integrates the movement of goods, services, information and capital, right from the sourcing of raw material, to the consumer (spring, 2012). The goal of the logistics management is to provide the right product with the right quality at the right time in the right place at the right price to the ultimate customer (Mentzer, 2004). Logistics management practice has been defined as a high priority for contemporary organizations. The success of logistics management is determined through the combination of efficiency, effectiveness and differentiation (Fugate et al., 2010).

Logistics management practice plays a key role in the economy, and the market volume of logistics had already reached a substantial level in many economies as a result. Companies that were successful worldwide had long recognized the critical role logistics management played in creating added value (Spillin et al., 2013). Logistics management is therefore a critical contributor to the competitiveness of a country. The demand for products could only be satisfied through the proper and cost-effective delivery of goods and services (Ittmenn & King, 2010).

Therefore, this study considered logistics management effect as an intervening variable to influencing company competitiveness. The study concentrated on logistics management core activities such as: transportation management, inventory management, warehouse management, customer service management, supply management and information flow management.

Transportation can be defined as the act of moving goods or people from an origin to a required destination. It also includes the creation of time and place utilities. Transportation plays a key role in the logistics management, because without the efficient movement of finished goods and raw materials the entire system would not be able to work at its full potential (Randall, 2010).

Customer service plays an important role in firms. Many firms are aware of growing customer requirements and adopt sets of standards to evaluate their service for customer satisfaction (Kisperska-Moron, 2005). Korpela (1998) explained that companies should establish a customer service strategy and focus on designing an efficient logistics system to better serve customer requirements and sustain competitive advantage. Steven (2012) examined the linkages between customer service, customer satisfaction, and profitability. They found that customer satisfaction affected competitive markets. Wouters (2004) addressed four customer service strategic options, namely, integration, adaptation, logistical precision, and standard service level by determining the customer needs accurately and exceeding the needs. The customer service in logistics had a direct impact on firm's market share, total logistics costs, and profitability (Collins, 2001).

According to Salami (2010), **Inventory Management** is defined as a framework employed in firms in controlling its interest in inventory. It includes the recording and observing of stock level, estimating future re-

quest, and settling on when and how to arrange. Inventory management is a method that companies use to organize, store, and replace inventory, to keep an adequate supply of goods at the same time minimizing cost (Deveshwar, 2013).Effective inventory management is essential in the operation of any business. Thus, keeping stock is used as an important strategy by companies to meet customers' needs without taking the risk of frequent shortages while maintaining high service level (Choi, 2012).

Supply Management, Purchasing, and procurement are used interchangeably to refer to the integration of related functions to provide effective and efficient materials and services to the organization. Purchasing is defined as all activities associated with identification and specification of needs, identification of decision criteria, initial screening of preferred suppliers, selecting suppliers, and monitoring performance (cf. Van Weele, 2010). Cavinto (1992) defines purchasing as receipt of buying instructions from internal users of the company according to needs, in other words, the main purchasing decision was to select suppliers for each specific purchase.

Purchasing or supply management is not only concerned with the standard steps in the procurement process: (1) the recognition of need, (2) the translation of that need into a commercially equivalent description, (3) the search for potential suppliers, (4) the selection of a suitable source, (5) the agreement on order or contract details, (6) the delivery of the products or services, and (7) the payment of suppliers (Martin Christopher, 2007).

Warehousing refers to the activities involving storage of goods on a large-scale in a systematic and orderly manner and making them available conveniently when needed. Warehousing is one of the important auxiliaries to trade. It creates time utility by bridging the time gap between production and consumption of goods (Tompkins, 2013).

Proper and effective use of warehouse management can greatly increase the efficiency and productivity of a warehouse, thus helping to achieve warehousing costs reduction of the company. When considering the level of effort involved in warehouse operations, the greatest expenditure of effort is in the picking process. To gain efficiencies in picking the labor time to pick orders needs to be reduced and this can achieved in a number of ways. Companies with the most efficient warehouses have the most frequently picked items closest to the shipping areas to minimize picking time. These companies achieve their competitive advantage by constantly reviewing their sales data to ensure that the items are stored close to the shipping area are still the most frequently picked (Mulama, 2012).

Information Flow is sharing of information on transfer or exchange of information indicating the level and position of inventory, sales data, and forecasting information, information about the status of orders, production schedules and delivery capacity (Wardaya, 2013). In today's competitive environment, effective and timely responses to ever-changing customer tastes and preferences have become essential components for successful business competitiveness (Han, 2012).

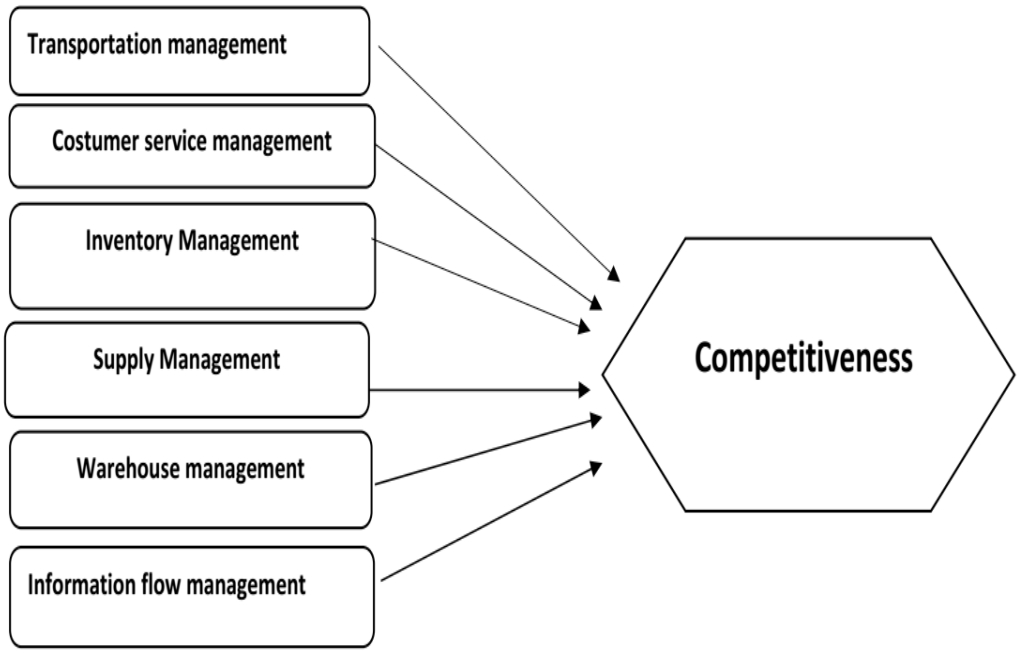
Competitiveness

Hai (2002) argued that the competitiveness of a company means adapting its products to the market and competition requirements, particularly in terms of product range, quality, price as well as optimal sales channels and methods of promotion. Bartholdi (2011) argued that a firm's competitiveness means its ability to produce and sell products and services of superior quality and lower costs than its domestic and international competitors. Competitiveness is a firm's long-run profit performance and its ability to compensate its employees and provide superior returns to its owners. Flejterski (1984) contended that competitiveness is the capacity of the sector, industry or branch to design and sell its goods at prices, quality and other features that are more attractive than the parallel characteristics of the goods offered by the competitors.

Slack et al. (1997) define five factors that measure firms' competitiveness: (1) reliability; (2) cost; (3) flexibility, (4) quality; and (5) speed. According to these authors, by attaining these five objectives, the organization will

solidify its superiority in the market. According to Davis (2001), besides costs, quality and flexibility, fast delivery and good service are competitive priorities. Delivery is related to the speed factor of slack et al.(1997), because it entails supplying products quickly, while service involves the way products are delivered and accompanied after sales.

A combined analysis of various authors in the business administration area shows an emphasis on the following factors that determine competitiveness: quality, cost, flexibility and delivery (Scopinho, 2000; Buiar, 1999; Stevenson, 2001; Buffa, 1972).



Source; Tayler (2005) and adapted for this study

Research Methodology

Research Design

This study employed explanatory research design. It has been used to establish the magnitude, direction and significance of various effect of logistic management practice on organizational competitiveness. Creswell (2005) asserts that explanatory research design can be used to predict an outcome such as competitiveness of the company.

Sample and data collection

The study used purposive sampling method to select the samples, because purposive sampling method is used when elements are selected due to a specific purpose, usually because of their unique position. The target population was permanent company employees who are working related to logistics management activities

within the company who have best knowledge of logistics management practices implementation and competitiveness. On the sample selection the researcher more focused on related departments such as, transportation management, inventory management, warehouse management, supply management, quality control department, operation, marketing and sales departments. Therefore, out of 561 total populations, 125 sample respondents were selected for this study as suggested by Malhotra (2007).

The researchers employed survey questionnaire. The questionnaire was designed in a structured manner which captures all the variables under study. In this case, there were closed ended questionnaire which allow for various responses by the respondents. These were administered through drop and pick method to the respondents. A survey questionnaire was distributed to 125 participants but 111 of them responded accurately which was 88.8% response rate.

Measures

For all the measures, participants were asked to respond to a five-point Likert-type scale ranging from 1 (Strongly Disagree) to 5(Strongly Agree). Items were averaged to form the indices of the variables with larger numbers indicating higher levels. Logistics management practices and competitiveness of the company were measured using 42-item and 12 item scale respectively.

Data Analysis

The hypotheses were tested using multiple regression analysis. The normal distribution condition for the dependent variable and degree of multicollinearity in the independent variables were assessed prior to the regression analysis.

Reliability test has been carried out in the analytical process. Cronbach's alpha was calculated to test the level of consistency among the items. Alpha coefficient for independent variables and dependent variable were above 0.710, which indicated an acceptable level of reliability (Nunnaly and Bernstein, 1994). correlation coefficient indicated that there were some interesting positive and significant relationships between the constructed variables.The skewness and the kurtosis statistics for the dependent as well as the independent variables fell within the fell within the ± 2 cut-off range, commonly used to establish whether a variable is normally distributed. Multicollinearity was not an issue either as the Variance Inflation Factors for all the independent variables were under 3.176, far below the recommended cut-off level of less than 5 (Hair et al., 2010). The six independent variables measuring logistics management practices were regressed against the dependent measure of competitiveness.

Table 1 Descriptive statistics and correlations and reliability test

Variables	Skewness	Kurtosis	Mean	SD	1	2	3	4	5	6	7	Cronbach's Alpha
(1)Transportation management	-1.079	1.141	3.44	.682	1							0.716
(2) Customer service management	-.615	.726	3.70	.502	.278*	1						0.755
(3) Inventory management	-.904	.476	3.47	.767	.781*	.252*	1					0.759
(4) Supply management	-.905	1.749	3.69	.538	.314*	.045*	.267*	1				0.751
(5) Warehouse management	-.585	-.312	3.64	.652	.194*	.087*	.198*	.152*	1			0.734
(6) Information flow management	-.690	-.396	3.48	.756	.712*	.225*	.703*	.235*	.058*	1		0.710
(7) Competitiveness	-.896	.879	3.49	.605	.765*	.250*	.696*	.388*	.291*	.590*	1	0.849

Notes: *p < 0.05

Table 2. The effect of logistics management practices on the competitiveness of the company.

Variables	Competitiveness	Collinearity statistics		
	Beta	t-values	Tolerance	VIP
Transportation management	.434*	4.723	.315	3.176
Customer service management	.040	.555	.916	1.092
Inventory management	.160*	2.009	.333	3.002
Supply management	.166*	2.396	.890	1.124
Warehouse management	.119*	2.113	.952	1.081
Information flow management	.040	.560	.425	2.329
Model fit statistics,R^2= 64.8%,F=31.905*				

Notes:*p < 0.05

Findings

The finding from the first hypothesis that employing transport management (H1), third hypothesis that showing inventory management(H3), fourth proposition that indicating supply management(H4) and fifth hypothesis employing warehouse management(H5) will result in higher level of company's competitiveness were confirmed in a statistical significant way (Beta=.434 ,t=4.723 , p< 0.05), (Beta=.160 ,t=2.009 , p< 0.05), (Beta=.166 ,t=2.396 , p< 0.05), and (Beta= .119 ,t=2.113 , p< 0.05) respectively. On the contrary, the proposition that employing customer service management (H2) and information flow management(H6)will result in higher levels of company's competitiveness were not supported in a statistically significant way (Beta= .040 ,t=.555 , p>0.05)and (Beta=.040 ,t= .560, p> 0.05) respectively. Based on Table 2 , R square indicates the extent or percentage the independent variables explained the variations in the dependent variable. From the result shown, independent variables can explain 64.8% of the variations in dependent variable (competitiveness). However, the remaining 35.2% is unexplained in this research study.

Discussion and Conclusion

A research conducted by Luftim (2012) revealed that Information flow management has a positive and significant effect on competitiveness. Information flow within the logistics had become vital since it enables supply chains to respond on real time and accurate data as well as flow of material which make it possible for firms to produce accurately and in real time (Stevenson & Spring, 2000; Bowersox *et al.*, 2010). Bowersox *et* al.(2010) goes on to say those four reasons make information flow management become more critical for effective logistics systems' design and operations: Customers perceived information about order status, product availability, delivery schedule, shipment tracking, and invoices as necessary elements of total customer service. However, the finding of current study depicted that information flow management has no significant effect on company's competitiveness which was inconsistent with the prior studies.

The finding of this study revealed that customer service management has a positive and insignificance effect on organizational competitiveness, because p value is greater than the significant level. This is not consistent with the finding of Ebistu (2015) which found that customer service management has a positive and significance effect on competitiveness. Korpela (1998) explained that companies should establish a customer service management and focus on designing an efficient logistics system to better serve customer requirements and sustain competitiveness for companies, this requires permanently adapting to market changes and a well-founded logistic strategy to meet and exceed customer requirements.

The finding of the study revealed that transportation management has significant effect on competitiveness

which is consistent with the previous study of Richard (2017) and Ebistu (2015) but inconsistent with the finding of Luftim (2012). The result of the current study depicted that inventory management has significant effect on competitiveness which supported the finding of Richard (2017) and Ebistu (2015). Conversely, it was inconsistent with the finding of Luftim (2012). According the finding of the study warehousing management has significant effect on competitiveness which is consistent with the finding of Richard (2017) and Ebistu (2015).

The finding of the study revealed that supply management has positive and significant effect on competitiveness. It supports the finding of Ebistu (2015).

Recommendations

The result of this study revealed that customer service management has insignificance effect on organizational competitiveness. This study suggested that Dashen brewery company must give more attention to customer service management by addressing customer service strategic options like by integration, by adaptation, by logistical precision and also providing standard service level by determining the customer needs accurately and exceeding the needs.

This study also depicted that Information flow management has insignificance effect on organizational competitiveness. In today's competitive environment information flow management is a significance effect on the firm's competitiveness. Therefore, the company must give more attention to the information flow management by formulate different application systems like system for order entry, order processing, electronic data interchange (EDI), vehicle routing, scheduling and inventory replenishment system and other new technological applications.

Limitations and Direction for further Studies

The overall model was significant and the six variables of logistics management have explained about 64.8% of the variance in the competitiveness variable. Therefore, future research should address the remaining variables represented 35.2% which was unexplained in the current study. The current study primarily focused on Dashen brewery Share Company; however, findings of this study cannot be adequately extrapolated to generalize the status of logistics management practices in other similar companies. Therefore, future research should extend into other similar companies.

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