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EFFECT OF LOGISTICS OUTSOURCING ON OPERATIONAL COST OF TEA PROCESSING FIRMS IN KENYA: A SURVEY OF TEA FIRMS IN KERICHO COUNTY.

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Abstract

Competition in the modern economy is driving business organization to adopt means of survival and to leverage their earnings for long-term development. Some businesses are forced to downsize or employ other strategies such as franchising in order to reach new markets or reduce the cost of operations. Logistics function has attracted many interests from both scholars and leading supplies organization across the globe. In the present study, logistics outsourcing was reviewed in light of three independent variables as under transportation outsourcing, warehousing outsourcing and distribution outsourcing and operational cost as a dependent variable. Various theories and existing literatures are reviewed to bring insights on the subject matter. The current study adopted a descriptive survey study design, with tea firms and factories in Kericho County being the subject. Production Managers, Procurement Personnel, Warehouse Personnel and Distribution Officers were selected as the respondents in all the identified firms and factories in Kericho County. Data which was collected was primary using a questionnaire and was later analysed through inferential and descriptive statistics. Data was analysed using both descriptive and inferential statistics. Multiple linear regression results have shown that three predictors can explain 73.2% of change in operational cost namely: Transport Management Outsourcing, Warehouse Outsourcing and Distribution Process Outsourcing. The findings indicated that Transport Management Outsourcing, Warehouse Outsourcing and Distribution Process. Outsourcing significantly affects tea processing firms operational cost. The study recommends that tea-processing firms should carefully choose the service providers to ensure that products get to the consumers without delays. Additionally, organisations ought to determine means of transportation which is cheaper against the one offering best service.

Keywords: Logistic outsourcing, operational costs, transportation, warehousing, distribution

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I. INTRODUCTION

1.1Background of the Study

Business entities across the globe strive to enhance their performance amid changes in customer needs and preferences such as value added services and reduced lead-times, cutthroat competition between firms in the same industry and government regulations. The business entities craft ways or strategies to reduce costs, improve productivity and more so to remain relevant in the market. The cost element remains fundamental in determining the operations of firms. Some of the strategies used by business entities include downsizing and right sizing, business restructuring and re-engineering and more so outsourcing. Outsourcing and particularly outsourcing logistics function has been of utmost essence in many firms and companies globally. The foregoing involves contracting providers of logistic services who have the necessary expertise to carry out logistics activities initially carried out in-house, with a mutual benefit to both parties (Hanna, 2009).

The concept takes a two-pronged approach that is outbound and inbound logistics outsourcing. The former entails activities such as collection, storage and distribution of finished goods or products to the prospects or customers (Hitt, Ireland &Hoskisson, 2007) whereas inbound logistics is simply arrangement and purchasing of inbound parts, W.I.P, finished goods and material movement from the origin to the firm's warehouse and store. Indeed, it is averred that logistics outsourcing has become paramount in cost reduction, risk mitigation and serves as an avenue for creating strategic alliances between firms (Stock & Lambert, 2001). It is however important for firms to critically look into the issues of confidentiality, security, stability of the company of firm offering logistics outsourcing services for them to gain the benefits of outsourcing logistics (Lynch, 2000). Outsourcing logistics function is observed to increase a firm competitiveness (Laugen, Berger, Zeng, & Gerstenfeld, 2008).

According to Kumar, Vrat and Shankar (2006) organizations across the world view logistics function as of strategic essence owing to competitive pressures within a given industry. In retrospect, organizations therefore seek ways to improve competitive advantage and more so profitability with an inclination on the logistics function among other functions in the organization. Firms such as those in tea processing engage other organizations to provide such services such as transportation, warehousing services, distribution and extend advisory services on the foregoing logistics function. Indeed, it is observed that firms primarily outsource such logistics function in order to reduce costs, improve product quality and enhanceflexibility (Lau & Zhang, 2006) and importantly achieve a higher market share (Skjoett-Larsen, 2002).

Outsourcing logistics activities not only leads to an organization to effectively control costs but also improve customer services and also aid an organization to focus on its core activities of

organization (Adebambo, Omolola & Dosunmu, 2015). In South Africa for instance, there are challenges to logistics outsourcing especially in the manufacturing sector. Logistics outsourcing faces such issues as lack of adequate managerial support and involvement, time constraints in drafting agreements on logistics outsourcing, change management and transitioning of resources (Waugh & Luke, 2012). It is claimed that it is important for an organization in any sector to carry out thorough business analysis, identify the core competencies and activities, the benefits that accrue and costs of outsourcing in order to ensure that outsourcing results to enhanced business performance.

In Kenya, manufacturing firms have experienced benefits of logistics outsourcing as it makes them improve overall organization performance by concentrating on the core functions and more so to reduce costs outsource certain activities such as transportation management, warehouse management and material handling management. Logistics outsourcing is seen to improve customer satisfaction, delivery time and ensures survival of the firm in the end due to significant cost reduction (Magutu, Chirchir & Mulama, 2013).

The core activities of tea processing firms include the processing aspect of the raw materials. As such, such firms may outsource such activities such as information flow, management consultancy, financial, transportation of raw materials, warehousing and distribution of finished product. The tea processing firms in Kenya continue to significantly impact the economy through employment provision. It is observed that tea processing firms practice logistics outsourcing activities due to the perish ability nature of tea and the rising demand of the product both local, regional and international market. Some of the logistics functions outsourced included warehousing, fleet management, fleet operations, transport and distribution. However, the degree of outsourcing depends on the firm. The rationale behind the practice of outsourcing some or all of the logistics function were to reduce costs, reduce risks, gain a competitive edge and most important to concentrate on the core activities, that is tea processing. However, tea-processing firms face bottlenecks while outsourcing logistics function. These challenges include loss of control of the activities, loss of employee loyalty, switching costs and loss of sensitive information to competitors (Ngonela, Mwaniki & Namusonge, 2014).

1.2 Statement of the problem

The tea industry an important agriculture sector in Kenya as it has continued to contribute to employment base in the country, opening up rural areas to infrastructural development and more so the export earnings. Tea processing in its entirety entails value addition and the quality of processed tea determines its price in the local and international market. The tea processing firms face a number of challenges such as unprecedented shortage of rainfall, pests and diseases among others which may hamper the production of tea and hence the volume of processed tea.

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There are also costs incurred such as the production, transportation, labor, processing and distribution costs in the entire processing aspect. These costs are crucial and significant to the operations of the processing firm. The foregoing coupled with logistics expenses which represent significant cost to the firms and other administrative costs are presumed to have a far reaching effect on the performance and overall survival of the tea processing firms. Small tea processing firms are therefore likely to face operational and performance problems once production and logistics costs are on the rise and may close shops if the problem persists. Large firms may also see their overall performance decline, which may result to such actions as mergers and layoffs. One strategy that has been cited as capable of mitigating these challenges is logistics Outsourcing. According to Hanna, (2009) outsourcing logistics function has been of utmost essence in many firms and companies globally. It involves contracting a logistics service provider with the necessary expertise to carry out logistics activities initially carried out in-house, with a mutual benefit to both parties (Hanna, 2009). To the researcher's knowledge, no research has been done to demonstrate how adopting logistics outsourcing in Kenyan context can impact on firm's operational costs. This study therefore examined how logistics outsourcing in tea processing firms influenced their overall operational cost.

1.3 Objectives of the Study

1.3.1 General Objective

The general objective was to establish the effect of logistics outsourcing on operational cost of tea processing firms in Kericho County, Kenya.

1.3.2 Specific Objectives

- To examine the effect of transport management outsourcing on operational cost of tea processing firms in Kericho County, Kenya.
- To find out the effect of warehousing outsourcing on operational cost of tea processing firms in Kericho County, Kenya.
- To establish the effect of distribution process outsourcing on operational cost of tea processing firms in Kericho County, Kenya.

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II. LITERATURE REVIEW

2.1 Theoretical Review

2.1.1 Resource Based View (RBV)

The RBV theory puts resources as fundamental pillars to enhanced firm performance and cost involved in the process of production which emerged in 1980s and 1990s through the works of Prahalad and Hamel (1990) and Barney (1991) after publishing the firm resources and sustained competitive edge. The model argues that a firm consists of a bundle of resources that constitute the firm as a whole. The resources of a firm include the assets, capabilities, organizational processes, knowledge, and information among other attributes under the control of the firm. (Kuada& Hinson, 2015). According to Barney (1991), valuable firm resources enable the firm to pool other resources in order to implement value-creating strategies that cannot be easily duplicated by other firms. Such resources therefore enable the firm to identify changes and opportunities in the operational environment and to act before their competitors and therefore be a step ahead of the rivals (Eisenhardt& Martin, 2000). In retrospect, firms can protect their core resources in a bid to outsmart their competitors. The outsourcing activities of a firm are limited to the non-core functions of the firm's value creation activities. Resource based theory can be used to explain the rationale behind logistics outsourcing in tea processing firms. These firms may carry out in-depth scanning of the environment to identify the opportunities such as cost saving and enhancing efficiency of their activities. Moreover, the firms may look into the resources endowed and weigh the costs versus benefits in-house functioning compared to outsourcing. More so, where the benefits of outsourcing exceed the costs of performing the function in-house, the firm may see it as an opportunity to concentrate on the core function of processing tea. It can also be presumed that logistics outsourcing can have far-reaching benefits on the overall operational performance of the firm.

2.1.2 Transaction Cost Theory

The theory is based on the early works of Coase (1937) and Williamson (1975) developed it. This theory has been widely used in the study of organizations by scholars and researchers (David & Han, 2004). It explains why companies or firms exist and the rationale behind company expansion or sourcing out activities to the external environment. The theory assumes that companies or firms try to minimize the costs of exchanges within the company. Firms therefore compare and weigh the costs of performing a particular task in-house with the costs on executing the same outside the firm. According to Coase (1937), firms expand in the event that performing firms' activities in-house is cheaper that outsourcing the activities and that transaction costs occur where product or service is transferred from one phase to another where technological capabilities are needed to make the product. Such factors as the need to transfer risks, environmental uncertainty or core company assets may increase the external transaction

costs and deter the firm from outsourcing certain activities. Logistics costs represent a significant cost in an organization. Thus, organizations yearning to minimize costs while maximizing returns ought to make informed decisions regarding logistics outsourcing. Private tea processing firms incur significant costs in carrying out their logistical operations and activities. Transaction cost theory is therefore relevant to these firms in that these firms can identify the costs involved in carrying out logistics functions in-house and compare cost of outsourcing similar functions. Rational firms therefore outsource logistics functions where it is cheaper to do so than to perform such activities in-house. In addition, the firms may also gauge costs for various logistics providers based on quality, speed and efficiency.

2.1.3 The Network Theory

According to Harland (1996), a network is a specific type of relation linking a defined set of persons, objects or events. The supply chain system has a characteristic of complex network. Complex supply chain network is composed of enterprises with some or all characteristics of self-organizing, self-similar, attractor, small world, scale-free. When this type of supply chain network exists, the core enterprise, upstream suppliers, sub-suppliers, suppliers with the original source of raw materials and the respective suppliers, distributors, retailers of these suppliers together constitute network (Yongxia Li, 2014). This means that these networks, as well as corporate relations of the supply and demand connected 'nodes' form a huge network. Connections between firms represent exchange relationships and the underlying contract if present. The theory tries to explain the relationships developed alongside supply chain in order to ensure that customers and other stakeholders maximize their satisfaction. Numerous connection types can be considered, but the critical connection types are the presence of contracts and various flow types including material flows, information flows and financial flows. Material flows refer to the transfer of physical products, information flows refer to the transfer of coordinating data and financial flows refer to the transfer of monetary resources, all relating to the exchange of products or services. In the most recent years management and coordination supply chain network has become vital, as firms need to reduce costs and maximize opportunities available on the marketplaces. The field of Supply Chain is seen as an area in which organizations can secure cost reductions opportunities. It is important to note that cost reduction and saving in not the only as the final objective is getting customer value, ensuring satisfaction and creation of loyalty, which can lead to enhanced profit and more firm profitability as a whole (Flint 2004).

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2.2 Conceptual Framework

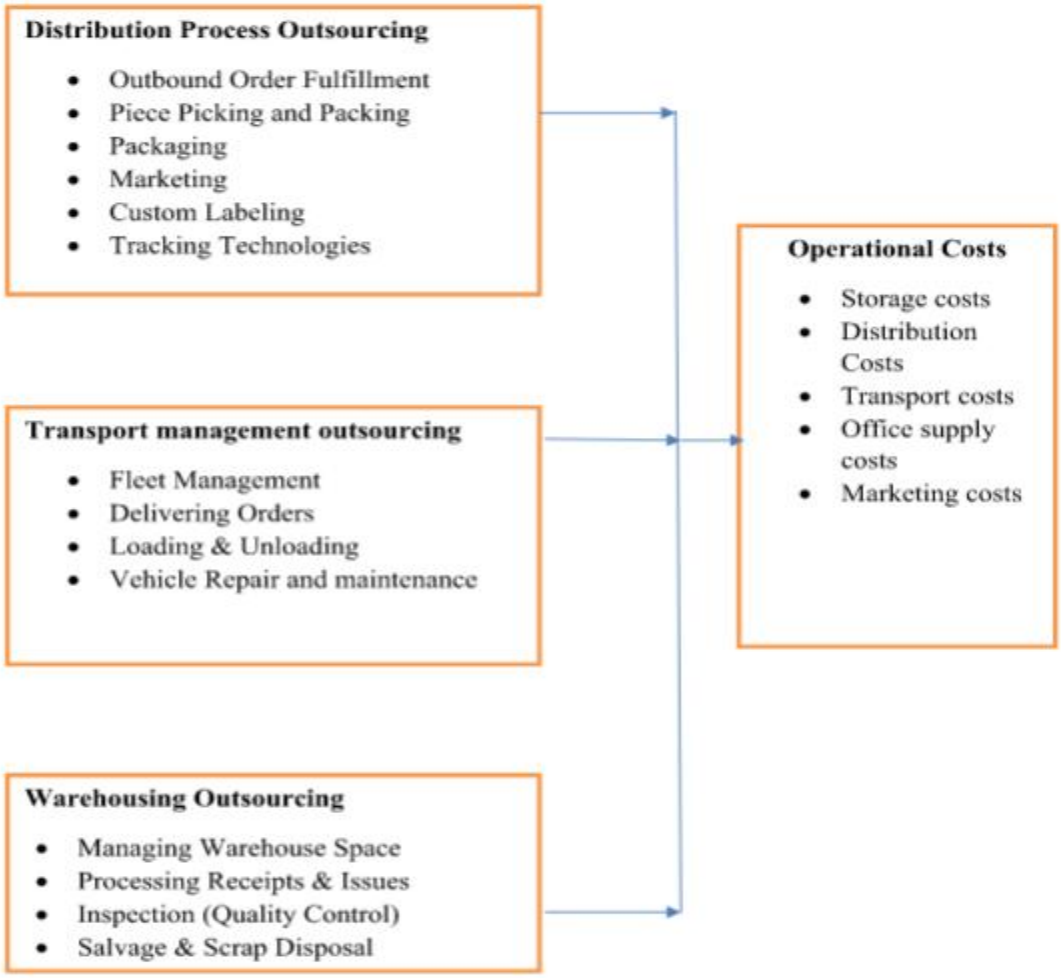

Figure 1: Conceptual Framework

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2.3 Empirical Review

Hsiao (2009) delved into logistics outsourcing in Netherlands and Taiwan. The study particularly focused on food processing firms in the two countries. The scholar noted that transportation and value adding activities were mainly outsourced in the firms particularly in Netherlands. Speed, on-time delivery and quality of food were key to the firms. In addition, lack of own vehicles and requisite human capital formed that basis for outsourcing the function. Other logistics functions such as transportation management were done in-house.

According to Aktas, Agaran, Ulengin & Onsel (2011) many companies in various industries yearn to bridge gapswhich makes the outsourcing vital.Denisa, Lucie, Eva &Leona, (2015) did a research on the use of outsourcing services in logistics by firms in the manufacturing sector in Czech and relied on survey data from the selected four firms. The results indicated that transportation was the most outsourced with 55% score from the responses. The firms' lack of own resources, cost reduction objectives and specialization motivated the firms to outsource some of the logistics functions.

Using outsourcing in logistics was subjected to investigation in manufacturing firms in Czech (Denisa, *et al*, 2015). The goal of the research was establishing how intensively various logistics outsourcing services were used by the manufacturing companies. The study relied on primary data obtained from the selected four manufacturing companies. The results illustrated that the companies outsourced some of the logistics function at various degrees. Warehousing was one of the activities that was mainly outsourced especially among medium sized and large manufacturing firms. The study however noted that warehousing outsourcing in Czech was lower compared to other regions such as North America, Latin America and Asia-Pacific.

Rahman, (2011) conducted a research to investigate the motivation to outsourcing, logistics services used, length of third party contracts and the effect of outsourcing on logistics costs, employee motivation and customer satisfaction. Companies listed in Dun & Bradstreet's 500 largest Australian firms were targeted excluding firms in the financial sector, insurance and real estate. Self-administered questionnaires were used to collect data from the sampled companies. The results show that the use of third party logistics was at 86%.The prime functions mostly outsourced were warehouse management outsourcing and order fulfilment. The practice was noted to aid the companies cut on cost, reduce capital investment and more so enhance operational flexibility.

In the past few years, the tea industry in Kenya has been hit by a downward trend in prices (Ongong'a&Ochieng, 2013). The authors looked into the innovation in the tea industry in the country with the goal of establishing how innovation impacts performance of the tea firms. The

study targeted five major tea firms in Kericho, Kenya and primary and secondary data was used. In the study, it was noted that high labour costs contributed to the downward trend in the prices of tea. Such strategies as mechanization in tea harvesting resulted to increased revenue and more so reducing operational and labour costs. It was recommended that the firms ought to fully embrace mechanization in tea harvesting.

III. RESEARCH METHODOLOGY

3.1 Research Design

The study used the descriptive survey design which allows the researcher to describe how things are at their current state (Kombo & Tromp, 2006). According to the authors, this method allows the researcher to collect or gather data and information by use of interviews or questionnaires. In addition, Kothari (2008) states that the descriptive studies explain or describe the state of the affairs as they are and attempts to answer 'what' kind of questions.

3.2 Target Population

The target population for this study was the production managers, logistics and procurement officers, and distribution officers in all Tea Factories and Processing firms in Kericho County. The study had categories the target organizations had5 Processing Firms and 32 factories to represent the entire tea firms in Kericho County. A total of 98 individuals from all the aforementioned firms' was the subject to the study.

3.3 Purposive Sampling Design.

Purposive sampling technique was used in order to select respondents with relevant information set out in research objectives. Willingness and availability of respondents with rich in information is vital for success of any research (Patton, 2002). According to Cresswell and Plano (2011), purposive sampling involves identifying and selecting groups or individuals with knowledge of a phenomenon under study. This approach was necessary gained relevant information from the target respondents. The current study comprised of 98 individuals composed of Production Managers, Logistics and Procurement Officers and distribution officers who according to the researcher had relevant information for the study.

3.4 Research Instrument

The study used a structured questionnaire to collect data from the respondents. Questionnaires are the most appropriate instrument for collecting data especially where respondents are

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literate and disbursed (Mugenda&Mugenda, 2009). The questionnaire usedclose-ended questions and included background information and study objectives.

3.5 Data Processing and Analysis

The collected questionnaires were verified in order to ascertain the ones that were appropriately filled to completion. Only those questionnaires filled according to instructions given were considered for analysis. Data processing and analysis was done using Statistical Package for Social Sciences (SPSS) software version 24 and involved both descriptive and inferential statistics. The descriptive statistics encompassed frequencies, percentages and means while inferential statistics incorporate correlation analysis. The findings were presented in form of statistical tables. The multiple regression analysis explored the relationship between variables while correlation coefficient analyzed the strength of variable relations. Correlation coefficients were calculated to observe the strength of the association. A series of multiple regression analysis was used because they provided estimates of net effects and explanatory power. ANOVA was used in testing the significance of the model. The regression model is indicated as shown;

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$

Y = Operational Cost
α= Constant
β_1, β_2, & β_3, = Partial regression coefficient
X_1 = Transport Management Outsourcing
X_2= Warehousing Outsourcing
X_3= Distribution Process Outsourcing
ε = error term or stochastic term

IV. RESULTS AND DISCUSSION

4.1 Response Rate

The research sampled 98 respondents from Tea Factories and Processing firms in Kericho County. However, only 86 questionnaires were filled correctly and returned. This translates to 87.76% response rate. The response rate was adequate as recommended by Babbie (2002). Mugenda and Mugenda (2003) too stipulates that a response rate of 50% is adequate for analysis and reporting; a rate of 60% is good and a response rate of 70% and over is excellent.

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4.2 Inferential Analysis

Inferential statistics infer from the sample to the population and help in assessing the strength of the relationship between the independent variables and the dependent variables.

4.2.1 Correlations of the Study Variables

Table 1 illustrates the correlation matrix among the independent variables (Pallant, 2010), which in turn helped in Multi-co linearity testing.

Table 1: Correlations of the Study Variables

		Transport Outsourcing	Warehouse outsourcing	Distribution Outsourcing	Operational cost
Transport Outsourcing	Pearson Correlation	1			
	Sig. (2-tailed)				
	N	86			
Warehouse outsourcing	Pearson Correlation	.386*	1		
	Sig. (2-tailed)	.038			
	N	86	86		
Distribution Outsourcing	Pearson Correlation	.516*	.497*	1	
	Sig. (2-tailed)	.005	.000		
	N	86	86	86	
Operational cost	Pearson Correlation	-.302	-.441	-.403**	1
	Sig. (2-tailed)	.011	.007	.005	
		86	86	86	86

Table 1indicates that distribution process outsourcing and transport management outsourcing have significant and positive relationship as attributed by the correlation coefficient of 0.516 and p-value of 0.005. This relationship is because the two functions are inseparable of each other. Distribution process entails the use of transport for physical movement of goods from one point to another.

The results shows presence of a positive and significant weak relationship between warehouse outsourcing and transport management outsourcing as proved by the p-value and the correlation coefficient (r=0.386, p=0.038). Orders are processed at the warehouse but actual

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movement of the orders is actualized by transport function. The correlation matrix table shows presence of moderate and significant positive relationship between distribution process outsourcing and warehouse outsourcing (r=0.497, p=0.000). The two functions work in handy since the complement each other. Harmonious dealing between warehouses and distribution is required to ensure smooth flow of materials to their required points.

From the table, all the independent variables are negatively related to operational cost as attested by the respective correlation coefficients: Transport Management Outsourcing (r=-0.302), Warehouse outsourcing (r=-0.441) and Distribution Process Outsourcing (r=-0.403). All the relationships are rendered significant since their p values are less than 0.05. Accordingly, the ranking of the independent variables with their contribution to operational cost reduction was: Warehouse outsourcing contributed more to operational cost reduction of tea processing firms (44.1%), followed by distribution process outsourcing (40.3%), and finally Transport Management Outsourcing (30.2%).

4.2.2 Regression Analysis Results

This study utilized multiple linear regression analysis to examine the relationship of the predictor variables with the dependent variable. Adjusted R^2 which is known as the coefficient of determination was used to explain how operational cost of tea processing firms varied with Transport Management Outsourcing, Warehouse Outsourcing and Distribution Process Outsourcing. The model summary table shows that 73.2% of change in operational cost can be explained by three predictors namely Transport management Outsourcing, Warehouse Outsourcing and Distribution process Outsourcing an implication that the remaining 26.8% of the variation in operational cost (COA) could be accounted for by other factors not in this study.

Table 2: Model Summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	.878[a]	.770	.732	.594

Analysis of variance (ANOVA) was done to establish the fitness of the model used. The ANOVA table shows that the F-ratio (F=53.636, *p*=.000) was statistically significant.

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This means that the model used was appropriate and the relationship of the variables shown could not have occurred by chance.

Table 3: ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
	Regression	28.367	3	9.456	53.636	.000[b]
	Residual	14.460	82	.1763		
	Total	42.827	85			

a. Dependent Variable: Operational Cost

b. Predictors: (Constant), Transport Management Outsourcing, Warehouse Outsourcing and Distribution Process Outsourcing

Table 4: Regression coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.881	.281		3.135	.007
	Transport management outsourcing	-0.626	.219	.718	-2.8584	.027
	Warehouse outsourcing	-0.989	.185	.636	-5.346	.019
	Distribution process outsourcing	-0.715	.271	1.012	-2.6384	.000

a. Dependent Variable: Operational cost

The above table gives the results for the regression coefficient for the multiple linear equation

$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$) which by supplying the coefficients becomes:

$$Y = 0.881 - 0.626X_1 - 0.989X_2 - 0.715X_3$$

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Where

Y = Operational cost

X_1 =Transport Management Outsourcing

X_2 =Warehouse Outsourcing

X_3 =Distribution Process Outsourcing

According to the regression equation established, holding all independent factors a constant *(Ceteris paribus)* then operational cost of tea processing firms will be 0.881 units. From the regression equation holding all other independent variables a constant, a unit increase in transport management outsourcing will lead to a 0.626decrease in operational cost of tea processing firms. A unit change in warehouse outsourcing will lead to a 0.989decrease in operational cost of tea processing firms; a unit increase in distribution process outsourcing will lead to a 0.715decrease in operational cost of tea processing firms in Kericho County.However, at 5% level of significance and 95% level of confidence Transport management Outsourcing, Warehouse Outsourcing and Distribution process Outsourcing have a significance influence(P-value<0.05) on operational cost with p-values of 0.027, 0.019 and 0.000 respectively and therefore their coefficients should be retained in the final model. The results further infers that of all the predictors considered in this study warehouse outsourcing contributes the most to operational cost reduction followed by distribution outsourcing and transport outsourcing as implicated by their larger coefficients.

V. CONCLUSION AND RECOMMENDATIONS

From the findings of the study, it is reasonable to make some conclusions. First transport management outsourcing was found to have an effect on operational cost of tea processing firms. Tea processing firms outsource transport management services from third parties outside the organization to reduce costs, increase efficiency and to concentrate on their core competencies. Among the common transport services outsourced by these tea- processing firms included delivery of orders to customers, loading and unloading, vehicle repair and maintenance freight management. The outsourcing of these key transport functions from specialists helps the firms to deliver their orders in a timely manner to their clients. Loading and unloading reduces damages and proper routing is adhered.

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Secondly, warehouse outsourcing was found to have an effect on operational cost of tea processing firms. The findings indicate that tea-processing firms outsource warehouse functions and specifically the management of warehouse space. Among the commonly warehouse functions where expertise is needed is the processing of receipts, processing of shipments and inspection and quality control. The practice of warehouse outsourcing aid the firms cut on cost, reduce capital investment and more so enhance operational flexibility.

Lastly, distribution process outsourcing was found to have an effect on operational cost of tea processing firms. Outsourcing distribution process achieves among others core competence, service enhancement, efficiency and cost, and flexible and scalable. It is also seen that outsourcing distribution process reduces capital investment as well as integrating information technology systems.

Concisely, it can be concluded that logistics outsourcing has an effect on operational cost of tea processing firms. The three main tenets of logistics including transport management, warehouse management and distribution process management have brought about insurmountable benefits to the tea processing firms in Kenya. Among the listed, include the reduction of the following costs; Reduction in transport costs, storage costs, distribution, cost of investment on logistics infrastructure, administration costs, distributionrisks, materials handling costs, maintenance costs and reduction of labor costs.
The tea processing firms should carefully choose the transport service providers to ensure that customers receive products quickly while also saving on costs. There is also need to achieve a balance between cheapest transportation provider and the one offering best service. Firms should consider when to outsource warehouse services. Warehousing can be fully either outsourced during peak periods while in off-peak periods storage should be done in-house or shared between the company and the third party logistics providers. Tea processing firms should also look into the suitability of their facilities and competence of their personnel before outsourcing. In choosing distribution service providers, firms should ensure that the provider has the ability to offer flexible solutions that are in line with the organisation's strategy, and technology enabling achievement of economics of scale and process development to drive efficiency and cost reduction, and eventually maximizing on their transportation dollar.

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