

EFFECT OF TRANSPORTATION MANAGEMENT ON THE PERFORMANCE OF LOGISTICS FIRMS IN NAIROBI COUNTY, KENYA

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Abstract: *As new processes in logistic management develops and the new advancements in the digital connectivity, national and local firms are reassessing the way they work and interact both internally and with external organization. This advancement in logistics management practices has encouraged logistics firms and affiliation to reconsider their internal and external relations and transaction. Therefore, the logistics firms worldwide are considering establishing an advanced approach to logistics management practices in order to provide and facilitate many services to people anywhere and at any given time. The performance of logistics firms is crucial to global economy as well as that of Kenya since it ensures constant availability of goods to the public when needed at a specific time. However, the performance of the logistics sector has been unstable with many logistics firms such as Kune foods, Wefarm, Wasoko, Nottify logistics shutting down their operations due to high cost of operations in Kenya, which threatens the sector's contribution to the countrys' GDP and employment rate. This research study focuses on effects of logistics management practices on performance of logistics firms in Nairobi County. The efficiency in the flow of information and goods is only possible with the availability of a well-developed transport and communication infrastructure. The main objective of the study was to establish the effects of logistics management practices on performance of logistics firms in Kenya. The study's specific objective was to assess the effect of transportation management on the performance of logistics firms, Nairobi County. Target population was popular top ten logistics services companies in Nairobi County. Sample size comprised of 88 employees from different departments in the 10 entities chosen. Stratified random sampling was applicable in selecting the respondents. In this case, questionnaires was used as research instruments. The data analysis was done by use of SPSS software, where inferential and descriptive was applicable to analyze quantitative data. Systems all have a positive significant effect on performance of logistics firms in Nairobi County. When all factors remain constant, a unit increase in the four variables increased the performance of logistic firms in Nairobi County. The study therefore recommended transportation management system, warehousing management, order processing and inventory management practices systems be strengthened in order to improve the performance of logistics firms.*

Keywords: *logistics firms, logistics management practices, transportation management*

1. Background of Study

Logistics plays an important role in supporting organization as they strive for more efficient management system in the business practices, the inefficient logistics system together with the inefficient internal management would disable the organization to respond to the needs of the customers within the shortest time possible (Judith N,2014).

Most successful companies practice logistics management to reduce cost, increase their competitiveness and enhance operational efficiency. The logistics in modern business conditions coordinates and integrates the movement of materials and products from physical, organizational and informational aspect (N.Ristovska et.al 2017).Reducing of each logistics activity influences the total amount of costs and enhances company's performance. This study therefore defines the logistics activities that are of key importance to the firm's success and they include transportation management, warehousing management, inventory management and order processing management.

In view of the current global business climate that is characterized by stiff competition, I therefore recommend that Firms need to be as efficient as possible at every level and this level includes logistics management (Tuttle & Heap, 2008).

Logistics management practices involve concentrating on area, which enhances efficiency, and productivity thus improves performance and enhances cash flow.

According Lea (2016), logistics management entails the movement of goods and information with an intention of optimizing services and profit. The need for efficiency in logistics management is the most important element because the current generation is digitized generation with informed knowledge meaning that the logistics firms must be able to offer first class service in terms of availability of the its products to avoid losing customers.

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This research therefore aims to analyze the effect of logistics management practices on performance of logistics firms in Nairobi County.

In the current dynamic competitive environment, logistics management strategy plays a vital role in the overall corporate governance, especially in the area of asset management and financial flows of the firm (Vlachos, 2016).Finally the use of logistical savings allowed the policy of lower prices, longer payment terms and higher level of service to customers' thus increasing operating efficiency.

Logistics firms in Kenya operate with an intention of making profit by providing services and goods to the customers. The majority of these firms have adopted third party logistics management practices in their business to enhance their performance. According Njambi and Katuse (2018), in the current period of rapidly changing technology ,use of logistics management practices has become vital ingredient for firms in gaining competitive advantage especially in the logistics firms. This is meant to achieve two basic objectives: Market share and cash flow as every other firms objective lies on quality service and minimum production cost.

As businesses become more globalised in order to access new markets, increase production efficiency, and utilize technological capabilities outside of their own national borders, logistics became more and more important (Kilasi, Juma, & Mathooko, 2013). Every business sought to increase production and sourcing efficiencies as well as capture a part of the global market in the highly competitive environment of today. The "logistics function's" responsibility for maintaining the efficient flow of resources, products, and information throughout an organization's supply chains was a significant factor in determining a firm's performance at that time (Kilasi, et al., 2013). Because of this, logistics had recently gained attention and been acknowledged as a crucial component of competitive advantage.

Several factors were responsible for the effectiveness and cost structure of Kenya's logistics network, according to a 2012 Shippers Council of Eastern Africa (SCEA) survey. These comprised measures for the cost and effectiveness of logistics, delivery times for items, truck turnaround times, the complexity of trade transactions as evaluated by these indicators, and customer perception indicators. Following a comparison of 2010/2011 and 2012, they discovered the following: Airplane operating expenses climbed from an average of USD 3.00 per kilogramme in 2010/2011 to an average of USD 4.90 in 2012, which resulted in a decrease in the categories of commodities transported by air year over year. In 2012, shipping freight prices jumped by 35.2%. (SCEA, 2013).

The transport service sector serves as one of the major backbone to the economic growth of the country, therefore, requires adequate management to serve the purposes well. The key milestone towards realization of the global vision 2030 objective for sustainable development goals (SDGs) is the development of sustainable transportation system that improves mobility of goods and services. Increased local and international commercial competitiveness is a direct result of globalization and liberalization of the business environment in many economic sectors.

Over the past few years, Kenya has made substantial advancements in terms of infrastructural development. Today's significant investment in transportation infrastructure is a major factor in the transport industry's booming annual growth. Kenya's strategy to achieve its Millennium Development Goals (MDGs) involves, among other things, the modernization of the country's transportation infrastructure, such as its roads, railroads, airports, and seaports (GoK, 2018). Not only do cargo owners in Kenya benefit from the high quality of transport services, but so do shipping lines, which may focus on meeting the needs of its immediate clients, such those who need packages delivered. The transport service businesses play a vital role in influencing clients on decisions concerning the choice of carriers. For instance, in 2018, container throughput in Kenya exceeded 1.2 million Twenty-Foot Equivalent Units (TEUs), which is more than the 4% annual growth rate predicted for the previous five years. More importantly, this volume increased steadily, reaching 1.57 million TEUs by 2021. Stable GDP growth, prudent government investment, domestic demand, private consumption, and infrastructure development all played roles in the increase (FitchGroup Company, 2017). Because of these developments, logistics management is now an essential factor in business competitiveness.

2. Performance of Logistic firms

The logistics firm needs to hold and manage the right logistics management practices that can enable it satisfy the needs of its customers, a logistics key performance indicator (KPI) can be used by firms to measure performance within the premises. Logistics KPI can measure a variety of metrics most of which pertain to purchasing, warehousing, transportation, delivery of goods and financials (Barnes, 2017).

Logistics management has added a great value to the GDP in 2021 by contributing approximately 11.7 billion US dollars that was highest compared to the 2021 and equals 8.03% of the GDP this is according to the country strategy paper 2021.

For the past ten years, government and practitioners have paid close attention to logistics management (Tilokavichai, et al., 2012). Because operational success has a favourable impact on a company's financial performance, understanding the significance of sustainability in logistics management was essential for gaining a competitive edge (Tilokavichai, et al., 2012). Every organization wanted to make a good first impression with its logistics management because it involved a wide range of tasks, such as customer service, order processing, inventory management, transportation, storage, packaging, demand and forecasting, production planning, purchasing and procurement, facility location, and distribution, all of which were supported by a massive information flow. This is only possible if logistics performance is managed to assure the firm's sustainability (Tilokavichai, et al., 2012).

The performance of logistics firms typically relates to delivery service, logistics cost and linked to capital. The expectation from the clients is that transport service companies should use shorter delivery times alongside precise and accurate services and efficiency in logistics management (Spillin, Meginnis & Liu, 2013). The choice on the logistics management practices service depends on the kind of business undertaken as well as the services being sought. For instance, some goods are better transported by use of cars as opposed to a motorbike. Some logistics firms are great for large deliveries that require a truck. It is also necessary to be familiar with the operational hours of the company, and make confirmation on the time alignment with client's schedule.

3. Transportation Management and Performance

The end goal is a decrease in the overall expense of logistics associated with international trade. From a logistics perspective, companies can save money by using transportation instead of constructing and staffing costly distribution centers and storing their products in-house (Balaker, 2016). If we can reliably and promptly convey what customers request from a distance production facility, we do not need inventory packed in several warehouses near every customer. Manufacturers have discovered that they can often reduce total logistics costs by exchanging the cost of transportation for the cost of warehousing and inventory, with the savings from the latter typically outweighing the latter by a significant margin. True if we have access abundant high-quality modes of travel (those that are both swift and dependable) at affordable per-mile rates (Ascheur, 2015).

Njeri (2016) conducted a study to determine how oil transport affected the performance of oil marketing firms in Rwanda. The study used a survey with a descriptive design, administering questions to the intended audience. Personal interviews with respondents served as the method of administering questionnaires. Since the population was split into oil-related companies to ensure adequate representation, stratified random sampling was employed to choose the sample. The study found a significant correlation between oil-marketing organizations' performance in Rwanda and transportation logistics management.

A study by Bashuna (2013) on logistic management practices established transport management practice as one of the components of logistic management practice that demands the attention of the firm. In this case, transport management practice focuses on optimization of the cost-effectiveness of supply chain processes. This helps in the aspect of capturing the firm's competitive advantage. The practice entails control, security, and management of the movement of goods to and from the firm, which focuses on saving cost of transportation, therefore, ultimately contributing to supply chain performance.

4. Statement of the Problem

Logistics management is one of the most crucial sectors in the country as it accounts for approximately 10% of GDP and 10% of formal employment. According to Njoroge (2018) the sector serves as an important tax collection point as Value Added tax was gathered at all levels. Hence there is need to improve the performance and raise the productivity in the logistics firms as the country's economy heads towards a 10% growth rate.

However the logistics firms are facing various challenges and in the recent years, the important players that operates internationally like Notify logistics, wefarm and Kune food have closed due to high cost of operation (C.Lammgard,2012). Consequently, the contribution of the logistics sector to the GDP has been progressively reducing and this shows that there is need for new approach with an intention of improving the performance of the logistics firms in order to attain the Vision 2030 (KNBS,2012)

By focusing on the "last mile" problem in an e-commerce setting, logistics management, a component of logistics, has grown in importance for practitioners and researchers. The logistics firms are not immune to intense competition. Firms are confronting new international competition even in their own markets. With more companies competing for logistics contracts around the world, it might be difficult for a single company to keep up. Organizational difficulties must be resolved in order to be ready to face these threats. At the same time, demand to optimize the quality and costs of services is mounting on firms (Okeyo, 2016).

A number of studies have been done in the area of logistic management practices and their influence on performance. The study by Pan et al. (2019) posits that the parcel delivery services companies face different challenges that entail fierce national competition, low margin levels within the transport industry in comparison to the demand services from clients alongside strict government regulations. Despite the performance of such models being addressed in the literature (Archetti et al., 2016; Wang et al., 2016; Chen et al., 2017), the perspective of the influence of logistics management practices on logistics firms is rarely addressed (Fitch Group Company, 2017). Statistics from Kenya's the different contexts, focus differences and mixed findings as reported above, this study was to assess the influence of logistics management practices on logistics services communication commission show that, despite the aforementioned difficulties, the logistics firms has been expanding steadily since the year 2000 (CCK, 2019). Considering firm's performance from a Kenyan context.

5. Scope of the Study

This study focused on logistics firms in Kenya with specific study area being Nairobi County. The topic of the study was Logistics management practices and performance of logistics firms in Nairobi County, Kenya. The stud considered only four core aspects of logistics management, which include warehousing management, management of inventory, processing of order and management of transportation. These core activities take place in every logistics chain of a firm while supporting activities vary from company to company (Njambi & Katuse, 2013). The time of undertaking the study may be limited.

6. Descriptive Statistics

The objective of the study was to assess the effect of logistics management practices on firm performance of logistics firms in Nairobi county. The descriptive statistics for transport management was based on the responses received as shown in the table 1 next page.

Table 1;

Statement	N	Min	Max	Mean	Std. Dev
TMS 1: Fleet management system	87	2	4	3.54	0.954
TMS2: Route planning system	87	2	4	3.29	0.973
TMS 3: Customized customer transportation schemes	87	2	4	3.48	0.890
TMS 4: Adequate Vehicle maintenance policy	87	4	5	4.10	0.301
Weighted Average				3.60	.780

Descriptive Statistics on transportation management

Descriptive results in Table 1 shows that there is use of transport management system in well-coordinated fleet management system (M= 3.54, S.D = 0.954), that the respondents neither agreed nor disagreed that the TM system helps in reducing the Route planning system (M= 3.29, S.D= 0.973),and that they agreed on the issue that the Customized customer transportation schemes is helpful in their organization (M=3.48, S.D.=0.890). On the other hand, the respondents agreed on both issues that the TM system is efficient as it helps in managing adequate vehicle maintenance in their organization (M= 4.10, S.D. = 0.301), affects the level of performance of logistic firms.

The researcher also showed that transportation management systems help the logistics firms to enhance their performance. It is concluded that control activities are an important factor in increasing performance of logistics firms. The result revealed that the application of transport management System is significant to the performance of the logistics firms.

Descriptive Statistics on Performance of Logistics firms

The study’s dependent variable was Performance of Logistics Firms. The results is presented in table 2.

Statement	N	Min	Max	Mean	Std. Dev
PLF 1: There is reduction of market share	87	2	3	2.97	0.194
PLF 2: Low return on investment	87	1	4	2.72	0.626
PLF 3: Reduction in profit	87	2	3	1.59	0.431
PLF 4: Reduction in complaints.	87	2	4	1.53	0.567

PLF 5: Level of customer satisfaction	87	1	3	1.94	0.797
Weighted Average				2.42	0.831

Table 2 shows that performance of logistics firms in the logistic firms in Nairobi County is very low. This is shown by the weighted average mean of 2.42, which indicates that the respondents generally disagree that there is performance of logistics firm in Nairobi County. Out of the five indicators of performance of logistics firm, the respondents generally disapproved the fact that the customers are satisfied because there is reduction of market share is effective ($M = 2.72, SD = 0.194$). The findings are in line with the report from (KNBS, 2012) which shows that performance of logistics firms in Kenya is very poor. It is therefore concluded that control activities practices are enhanced by following the recommended control models in the logistic firms in Nairobi County in order to ensure that performance of logistic firms enhanced.

Inferential Analysis

Correlation analysis shows the direction, strength and significance of the relationships among the variables of study (Sekaran, 2000). To establish whether there was a relationship between the variables, a correlation analysis was conducted. The correlation analysis shows the direction, strength, and significance of the relationships among the variables of the study. A positive correlation indicates that as one variable increases, the other variables also increased. On the other hand, a positive correlation indicates that as one variable increases the other variable increases (Sekaran, 2003).

Table 3: Correlation between Study Variables

	Y	X₁
Y	1	
X₁	0.769***	1

Note: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table From the results in Table 3, several conclusions can be drawn. First, it has been indicated that Transport Management System(X_1) is positively and significantly correlated with performance of logistics firms in Nairobi County. This is indicated by the correlation coefficient of 0.769 that is significant ($p < 0.01$). This implies that there is a strong and significant positive association between Transport Management System and performance of logistics firm in Nairobi County implying that Transport Management System leads to an increase in the performance of logistics firms Nairobi County.

7. Summary of Findings

The general objective of the research was to investigate the effect of Logistics Management Practices on performance of Logistic firms in Nairobi County. The specific objectives of the study was to; assess the effect of Transportation Management on performance of logistic firms in Nairobi County, examine the effect of Warehousing management system on performance of logistic firms in Nairobi County, assess the effect of Order Processing Management System on performance of logistic firms in Nairobi County, and to establish

the effect of Inventory Management System on performance of logistic firms in Nairobi County. Regression results from the analysis based on the first objective show that control activities have a positive significant effect on performance of logistic firms in Nairobi County. This implies that holding all factors constant, a unit increase in control activities leads to a significant increase in performance of logistic firms in Nairobi County.

References

- Adewole, A., & Struthers, J. J. (Eds.). (2018). *Logistics and global value chains in Africa: The impact on trade and development*. Springer.
- Acciaro, M. (2011). *Service differentiation in liner shipping: advance booking and express services*. *International Journal of Shipping and Transport Logistics*, 3(4), 365.
- Ambe, I. M. (2012). *Determining an Optimal Supply Chain Strategy*. *Journal of Transport and Supply Chain Management*, 6 (1), 126-147.
- Ang'ana, B. O. (2012). *Determinants of effective supply chain management performance in road construction projects in Kenya (Masters thesis)* Retrieved from URI: <http://irlibrary.ku.ac.ke/handle/123456789/12474>
- Awino, Z. B. (2015). *Organizational Structure and Performance of Large Manufacturing Firms in Kenya: An Empirical Investigation*. *Journal of Business and Economics*, 6 (11), 1883-1891.
- Bozarth, C. C., Handfield, R. B., & Weiss, H. J. (2008). *Introduction to operations and supply chain management*. Upper Saddle River, NJ: Pearson Prentice Hall. Balci, G., Cetin, I. B., & Tanyeri, M. (2018). *Differentiation of container shipping services in Turkey*.
- Cannon, B. (2018). *Inland Container Depots and the Future of Handling East Africa's Cargo*. Retrieved April 25, 2018.
- Chambers, D., Lacey, N. (2011). *Modern Corporate Finance, Sixth Edition*, Michigan: Hayden McNeil Publishing.
- Chen, H., Frank, M. Z., & Wu, Q. W. (2007). *What actual happened to the inventories of American companies between 1981 and 2000? Management sciences*, 51, 1051- 1031.
- Chimwani, B.I., Iravo, M.A., & Tirimba, O.I. (2014). *Factors Influencing Procurement Performance in the Kenyan Public Sector: Case Study of the State Law Office*. *International Journal of Innovation and Applied Studies*, 9 (4), 1626-1650.
- Christopher, M. (2005). *Logistics & Supply Chain Management*. (3rd ed.). London: PrenticeHall/Financial Times. Creswell, J. W. (2013). *Qualitative inquiry and research design: Choosing among five approaches* (3rd ed.). Thousand Oaks, CA: Sage.
- Draugalis, J.R., Coons, S.J., & Plaza C.M. (2008). *Best practices for survey research reports: A synopsis for authors and reviewers*. *Am J Pharm Educ.*; 72: Article 11.
- Eroglu, C., & Hofer, C. (2011). *Lean, leaner, too lean? The inventory-performance link revisited*. *Journal of Operations Management*, (29), 356–369

- Green, K.W. Jr & Inman, R.A. (2005), "Using a just-in-time selling strategy to strengthen supply chain linkages", International Journal of Production Research, 43(16). 3437-3453.*
- Ideet, I. L., & Wanyoike, D. (2012). Role of Buyer-Supplier Relationship on Supply Chain Performance in the Energy Sector in Kenya: A Survey of Kenya Power and Geothermal Development Companies.*
- Jooste C, Kim V., & Roberts-Lombard M (2015), "Reinter mediation Strategies For Disinter mediated Travel Agencies: A Strategic Marketing Perspective", International Business & Economics Research Journal, 14 (3).*
- Kanda, M. K. & Iravo M. A. (2015). Access Factors Affecting Supply Chain Efficiency of Medical Supplies in public Health Centres in Kenya: A Case Study of Public Health Centres in Elgeyo Marakwet Count. International Journal of Academic Research in Accounting, Finance and Management Sciences, 5 (2), 32-41.*
- Karimi, E. & Rafiee, M. (2014). Analyzing the Impact of Supply Chain Management Practices on Organizational Performance through Competitive Priorities (Case Study: Iran Pumps Company).*
- Kariuki, A., Murimi, C. (2015). Employee empowerment and organizational performance of Tata Chemical Magadi Ltd, Kenya. European Journal of Business and Management, 7(8), 190- 200.*
- Kitheka, S.S., & Ondiek, G.O. (2014).Inventory Management Automation and the Performance of Supermarkets in Western Kenya. International Journal of Research in Management & Business Studies, 1 (4.), 9-18.*
- Kitonga, D.M., Bichanga, W.O., & Muema, B.K. (2016).The Role of Determining Strategic Direction on Not-For-Profit Organizational Performance in Nairobi County in Kenya. International Journal of Scientific & Technology Research 5(5), 28-32*
- Mbalwa, P.N., Kombo, H., Chepkoech, L., Koech, S., & Shavulimo, P.M. (2014). Effect of Corporate Governance on Performance of Sugar Manufacturing Firms in Kenya: A Case of Sugar Manufacturing Firms in Western Kenya. IOSR Journal of Business and Management, 16 (11), 86-112.*
- Mogere, K., Oloko, M. & Okibo, W. (2013).Effect of Inventory management practices on Operational Performance of Tea Processing Firms: A Case Study of Gianchore Tea Factory, Nyamira County, Kenya. The International Journal of Business & Management, 1 (5), 12-27.*
- Mukopi, C.M., & Iravo, A.M. (2015).An Analysis of the Effects of Inventory Management on the Performance of the Procurement Function of Sugar Manufacturing Companies in the Western Kenya Sugar Belt. International Journal of Scientific and Research Publications, 5(5), 2-14.*
- Muma, B. O., Nyaoga, B. R., Matwere, B. R. & Nyambega, E. K. (2014).Green Supply Chain Management and Environmental Performance among Tea Processing Firms in Kericho County, Kenya. International Journal of Economics, Finance and Management Science 2(5) 270-276.*
- Muthini, J. N., Namusonge, G.S., Guyo W. & Shale N.I (2017) Role of Government Economic Regulations on Petroleum Supply Chain Management, 131-139.*
- Mwangi, A.G. (2013). Inventory Management and Supply Chain Performance of Non Governmental Organizations in the Agricultural Sector, Kenya. Master's Thesis Presented to University of Nairobi.*

- Nduire, J. (2018, October 17th). Positive impact of SGR on the Kenyan economy. The railway is designed to enhance transport operations in the country*
- Okeyo, M. (2016). Effects of integrated national transport policy on transport service delivery in Nairobi City County, Kenya. University of Nairobi, Department of Urban and Regional Planning. Nairobi: University of Nairobi.*
- Otieno, B. (2018, March 27th). Standard Gauge Railway extension to cover berth 10 at the Mombasa Port. Shipping and logistics*
- Onchoke, B. N., & Wanyoike, D. M. (2016). Influence of Inventory Control Practices on Procurement Performance of Agrochemicals Distributors in Nakuru Central Sub-County, Kenya. International Journal of Economics, Finance and Management Sciences, 4 (3), 117- 126.*
- Osoro, A., Muturi, W.M., & Ngugi, P.K. (2016). Determinant Affecting Performance of Supply Chain Systems in the Petroleum Industries in Kenya. European Journal of Logistics Purchasing and Supply Chain Management, 4 (4), 44-63.*
- Railways. (2019). Mombasa-Nairobi Standard Gauge Railway Project. Railway Technology.*
- Saunders, M. L. (2012). Research Methods for Business Students (6th ed.). Pearson Education Limited.*
- Seghete, U.G. (2016). Factors Affecting the Performance of Supply Chain Financing In Kenya: A Case Study of Commercial Bank of Africa, Kenya. Master's Thesis Presented to United States International University – Africa.*
- Shi, X., & Liao, Z. (2015). Inter-firm dependence, inter-firm trust, and operational performance: The mediating effect of e-business integration. Information & Management, 52(8), 943-950.*
- Shisia, A., Sang, W., Matoke, J., & Omwario, B. N. (2014). Strategic Innovation and Performance of Public Universities in Kenya. European Journal of Business and Management, 6 (23), 259-269.*
- Singh, D. K. (2017). Influence of technological innovation on performance of small manufacturing companies in India. International journal of productivity and management, 66 (7), 838-856.*
- Silvestro, R., & Lustrato P. (2014). Integrating financial and physical supply chains: the role of banks in enabling supply chain integration. International Journal of Operations & Production Management Jarrett, 34 (3), 298-324.*
- Standard, N. (2018). Honeymoon over for Standard Gauge Cargo Shippers. Nairobi: The Standard Digital.*
- Standard, T. (2019). Mombasa-Nairobi Standard Gauge Railway. (cc BY- SA 3.0).*
- Shisia, A., Sang, W., Matoke, J., & Omwario, B. N. (2014). Strategic Innovation and Performance of Public Universities in Kenya. European Journal of Business and Management, 6(23), 259-269.*
- Wabwile, L.N., & Namusonge, G. S. (2015). Determinants of Outsourcing as a Competitive Strategy in Supply Chain Management of Manufacturing Companies in Kenya. A Case Study of East African Breweries Limited. International Journal of Academic Research in Business and Social Sciences, 5(5)190-202.*

- Waithaka, S.T., Mburu, T.M., Koror, J., & Muathe, S. (2012). *Environmental Factors that influence Supply Chain Management Implementation in the Manufacturing Industries in Kenya: A Case of Manufacturing Industries in Nairobi, Kenya*. *ABC Journal of Advanced Research*, 1 (2), 1-8.
- Wangari, K.L., Kagiri, A.W. (2015). *Influence of Inventory Management Practices on Organizational Competitiveness: A Case of Safaricom Kenya Ltd*. *International Academic Journal of Procurement and Supply Chain Management*, 1(5), 72-98.
- Waweru, M. (2016). *Impact of infrastructure development on economic competitiveness in Kenya*. *University of Nairobi, Humanities and Social Sciences (CHSS) {23318}*. Nairobi:
- Wekesa, C. W. (2016). *Effects of Development on Direct Investment in Kenya*. *Journal of infrastructure development* 8 (2) 1-18.
- Walker, R. M., Chen, J., & Aravind, D. (2015). *Management innovation and firm performance: An integration of research findings*. *European Management Journal*, 33(5), 407-422.
- Yang, Y., Lee, P. K., & Cheng, T. C. E. (2016). *Continuous improvement competence, employee creativity, and new service development performance: A frontline employee perspective*. *International Journal of Production Economics*, 171, 275-288.