

THE VARIOUS TOOLS AND CHALLENGES OF LOGISTICS EFFECTIVENESS IN THE ORGANIZATION IN BOLLORE AFRICA LOGISTICS, SOUTH SUDAN: A CROSS SECTIONAL STUDY.

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Abstract

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Background

This study aims to assess the various tools and challenges of logistics effectiveness in the organization. in Bollore Africa Logistics, (South Sudan) Ltd.

Methodology

The study used a descriptive and quantitative research design which helped to bring out the relationship between the two variables. The study sample size was 80 respondents and the actual respondents are 50.

Results

80% of the respondents were male employees while 20% of the respondents were female employees in Bollore Africa Logistics Company. The study found out that vehicle and route tracking systems and warehouse operations management system software were the key tools used in logistics and ware operations to ensure that travel cost is proportional to travel distance, travel cost reduction as well as having a more accurate distance model leads to system designs with lower costs.

Conclusion

The conclusions drawn from the study findings indicate that: Bollore Africa Logistics Company needs to use ICT in logistics and Warehouse management system software, and vehicle tracking devices to determine the movement of vehicles on the various routes using the geographical information system which establishes the distance traveled and covered to avoid theft of the product/goods while in transit and to gain a competitive edge however, still affected by network problems.

Recommendations

Internet Network failures, the study recommends the use of a stable network for internet and web services be outsourced from a reliable service provider especially wireless connections to ensure the use of vehicle tracking systems in logistics management, vehicle tracking devices to determine the movement of vehicles on the various routes using the geographical information system to avoid theft of the product/goods while in transit and to gain a competitive edge in business operations as wells fully operationalize the use of other tools like Site location, Warehouse management system software

Keywords: Tools, Challenges, Logistics Effectiveness, Organisation, Bollore Africa Logistics, South Sudan.

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Introduction

Logistics is a process of moving and handling goods and materials, from the beginning to the end of the production, sale process, and waste disposal, to satisfy customers and add business competitiveness (Tseng, Yue, & Taylor, 2005). It is the process of anticipating customer needs and wants; acquiring the capital, materials, people, technologies, and information necessary to meet those needs and wants; optimizing the goods or (Okoroji et al 2017) service-providing network to fulfill customer requests; and utilizing the network to fulfill customer requests in a timely way (Tseng, at el., 2005). Simply, logistics is customer-oriented operation management and it involves the delivery of

products or services for the client with assured quality and quantity.

Impact of logistics on organizational performance of Bollore Africa Logistics (South Sudan) Ltd with a focus on the interaction of shipment, transport, and warehousing industries as well as its operation and management. The study specifically is a tool to gather information about the different logistics tools, the application areas, the challenges, and solutions that could be useful to improve the logistics performance in urban commodities. It also intends to examine the implications for the government as well as the private sector in ensuring that future transport

The organization uses various tools for logistics and supply chain management which include EDI (Electronic Data Interchange, Data Warehouse - Container and equipment Control System, Container and storage planning system), manufacturers, and transport/logistics for improving quality and efficiency both in services and operation is the primary of logistics. For transport/logistics firms, improving communication and information exchange with customers thus reducing costs hence improving communication and integration within the organization results in faster planning and system integration which increase revenue and income. Logistics use in manufacturing is mostly applied for warehousing management, order processing, purchasing and procurement, customer relationship management, and material handling. this study aims to assess the various tools and challenges of logistics effectiveness in the organization. in Bollore Africa Logistics, (South Sudan) Ltd.

Methodology
Research Study Design

The study used a descriptive and quantitative research design which helped to bring out the relationship between the two variables.

Target Population

The target population comprised 7 Heads of Department together with their various 38 staff and 5 service providers. This helped to obtain complete information for the study which comprised 50 respondents.

Sampling design/methods

To ensure good representation and validity of the findings, a stratified random sampling method was used. Stratified random sampling was used for selecting the respondents from different departments from which opinions were sought during the research. This was because the stratified random sampling technique gave unbiased data covering the entire departments in Bollore Africa Logistics (South Sudan) Ltd.

Sampling design
Sample Size

The study sample size was 80 respondents and the actual respondents are 50. These were categorized in the following manner. Procurement, ICT, Stores, Administration, Marketing and sales, Logistics, and service providers.

Table 1: Showing population and Sample size of the study.

Department	Number of respondents	Sample size
Procurement	6	10
ICT	7	12
Stores	5	8
Administration	8	10
Marketing and sales	10	15
Logistics	9	15
Service providers	5	10
Total	50	80

Source: Primary Data

Sources of data

Data was collected from both primary and secondary sources.

Primary sources

The primary data was collected from the members and staff of Bollore Africa Logistics (South Sudan) Ltd.

Secondary sources

Secondary data was obtained from the store records, entity ledgers and journals, purchase requisitions, and contract award documents from various departments. Also data from libraries especially Barclays Library from Kyambogo University and other libraries like Makerere University Business School was of great use.

Data collection instruments

The study employed the following data collection methods;

Questionnaires

The questionnaires were both open and closed-ended to enable the respondents to understand them and answer them appropriately with ease. It included boxes to be ticked by the respondents. They were of use since they helped the researcher gather data from the respondents considered to be rich in information.

Observation

This method was used in the field to collect data on certain non-physical aspects of the study, which do not necessarily need interaction with respondents, or are of too much contention to avoid asking respondents. This was used since

it helped the researcher to avoid clashes with respondents.

Data Collection Procedure

Data in the field is to be collected by getting an introduction letter from the head of department procurement and logistics management of the University to introduce me to the relevant local and management staff of Bollore Africa Logistics (South Sudan) Ltd. When granted permission by the organization, the researcher then made appointments with the respondents and interacted with them in their free time.

Data Presentation and Analysis

Data was analyzed using tables, bar graphs, and pie-charts using computer packages, and descriptive tools of frequencies with narrative summaries and computed in percentages method to determine the relationship between the variables.

Results

Gender of respondents

The respondents of the employees of Bollore Africa Logistics Company were asked to give their gender and below were the findings.

Table 2: gender of respondents.

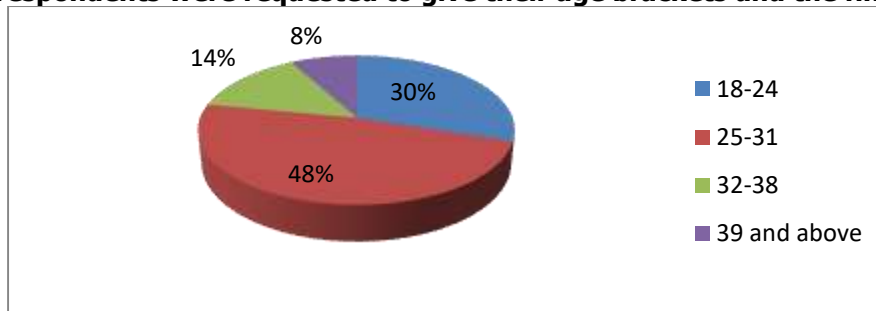
Gender of the employees	Number of respondents	Percentage (%)
Male	40	80
Female	10	20
Total	50	100%

Source: primary data from the field study

The table shows that 80% of the respondents were male employees while 20% of the respondents were female employees in Bollore Africa Logistics Company. Hence it clearly showed that there was gender disparity because most of the females are employed to perform light jobs like sorting, packaging of the materials in the stores, and other office duties compared to the 80% of the male employees who are employed to perform the heavy duties of the

organization, especially in the stores, clearing and forwarding, offloading and loading of the products while in the stores and transportation service to the various destination points. This indicates that the work in Bollore Africa Logistics Company includes loading, offloading, storage, movement, transportation, and lifting needs strong and energetic people, and thus the reason for men being mostly taken to perform these duties and functions.

Figure 1. The respondents' age bracket
The respondents were requested to give their age brackets and the findings.

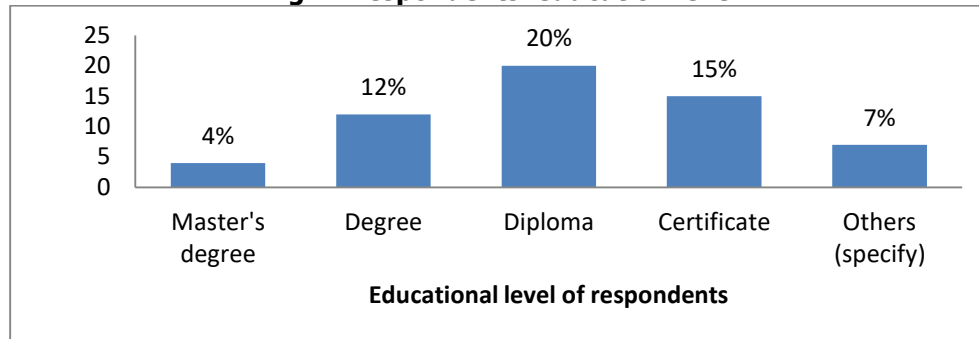


Source: primary data from the field study

The pie chart indicated that 48% of employees were age between 25-31 years of age while 30% years of the employees were aged 18-24 years of age, 14% of the employees indicated that they were aged between 32-38 years of age and 8% of the employees were aged 39 and above. Hence the information obtained from Table 4.2

shows that 48% of the employees are in the age range of 25-31 years. Therefore, 78% of the employees lie between the age of 18 and 31 years of age indicating that people in this age bracket are still very strong and energetic hence managing most of the activities in Bollore Africa Logistics Company.

Fig 2: Respondents' education level



Source: primary data from the field study

The bar graph indicated that 40% of the respondents who are employees of Bollore Africa Logistics Company were diploma holders, while 30% of the respondents were certificate holders since they at least completed a certificate of education, advanced certificate of education, and other certificates of education respectively, 14% of the respondents indicated that they were holders of other qualifications or equivalents, while 12% of the respondent were degree holders and 4% of the respondents were master's degree holders in Bollore Africa Logistics

Company. Hence the majority of the respondents were diploma holders constituted of 40% thus all the employees/respondents were knowledgeable which ensured easy data collection from the field. Most of the respondents are diploma and certificate holders since the work in Bollore for example lifting, movement, transportation, and storage needs young and energetic people, so these persons grab the jobs immediately after these diploma and certificate courses to upgrade in the future.

Table 2: Departments where respondents belong;

Department	Number of respondents	Percentage (%)
Procurement	6	12
ICT	7	14
Stores	5	10
Administration	8	16
Marketing and sales	10	20
Logistics	9	18
Service providers	5	10
Total	50	100%

Source: primary data from the field study

Table 3, indicated that 20% of the respondents worked in the marketing and sales department while 18% of the respondents worked in the logistics department in transit and transportation of goods and services to the various destinations for customers and supply exchanging information, money, and services, 16% of the respondents were employed under the administration department to manage and run daily routine company activities and functions assigned from time to time while 14% of the

respondents were in ICT department in the company, 12% of the respondents worked under the procurement and both 10% of the respondents work under the store's department and service providers. Hence the majority 50% of the respondents according to the information obtained indicated that they were employed under the logistics and warehouse management department at Bollore Africa Logistics Company a leading service provider in the logistics in the country.

Table 3: Key logistics tools used;

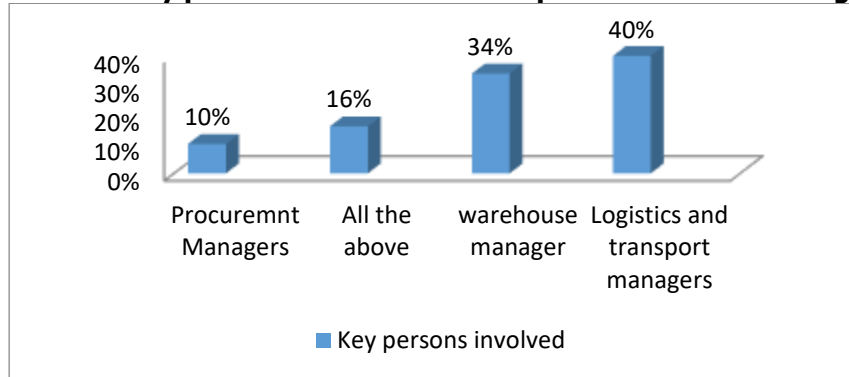
Key tools of logistics management system approach	Number of respondents	Percentage (%)
Warehouse management system software	15	30
Vehicle and route tracking system	20	40
Site location	10	20
All the above	5	10
Total	50	100%

Source: primary data from the field study

From the Table 4, indicated that 40% of the respondents showed vehicle and route tracking system as a key logistics tool used by Bolllore Africa Logistics Company, while 30% of the respondents indicated ware house management system software as a tool used in logistics management system approach by Bolllore Africa Logistics Company, 20% of the respondents indicated site location while 10% indicated all the above tools were employed by Bolllore Africa Logistics Company in the management of the logistics management system since they were informed of

the presence of the logistics management system used by Bolllore Africa Logistics Company .therefore most of the logistics management software with the majority 40% of the respondents indicated vehicle and route tracking system to ensure the items, goods and services in transit are not stolen or diverted by the drivers and logistics officers while in transit since its monitored on satellite system and route tracking to avoid diversions unless authorized for change of route plan by the ICT department.

Figure 3: The key persons involved in the implementation of the logistics;



Source: primary data from the field study

The fig 3, showed that 40% of the respondents indicated logistics and transport managers as the key persons involved in the operation and implementation of the logistics systems approach in Bolllore Africa Logistics Company, while 34% of the respondents indicated warehouse managers were the key persons involved in the implementation of the logistics, 12% of the respondents indicated all the above persons were responsible for the implementation of the logistics management in Bolllore Africa Logistics Company and 16% of the respondents showed it were the procurement managers responsible for the implementation of logistics

apart from the information and communication managers who have the skills and knowledge in Bolllore Africa Logistics Company. Hence according to the information obtained from the table above, therefore from the findings it indicated that the majority 40% of the respondents were logistics and transport managers hence responsible as key persons in the implementation of the logistics management system approach in Bolllore Africa Logistics Company since they are in control of all the company's fleet management system for efficient and effective monitoring of stock movement and storage within and outside the company.

Table 4: Potential benefits of using logistics systems;

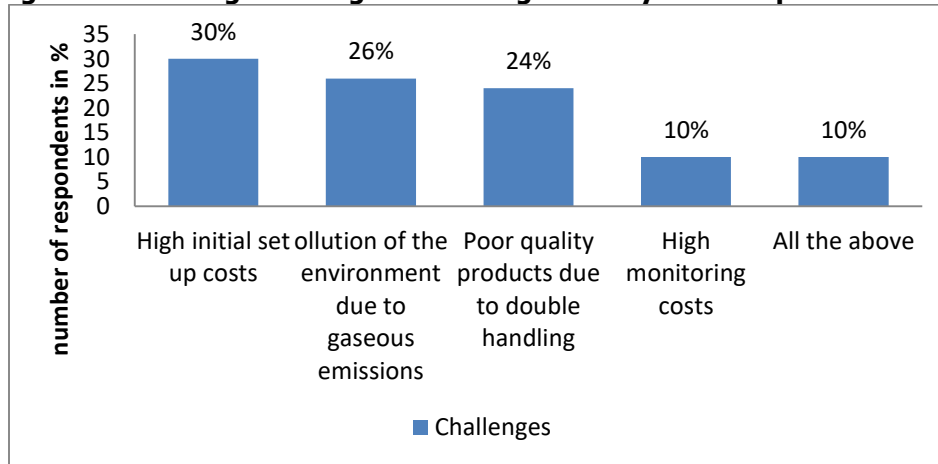
Potential benefits	Number of respondents	Percentage (%)
Customer satisfaction	14	28
Quality products and services	13	26
Reduced lead time	10	20
Reduced theft and pilferage	10	20
All the above	3	6
None of the above	0	0
Total	50	100%

Source: primary data from the field study

As seen from the table, indicated that 28% of the respondents showed customer satisfaction as the potential benefit accrued from the use of the logistics management system by Bollore Africa Logistics Company, while 26% of the respondents indicated quality products and services, 20% of both the respondents indicated reduced lead time and reduced theft and pilferage as the potential benefits while 6% of the respondents indicated all the above benefits were acquired from the use of logistics system by Bollore Africa

Logistics Company and 0% of the respondents indicated none of the above were the potential benefit of using logistics system approach by Bollore Africa Logistics Company. Hence according to the majority of the respondents who constituted 28% have indicated customer satisfaction as the potential benefit of the implementation of the logistics system approach by Bollore Africa Logistics Company since they are the end users of the products.

Figure 4: Challenges for logistics management systems implementation;



Source: primary data from the field study

As seen from fig 4, 30% of the respondents indicated high initial set up costs as the challenge facing the implementation of logistics management system approach in Bollore Africa Logistics Company since they are very costly to purchase, maintain and monitor the various systems, while 26% of the respondents indicated pollution of the environment due to the gaseous emissions transmitted

into the environment leads to the destruction bio diversity, 24% of the respondents indicated poor quality products due to double handling caused by accidents of the products while in transit hence deterioration in the quality of the final products, 10% of the respondents both indicated high monitoring costs affects the operation and implementation of logistics management system approach by Bollore Africa

Logistics Company since they have to constantly train and hire experts to perform some specialized duties of tracking the device, point of the disruption it occurred at and installation of monitoring alert cameras on the vehicles, and 10% of the respondents indicated all the above challenges were faced by Bollore Africa Logistics Company in the implementation logistics system approach. Hence the majority of the respondents who constituted 30% indicated high initial set-up costs as a major challenge to the implementation of logistics system management by Bollore Africa Logistics Company.

Discussion.

From the findings, we found out that the tools used are vehicle and route tracking system as a and ware house management system software as the key tools used in logistics and ware operations which is also emphasized by most authors for example by (Campbell, Labelle, and Langevin 2001) who use this approach in commercial transportation contexts because it provides a simple and accurate distance approximation for use in an interactive GIS-based decision support system in logistics while the findings, found out that Warehouse management was also a key part of the overall problem of logistics and ware house operations management as clearly indicated by the author (Johnston, Taylor, et al. 1999) who describes a geographical information system (GIS)-based software system for managing and integrating multi-facility warehousing and production systems that are distributed within a relatively large geographical area to reduce on the effect of theft of items in stores, monitor work in progress in the ware house so that it meets the set required standard ware house management since travel cost is proportional to travel distance, and travel cost reduction as well as having a more accurate distance model leads to system designs with lower costs. However, Bollore has it installed in all the vehicles for tracking vehicles. As a researcher, I agree with the findings and emphasis of the authors, like (Monczka et al 2005)

Still, there is a need for management to monitor the items in stock, especially under warehouse operation physically to ensure accuracy because the system can be tempted at any time and cause a big loss to the organization., the logistics network consists of suppliers, warehouses, distribution centers, retail outlets, as well as raw materials, work-in-process inventory. According to (Van Weele, 2005) Key strategic decisions about any logistics network configuration include: determining the optimal number of warehouses, the location of each warehouse, the size of each warehouse, Allocating space for products in each warehouse, determining which products need to be transported, and in what quantities, the best routes for a vehicle in a transportation network.

High set costs incurred in the purchase of the logistics management system software, and training of employees to use the available technology is costly in terms of initial set-

up capital requirement by the organization due to limited capital. (Kenneth Lysons, 2006), Double handling due to accidents caused by the collision of trucks during the loading and offloading of products in the warehouse leads to high costs incurred to pay for products damaged by the workers/employees (Miller, Wu, and Hung, 1999).

Conclusion

The conclusions drawn from the study findings indicate that: Bollore Africa Logistics Company needs to use ICT in logistics and Warehouse management system software, and vehicle tracking devices to determine the movement of vehicles on the various routes using the geographical information system which establishes the distance traveled and covered to avoid theft of the product/goods while in transit and to gain a competitive edge however, still affected by network problems.

Recommendation

Internet Network failures, the study recommends the use of a stable network for internet and web services be outsourced from a reliable service provider especially wireless connections to ensure the use of vehicle tracking systems in logistics management, vehicle tracking devices to determine the movement of vehicles on the various routes using the geographical information system to avoid theft of the product/goods while in transit and to gain a competitive edge in business operations as wells fully operationalize the use of other tools like Site location, Warehouse management system software.

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List of abbreviations

OLAP	On-Line Analytical Processing
GIS	Geographical Information System
WMS	Warehouse Management Systems
CSCMP	Council of Supply Chain Management Professionals
ICT	Information and Communication Technology
EDI	Electronic Data Interchange
TMS	Transportation Management systems
DRP	Distribution requirements planning
DSS	Decision Support System
DEA	Data Envelopment Analysis
BPM	Business Process Management

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Source of funding

The study was not funded.

Conflict of interest

The author had no conflict of interest.

Author Biography

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References

Publisher details:

- 1) Kenneth Lysons (2006) 6th edition, purchasing and supply chain management Pearson learners, Great Britain.
- 2) Van Weele (2006) 4th edition purchasing and supply chain management Pretence hall, Great Britain.
- 3) Miller, Wu, Hung, (1999) <https://books.google.co.ug/books?id=2XjtJIUG-gMC&lpg=PA192&ots=JJumKsD4Ts&dq=miller%2C%20wu%2C%20hung%201999&pg=PT2#v=onepage&q=miller,%20wu,%20hung%201999&f=false>
- 4) Monczka et al..., (2006) 4th, purchasing and supply chain management Pearson learners, Great Britain.
- 5) D. A. Johnston, G. D. Taylor, and G. Visweswaramurthy. Highly constrained multi-facility warehouse management system using a GIS platform. Integrated Manufacturing Systems, 10(4):221–233, 1999.
- 7) J. F. Campbell, A. Labelle, and A. Langevin. A hybrid travel distance approximation for a GIS-based decision support system. Journal of Business Logistics, 22(2):165–182, 2001.
- 8) Okoroji Lazarus I., ²Moses Ntor-Ue Eba, ³Nwosu Emmanuel N., ⁴Nwagbara M. C. (2017) Measuring the Correlation between Logistics Service Quality and Consumer Satisfaction in Nigeria

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