



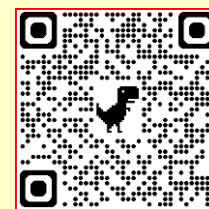
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## LOGISTICS MANAGEMENT AND SALES PERFORMANCE OF UNIVERSITY PRESS PLC IN NORTH CENTRAL NIGERIA

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### ABSTRACT

The study investigated the effect of logistics management on sales performance of University Press Plc in North Central Nigeria. The study examined the effect of logistics management practices (transport management, inventory management, warehouse management, information flow management and risk management) on sales performance of University Press in North Central Nigeria. The study adopted an ex post facto research design. The population of the study included 453 staff of University Press Plc in North Central Nigeria. The study used a census sampling approach to sample the entire population. A self-administered questionnaire was utilized for the collection of data from the participants. The data obtained was analyzed using frequency tables, simple percentages, means, standard deviations, correlation and regression analysis with the aid of the Statistical Package for Social Sciences (SPSS Version 25). The study found that transport management, inventory management, information flow management and risk management have positive and significant effect on sales performance of University Press Plc (0.028; 0.000; 0.021 and 0.000). The study, however, found out that warehouse management has an insignificant effect on sales performance of University Press Plc (0.965). The study concluded that logistics management practices have significantly enhanced the sales revenue and market share of University Press Plc. The study recommended that the management of University Press Plc should properly equip the company with the newest technologies in carrying out logistics activities in order to enhance product delivery. It should also establish and maintain a standard warehouse management system so that the right amount of stock is held and economic order quantity is achieved through proper physical distribution of the products so as to achieve higher sales performance.

**Keywords:** Transport Management, Inventory Management, Warehouse Management, Information Flow Management, Risk Management, Sales Performance.

### 1. Background to the Study

The goal of every profit-oriented business is to make sales and generate revenue, and the most successful companies are those who develop and prioritize sales. Sales performance has long been a complex puzzle for organizations, regardless of industry or size. The challenges stem from a mix of internal and external pressures that evolve with market dynamics, technological advances, and continued shifting customer expectations. Many companies have

continued to rely on inconsistent sales methodologies, without clearly defined metrics, thereby affecting their sales revenue in the market. Unlike earlier eras where the success of sales hinged largely on individual charisma, today's performance is shaped by a blend of strategy, data, technology, and human insight (Ngesa & Namusonge, 2023).

Sales performance describes changes in revenue as a result of products or services offered by companies to consumers when

comparing different periods (Ritagrace & Batonda, 2022). Sales performance can be measured using various indicators depending on the industry and business goals, but the common metrics often used include sales revenue and market share. Sales revenue is the total amount of money generated by firms from the sales of goods and services in a given period. Market share measures the percentage of customers or markets the company successfully captures over a period of time (Aopare, Anane & Mensah, 2024).

The success of publishing firms depends on their ability to continuously improve sales performance metrics and remain competitive. In recent years, the landscape of the publishing industry in Nigeria has however witnessed significant transformations amidst a backdrop of both opportunities and challenges. As globalization and technological advancements continue to reshape the sector, Nigerian publishing firms are facing a multitude of hurdles impacting their sales performance. The volatility in demand driven by shifting consumer preferences, economic uncertainties, and competitive pressures adds another layer of complexity to the sales landscape for these firms (Agbanu, Tsetim & Ibrahim, 2024).

Logistic management encompasses a spectrum of functions aimed at ensuring the efficient movement of goods, timely delivery of services, and proactive risk mitigation along the supply chain (Ijirshar, Asue, Tarumun & Audu, 2023). It is a process that integrates the movement of goods, services and information from the sourcing of raw material to the consumers (Maulana, Ubud, Sumiati, 2018). As an integral part of improving sales performance, the dimensions of logistics management include transportation management, warehousing management, inventory management, information flow management and risk management (Gebisa, 2019; Wasike & Juma, 2020; Hailu, 2022). These dimensions of logistics management are applicable and relevant to organizations. Transportation management deals with the method of meeting transport targets, including timely delivery of transportation-related information to the business and consumers as well as improved efficiency and optimal utilization of company resources (Edim & Inyang, 2022). Warehouse management is the control of the day-to-day operations of a warehouse, such as the shipping, receiving, put-away and picking of goods (Hailu, 2022). Inventory management includes methods used by companies to organize, store and substitute inventory so as to minimize the cost of ensuring that goods are properly supplied simultaneously (Nzioka & Waithaka, 2021). Information flow management is another crucial component of logistics management that ensures that the flow of raw materials and goods is accompanied by the flow of information from suppliers to customers. Risk management in logistics involves identifying, analyzing, mitigating and controlling potential hazards associated with businesses to enhance operational efficiency, reduce costs and ensure supply chain continuity (Ifekandau, Ihuoma, Renner, & Lawrence, 2024).

North Central Nigeria is home to numerous educational institutions, from primary schools to universities, and University Press Plc's core business is educational publishing. The company's operations in North Central Nigeria offer a lens into how these factors affect book distribution, pricing, and sales volume. It maintains a strong portfolio of curriculum-aligned educational materials, serving pre-primary to tertiary levels.

### 1.2 Statement of the Problem

The sales performance of University Press Plc has sharply deteriorated in recent years, a factor which has translated to huge decline in revenues. University Press Plc, one of Nigeria's oldest publishing firms, has faced a mix of internal and external challenges

impacting its sales performance in recent years. Despite recording a 21% increase in revenue reaching ₦2.63 billion in the 2023/2024 fiscal year, the company still reported a loss of ₦157.73 million after tax, largely due to macroeconomic pressures (University Press PLC Annual Report 2024). Fluctuations in demand, inadequate sales forecasting, and reliance on traditional distribution channels may be limiting the company's ability to maximize revenue.

Efficient logistics management is therefore critical to the sustainability and growth of University Press Plc, a key player in the publishing industry. Logistics costs related to transportation, distribution, information flow, and storage and customer patronage which might have compounded difficulties of the company in achieving sales performance. The problem of sales performance often has far-reaching effects on the company and if neglected it can cause a great threat to the continued existence of the company. The prevailing challenges might have resulted in a loss in revenue and market share of the company, hence the need to address them. A problem area necessitating this research study is that there is scanty literature on the role of logistics management in the Nigerian publishing industry. This study is therefore carried out to add to the existing but scanty literature in the area of logistics. This research shall therefore examine the effect of logistics management on sales performance of University Press Plc.

### 1.3 Objectives of the Study

The main objective of the study is to examine the effect of logistics management on sales performance of University Press Plc in North Central Nigeria. The specific objectives of the study include to:

- i. Ascertain the effect of transport management on sales performance of University Press Plc in North Central Nigeria;
- ii. Evaluate the effect of inventory management on sales performance of University Press Plc in North Central Nigeria
- iii. Determine the effect of warehouse management on sales performance of University Press Plc in North Central Nigeria;
- iv. Examine the effect of information flow management on sales performance of University Press Plc in North Central Nigeria; and
- v. Evaluate the effect of risk management on sales performance of University Press Plc in North Central Nigeria

### 1.4 Research Hypotheses

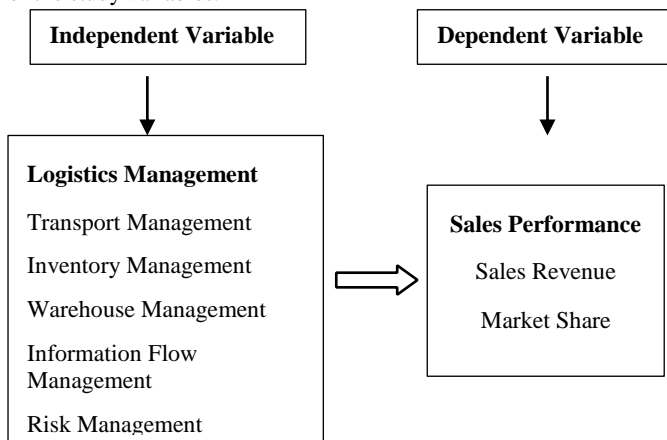
The following hypotheses have been stated in a null format:

- H0<sub>1</sub>: Transport management has no significant effect on sales performance of University Press Plc in North Central Nigeria.
- H0<sub>2</sub>: Inventory management has no significant effect on sales performance of University Press Plc in North Central Nigeria
- H0<sub>3</sub>: Warehouse management has no significant effect on sales performance of University Press Plc in North Central Nigeria
- H0<sub>4</sub>: Information flow management has no significant effect on sales performance of University Press Plc in North Central Nigeria
- H0<sub>5</sub>: Risk management has no significant effect on sales performance of University Press Plc in North Central

## 2. REVIEW OF RELATED LITERATURE

### 2.1 Conceptual Framework

The conceptual framework shows the diagrammatic representation of the study variables.



**Fig. 1:** Conceptual Model of the Study by the Researcher

**Source:** Researcher's Conceptualization (2026)

#### 2.1.1 Logistics Management

Logistics management is the process of planning, implementing and controlling procedures for the efficient and effective transportation and storage of goods including services and related information from the point of origin to the point of consumption for the purpose of conforming to customer requirements and includes inbound, outbound, internal and external movements (Takwi & Mavis, 2020). Gebisa (2019) describes logistics management as an organization's collection of activities to promote efficient logistics management. Logistics management is a subset of supply chain management which is involved in planning, executing and controlling the seamless and timely flow as well as storage of products, services and relevant information from source or origin to the place of consumption in order to satisfy the requirements of customers (Amin & Shahwan, 2020). It helps companies reduce expenses and enhance customer service (Ristovska, Kozuharov & Petkovski, 2017).

The goal of 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 (Nisabwe & Irechukwu, 2022). The success of logistics management is determined through the combination of efficiency, effectiveness and differentiation (Ijirshar, Asue, Tarlumun, Adudu, 2023). Logistics management is the process of strategically managing the procurement, movement and storage of materials, parts and finished inventory (and the related information flows) through the organization and its marketing channels in such a way that current and future profitability are maximized through the cost-effective fulfilment of orders (Mukolwe & Wanyoike, 2015). Ogbeide and Isokpan, (2022) noted that logistic management practices provide an avenue for integrating activities in the supply chain aiming at realizing a sustained competitive advantage. The process entails formulation of ways and means through which products and services reach the firm as well as the consumer.

Logistics management in this study refers to set of activities undertaken by companies to promote effective management of logistics in order to improve sales performance. Publishing firms perform various logistical operations such as transport management,

warehouse management, inventory management, information flow management and risk management to meet customer needs and sustain competitive advantage to enhance sales performance.

#### i. Transport Management

Transport management system refers to the planning, controlling and decision making on operational area of logistics that geographically moves and positions inventory (Gimenez & Sierra, 2013). Because of its fundamental importance and visible cost, transportation has traditionally received considerable managerial attention and almost all enterprises, big and small, have managers responsible for transportation (Ayantoyinbo & Gbadegesin, 2021). Transportation occupies one-third to two thirds of the amount in the logistics costs provision hence transport management influences the performance of logistics system immensely (Edim & Inyang, 2022). In the context of the publishing industry, transport management takes on specific nuances. Books and other printed materials require careful handling to ensure that they reach bookstores, schools, and other outlets in pristine condition. A delayed shipment could result in missed sales opportunities, especially during critical periods like the release of a new textbook or a seasonal sales push (Smith & Jones, 2020). Transport management in this industry involves handling the distribution of heavy, bulky products across long distances, often under strict deadlines. One of the key challenges in the publishing industry is managing seasonal demand spikes, such as during school enrollment periods when the demand for textbooks soars (Johnson & Clark, 2022). In the context of this study transport management is defined as the strategic coordination and optimization of transportation activities, including fleet management, route planning, and carrier selection, to ensure the timely and cost-effective distribution of books and printed materials, while maintaining high service levels and minimizing environmental impact.

#### ii. Inventory Management

Inventory is the storage of any material or item used by a company. The system of inventory management refers to a collection of policies and procedures, which regulate stock levels and decide how stocks must be retained and the size of the order to replenish the shortage (Prempeh, 2015). In this context, inventory management or inventory planning and control pertain to the continuous provision of standard items with independent demand, where there should always be specific speculative quantities (Nzitunga, 2019). Companies keep such inventories for different purposes, which include safety from general deficiencies or possible supplier issues, or because fluctuations in unit prices are likely inevitable. Usually, the resulting inventories allow businesses to deliver provisions without costly delays for the recipients (Nyaberi & Mwangangi, 2014).

In the publishing industry, inventory management is particularly vital due to the seasonal nature of book sales and the diversity of titles offered. Publishers must carefully manage their stock to ensure that popular titles are readily available while minimizing the risk of excess inventory that could lead to markdowns (Johnson & Taylor, 2020). This industry faces unique challenges, such as managing returns from retailers and fluctuating demand for new releases (Brown & Davis, 2022). Effective inventory management systems are critical for tracking print runs, sales trends, and author contracts, enabling publishers to adjust their stock levels accordingly. Based on this analysis, a working definition of inventory management in the context of this study is the systematic planning, control, and monitoring of stock levels within the publishing industry, aimed at balancing customer demand with operational costs to enhance sales performance and overall supply chain efficiency.

#### iii. Warehouse Management

Warehouse management is the process of ensuring the availability and functionality of facilities needed to safely, securely and effectively store inventory for future sale or production (Mao, Xing & Zhang, 2018). Warehouse management is influential in determining logistics performance because the operation of these two components is interrelated, and proper warehouse management will improve the flow of materials, provide a strong backbone for increased inventory, and indirectly lower shipping costs. As a result, logistics performance will improve (Mohamad *et al.*, 2018). In the publishing industry, warehouse management is especially important due to the need for careful handling of various types of printed materials, including books, journals, and promotional materials. Publishers must ensure that inventory levels are managed effectively to accommodate seasonal demand fluctuations, such as the start of school terms when textbook sales typically surge (Smith & Jones, 2022). Additionally, returns management is crucial in publishing, where unsold books must be returned to the warehouse efficiently to minimize losses (Brown & Davis, 2022). Warehouse management is defined in this study as the process of overseeing the day-to-day operations of a warehouse; this includes procedures involved in ensuring the smooth performance of activities such as receiving, inventory, storage and packing of products out of warehouses. Managing warehouses effectively ensures that these storage facilities remain organized and efficient so that products are well-kept and easy to transport to their next location. Warehouse management in publishing firms helps to improve warehouse operations by controlling, prioritizing, analyzing, and optimizing all day-to-day activities to enhance market share and sales revenue.

#### iv. Information Flow Management

Information flow is defined as the flow of data in different directions with variable contents between various data base (department) within a company. Before, the information flow within the logistics had become vital since it enabled chains to respond on real time and accurate data (Ayantoyinbo & Gbadegesin, 2021). In today's competitive environment, effective and timely responses to ever-changing customer tastes and preferences have become essential components for successful business performance (Edim & Inyang, 2022). In the publishing industry, information flow management is vital for coordinating various aspects of the supply chain, from manuscript submission to book distribution. Publishers rely on effective information exchange with authors, printers, and distributors to ensure that books are produced and delivered on time (Zhao & Huang, 2020). The need for accurate sales data is particularly important, as publishers must make informed decisions about print runs and inventory levels based on current market trends (Lee & Chen, 2021). Information flow management in this context refers to flow of information in the movement of published works to the customers. Information flow enables publishing firms to make better planning decisions in their operations such as sales forecast and inventory and this helps to increase sales performance.

#### v. Risk Management

Risk management is the process through which an organization identifies loss exposures facing it and selects the most appropriate techniques for treating such exposures. Risk management is an essential component of strategic management of an organization (Gudeta & Barani, 2021). It is an ongoing process of risk assessment through different tools and methods which identify all possible risks, determine which risks are critical to solve as soon as possible and then execute strategies to deal with these risks (Ogbeide & Isokpan, 2022). An efficient and effective risk management is the need of each and every organization and is one of the key responsibilities of firms in the hospitality industry. However effective risk management

boosts the performance of an organization (Barani, 2021). Risk management is a crucial aspect of logistics management, focusing on identifying, assessing, and mitigating potential risks that can disrupt the supply chain. Effective risk management is essential for ensuring operational continuity and maintaining customer satisfaction in a dynamic and often unpredictable business environment. In the publishing industry, risk management plays a vital role in addressing various uncertainties, such as fluctuations in demand, supply chain disruptions, and changes in consumer preferences. Publishers must manage risks associated with inventory management, ensuring that they do not overproduce or underproduce titles based on uncertain market conditions (Lee & Park, 2021). The use of risk management strategies helps publishers mitigate potential financial losses and maintain operational efficiency in a highly competitive landscape (Kumar & Singh, 2022). Risk management within the context of this study refers to the systematic process of identifying, assessing, and mitigating potential risks that may impact the operations and performance of an organization's supply chain. It involves proactive measures to anticipate and address disruptions such as supplier failures, and transportation delays that could lead to supply chain interruptions or inefficiencies in the publishing industry.

#### 2.1.2 Sales Performance

Sales performance refers to the measurement and evaluation of an organization's sales activities and the outcomes achieved over a specified period. This concept is multifaceted, encompassing the efficiency, effectiveness, and overall productivity of a company's sales operations. Scholars and practitioners have explored sales performance from various angles, providing a range of definitions and views that highlight its importance and complexity. Sales performance describes the trend of collections in terms of revenue when comparing different periods. The sales may be in form of offering products or services to consumers (Ritagrace & Batonda, 2022). Sales performance is an integrated framework that enables organization to plan and model sales strategies and ensure timely execution of sales initiatives while ensuring both front lines sales peoples and decision makers have visibility into performance (Nzioka & Waitthaka, 2021). Sales performance is the performance of your sales team. It refers to how effectively your sales team performs within a specific period of time, for example, monthly and quarterly (Takwi & Mavis, 2020).

In the context of this study, sales performance is defined as the ability of University Press PLC to achieve its revenue and distribution targets in North Central Nigeria, through effective sales strategies, customer engagement, and the alignment of its product offerings with market demand and educational needs. This definition reflects the specific challenges and opportunities within the publishing industry and the geographical focus of the research. In the publishing industry, sales performance takes on unique dimensions due to the sector's specific characteristics. University Press PLC, like other publishing firms, relies heavily on long-term relationships with educational institutions, government bodies, and distributors to sustain its sales. The performance of such companies is often linked to the timing of educational cycles, government policies on textbook procurement, and evolving preferences in digital versus print content (Agnihotri *et al.*, 2021).

Measuring sales performance accurately is important to drive growth. The aim of measuring sales performance is to improve sales and track progress toward achieving defined business objectives. Typical sales performance measures include sales revenue, market share and customer retention (Lu, Liang & Shan, 2015). Sales

revenue and market share are used in this study as the measures of sales performance.

### i. Sales Revenue

Sales revenue is the total amount of money that the firm gets from the sales of all its goods and services in a given period of time (Wasike & Juma, 2020). Sales revenue is the income received by a company from its sales of goods or the provision of services (Abdullah & Anwar, 2021). Sales revenue is calculated by multiplying the number of products or services sold by the price per unit. This indicator measures the sales that an individual or company receives from its business activities, usually the sale of goods or services (Birasnav & Bienstock, 2019). In the publishing industry, sales revenue is typically driven by the sale of physical and digital books, journals, and other educational materials. It is often seasonal, tied to the academic calendar, and influenced by government policies on educational content procurement. According to Blattberg and Fox (2024), publishers also face challenges from piracy and unauthorized distribution, which can significantly impact revenue. The rise of digital publishing platforms has introduced new revenue streams for publishers, but it has also necessitated shifts in business models. For instance, many publishers now offer subscription-based services for digital content, which affects how sales revenue is recognized and reported (Johnson et al., 2021). In this industry, pricing strategies, distribution channels, and market demand for educational content all play crucial roles in determining total sales revenue.

### ii. Market Share

Market share refers to a company's sales in relation to total industry sales for a certain period (Fida & Younis, 2016). Market share is the percent of total sales in an industry generated by a particular company. Market share is calculated by taking the company's sales over the period and dividing it by the total sales of the industry over the same period (Yong & Tan, 2017). The market share consists of capability of a company for operating or using a brand image that can enjoy a significant importance in every category of products or services. Menike (2019) also defines market share as sales relative to those of other competitors in the market. Market share is usually used to express competitive position. Firms offering products that offer customers greater value enjoy gains in market share. Better managed firms that have a competitive advantage grow faster than rival firms. Firms with superior skill and foresight gain market share through lower prices or through better products.

In the publishing industry, market share is determined by the number of books, journals, or other materials sold in comparison to the total industry sales. It is influenced by factors such as pricing strategies, product quality, distribution channels, and consumer demand. Market share in publishing is often segmented by format (e.g., print vs. digital), genre, and region. According to Blattberg and Fox (2024), companies with a high market share in educational publishing, for example, often have strong relationships with academic institutions and government bodies. However, the industry is highly competitive and vulnerable to digital disruption, with more players entering the market through self-publishing platforms and online retailers. Therefore, maintaining market share in the publishing industry requires a combination of innovation, effective pricing, and strong distribution networks (Johnson, Miller, & Shapiro, 2021). Companies that dominate the educational publishing segment, for instance, benefit from exclusive contracts with schools or governments, but they must continually adapt to technological shifts in the industry.

In the context of this study, market share is defined as the proportion

of the total sales of educational materials captured by University Press PLC in North Central Nigeria. This includes both physical textbooks and digital materials sold to primary, secondary, and tertiary educational institutions, as well as individual buyers. Market share in this case will be analyzed in relation to the overall market for educational publishing in the region, taking into account competitors and market trends. The study will focus on how University Press PLC maintains or increases its market share through logistics management strategies.

## 2.2 Theoretical Framework

The theoretical perspective relevant to this study was anchored on the resource-based view theory. **The resource-based view theory** was propounded by Penrose (1959). The theory proposes that firms are heterogeneous because they possess heterogeneous resources, meaning firms can have different strategies because they have different resource mixes. The RBV focuses managerial attention on the firm's internal resources in an effort to identify those assets, capabilities and competencies with the potential to deliver superior competitive advantages.

The Resource-Based View (RBV) theory is relevant to the current study because it has been applied to various areas of logistics management, including transport management, inventory management, warehouse management, risk management and information flow management. RBV suggests that specific resources and capabilities can lead to competitive advantage. The theory provides a useful theoretical lens, which the antecedents of a firm's competitive advantage and sales performance can be examined. Companies tend to reflect on their strategic resources with the focus being towards determining their abilities to maintain positive performance. The approach also allows companies to weigh their resources with the focus being towards deciding their potential regarding achieving set out goals and objectives. The adoption of the RBV theory as part of company performance can be seen from the perspective that it works towards enhancing the ability for companies to position themselves effectively (Yang & Lirn, 2017).

## 2.3 Review of Empirical Studies

Ifekanandu *et al.* (2024) examined the relationship between logistics management and operational efficiency of Food and Beverage Firms in Port Harcourt, Nigeria. The study adopted the correlation survey research. The population of the study comprised 30 food and beverage firms in Port Harcourt and census approach was adopted with a focus on the staff (inventory manager, distribution manager and warehousing manager). The questionnaire was distributed the staff and data collected were analysed using the Spearman Rank-order Correlation Coefficient. The study established that transport management showed a positive and significant relationship with operational efficiency of food and beverages firms in Port Harcourt. It also confirmed that inventory management showed a positive and significant relationship with operational efficiency of food and beverages firms in Port Harcourt. The study investigated the relationship between the variables but did not ascertain the extent to which logistics management practices affect operational efficiency.

Boateng (2024) investigated the effects of inventory management practices on performance of small and medium size enterprises in Accra, Ghana. The study employed the purposive sampling technique to gather data from 110 staff of SME firms in Accra. The statistical Package for Social Sciences version 23 was used for data analysis. Findings of the study showed that Economic Order Quantity (EOQ), Vendor Managed Inventory (VMI) and ABS analysis are the inventory management practices in the SME industry in Accra. The study also showed a significant positive

relationship between inventory management practices and organizational performance. The study was limited to inventory management which is one dimension of logistics management used in the present study. Also, the study was limited to SMEs in Ghana whose peculiarities might be different.

Acquah (2024) investigated the role of inventory management practices on organizational performance with focus on Municipal Hospital Tarkwa in the Western Region of Ghana. The study adopted descriptive and causal research designs and used questionnaire as the data collection instrument. Data were collected from 200 respondents and STATA 13 analytical tool was used to perform the analysis. The results were presented using frequency tables and descriptive statistics tables as well as Probit regression analysis to establish the relationship between the variables. The findings showed that inventory management practices positively affect the performance of organizations in terms of quality of service delivery. The study though related to the present study focused on inventory management which is one dimension of logistics management considered in the present study.

Hura and Dushimimana (2024) examined the effect of warehouse management on the organizational performance of a manufacturing company in Rwanda. The study assessed the effect of inventory, material handling, packing and dispatching on performance of Cimerwa Limited in Rusizi District. The study utilized a survey research design and data were collected from 285 employees of Cimerwa Cement and a sample size of 166 respondents was selected by using purposive sampling technique. Questionnaire, observation, interview guide and documentation were used as tools of data collection. Data was analyzed by using both quantitative data and qualitative data by presenting the findings of respondents through the mean and standard deviation. The results of regression analysis indicated that inventory, material handling, packing and dispatching have significant effect on the performance of Cimerwa Limited in Rusizi District. The major limitation of the study is that it focused on only one company in Rwanda.

Mutuga *et al.* (2024) conducted a study on the effect of logistics management practice on firm performance of Kenya's tea subsector industry. The study examined the effect of transport management, inventory management and distribution management practices on firm performance of Kenya's tea subsector industry. The research adopted a quantitative research design and a stratified random sampling technique was used to select a sample size of 155 firms from the target population of 254 firms. Primary data were collected by use of self-administered structured questionnaire which were distributed through the drop and pick method. Data were analyzed using descriptive statistics and inferential statistics using Statistical Package for Social Sciences (SPSS) version 24. The Pearson's Product Moment Correlation analysis and standard multiple regression analysis were used for hypotheses testing. The data was presented using tables, and figures for the purpose of giving a pictorial view of the results. The findings indicated that transport management, inventory management and distribution management practices had a statistically significant and positive effect on firm performance of Kenya's tea subsector industry. The study considered three dimensions of logistics management but failed to state which of the dimensions exert more effect on firm performance.

Mwizerwa and Akumuntu (2024) examined the effect of warehousing management on supply chain performance with focus on Inyange Industries Ltd in Kenya. The study determined the effect of inventory management, warehouse capacity building, and

material handling on supply chain performance in Inyange Industries Ltd. The study adopted a descriptive survey research method. The population of the study were 105 staff members of Inyange Industries Ltd and a census was used to contact all the respondents. Questionnaire was used to gather primary data which were analyzed using descriptive and inferential statistics with the aid of the Statistical Package for the Social Sciences (SPSS). The study found that supply chain performance is positively and significantly affected by both automated and manual material handling. Mechanical material handling, on the other hand, improves supply chain performance, but not much. The study is related to one of the objectives of the current study though the scope was limited to one organization in Kenya.

Ijirshar *et al.*, (2023) investigated the impact of logistics management practices on organizational performance of Jumia digital logistics company in Nigeria. The study used a survey research design and elicited primary data from 768 respondents, including 384 Jumia customers and 384 Jumia staff with the help of online Google Forms. Data collected were analyzed using the Structural Equation Model (SEM). The results showed that the dimensions of logistics management, inventory management, warehouse management, transport logistics and information flow management have positive and significant impact on Jumia's organizational performance. This study is related to the current study except that the sector each of the studies focused differs. The study used online Google Forms but failed to provide justification for the choice.

Kanyepe (2023) investigated the effect of transport management practices on the performance of diamond mining companies in Zimbabwe. A survey design was adopted for the study. The study population of the study comprised 92 staff of four authorized diamond mining companies in Zimbabwe. A convenience sampling technique was drawn from logistics, procurement, and finance departments. Respondents were selected using stratified random sampling techniques. Data was collected using a structured 5-point Likert scale questionnaire. Multiple regression was used for data analysis. The study found that vehicle scheduling, route planning, vehicle tracking, and fuel management positively influence the performance of diamond mining companies. The study is related to the current study but it was limited to only one dimension of logistics management as used in the current study.

Adelwini *et al.* (2023) examined the effect of logistics management on organizational performance of manufacturing companies in Ghana. The study used a descriptive survey research design. The participants in this study included 87 employees and executives of 10 chosen roofing sheet manufacturing firms in Ghana. Management staff were chosen through purposeful sampling technique. Questionnaire was used as the instrument of data collection and primary data collected were analyzed using multiple linear regression. The study established that logistics management components (inventory management, physical distribution, and warehouse management) have a significant effect on organizational performance. Logistics management practices used in the study are related to the present study but the organizational unit of analysis differs. Also, the study failed to clearly point out measures of organizational performance.

Elemo *et al.* (2023) examined the effect of logistics management practices on organization performance with focus on Borland Graphics Interface Manufacturing Company Hawassa Branch, Ethiopia. The study adopted descriptive and explanatory research designs. The researchers used questionnaire and interviews for data

collection. The target population consisted of 295 employees of four departments and the sample of the study was drawn through stratified random sampling. The study used descriptive (mean and standard deviation) and inferential statistics (multiple regression) for data analysis. The study showed that logistics management practices (inventory management practices, transportation management practices, information flow management practices and procurement management practices) have significant effect on organizational performance. The study considered three logistics management practices also used in the current study but was conducted in Ethiopia with focus on manufacturing firms hence; it might be difficult to generalize the findings to other sectors such as the publishing industry.

Mazikana (2023) examined the effect of warehouse management systems on the performance of private warehouses in Southern Zimbabwe. The study used a survey research design and employed questionnaire as the instrument of data collection. A sample size of 322 was determined using Krejcie and Morgan sample size determination from a population of 1350 which included Zimbabwe S&P logistics, Manica Zimbabwe, Bak logistics and Bonded Warehouses in Harare. Primary data collected were analysed using multiple regression and results indicated that warehouse management systems significantly affect the performance of warehouses in Zimbabwe. The study sampled different warehouses in Zimbabwe but failed to state which participants constituted the population.

Adeitana et al. (2021) examined the influence of information flow on logistics management in the industry in Nigeria. The study sought to evaluate the influence of negotiating better contracts, better product tracking, better quality logistics information flow, expanded network on logistics management in the industry. The study used a quantitative methodology. Primary data were collected through questionnaire from a sample of 340 respondents. The study used multiple regression for data analysis and findings revealed that negotiating better contracts, better product tracking, better quality logistics information flow, expanded network, and enhanced information transfer have significant effect on logistics management in Nigeria. The study was limited to only one aspect of logistics management hence the need to expand the scope in this study to include different dimensions of logistics management.

Al-Nimer et al. (2021) examined the effect of enterprises risk management (ERM) on firm performance with a mediating role of Business Model Innovation (BMI) in Jordan. The study utilized a descriptive survey design. The data collected from 228 Jordanian firms were analyzed using regression. The results indicated that the ERM practices have a significant influence on BMI and financial firm's performance. The study also found that BMI significantly mediated the relationship between ERM practices and financial performance. The study is related to the present study though but it considered only one variable of logistics management.

Wasike and Juma (2020) examined the effect of logistics management on performance of humanitarian organizations in Kenya. The study elicited primary data from 64 personnel of humanitarian organizations in Kenya using a semi-structured questionnaire. Data analysis was carried out using descriptive and regression analysis. The study found that inventory management, transportation management, information flow management and warehouse management had significant impacts on logistic performance of humanitarian organizations in Kenya. The independent variable used in the previous study is same as the current study but the scope differs.

### 3. METHODOLOGY

The study adopted a survey research design to obtain a valid and systematic representation of the variables under investigation. This design was considered appropriate because it enables the collection of quantifiable data on respondents' perceptions, attitudes, and practices, while also facilitating generalization of findings to the broader population. The population comprised all 453 staff of University Press Plc in North-Central Nigeria as at 31st March 2024. Given the manageable size of the population, a census sampling technique was employed, meaning the entire population constituted the sample size. Data were collected from primary source through a structured, self-administered questionnaire designed on a five-point Likert scale ranging from Strongly Agree (5) to Strongly Disagree (1). The instrument was distributed using the drop-and-pick method with the assistance of trained research assistants, ensuring adequate response time and high retrieval rates.

The validity and reliability of the research instrument were rigorously established. Face, content, and construct validity procedures were undertaken to ensure clarity, relevance, and alignment of questionnaire items with the study constructs. Construct validity was assessed using factor analysis, specifically Exploratory and Confirmatory Factor Analysis, supported by the Kaiser-Meyer-Olkin (KMO) and Bartlett's Test of Sphericity results (KMO = 0.793;  $p < 0.001$ ), confirming sampling adequacy and suitability of the data for factor analysis. A pilot study involving 30 respondents was conducted to test internal consistency. Reliability was determined using Cronbach's Alpha, with all constructs exceeding the acceptable threshold of 0.70. The coefficients ranged from 0.866 to 0.894, with an average reliability of 0.880, indicating a high level of internal consistency. Statistical analyses were performed using SPSS to ensure precision and robustness of results.

The functional relationship was expressed as:  $SPE = f(TPM, IVM, WHM, IFM, RKM)$ , and explicitly modeled using multiple regression as:  $SPE = \beta_0 + \beta_1TPM + \beta_2IVM + \beta_3WHM + \beta_4IFM + \beta_5RKM + e$ . Data analysis involved both descriptive and inferential statistics. Descriptive statistics (means, frequencies, percentages, and standard deviations) were used to summarize responses, while multiple regression analysis was applied to test the hypotheses. The t-test with a critical value of 1.96 and a significance level of 0.05 was employed to determine the statistical significance of each logistics management dimension on sales performance.

### 4. DATA PRESENTATION, ANALYSIS AND DISCUSSION OF FINDINGS

Table 1: Descriptive Statistics

Variable	N	Minimum	Maximum	Mean	Std. Deviation
TM	438	1	5	4.08	0.953
IM	438	1	5	4.18	0.799
WM	438	1	5	4.04	1.030
IFM	438	1	5	3.99	1.036
RM	438	1	5	3.98	1.093

Source: Field Survey (2026).

From the results in Table 1, the participants indicated with a mean of 4.08 (std. dev =0.953) that the company was using transport

management to a large extent. Also, the participants revealed with a mean of 4.18 (std.dev =0.799) that their company practiced inventory management to a large extent. With a mean of 4.04 (std. dev =1.030) participants revealed that their company practiced warehouse management to a large extent. Also, as indicated with a mean of 3.99 (std. dev= 1.036), the respondents showed that the company used information flow management. Similarly, the participants averred that the company practiced risk management to a greater extent as indicated by the mean score of 3.98 (std. dev =1.093).

**Table 2: Test of Normality**

Variables	Shapiro-Wilk		
	Statistic	Df	Sig.
Transport Management	.818	437	.113
Inventory Management	.856	437	.213
Warehouse Management	.943	437	.390
Information Flow Management	.926	437	.570
Risk Management	.872	437	.236
Sales Performance	.879	437	.482

**Source:** Field Survey (2026)

As part of exploratory data analysis, tests for normality of distribution of the study variables were conducted. The normality of the data was tested using the Shapiro – Wilk test. The significance level for the study was  $p = 5\%$ . For  $p \geq 0.05$  normality was assumed while for  $p < 0.05$  deviation from normality was assumed. The normality tests results were as shown in Table 2 indicates that the significance values for the Shapiro-Wilk tests were 0.113for transport management, 0.213 for inventory management, 0.390 for warehouse management, 0.570 for information flow management, 0.236 for risk management and 0.482 for sales performance. This implies that since the p-value of Shapiro-Wilk tests was greater than the chosen alpha level of 0.05 then we accept the hypothesis that the data came from a normally distributed population. The results of the tests are therefore of a normally distributed population.

**4.1 Regression Analysis**

Multivariate regression analysis was adopted to evaluate the effect of the predictor variables (transport management, inventory management, warehouse management, information flow management and risk management) on the dependent variable (sales performance). The result of regression analysis is presented in Table 3.

**Table 3: Regression Result**

Model			
Obs	438		
R <sup>2</sup>	.552		
Adjusted R <sup>2</sup>	.542		
F statistics	15.472		
Sig.	.000		
Variable	Coefficient	t-value	Sig.
TPM	.258	2.208	.028
IVM	.440	4.090	.000

WHM	.002	.043	.965
IFM	.303	2.312	.021
RKM	.497	4.711	.000
Cons	1.625	5.200	.000

**Dependent Variable:** Sales Performance

The result in Table 3 shows that the R-squared was utilized to explain the difference in dependent variable (sales performance) that could be illustrated by independent variables in this study (transport management, inventory management, warehouse management, information flow management and risk management). The R squared was 0.552 and this meant that 55.2% of dependent variable (sales performance) of University Press Plc could be explained by the independent variables. The F-calculated was 15.472 which was more than the F-critical (2.484) and the p value (0.000) was below significant level which is (0.05). Therefore, model was a good fit for the data and therefore could be utilized in explaining the influence of independent variables (transport management, inventory management, warehouse management, information flow management and risk management) on the dependent variable (sales performance).

The regression equation used was as follows:

$$Y = 1.625 + 0.258X_1 + 0.440X_2 + 0.002X_3 + 0.303X_4 + 0.497X_5 + \epsilon$$

From the coefficients Table 3, it is evident that the p-values for logistics management practices are transport management (0.028), inventory management (0.000), information flow management (0.021) and risk management (0.000) are less than 0.05. This therefore means that transport management, inventory management, information flow management and risk management are statistically significant and affect the sales performance of University Press Plc. The findings revealed that warehouse management has positive but insignificant effect on sales performance (p-value=0.965). The relationship was insignificant since (0.05) which is the significant level was less than the p value (0.965). The coefficient for transport management (0.258), implies that if a change in transport management by one unit will result to 25.8% change in sales performance. For inventory management, a coefficient value of 0.440 entails that if inventory management is increased by one unit, sales performance will be improved by 44%). However, a change in in warehouse management will bring about a slight change in sales performance (002). Meanwhile, if information flow management is improved by one unit, sales performance will be enhanced by 30.3%. Also, a change in risk management will lead to a 49.7% improvement in sales performance of University Press Plc.

**4.2 Test of Hypotheses**

Hypothesis one (H<sub>01</sub>) states that transport management has no significant effect on sales performance of University Press Plc in North Central Nigeria. The findings established that transport management has positive and significant effect on sales performance of University Press Plc in North Central Nigeria ( $\beta_1=0.156$ , p value=0.028). This association was significant as p value (0.028) was below 0.05 which is the significant level, hence the null hypothesis was rejected and alternate hypothesis accepted.

Hypothesis two (H<sub>02</sub>) states that inventory management has no significant effect on sales performance of University Press Plc in North Central Nigeria. To test this hypothesis, the result showed that inventory management has a positive and significant effect on sales performance of University Press Plc ( $\beta_1=0.194$ , p value=0.000). This

association was significant as p value (0.000) was below 0.05 which is the significant level, hence the null hypothesis was rejected and alternate hypothesis accepted.

The test of hypothesis three ( $H_{03}$ ) indicated that warehouse management has no significant effect on sales performance of University Press Plc in North Central Nigeria ( $\beta_1=0.002$ , p value=0.965). This relationship is insignificant as p value (0.965) is above 0.05 which is the significant level, hence the null hypothesis was accepted and alternate hypothesis rejected.

In testing hypothesis four ( $H_{04}$ ) the study found that there is a positive and significant effect of information flow management on the sales performance of University Press Plc ( $\beta_1=0.108$ , p value=0.021). This association was significant as p value (0.021) was below 0.05 which is the significant level. The null hypothesis which states that information flow management has no significant effect on sales performance of University Press Plc in North Central Nigeria was accepted and alternate hypothesis rejected.

Hypothesis five ( $H_{05}$ ) states that risk management has no significant effect on sales performance of University Press Plc in North Central Nigeria. The result revealed a positive and significant effect of risk management on sales performance of University Press Plc ( $\beta_1=0.219$ , p value=0.000). This relationship was significant as p value (0.000) was less than 0.05 which is the significant level, hence the null hypothesis was rejected and alternate hypothesis accepted.

#### 4.3 Discussion of Findings

The findings of the study were presented and discussed based on objectives of study as follows:

##### i. Effect of transport management on sales performance

The study found that transport management has a positive significant effect on sales performance of University Press Plc in North Central Nigeria. The result agrees with Macharia and Mwangangi (2016) whose study on the impact of transport management on the performance of the industrial sector in Kenya found a positive and significant effect of transport management on business performance. Ifekanandu et al. (2024) also found a positive effect of transport management on operational efficiency of food companies. The study is supported by Mutuga (2024) who agreed that there is a positive significant effect of transport management on firm performance. A positive effect of transport management practices on firm performance was reported by Kanyepe (2023). The implication of the finding is that effective transport management helps goods and services to reach customers at the right time and value.

##### ii. Effect of inventory management on sales performance

The result of the test of hypothesis two indicated that inventory management has a positive significant effect on sales performance of University Press Plc in North Central Nigeria. In agreement with the finding, a study by Ifekanandu et al., (2024) established a positive relationship between inventory management and operational efficiency of food and beverages firms in Port Harcourt. Similarly, Boateng (2024) reported a positive significant relationship between inventory management practices and organizational performance. Recent research by Acquah (2024) also indicated that inventory management practices positively affect quality of service delivery. The implication of the result is that inventory management practices enable organizations to properly handle stocks to help increase sales performance.

##### iii. Effect of warehouse management on sales performance

The test of hypothesis three indicated that warehouse management has no significant effect on sales performance of University Press

Plc in North Central Nigeria. The finding is in contrast with Hura and Dushimimana (2024) whose study indicated that warehouse management practices such as material handling, packing and dispatching have significant effect on organizational performance. The result also disagrees with Mwirerwa and Akumuntu (2024) who found a positive effect of warehousing management on supply chain performance. Ijirshar *et al.*, (2023) also found a positive relationship between warehouse management and firm performance in contrast to this study. The result of this study also disagrees with Mazikana (2023) who affirmed the effect of warehouse management systems on the performance of private warehouses in Southern Zimbabwe. The implication of the finding is the University Press Plc has not put in place good measures of warehouse management and this might have affected its sales performance.

##### iv. Effect of information flow management on sales performance

The result of hypothesis four that there is a positive and significant effect of information flow management on the sales performance of University Press Plc. In agreement with this result Mwirerwa (2024) found a positive effect of information flow management on performance of Gorilla Logistics Limited in Rwanda. The result is supported by Adelwini et al. (2023) who found a positive significant effect of information flow management on firm performance. Elemo et al. (2023) also agreed that information flow management practices have significant effect on organizational performance. Research by Adeitana et al. (2021) on the influence of information flow on logistics management Nigeria found positive significant relationship between the variables. The implication of the result is that the flow of information or physical distribution of information is important as it helps in enhancing the sales performance of University Press Plc.

##### vi. Effect of risk management on sales performance

The study further found that risk management has a significant effect on sales performance of University Press Plc in North Central Nigeria. The result agrees with Al-Nimer et al. (2021) whose study on the effect of enterprises risk management on firm performance reported that risk management practices have a significant influence on financial firm's performance. Wasike and Juma (2020) also affirmed a significant effect of risk management on firm performance. The result implies that risk management practices such as risk identification, risk assessment and risk mitigation help to avert risks associated with publishing in University Press Plc and this positively affects sales revenue and market share of the company.

## 5. CONCLUSION AND RECOMMENDATIONS

### 5.1 Conclusion

This study concludes that logistics management practices are critical strategic drivers of sales performance in manufacturing and publishing firms such as University Press Plc. The evidence from the study indicates that not all dimensions of logistics management contribute equally to sales outcomes; however, the overall logistics architecture of the firm significantly shapes its ability to generate revenue and sustain market share. Specifically, the study establishes that transport management, inventory management, information flow management, and risk management constitute high-impact logistics components that enhance operational efficiency, market responsiveness, and competitive positioning. These dimensions strengthen product availability, reduce operational bottlenecks, minimize losses, and improve decision-making accuracy, thereby translating operational effectiveness into improved sales

performance.

On the other hand, the study suggests that warehousing management, in its current form, may function more as a supportive operational mechanism rather than a direct sales performance driver. This implies that the mere existence of warehousing facilities does not automatically guarantee improved sales outcomes unless strategically optimized and integrated with other logistics functions. In general, the study concludes that sales performance in University Press Plc is significantly influenced by the effectiveness, integration, and strategic alignment of logistics management practices. Therefore, firms seeking improved revenue growth and market expansion must treat logistics management not as a routine operational function but as a core strategic capability.

## 5.2 Recommendations

Based on the findings of the study the following recommendations are made:

- i. To attain reasonable on time delivery, University Press Plc should be properly equipped with the newest technology in transportation. Logistics managers should try as much as possible to maximize space and enhance ontime delivery to avoid delays in the distribution of products in order to meet customers demand through proper means of transportation. Cost minimization distribution and transportation mode should be selected in the keeping and allocation of products.
- ii. Management of University Press Plc should train the staff to enable them to understand the current inventory systems that will help the company to reduce costs associated with holding inventory. This will help to ensure the availability of inventory required for production and customer service to help improve sales performance.
- iii. Management of University Press Plc should establish and maintain standard warehouse management system so that the right amount of stock is held and economic order quantity is achieved through proper physical distribution of the product to achieve higher sales performance. The company should consider investing in advanced material handling technologies and training to optimize the crucial aspect of warehousing management. The company must ensure the availability and functionality of modernized facilities for material and/or product storage, handling and preservation.
- iv. Management of University Press Plc should ensure we have the right information flow management strategy and system in place can help prevent back-ordered items. The company should streamline its information flow management process by centralizing all critical data that will make better business decisions and increase information accuracy while keeping costs down.
- v. Management of University Press Plc should always identify and communicate risk factors such as transportation risk, supplier risk, infrastructure risk, weather- related risk, Regulatory Compliance risk as well as handle the challenges inherent in their operations. This will help in reducing the company's exposure to risk and cost in operations thereby facilitating improvement in sales performance.

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