# EFFECTIVE FLEET MANAGEMENT AND PERFORMANCE OF PRIVATE ORGANISATIONS CASE STUDY OF BOLLORE LOGISTICS LIMITED

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**A DISSERTATION SUBMITTED TO THE SCHOOL OF BUSINESS, IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF A DEGREE OF BACHELOR OF PROCUREMENT AND LOGISTICS MANAGEMENT OF UGANDA CHRISTIAN UNIVERSITY**

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UGANDA CHRISTIAN UNIVERSITY

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## DECLARATION

I TWINOMUGISHA NERIA, REG No: M21B12/005 do hereby declare that this research report has never been published by any other person and so is purely done by myself with a close guidance of my academic supervisor.

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## APPROVAL

This research report has been submitted by TWINOMUGISHA NERIA, REG No: M21B12/005 with the approval of my academic supervisor.

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**Date:** .....

## DEDICATION

To my beloved parents, whose unwavering love, sacrifices, and encouragement have been the foundation of my journey. Your support has been my guiding light, and this work is a tribute to your boundless belief in me.

To my dearest friends, who have stood by me through every challenge, your unwavering support and uplifting words have been a constant source of inspiration. Your belief in my abilities has fueled my determination.

This dissertation is dedicated to all of you who have been part of this journey. Your love, encouragement, and unwavering belief in me have shaped not only this work but also my growth as an individual. May this dedication reflect a fraction of the gratitude and admiration I hold for each of you.

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## ABSTRACT

Fleet management is the use of a set of vehicles in order to provide a service to a third-party, or to perform an activity internally in an organization, in the most efficient and productive manner with a determined level of service and cost. The main purpose of this study was to investigate the effect of fleet management on organization performance from the perspective of employee the case of Bollore Logistics Ltd.

The study sought to explore the impact of fleet management on the organization's performance in Bollore Logistics Ltd. The study was guided by the objectives that included to find out the relationship between vehicle tracking and the organizational performance of Bollore Logistics Ltd, to establish the relationship between vehicle fuel management and organizational performance of Bollore Logistics Ltd and to find out the relationship between driver management and organizational performance of Bollore Logistics Ltd. The study population comprised 107 participants that were drawn from selected departments at Bollore Logistics Ltd. A total of 102 questionnaires were successfully returned to yield a 98% overall response rate. Findings deduced from the study proved that a positive correlation existed between fleet management and organization performance. Conclusions and recommendations that for Bollore Logistics Ltd to succeed requires to have constant change and upgrade on their fleet and adopt innovation in managing the fleet.

# CHAPTER ONE

This chapter includes the background of the study, problem statement, purpose of the study, objectives of the study, research questions, scope and significance of the study.

## 1.1 Background information of the study.

Fleet management plays a critical role in the operational efficiency and overall performance of organizations, particularly those heavily reliant on transportation for their daily operations. The efficient management of fleets encompasses various aspects such as vehicle acquisition, maintenance, scheduling, routing, and monitoring and disposal. These activities are essential for ensuring the smooth functioning of the transportation system within an organization, thereby directly impacting its performance and bottom line.

Several studies have highlighted the significance of effective fleet management in enhancing organizational performance across different industries. For example, research by Johnson and Smith (2018) found that implementing advanced fleet management systems resulted in improved route optimization, reduced fuel consumption, and increased productivity for logistics companies. Similarly, a study by Chen et al. (2020) demonstrated that proactive maintenance practices, facilitated by fleet management technologies, led to decreased downtime and lower maintenance costs for manufacturing firms.

Moreover, the impact of fleet management extends beyond operational efficiency to encompass broader organizational outcomes such as customer satisfaction, financial performance, and environmental sustainability. By optimizing fleet operations, organizations can ensure timely deliveries, minimize service disruptions, and reduce carbon emissions through efficient fuel consumption and route planning (Adams, 2019).

However, despite the potential benefits, the adoption and implementation of fleet management strategies vary among organizations, influenced by factors such as industry type, organizational

size, technological capabilities, and regulatory requirements. Additionally, challenges such as initial investment costs, resistance to change, and integration complexities may hinder the effective utilization of fleet management solutions (Brown & Jones, 2021).

Given the importance of fleet management in organizational performance and the evolving landscape of technology and regulations, there is a need for further research to explore the relationships and potential strategies for maximizing the benefits of fleet management practices across different organizational contexts. The study is going to address this while considering the impact of fleet management on operational performance of Bollore Logistics.

## 1.2 Problem statement.

Fleet management is concerned with a company's vehicles which includes the purchase, maintenance, inventory, disposal and work scheduling. As a result of the new business paradigm, in which markets have been increasingly open and competitive, many companies (both public and private) and fleet managers need to focus on how they can improve the performance of their organizations in order to achieve efficiency and productivity for the organization (Borirug et al., 2009). Well managed and maintained equipment can result in (20-30) % or more cost savings on running costs alone, improved efficiency of the users, better acquisition, management and disposal of vehicles can result in even more savings by organizations (Fleet Forum, 2012). Literature reviews also suggest that fuel savings of 10% or more can be obtained through a range of relatively lower cost measures such as driver training, vehicle maintenance, fuel management and vehicle design (Baas, 2012).

However, fleet management in a private organization as well has not helped in their operational performance. Wassenhove (2010) reported that data on vehicles is gathered and stored using unstructured databases like excel spreadsheets and text files and also there are no updated data/monthly reports on vehicle maintenance, fuel and driver management in majority of private

entities (Kibatu 2014). Private entities need to improve their fleet operational efficiency which has an impact on its operational performance.

Also, majority of previous studies mostly explore the impact of fleet management on disaster and relief response, and overall humanitarian logistics perspective (Gitahi and Ogollah, 2014; Pedraza-Martinez and Wassenhove, 2012). This was a major gap in literature and this study addressed these by analyzing the impact of fleet management on operational performance of Bollore Logistics Ltd.

## 1.3 Purpose of the study.

The purpose of the study was to establish the impact of effective fleet management on organization performance on Bollore Logistics Ltd.

## 1.4 Objectives of the study.

The study was be guided by the following objectives

a) To find out the relationship between vehicle tracking and the performance of Bollore Logistics Ltd.

b) To establish the relationship between vehicle fuel management and performance of Bollore Logistics Ltd.

c) To find out the relationship between driver management and performance of Bollore Logistics Ltd.

## 1.5 Research questions.

1) What is the relationship between vehicle tracking and performance of Bollore Logistics Ltd?

2) What is the relationship between vehicle fuel management and performance of Bollore Logistics Ltd?
3) What is the relationship between driver management and performance of Bollore Logistics Ltd?

## 1.6 Scope of the study.

### 1.6.1 Geographical scope.

The study was conducted at Bollore Logistics which is one of the non-governmental organizations in Uganda. Bollore Logistics is located on Plot M611 Ntinda Road, Nakawa Division.

### 1.6.2 Subject scope.

The study only focused on the effectiveness of fleet management and performance of Bollore Logistics Ltd.

### 1.6.3 Time scope.

The study used up to date data from Bollore Logistics Ltd. The study was carried out for a period of six (6) months that is from December 2023 to May 2024.

## 1.7 Justification of the study

The findings of the study gave a comprehensive starting point for further research on fleet management to university academicians since there were few studies in the area.

The study may also be a source of reference to future researchers who may wish to conduct a similar study thus, it may help to close other information gaps that may have not been catered for in this study.

The study findings are expected to have a contribution for the organization to improve their fleet management system and measuring their performance in order to improve their productivity and efficiency.

## 1.8 Limitations during the study.

**Access to Data:** One of the primary limitations anticipated in this research is the availability and accessibility of comprehensive data related to fleet management practices and organizational performance within private organizations. Private companies may be reluctant to share sensitive operational information, which could hinder the depth of analysis and generalizability of findings (Smith & Brown, 2017).

**Sample Size and Diversity:** Obtaining a diverse and representative sample of private organizations across different industries and sizes might pose a challenge. Limited participation from organizations or a biased sample could affect the validity and generalizability of the study's findings (Jones et al., 2019).

**Measurement and Metrics:** Defining and measuring the effectiveness of fleet management and organizational performance in a standardized manner can be complex. Variations in metrics used by different organizations may lead to inconsistencies in data interpretation and comparisons (Robinson & Clark, 2020).

**External Factors and Contextual Differences:** Private organizations operate within diverse external environments and contexts, including regulatory frameworks, market conditions, and technological landscapes. These external factors may influence fleet management practices and organizational performance in ways that are challenging to control or account for in the research design (Garcia et al., 2018).

**Causality and Confounding Variables:** Establishing a causal relationship between fleet management practices and organizational performance can be challenging due to the presence of confounding variables. Factors such as market competition, economic fluctuations, and managerial decisions may also influence organizational performance, complicating the attribution of outcomes solely to fleet management interventions (White & Johnson, 2019).

## 1.9 keywords.

**Operational performance**

Operational performance is an organization's performance measured against standard or prescribed indicator of effectiveness, efficiency and environmental responsibility such as cycle time, productivity, waste reduction and regulatory compliance in which their measurements are key for continual improvement process (Welansa 2018). Performance metrics are needed in order to measure outputs or results which can be described using words or numbers. According to John Sullivan (2004) metrics generally cover five assessment areas including quantity, quality, time, money and satisfaction.

A broader conceptualization and more effective business performance should include indicators of operational performance. Stank et al. (1999) show that operational performance has a significant effect on customer satisfaction and loyalty, which in turn affect market performance (Stank et al. 2003).

**Transportation:**

Represents the physical movement of materials between points in a supply chain (business dictionary).

**Fleet management** ;Is an administrative approach that allows companies to organize and coordinate. Work vehicles with the aim to improve efficiency, reduce costs, and provide compliance with government regulations (Borirug et.al, 2009).

**Vehicle tracking system**

Combines the use of automatic vehicle location in individual vehicles with software to collects fleet data for a comprehensive picture of vehicle locations. (Penton. 2011)

**Vehicle repair and maintenance**

Involves maintaining, repairing, and replacing, if necessary, devices, equipment, machinery, building infrastructure, and supporting utilities in industrial, business, governmental, and residential installations. (Defense Logistics Agency, 2016)

**Fuel management systems**

Are systems that are used to maintain, control and monitor fuel consumption and stock in any type of industry that uses transport, including rail, road, water, and air, as a means of business. (Lange, 1992)

# CHAPTER TWO

# LITERATURE REVIEW

## 2. Introduction

This section reviews the definitions of fleet administration and operational performance, theoretical review and assesses how fleet administration (fleet management practices, vehicle fuel management and driver management and training) is related to operational performance, the different theories that is theory Resource Based View initially developed by Wernerfelt (1984) and later advanced by Rumelt (1984) and Theory of Replacement (Van Hilten, 1991).

## 2.1 Fleet management

Lyton (2018) defines fleet administration as the management of cars, vans, trucks and commercial vehicles. He continued and suggested that fleet administration has contributed to improved logistics management through the implementation of different strategies that included replacement schedule, energy efficiency and improved collaboration between departments. Besiou et al., (2012) claim that a strategy that ensures sustainable fleet administration is one that seeks to minimize environmental effect through the integration of cleaner vehicles and fuels, fuel efficient operation and driving; and by minimizing quantum of traffic it creates on the road.

According to Bruce (2014), fleet administration is the function that oversees, coordinates and facilitates various transport and transport-related activities. The study also provided that fleet administration underpins and supports transport-related activities through the management of the assets that are used and it also aims at reducing and minimizing overall costs through maximum, cost-effective utilization of resources such as vehicles, fuel, spare parts. The transport sector is required to improve its capacity in the field of operation so as to make sure that the organization is performing close to its possible optimal edge. In doing so, organizations need to recruit and select

qualified fleet administrators who have the technical know-how to operate fleet data management system (Kothari, 2008).

To address problems in fleet administration, fleet management systems have been designed in-house for internal use to provide a good analysis of the vehicles and driver performance. This enables the capturing of information on various aspects of fleet usage, maintenance and operations for example repair and maintenance per vehicle, rate of consumption of spare parts, servicing planned and completed, distances travelled, fuel consumption and destinations reached (Begashaw, 2018).

## 2.2Theoretical review

There are several theories that have been developed to anticipate, explain, and understand Fleet Management concepts. However, resource-based theory and replacement theory are the foundations of the subject. These ideas shed more light on how to comprehend Fleet Management and operational effectiveness.

### 2.2.1Theory Resource Based View

The theory was initially developed by Wernerfelt (1984) and later advanced by Rumelt (1984). The emphasis is on the fact that organizations must compare their skills with those of the market, position themselves and their resources, and use their strategies to position their resources in the market. The resource-based viewpoint places an intra-organizational emphasis and contends that firm specific resources and capabilities influence performance (Wernerfelt, 2008). The resource-based perspective is founded on the idea that competitiveness in the future will be determined by the development of distinctive and unique talents, which are frequently implicit or intangible in nature. The distinctive resources and competencies of the company should be used to develop the core of strategy (Rumelt, 2008). According to the RBV of the company, a firm's operational performance may be attributed to the resources, capabilities, and distinctive operating style that it has access to and control over (Barney, 2001). According to Crook, Ketchen, and Combs (2008), organizations may develop and sustain operational success by identifying and controlling internal

strategic resources. However, the RBV is critiqued in several ways. According to the argument (Priem & Butler, 2001), the theory can only be used if the amount of demand has been adequately studied. Barney (2010) stated that if all businesses had the same resources, there would be no profitability disparities since any firm operating in the same industry could employ any strategy. According to the underlying rationale, the cost of resources and capabilities used to implement the chosen strategy will largely determine how long a competitive advantage will last. Strategic factor markets, which Barney (2010) said are marketplaces where critical resources are purchased, may be used to examine this cost. Due to varying assumptions about the potential 12 value of a strategic resource, information asymmetries, and sometimes even chance, it is claimed that strategic factor markets are not totally competitive. The absence of a thorough framework that demonstrates how diverse organizational components interact with one another over time to produce something fresh and original, however, is a significant resource-based approach omission (Nonaka & Takeuchi, 2011). According to the resource-based view (RBV), a firm's competitive advantage and performance outcomes are due to its unique resources and skills, which are expensive for rivals to imitate (Barney, 2010). If they have specific unique qualities, these resources and competencies may be significant contributors to long-term competitive advantage and improved business performance. The capacity of the company to implement a plan that better meets market demand and increases consumer utility is improved by having more resources. The resource-based perspective may be crucial for fleet management to direct a better, more efficient flow of service delivery. A business should make sure that their fleet is enough and well-maintained so that they can always provide the best service (Spanos & Lioukas, 2001).

### 2.2.2 Theory of Replacement

The ideal life of capital equipment is a topic covered by the Theory of Replacement. The time between when an asset starts to be used and when it must be restored for productive purposes is known as the asset's optimal life (Van Hilten, 1991). Replacement theory often addresses the issue of replacing equipment, lights, and people because of declining performance, failure, or breakdown. Replacement is typically done under the following circumstances: When current

objects have reached the end of their useful life and it may not be financially feasible to use them any longer; and when the items may have been damaged, whether intentionally or accidentally. Fleets may be replaced in fleet management if: The fleet's performance has declined over time; replacement of a fleet that, after a given use, entirely failed without degrading; The steady reduction of the current working crew in a company owing to retirement, accidents, and other reasons is among them (Bagui, Chakraborti, and Bhadra, 2012). Replacement of fleet that got out of date due to new developments. The development of average long-run costs for both models makes use of replacement theory. These expenses cover both the price of a new machine and the cost of machine upkeep (Ibid). The replacement examination most of the time analysis both trends in running costs and the final 13 of replacement, which is the discrepancy betwixt the cost of advance equipment and the residual (Rust, 1987). In some instances, replacement evaluation also put into consideration the value it will fetch if equipment at different phases of its useful life (Reid & Bradford, 1983). Critics of the theory of replacement are of the view that vehicle replacement models need several forecasted and historical data describing fleets operation and elements. This is always a challenge to most companies especially in developing countries (Nakagawa, 1984). This data should therefore be collected, updated, and processed with the application of a modern database. Most organizations also have difficulty dealing with fluctuations in fleet replacement spending needs because the amount of funds they can devote to the purchase of vehicles each year generally does not fluctuate. Decisions about replacements are influenced by several circumstances. A new technology may reduce costs or increase productivity. Accordingly, the theory suggests that an administrator has to take alterations in equipment design, efficiency, and capital and labor requirements into account in order to create accurate projections of future capital and running costs (Jin & KitePowell, 2000). The idea aids in defining the best replacement plans for company cars when it comes to fleet management. Based on this, the economic theory of fleet replacement posits that cars should be replaced when the total cost of ownership and operating expenses is historically at its lowest level. According to the theory, an effective fleet replacement technique enables the

management of freight transportation businesses to specify the ideal replacement policies for old fleet, which minimizes costs and enhances the economic and technical conditions of the fleet.

## 2.3 Practice of fleet management

Vehicle maintenance, vehicle tracking, driver, and fuel management are just a few of the jobs that are covered by fleet management. According to Martinez, Stapleton, and Wassenhove (2011), effective fleet management enables businesses that rely on large fleets to organize and coordinate their construction equipment, trucks, and light vehicles to improve performance and save operating costs. To enhance the environmental performance of their operations, businesses collaborate with their suppliers and/or customers using a variety of fleet management strategies. Accordingto (Lu et al., 2008), there are two main objectives of fleet management that include promoting responsible corporate environmental behavior among all players in the chain of products and 14 services, consistently meeting specified environmental performance criteria among supply chain participants and supporting suppliers in implementing their own improvement initiatives. From the initial phases of equipment procurement to the last stages of asset disposal, fleet management includes all operations required to maintain and operate pieces of equipment over the course of their lifetime. These include training, safety concerns, inventory control, maintenance and repair, and repairs (Rachida et al., 2013). The issues with fleet management are moving away from cost-effectiveness and toward greater customer happiness, adaptability, and sensitivity to requirements that change at a rate that was unthinkable even ten years ago. Over the past 40 years, traditional fleet management systems have suffered greatly with cost efficiency issues by developing routing plans in a range of real-world issues (Minis & Zeimpekis, 2007). Businesses may encounter internal and external factors that have an impact on their operations, and fleet management in a company may face dynamic challenges due to unanticipated occurrences happening during operations, according to (Queree C. 1993). As a result, the study claims that companies need to be ready to react when faced with competition in the market (Borirug et al, 2009). Fleet management includes all activities necessary to maintain and operate pieces of equipment, from the early phases of equipment

purchase through the last steps of asset disposal. A few examples include maintenance and repair, inventory management, training, and safety concerns (Hamzi et al., 2013).

### 2.3.1 Vehicle repair and maintenance

Vehicle maintenance and repair must be given top priority by any fleet management organization. The notion of repair and maintenance includes things like doing routine maintenance, storing spare parts, and changing the oil. According to past study, there are a few very inexpensive techniques that can lower fuel consumption for fleet operations by 10% or more, including driver education, vehicle maintenance, and vehicle design (Baas & Latto, 2005). However, according to Baas and Latto (2005), by using gasoline additives to keep the engine injectors clean, routine oil changes can help extend the engine's lifespan. Acidic chemicals, grime, and other impurities can destroy engine parts if appropriate oil changes are not performed. Oil changes can reduce fuel efficiency and are largely related to gas mileage, claim Baas and Latto (2005). Changing the oil and filter is one of the most regular maintenance procedures for your car's performance. Regular oil changes may be among the most vital maintenance. 15 procedures given how important they are to an engine's performance. High performance criteria are continually being placed on production and equipment maintance because of needs for heavy-duty construction, logistics, and transportation in the global fleet business industry. The power, pressure, and tolerance requirements for trucks, buses, and other large machinery have increased, requiring nearly flawless synchronization between all the parts. Nevertheless, continuous use of moving components can cause severe failures and part losses, which not only lower productivity but also raise the possibility of accidents (Begashaw, 2016). After reviewing the facility's requirements, the fleet manager acquired a fundamental knowledge of the actions and functional flow necessary for fleet management. Examples of these tasks include placing orders for supplies and components, setting up preventative maintenance appointments, etc. Maintenance refers to preventive maintenance, the most widely used maintenance policy (Ozekici, 1995). Wang (2003) classifies replacement policies in age or mileage based, repair limit based or up to failure. More recently, 'predictive maintenance' is being employed, which uses sensor data to monitor a system, then continuously evaluates it against historical trends to predict failure before it

occurs. In aircraft maintenance, maintenance, repair, and overhaul services also include inspection, rebuilding, alteration and the supply of spare parts, accessories, raw materials, adhesives, sealants, coatings and consumables for aircraft manufacturing and maintenance, repair and overhaul services. The marine transportation, offshore structures, industrial plant/equipment, and commercial facilities market sectors depend on scheduled or preventive paint maintenance programmers to maintain and restore coatings applied to steel, and concrete and masonry assets in environments subject to attack from erosion, corrosion, and environmental pollution. The basic categories of maintenance (regular inspections, corrective maintenance, or preventive maintenance), as well as the basic repair functions (from non-repair to complete repair of the vehicle), are also taken into consideration when analyzing each function (Freire & Matos, 2000). Any form of company enterprise needs the tools or resources to produce the outcomes that are crucial in the dynamic global economy (Murphy, D. 2002). The fleet's equipment will age with time, lengthening the downtime. As a result, the planned maintenance must be carried out correctly to prolong its useful life.

### 2.3.2 Fuel management

An essential component of fleet operation review is fuel management. Fuel is compared to the blood that flows throughout the human body. It makes moving the car easier at any given time. It is important to remember that while fleet management and traffic safety are essential to providing services, gasoline is a resource that requires careful management. Fuel management is a significant cost issue in most settings, notwithstanding variations throughout the company (Gitahi and Ogollah, 2014). However, creating a structured fuel management program is a useful tactic for achieving long-lasting fuel cost savings for fleet operations. To monitor, cut back on, and maximize gasoline-related costs, businesses implement fuel control and management designs for vehicles. The most common ways to learn about fuel level and usage are to place a gasoline level sensor directly in the fuel tank or attach a GPS tracker to the vehicle's onboard computer. This operation produces thorough records that show which drivers squander the company's fuel and whose cars consume excessive amounts of it. Therefore, since effective fuel management has a significant

impact on the competitive advantage of the company, operators must put in place the proper measures to encourage it (Ibid). Fuel usage in heavy construction operations is one of the critical problems in considering the cost. Construction trucks and machinery overall has more fuel usage because of its huge mass and its full loads of construction raw materials. Additionally, the driving situation on construction sites frequently has uneven geography settings and the driving routes regularly face recurrent steep gradients, which lead to high fuel usage and at the same time the trucks, must travel at low speed. Machinery manufacturer effort continually on upgrading the fuel efficiency of the construction equipment parallel from the vehicle design point of view and expectation of the road condition, subsequently a decline of a little portion points in fuel usage can affect considerable cost savings (Jiali, 2017). After outlining a wide range of factors that have an impact on fuel, Latto, and Baas et al. (2005) specify that driver education, speed management, better fleet management procedures, improved in-cab temperature control, matching vehicles to the transport task, better maintenance management, and better Tire management are possible measures to increase fuel efficiency. The study by Alfonso P. Orla. S & Luk N. (2009) explores the use of data collection and analysis in monitoring and evaluating Field VFM, particularly in the context of international humanitarian organizations. It discusses various fuel management systems, including card-based 17 systems, on-site systems, total fuel management systems, and mobile fuel management. The study also highlights the challenges posed by the increasing use of biofuel, such as the risk of microbial growth and deteriorating fuel quality over time. According to the findings -6of their study, they identified fleet fuel management as one of the nine tools of real-time Fleet Management that are now available and observed that fuel management in dynamic fleet management systems has been a key instrument in the operation of vehicles. The use of personalized cards for all fuel-related transactions helps to prevent irregular or unauthorized activity and enables the gathering of all pertinent data, including date, time, location, odometer reading, driver name, product type, unit and cost per unit, and total cost (Borirug, Fung, & Philuek, 2009).

### 2.3.3 Driver training and management

The maintenance of cars in excellent condition is a major driving duty. Drivers must have the necessary training to maintain cars and should be able to fix issues that develop while operating the vehicle. The effectiveness of fleet management also depends heavily on vehicle inspection. Fleet cars must undergo thorough inspections on a regular basis to determine if they are fit for use on the road or whether they comply with local requirements. When a breakdown happens while driving, the driver should be able to give first aid to the vehicle while also being able to swiftly recognize and address issues. Particularly proved to be a successful way to proactively enhance workplace health, resilience training may be given priority in any intervention approach to treat workplace stress (Hesketh et al., 2015). In many businesses, it is not feasible to teach staff members on a large-scale program about the usage of new technology. Organizations do this, though, by giving user departments the right information in the right manner. Employees are also provided training documents to promote rapid and simple adoption of new equipment inside the company. Other techniques, such as brief presentations, posters, and announcements with advice on how to make changes, are crucial for improving drivers' abilities and knowledge in providing high-quality service. Therefore, we propose that driver management and training have a greater impact on service delivery and overall competitive advantage (Ibid). The steps included creating a thorough persistent checklist, making sure drivers are aware of their accountability for their actions, enhancing the hiring process for drivers, teaching, and coaching them about vehicle standards and visual inspections, holding regular monthly driver forums, cultivating a culture where drivers can step in and stop any unsafe or non-compliant behavior, and creating monthly feedback reports on individual driver performance. The best approach is to properly manage your drivers and operators. To guarantee that both workers and the public are not put at danger, it is crucial to approach driver selection and management in a knowledgeable manner. Driving affects a person's physical and emotional wellbeing. Mejza et al. (2003) identified careful hiring processes and formal reward systems as best practices for driver management in US motor carriers, enhancing performance. They are expected to work long hours and have limited access to nourishing meals and roadside

assistance, which might have an adverse effect on their health. Additionally, drivers are required to focus for lengthy workdays. They typically don't communicate much with other people and are impacted by things they can't control, including weather and traffic. To ensure that they and 19 other road users are not put in danger, drivers require the help of their companies. Because of the existing shortage of qualified drivers and candidates wishing to pursue professional driver training, concerned company owners are increasingly realizing their moral responsibilities to manage their workforce effectively (London, 2006).

### 2.3.4 Vehicle replacement and disposal management

The ability to anticipate resource life cycles based on costing data, utilization, and resource age is a requirement for the advantageous replacement of vehicles and equipment. Subsidizing needs is also a problem because many organizations, especially the government, spend money on purchasing automobiles. Numerous operations have been confined to an outdated fleet due to the unpreparedness and typical low financial funding levels. Because of the outdated vehicles, this lack of sufficient funding for replacement may also result in greater support expenses (Begashaw, 2016). For a single machine problem, the quantity-based replacement policy and the time-based replacement policy are presented. Problems with inventory management have been addressed using these two types of policies. When an accumulation of products of a certain magnitude is generated, a machine is replaced under a quantity-based replacement strategy. One can choose the ideal production size in this model. Before taking a fleet for maintenance and repair or replacement later, a company should ascertain the predicted ideal workload that specific fleet can handle based on usage. This needs to be done while considering things like the cost of operating the fleet and the cost of repairs and maintenance, among other things (City of Seattle, 2014). The general condition of the car and the total cost of repairs and maintenance will also be taken into consideration when deciding how to dispose of it. Therefore, it is crucial to dispose of cars while considering their mileage, working hours, and history of repair and maintenance expenditures. Running outdated vehicles increases operational expenses, prolonged downtime, and lowers service quality by interfering with operations during frequent breakdowns (A1593, 2017).

## 2.4 Operational performance

The physical values that are used to assess, compare, and manage an organization's overall performance are referred to as performance indicators (Gosselin, 2005). A few examples of 20 performance indicators include quality, price, time, flexibility, and delivery. These performance indicators are used by most companies to assess and manage their performance. According to performance indicators, the measurements are the elements that are used to assess an organization's performance (Heckl & Moormann 2010). Indicators of operational success should be part of a more comprehensive conceptualization and effective company performance. This study focuses on fleet operating performance to assess the advantages of fleet management practices. According to Stank et al. (1999), operational effectiveness significantly influences customer loyalty and satisfaction, which in turn affects market performance (Stank et al. 2003). According to Venkatraman and Ramanujam (1986), operational performance indicators include market share, new concept introduction, product quality, product marketing, efficiency, creation of value addition, and other business-related factors. Additionally, according to Zhu, Sarkis, and Lai (2008), operational performance indicators included flake rate, capacity utilization, product quality, amount of inventory, and product line. On the other side, operational performance is a problem for Russell and Taylor (2008) while managing the cost budgeting. Regarding low- cost production, it means maximizing output with the fewest inputs possible while minimizing waste so that the firm can provide value to its customers. Cost management measurement may be compared to quality management, according to Prajogo and Goh (2007). Speed and product service are improving in operational performance. Shortening the time between delivery and service request is achieved by encouraging an organization to offer on time service to its consumers. Quality, pricing, delivery, and flexibility are described as the characteristics that serve as competitive priorities by Phusavat and Kanchana (2007). These criteria were specified as follows:

### 2.4.1 Quality

Low quality defect rates, product performance, dependability, certification, and environmental concerns are all examples of quality. The success of every firm depends on quality. Customers

today want high-quality items, and businesses who can provide these things at a lesser cost succeed. Three primary levels—input, output, and throughput or process quality—are where the quality is assessed. Most businesses prioritize quality because they have promised to provide 21 high-quality services and goods to their clients (Heckl & Moormann 2010).

### 2.4.2 Cost

It is the capacity to control production costs, together with its linked components like overhead and inventory, as well as value-added. According to (White, 1996), cost-based performance measures are of greater concern to external stakeholders, which is why organizations use cost accounting systems that include efficiency and effectiveness measures to link internal performance measures to external ones (Razaq, 2013).

### 2.4.3 Delivery reliability

It is seen as a temporal problem. Delivery refers to how soon a good or a service is given to clients. It also takes a new product's time-to-market into account. According to White (1996), perceived relative dependability, reliability in comparison to rivals, percentage of on-time delivery, adherence to due dates, and percentage rise in the share of delivery promises met are all important factors. As indicators of the delivery reliability, consider the percentage of orders with incorrect quantities, schedule attainment, average delay, and percentage reduction in lead time per product line, percentage increases in output, percentage reduction in purchasing lead time, and percentage reduction in average turnaround time per warranty claim. The indicators of delivery dependability are generally agreed upon by scholars (Razaq, 2013).

### 2.4.4 Flexibility

Flexibility is the capacity to deploy and/or re-deploy resources in response to modifications in contractual agreements that are largely brought about by clients. This word encompasses several elements, including modifications to design and planning, volume adjustments, and product diversity. According to Zhang et al. (2003), flexibility is the capacity of organizations to carry out a variety of activities with a given amount of manpower, machinery, etc. The most reliable indicators

of flexibility, according to Neely and Platts (2005), are material quality, output quality, new and updated products, deliverability, volume mix, and resource mix. With a clear capacity for adaptability to new difficulties, flexibility is a technique to clearly convey the competitive advantage in an unpredictable market and to avoid instability. The levels and the type of required flexibility, in real time are influenced by the competitors of this market (Todorut, 2008).

## 2.5 Empirical Literature Review

Orr and Kempter (2009) conducted a study on improving operational performance through automatic vehicle management. The study found out that automatic vehicle management system has proved to be rewarding in where it has been positioned. It has created an allowance for better administration of important capital investments of the company, not limited to fleet and human resources. The overall operational efficiency has improved while miles driven have been reduced. Team are most probable to drive less risky and are following the accepted standards of driving. An evaluation of the effects of logistics management apps on the effectiveness of operations at MS C, Kenya, was done in Mukolwe and Wanyoike. His study's objective was to assess the effects of logistics management software on MSC, Kenya's operational effectiveness. The study found that improving the organization's internal and external operations through effective information outflow management. Task automation greatly improves accuracy, operational efficiency, and scrap reduction. Practices for managing transportation and distribution allow for the quicker and more economical outflow of resources, which boosts operational effectiveness. The study recommends a tactical plan for managing logistics applications by implementing cutting-edge technology and personnel training. Fleet management systems are very important, the successful introduction of these systems has become a key issue (Yi-Chung Hu et al, 2015). Concerning on operational fleet management, Scott (1998), the two tools that can be used to improve operational efficiency are the minimization of fuel consumption and the maximization of vehicle utilization while still meeting required service levels. Kersten (2017) study result pointed out that weak logistics practices particularly vehicle fleet management have caused delays in the implementation of government services and projects, thereby derailing service. Similarly, Aflabo (2020) finding shows that if the

other variables are held constant (repair and maintenance, fuel management, vehicle tracking) competitive advantage will increase at an increase practices of driver management and training. A sizeable number of scholars have applauded fuel management as a key transport management component that facilitates the movement of vehicles at any point in time (Kamalanathsharma & Rakha, 2016). Fuel management aspects such as monitoring fuel consumption rates, fuel procurement, allocations of fuel, and monitoring fuel usage rates influence the ability of an organization to respond to its customers (Gitahi & Ogollah, 2014). Similarly, research by Aflabo et al. (2020) highlighted that proper fuel management can reduce vehicle fuel consumption, which in turn saves an organization‘s financial resources. In addition, Chiparo et al. (2022) found 23 that fuel management aspects, such as fuel-efficient driving techniques and route optimization, can significantly reduce an organization‘s carbon footprint. An organization to monitor fuel quality, test fuel samples, and implement quality control measures to ensure that the fuel meets established standards. Effective fuel management requires continuous monitoring and reporting of fuel consumption, inventory levels, and other key metrics (Gitahi & Ogollah, 2014). This information can be used to identify trends, track performance, and make informed decisions about fuel management strategies. There is a general agreement in the literature that fuel management significantly influences organizational performance (Chiparo et al., 2022; Gitahi & Ogollah, 2014). According to Sgarbossa and Russo, (2017), older vehicles constitute a small proportion of the entire vehicle fleet and yet they contribute to a disproportionate amount of both economic and social motor vehicle costs. Driver training, vehicle maintenance and vehicle design are range of relative low-cost measures that can save 10% or more fuel for fleet operation (Baas & Latto 2005). However, Bell (2013) noted that properly changing of oil can help increase the lifespan of the vehicle engine by using fuel additives to ensure that the engine injectors are always clean. When vehicle oil is not change adequately it will permit dirt, particles, and acidic substances to degrade the engine parts. Chevrolet (2015) states that oil change is related primarily to gas mileage and can result to a decrease in fuel economy. Vehicle parts are replaced as a function of the odometer except for batteries. Maintenance costs according to the New Zealand Agency (2005) makes up

between 5% and 10% of a vehicle‘s operating cost in developed countries, which help to maintenance costs increase with vehicle age and operation intensity. Research has indicated that the maintenance percentage rate will increase as the delivery distances and weights increases as is the case in Zimbabwe where maintenance costs are much higher than in developed countries reaching between 25% and 35% of operating costs. The maintenance system plays a very important role, as does many other systems within an organization. The maintenance system must be considered carefully because this system can have great influence on the overall performance of the organization. Maintenance expenditures in the UK‘s manufacturing industry (as an example) range from 12 to 23% of the total operation costs (Cross, 1988; Dekker, 1996) reported that, in refineries, maintenance spending is about 30% of the total staffing costs. The mining industry spends between 40 to 50% of operating costs on maintenance (Campbell, 1995) showed that, in a case study of data presented on a six- year- 24 old, 75,000-ton bulk carrier, maintenance costs account for the largest proportion of operation costs (40%) based on the sample surveyed. Therefore, the issue of how to conduct maintenance optimally must be given careful consideration to reduce the great costs of such maintenance. The importance of maintenance has generated an increasing interest in the development and implementation of optimal maintenance strategies for improving system reliability, preventing the occurrence of system failures, and reducing maintenance costs of deteriorating systems. Similarly, Maintenance spare parts planning and control also has a significant financial impact. A study conducted by Aberdeen Group (2003). In 2003, spare parts sales and services (mostly maintenance) accounted for 8% of the gross domestic product in the United States and a study by Deloitte (2006), among 120 large manufacturing companies in North America, Asia Pacific and Europe shows that service revenues represent more than 25% of total business (Arts, 2013). Baas (2012) come with finding the case studies results related to barriers to adopting fuel saving measures that are fleet managers often do not have any formal training in financial management and therefore do not have a good handle on what each truck costs to run over its lifetime rather, fleet managers and owners largely base their decisions on the experience of previous generations of fleet managers. As a result, very few fleets are putting effort into saving

fuel despite the financial benefits (Baas, 2012). Beside of this, Central to a fleet management program is fleet driver training. The idea behind this training is to reduce or even eliminate the risks encountered by fleet drivers. It has several additional benefits including reducing fuel costs, gaining a discount on insurance premiums and most importantly, lowering the risk of crashes (Baker, 2016). Similarly, Lynne and Lockwood (1998) study show that providing training for drivers are important to people with involvement and relations as being integral to organizational success.

## 2.6 Relationship between fleet administration and operational performance

### 2.6.1 Vehicle tracking and operational performance

A vehicle tracking system combines the use of automatic vehicle location in individual vehicles with software that collects these fleet data for a comprehensive picture of vehicle locations. Modern vehicle tracking systems commonly use GPS technology for locating the vehicle, but other types of automatic vehicle location technology can also be used. Vehicle information can be viewed on electronic maps via the Internet or specialized software. Urban public transit authorities are an increasingly common user of vehicle tracking systems, particularly in large cities. (Penton. January 6, 2011) As (Penton, 2011) vehicle tracking systems are commonly used by fleet operators for fleet management functions such as fleet tracking, routing, dispatching, on-board information and security. Some vehicle tracking systems are bundled with or interface with fleet management software. Along with commercial fleet operators, urban transit agencies use the technology for a number of purposes, including monitoring schedule adherence of buses in service, triggering automatic changes of buses' destination sign displays once the vehicle approaches the bus terminus (or other set location along a bus route such as a particular bus stop along the route), and triggering pre-recorded (or even synthetic speech) bus stop, route (and its destination) or service announcements for passengers. Global Positioning System (GPS) vehicle tracking has rapidly gained popularity among fleet owners as the technology becomes more affordable and easier to access. In general, GPS vehicle tracking utilizes a space-based global navigation satellite system to

track time and location information of fleet vehicles. This information is then transmitted to a remote user who can monitor vehicle location, speed, routing, idle time, engine start up and shut down, and much more. This information can be used to improve a host of fleet management operations including the reduction of fuel costs. According to a study by the Aberdeen Groups (a research firm that studies the effects of technology) on business, fleets with GPS tracking installed experience a 13 percent reduction in fuel costs on average.(Udham ,Kumar &Rashid ,2015)

From my perspective, the researchers accurately present the role and advantages of vehicle tracking systems in fleet management. The integration of GPS technology has indeed revolutionized fleet tracking and management, offering real-time insights that can lead to cost savings, improved efficiency, and enhanced services. The passage effectively highlights the multi-faceted nature of vehicle tracking systems, showcasing their relevance in urban transit and their potential for optimizing various aspects of fleet operations.

### 2.6.2 Vehicle fuel management and operational performance

Fuel management systems are used to maintain, control and monitor fuel consumption and stock in any type of industry that uses transport, including rail, road, water and air, as a means of business. Fuel management systems are designed to effectively measure and manage the use of fuel within the transportation and construction industries. They are typically used for fleets of vehicles, including railway vehicles and aircraft, as well as any vehicle that requires fuel to operate. They employ various methods and technologies to monitor and track fuel inventories, fuel purchases and fuel dispensed. This information can be then stored in computerized systems and reports generated with data to inform management practices. Online fuel management is provided through the use of web portals to provide detailed fuelling data, usually the back end of 15 an automated fuel management system. This enables consumption control, cost analysis and tax accounting for fuel purchases.(Lange, H.B.1992).

There are several types of fuel management systems. Card-based fuel management systems typically track fuel transactions based on a fuelling credit card and the associated driver PIN.

Reports can then be generated based on fuel consumption by driver, and data can be directly downloaded. On-site fuel management systems may employ fleet refueling services or bulk fuel tanks at the site. Fuel is tracked as it is pumped into vehicles, and on-site storage levels can be managed. Some fuel companies offer total fuel management systems whereby they provide elements of a card-based system along with on-site fuel delivery and refueling services. Mobile fuel management refers to a fleet of fuel trucks or tankers which provide fuel supply to commercial fleets of trucks or construction equipment. The increasing use of bio-fuel has introduced another challenge in fuel management. With greater water content, there will be a risk of microbial growth – depending on the storage conditions, the fuel quality will deteriorate over time, leading to clogged filters and loss of productivity. (Hohn, Geoffrey M., 2011)

The schoolars above offer a comprehensive overview of fuel management systems and their significance in various industries that rely on transportation. These systems play a vital role in monitoring, controlling, and optimizing fuel consumption and stock, which is crucial for operational efficiency and cost-effectiveness.

Overall, the dialogue underscores the importance of effective fuel management systems in various industries and highlights the diverse range of technologies and strategies employed to ensure efficient fuel consumption, inventory management, and operational performance.

### 2.6.3 Driver management and operational performance

It is the responsibility of drivers to keep vehicles in good shapes and condition. Drivers must be provided with the requisite training to take care of vehicles and should be able to attend to problems that arise when using the vehicle. Vehicle inspection is also very important for fleet management to be effective. Fleet vehicles must be properly inspected on regularly basis to check whether they are in good conditions to work on the road or whether vehicle meet regulations in the country of operation. The driver should be able to provide first aid for the vehicle when a break

down occurs on the road whiles ensuring that they are able to quickly identify and respond to problems immediately (Aflabo et al., 2020).

Driver behavior and education are directly imposed with improvements in fuel efficiency and safe driving practices, hence, accordingly driver training is aimed at improving fuel-efficient driving and decreasing incident rates and basing on study findings a number of initiatives were introduced aimed at improving driver behavior and education (Baas, 2012). He also provided that driver management involves steps which included developing a comprehensive prestart check sheet, ensuring that drivers understand that they are responsible and accountable for their actions, improving driver recruitment procedures, educating and coaching drivers about vehicle standards and visual inspections and all these have a positive effect on operational performance of an organization.

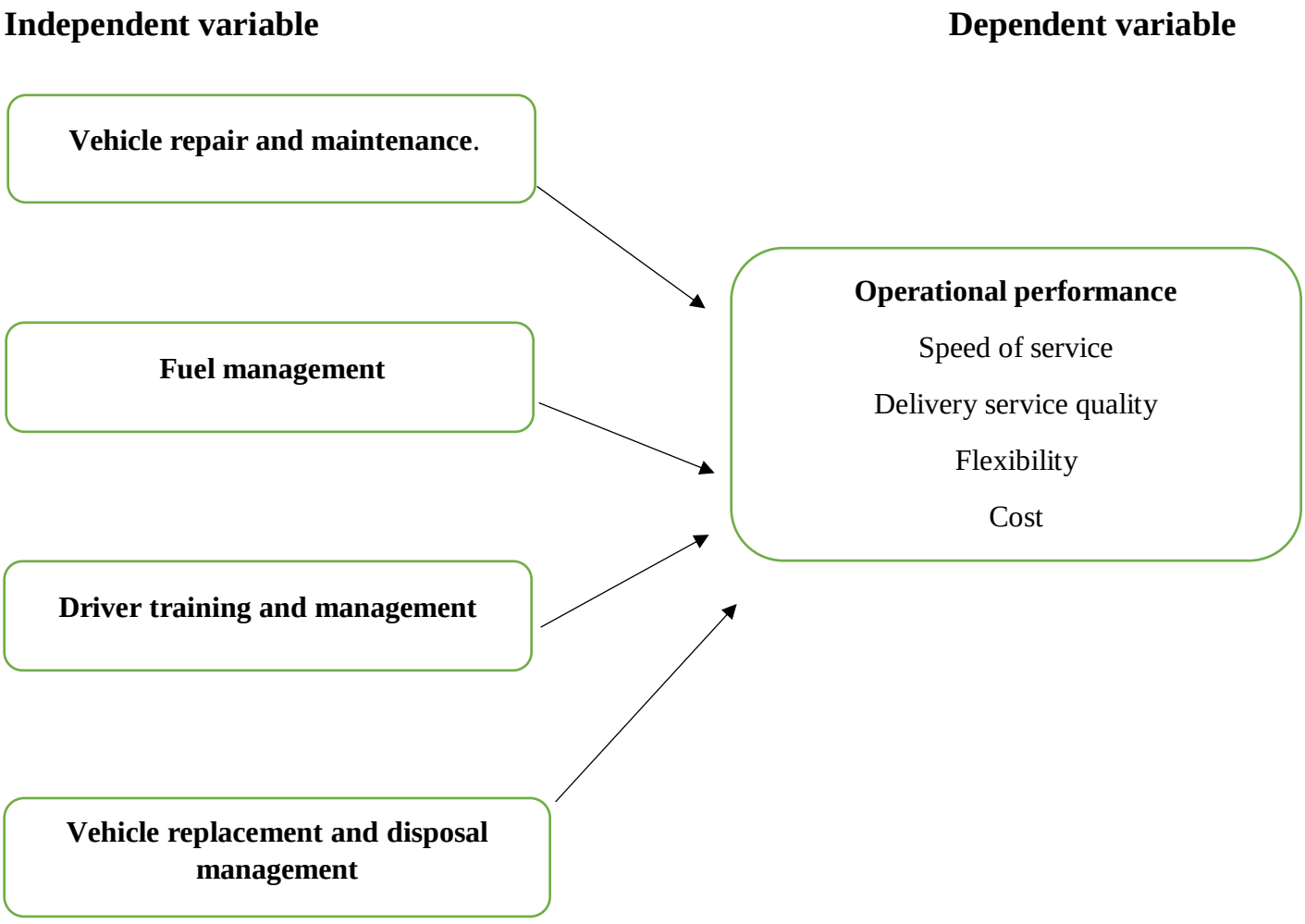
Resilience training has especially been proven to be an effective means to proactively improve workplace wellbeing and may be considered foremost in any intervention strategy to address workplace stress (Hesketh et al., 2015).

The training of employees on a large-scale program with regards to the usability of new technology is not possible in many organizations but most organizations achieve this by providing information to user department in the most appropriate way. Training manuals are also given to employees to encourage easy and quick adaptation of new machines in the organization. Other methods such as short presentation as well as posters and notices with tips on how improvements can be made are important in enhancing driver's skills and knowledge in delivering quality service delivery.

## 2.7 Conceptual framework

As part of the development of this conceptual framework, many types of literature were reviewed. According to (Young, 2009) a conceptual framework is a diagrammatically representation that depicts how dependent and independent variables are related. The study's conceptual framework, which was adapted from Gitahi and Ogollah (2014), will examine the examination of Fleet management practices and their impact on the operational performance of Dangote Cement

Ethiopia Plc. The factors are organized into four themes: driver education and management, fuel management, vehicle replacement and disposal management, and vehicle repair and maintenance. The variables are shown together with any potential relationships between them and the result variable. The presence of potential connections between the elements is also there.



# CHAPTER THREE

# METHODOLOGY

## 3.0 Introduction

This chapter presents different methodologies that were used in the study and they included; research design, target population, data sources, sampling techniques and sample size determination, data collection tools and techniques, data compilation and analysis, validity and reliability and ethical considerations.

## 3.1 Research approach

Enough qualitative data (a survey questionnaire) was employed, evaluated, and the total result was interpreted to address the broad aim and close the knowledge gap. The study employed a qualitative research technique as the result.

## 3.2 Research Design

The researcher used cross sectional research design because the design allowed the researcher to generate information in a relatively short time from the target population as there was no need of a follow up to be done.

## 3.3 Target Population

A population is a complete set of units was studied (Kothari, 2004). The study population comprised of employees from Bollore Logistics Ltd in the fleet department.

## 3.4 Sources of Data

Data was collected from both primary and secondary sources. Secondary data sources were used in the process of relevant literature from textbooks, research papers, journals, internet and dissertations. Primary data was collected from employees of Bollore Logistics Ltd.

## 3.5 Data collection procedures

Before beginning data collection, the researcher tried to get the necessary approval and authorization from the concerned Bollore Logistics Ltd. authorities. Each questionnaire included a cover letter assuring the respondents that their replies would be kept confidential and anonymous. The researcher made appointments with the respondents and visited them to go through the study's goals and data collection techniques before delivering the questionnaire. On the day of the visit, the researcher presented the questionnaire in person and waited while the respondent filled it out. This gave the researcher the opportunity to give the respondent further information as needed. The questionnaire was completed and collected by the researcher at the time of data collection, who also reviewed the completed questionnaires.

## 3.6 Sampling Techniques and Sample size Determination

The study used simple random sampling to select a sample of 30 respondents from the fleet department of Bollore Logistics Ltd. All employees were assigned numbers and later a sample of numbers were chosen and employees with those numbers were required to give information answering the objectives of the study.

## 3.7 Data collection tools and techniques

The data was collected using a questionnaire which comprised of questions which were expected to answer the questions related to the objectives of this study. A questionnaire is a research instrument consisting of a series of questions and other prompts for the purpose of gathering information from respondents (Abawi, 2017). Section A of the questionnaire comprised of background information of the respondent, section B comprised of questions on effect of fleet administration on performance and section C will comprise of questions on fleet management.

## 3.8 Data compilation and analysis

Pearson correlation was used to find out the relationship between fleet management components (vehicle tracking, fuel management and driver management) and its performance on Bollore Logistics Ltd. The hypotheses was done at 95% level of significance. The sign of the correlation value will imply the direction of the relationship whether increasing or decreasing.

## 3.9 Validity and reliability of the instrument

According to Creswell (2014), a trait that enables a data collecting instrument to measure the items that it is designed to assess is called validity.

For validity of the instrument, the questionnaire was prepared and submitted to my supervisor for verification and assessment of reliance on content. The questioner asked a wide range of questions on the respondents' knowledge to attain validity. The questionnaires were prepared following a thorough examination of relevant fleet management literature to guarantee content validity. The questionnaires included a variety of questions on the knowledge of the fleet managers and their staff about fleet management practice and its effect on the operational performance of Bollore Logistics Ltd.

The researcher ensured reliability by using instruments that were previously used by other researchers to carry out research and also make conclusions on the relationship of the variables in question. The instrument was examined by the researcher advisor to make sure the content validity. The questionnaire had adequate sample size to make inference about the population as a result, it fulfilled external validity, or the study can generalize about the population based on the sample.

## 3.10 Pre-testing

The goal of the pretest was to determine the respondent's understanding of any ambiguous terms and the instrument's comprehensiveness. Pre-testing was carried out using a 10-person convenience sample drawn at random from employees who were excluded from the final sample. After they had finished, a discussion was held with the respondents to highlight the need to clarify any unclear questions and eliminate any that were unnecessary to ensure accurate study variability measurement. Participants in the pilot research were questioned about the applicability and clarity

of the questions as well as any other feedback or issues they had with the survey instrument. Therefore, all test items were made obvious to the test takers.

### 3.11 Ethical considerations

The researcher made it clear that participation in the study was voluntary and that the respondent was free to decline or withdraw anytime during the research period.

The researcher guaranteed the participants that their information would never be made available to anyone who was not be involved in the study and would remain confidential for the purposes it is intended for. The researcher also instructed participants not to write their names on the questionnaires to preserve their level of confidence and trust and to safeguard correct data.

# CHAPTER FOUR

# DATA ANALYSIS, PRESENTATION AND INTERPRETATION

## 4.0 Introduction

This chapter deals with data presentation, interpretation and analysis of the study. It has two main parts: the first part is demography of the respondents; the second part consist of data collected from the respondents through questionnaires. In order to address the research questions and hypothesis, 107 questionnaires were prepared and distributed to Bollore Logistics Ltd employees, out of these questionnaires 102 were filled and returned.

## 4.1 Response rate

Employees at Bollore Logistics Limited were given 107 questionnaires, and 102 of them were returned. However, the researcher eliminated 4 of the 102 surveys because they were not complete. As a result, the overall response rate utilized to analyze participant responses was 98 (91.56%).

## 4.2 Reliability test

The fleet management and transport operational performance of Bollore Logistics Limited was investigated by the researcher using a questionnaire. The researcher next evaluates the questionnaire's mod fit reliability and validity to gain confidence in comparing the sample with the aid of SPSS V-22, the most widely used Cronbach's alpha.

### Table 1 Reliability Test

| No. | Types of questionnaires | Cronbach's Alpha | No of Items |
|---|---|---|---|

| | | | |
|---|---|---|---|
| 1 | Operational performance | 8.22 | 17 |
| 2 | Vehicles Repair and Maintaining | .702 | 6 |
| 3 | Fuel Management System | .765 | 6 |
| 4 | Vehicle replacement and Disposal Management | .700 | 6 |
| 5 | Driver training and management | .759 | 7 |

The reliability indicated that all question items were > 0.70 and it is acceptable.

## 4.3 Respondents profile

Profile of respondents of the study consists of gender; age, work experience, and education level are described as follows:

### Respondents gender

Figure 1 shows the respondents gender that participated in the study thus in terms of gender were 84(85.7%) male and 14(14.3%) female.

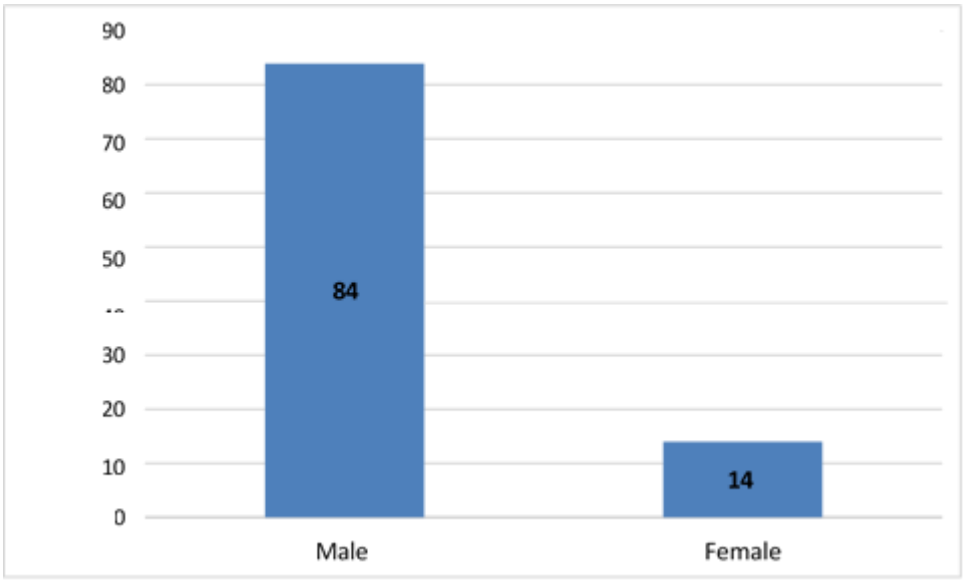



Figure 2 Respondents' Gender

## Respondents' Educational status

The majority of 73(74.5%) of the respondents were degree holder, and 13 (13.3%) of respondents were master's degree holder, and lastly 12(12.2%) of participants were diploma educational level.

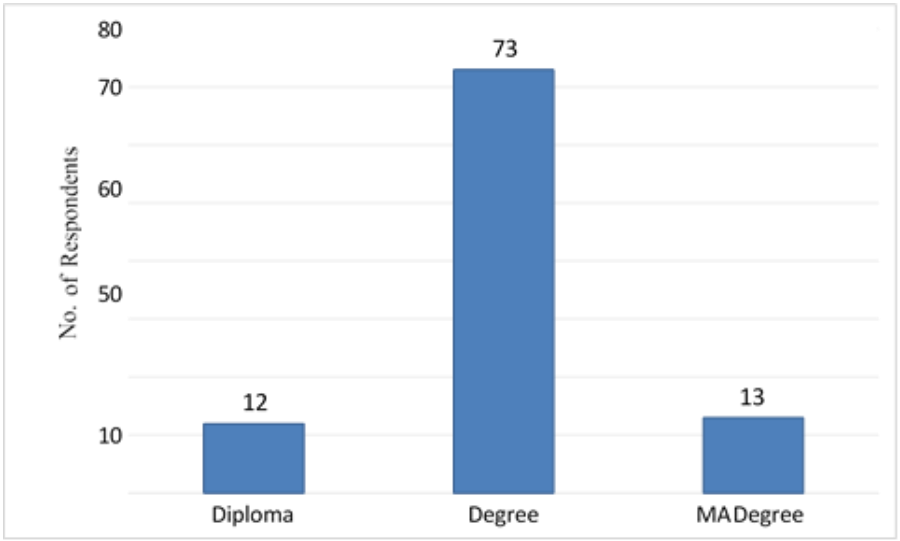



Figure 3 Education Status of the Respondents

## 4.6 Age of respondents

As shown in the above figure most of the respondents 53(54.1%) were age of 31-40, 17(17.3%) of respondents were the age of 18-30. Similarly, 20(20.4%) and 8(8.2%) were age of 41-50 and over 51 years respectively.

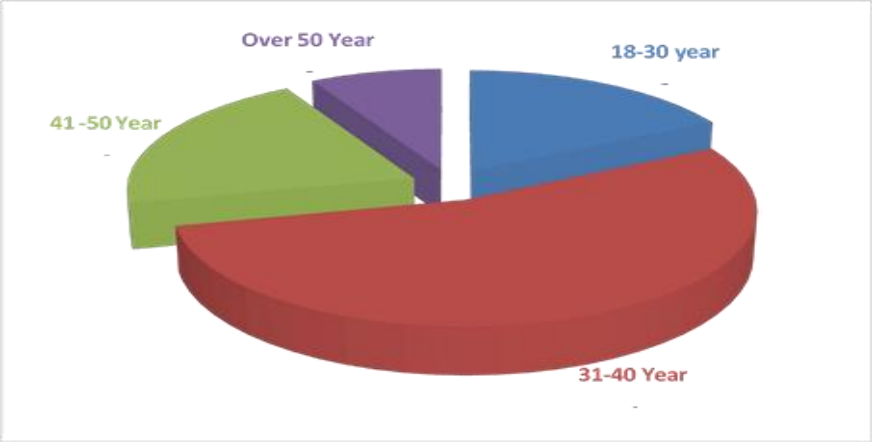


Figure 4 Respondents Age

## 4.7 Descriptive Statistics

In this section, the acquired data were analyzed using a variety of statistical data analysis techniques, including mean, standard deviation, frequency, and percentage. A 5-point Likert scale is used to evaluate all variables, with 1 denoting "strongly disagreed" and 5 denoting "strongly agreed." The descriptive statistics of all variables are summarized. The overall mean (M) score between 4.21 and 5.00 is regarded as the respondents strongly agreed (SA), while the score between 3.41 and 4.2 indicates that the respondents agreed (A), the score between 2.61-3.40 indicates that the respondents are neutral (N), the score between1.81-2.60 indicates that the respondents disagreed, and the score between 1-1.80 indicates that the respondents strongly disagreed. As a result, the analysis's details are given as follows. Statistical procedures were carried out using SPSS version 26 software to evaluate the acquired data in accordance with the general goal of the research activity. The study breaks down the findings into two sections: fleet management inside the study organization and transport operational performance practice level.

### 4.7.1 Descriptive statistics for operation performance

In the following part of the study respondents were asked to separately evaluate each four dimensions of operational performance using a five-point Likert scale: “strongly disagree”, “Disagree”, “neutral”, “agree”, and “strongly agree”

## Descriptive statistics for Cost

### Table 2 Rating of Cost

| No | Description | Mean | Standard Deviation |
|---|---|---|---|
| 1 | The company focuses on decreasing transportation cost | 3.09 | .761 |
| 2 | The Company aims at decreasing warehousing cost | 3.27 | .880 |
| 3 | The company focuses on reducing labour cost | 3.31 | .680 |
| 4 | The company seeks to reduce operating expenses | 3.50 | .815 |
| 5 | The company focus to increase fuel saving | 3.12 | .722 |
| 6 | The company seeks to lower insurance premiums | 3.07 | .803 |
| | **Aggregate average of cost of transport** | **3.3197** | **.34235** |

According to the table, the respondents had a moderate level of agreement with the first sub-construct, which is that the organization focuses on reducing transportation costs, with a mean score of 3.09 and a standard deviation of.761. The respondents' agreement with Bollore Logistics' Limited policy of reducing transportation costs received a modest level of support from the respondents in this respect. The second sub-construct's mean score. The results showed that respondents had a reasonable level of agreement on the topic, with a mean that ranged between 2.61 and 3.40. The company's goal of reducing warehousing costs was indicated by a mean value of 3.27 and a standard deviation of.880. The third sub-construct's scored mean value, "Company Focuses on Reducing Labor Cost," was 3.31 with a standard deviation of.680. This result showed

that respondents were moderately in agreement with the issue as the mean value reflected, which means there is moderate level practice on Bollore Logistics' Limited with a mean value of 3.50 and a standard deviation of.815, the results of the survey suggest that respondents agreed that Bollore Logistics' Limited should try to cut operational costs. The respondents' agreements confirmed a moderate level of practice on the two issues in Bollore Logistics' Limited based on the two statements of the fourth and fifth sub-construct's mean scores for the items "The company focus to increase fuel saving" (mean value of 3.12 and standard deviation of.722) and "The company seeks to lower insurance premiums" (mean value of 3.07 and standard deviation of.803). The average response cost mean values for Bollore Logistics' Limited were generally in reasonable agreement with the agreement confirmed with a mean value of 3.32 and a standard deviation of.342. The replies from the respondents reveal that they agreed that Bollore Logistics' Limited operational performance of cost was practiced at a moderate level (2.62–3.40).

### Descriptive statistics for Flexibility

#### Table 3 Rating of Flexibili

| No | **Description** | Mean | Standard Deviation |
|---|---|---|---|
| 1 | The company looks at provision of a variety of services | 3.36 | .722 |
| 2 | Company seeks to offer readily available services | 3.37 | .724 |
| 3 | The company aims at volume flexibility | 3.49 | .613 |
| 4 | Company looks at mix flexibility | 2.97 | .633 |
| | **Aggregate average of Flexibility** | **3.3495** | **.37434** |

As shown in the above table and the second dimension of Bollore Logistics' Limited operational performance which is flexibility. The respondents were moderate level of agreement with the first sub constructs i.e., Bollore Logistics' Limited looks at provision of a variety of services, with the scored mean value points 3.36 and the standard deviation was .722. The result indicated that respondents were confirming their response moderate level practice Bollore Logistics' Limited has provision of a variety of services. Respondents 'agreements were agreed with mean level of 3.49 and standard deviation was .613 on the issue of Bollore Logistics' Limited seeks to offer readily available services. The scored mean value for the second sub-construct i.e., Bollore Logistics' Limited seeks to offer readily available services was moderate level of practice and respondent agreement confirms with a mean value of 3.37 and standard deviation was .721. Similarly, the fourth sub construct statement i.e., Company looks at mix flexibility was mean score 2.97 and standard deviation of .633, thus respondents 'agreement was confirmed moderate level practice on Bollore Logistics' Limited looks at mix flexibility. The average response cost mean values for Bollore Logistics' Limited were generally in reasonable agreement with the agreement confirmed with a mean value of 3.32 and a standard deviation of.342. The replies from the respondents reveal that they agreed that Bollore Logistics' Limited operational performance of cost was practiced at a moderate level (2.62–3.40).

## Descriptive statistics for Service Quality

Table 4 Rating of Service Quality

| No | **Description** | Mean | Sta. Dev |
|---|---|---|---|
| 1 | The company looks to achieve high customer loyalty | 3.59 | .972 |
| 2 | Company looks at increasing the number of customers | 3.50 | .977 |
| 3 | The company focuses on reducing emissions | 3.51 | 1.105 |
| | **Aggregate average of Service Quality** | **3.6902** | **.50168** |

To assess the operational success of Bollore Logistics' Limited service quality practices, the respondents were given three questions. The first sub-construct, Bollore Logistics' Limited, which is depicted in the above table and achieved a mean value point of 3.59 and a standard deviation of.972, aims to establish great customer loyalty. The outcome demonstrates that respondents agreed on the subject, and Bollore Logistics' Limited is highly motivated to increase customer loyalty. Like the first sub-construct, "Bollore Logistics' Limited looks at increasing the number of customers," the second sub-construct, " Bollore Logistics' Limited focuses on reducing emissions," had a mean level of 3.50 and a mean value of 3.51 respectively. Accordingly, respondents' agreement indicated that Bollore Logistics' Limited had a high level of practice on the two issues mentioned above. Respondents 'aggregate response on Bollore Logistics' Limited operational performance of service quality were agreed high level of practice with mean score of 3.69 and standard deviation .502. The result shows high level practice of service quality operational performance in the study organization.

### Descriptive statistics for Speed of Service Delivery

### Table 5 Rating of Speed Delivery

| No | Description | Mean | Sta.Dev |
|---|---|---|---|
| 1 | The company seeks to improve communication | 3.49 | .876 |
| 2 | The company aims at high service rates | 3.33 | .685 |
| 3 | The company keeps up to date procurement information | 3.31 | .680 |
| 4 | The company looks at reducing lead time | 3.47 | .815 |
| | **Aggregate average of Speed of Service Delivery** | **3.4974** | **.27455** |
| | **Total Aggregate average of operational performance** | **3.4648** | **.31460** |

The scored mean value for the first sub-construct i.e., company seeks to improve communication mean value of 3.49, with standard deviation of .876. The second sub constructs i.e., the company aims at high service rates was scored mean value of 3.33 and the standard deviation was .685. Similarly, third sub constructs i.e., the company keeps up to date procurement information was mean value of 3.31 and standard deviation was .680. Lastly, the fourth sub construct i.e., the company looks at reducing lead time was mean score of 3.47 with standard deviation of .815. All the above sub construct results indicated that respondents 'response confirmed moderate level practice of all the above issues. The result indicated that there is moderate level operational performance of service delivery practice in the study area. Lastly, the aggregate level of Bollore Logistics' Limited operational performance of service delivery was 3.49 and standard deviation was .680. The result indicated that there is high level operational performance of service delivery practice in the study area.

Generally, the aggregate response of respondents was score between 3.41- 4.2 means they agreed on Bollore Logistics' Limited operational performance was high at mean value of 3.46 and standard Deviation of .314.

### 4.7.2 Descriptive statistics for Fleet management

In the next part of the survey, respondents were asked to rate four aspects of fleet management separately using a 5-point Likert scale.

"Strongly disagree", "disagree", "neutral", "agree", "strongly agree".

### Descriptive statistics for Vehicles Repair and Maintaining

### Table 6 Rating of Vehicles Repair and Maintenance

| No | **Description** | Mean | Standard Deviation |
|---|---|---|---|

| | | | |
|---|---|---|---|
| 1 | This organization has an adequate management system for vehicle repair and maintenance | 3.45 | .921 |
| 2 | The organization has regular vehicle servicing time schedule | 2.85 | .632 |
| 3 | This organization has an adequate management system for vehicle repair and maintenance | 3.08 | .447 |
| 4 | The repair and maintenance garage complete the service and maintenance on time | 2.99 | .419 |
| 5 | The organization's drivers provide appropriate feedback to the fleet department regarding the service and maintenance of their assigned Vehicles. | 2.91 | .644 |
| 6 | The organization's fleet department handles service and maintenance complaints appropriately. | 2.97 | .546 |
| | Aggregate average of Vehicles Repair and Maintaining | **3.0701** | **.28337** |

The respondents were asked six questions to measure the level of vehicles repair and maintenance in Bollore Logistics' Limited. As shown in the above table the first sub constructs i.e., the organization has successful vehicles repair and maintenance control system was the scored mean value of 3.45and the standard deviation was .921. The result proves that there is high agreement on the practice of vehicles repair and maintenance control in the study organization. Concerning on second sub constructs i.e., organization has regular vehicle servicing time schedule was mean level of 2.85 and standard deviation was .632 on the above issue. This means there is moderate practice of regular vehicle servicing time schedule at Bollore Logistics' Limited.

The two statement of third and fourth sub-construct mean score the item of "organization has well organized control mechanism for genuine spare part used for vehicle service and maintenance" (mean value of 3.08 and standard deviation of .447) and "the repair and maintenance garage complete the service and maintenance on time" (mean value of 2.99 and standard deviation of .419), thus respondents agreement were confirm moderate level of practice on the two above issue in Bollore Logistics' Limited. Fifth sub construct i.e. drivers of the organization gives proper feedback for fleet department about service and maintenance of the assigned vehicle was mean score of 2.91 with standard deviation of .644. Respondents 'response on the above issue was agreed at moderate level of practice in Bollore Logistics' Limited.

The six-sub construct i.e., the fleet department of the organization handles complaint regarding service and maintenance appropriately was mean score of 2.97 with standard deviation of .546; the result shows that respondents' response was moderate level of practice fleet department handles complaint regarding service and maintenance appropriately in the study area.

Respondents 'aggregate response on vehicles repair and maintaining was agreed at moderate level of practice in Bollore Logistics' Limited with mean score of 3.07 and standard deviation .283.

### Descriptive statistics for Fuel Management System

### Table 7 Rating of Fuel Management System

| No | **Description** | Mean | Standard Deviation |
|---|---|---|---|
| 1 | The organization is successful in overall fuel management system | 3.12 | .630 |

| | | | |
|---|---|---|---|
| 2 | The organization has set a standard on fuel consumption rate per Vehicle | 2.84 | .669 |
| 3 | The organization allocates enough fuel coupons for field missions | 3.19 | .637 |
| 4 | There is a timely follow up for fuel consumption | 3.02 | .537 |
| 5 | The organization has potential fuel Suppliers all over the regions | 3.03 | .818 |
| 6 | The organization allocate sufficient budget for fuel cost | 2.93 | .613 |
| | **Aggregate average of Fuel Management System** | **3.0623** | **.33773** |

As shown in the above table the respondents were moderate level of agreement with the first sub constructs i.e., organization is successful in overall fuel management system was scored mean value points 3.12 and the standard deviation was .630. The result indicated that respondents were confirming their response moderate level of practice the above issue in the study project. The second sun constructs, i.e. organization has set a standard on fuel consumption rate per vehicle was mean level of 2.84 and standard deviation was .669 on the issue. The result proves that there is moderate level practice the organization has set a standard on fuel consumption rate per vehicle.

The scored mean value for the third sub-construct i.e., organization allocates enough fuel coupons for field missions was mean value of 3.19 with standard deviation was .637. The two statements (fourth and fifth sub-construct) mean score the item of "There is a timely follow up for fuel consumption" (mean value of 3.02 and standard deviation of .537) and "organization has potential fuel Suppliers all over the regions" (mean value of 3.03 and standard deviation of .818), thus respondents' agreement was confirming moderate level of practice on the two- above issue in Bollore Logistics' Limited. Lastly, the six sun constructs i.e., the organization allocate sufficient

budget for fuel cost was mean level of 2.93 and standard deviation was .613 on the issue. The result proves that the moderate level practice of the organization allocates sufficient budget for fuel cost. Generally, the respondents‘ aggregate response of fuel management system was mean value 3.06 with standard deviation of .338. According to respondents‘ agreement mean score between 2.60 – 3.40 shows that respondents agreed that a moderate level of practice fuel management system.

## Descriptive statistics of Vehicle replacement and Disposal Management

### Table 8 Rating of Vehicle Replacement and Disposal Management

| No | Description | Mean | Sta.Dev |
|---|---|---|---|
| 1 | The organization is using the vehicle tracking system for fleet management | 3.67 | 1.258 |
| 2 | This organization has the latest GPS technology for its vehicle tracking system | 3.33 | .871 |
| 3 | This organization has a vehicle tracking system installed on all of the organization's vehicles | 3.06 | .494 |
| 4 | The organization assigned a person to monitor and manage the GPS tracking system | 3.08 | .511 |
| 5 | The organization supervises speed limit by GPS tracking system | 3.16 | .669 |
| 6 | The organization used the tracking system to manage fuel consumption and maintenance scheduling | 3.14 | .746 |

| | | | |
|---|---|---|---|
| | **Aggregate average of Vehicle replacement and Disposal Management** | **3.3097** | **.31573** |

The scored mean value for the first sub-construct i.e. the organization is using the vehicle tracking system for fleet management was mean value 3.67, with standard deviation of .258, with this result we can understand that respondent‘s agreement was conform high level of organization is using the vehicle tracking system for fleet management. Similarly, the scored mean value for the second sub-construct i.e., the organization has modern technology of GPS for vehicle tracking system indicated mean value 3.33, with standard deviation of .871. The two statements of third and fourth sub-construct mean score the item of “The organization has installed vehicle tracking system on all organization vehicles” (mean value of 3.06) and “the organization assigned a person to monitor and manage the GPS tracking system” (mean value of 3.08), thus respondents ‘agreement was confirming moderate level of practice on the two-above issue in Bollore Logistics Limited.

Concerning on “the organization supervises speed limit by GPS tracking system” was mean value of 3.16 and standard deviation of .669. Similarly, respondents were in moderate agreement on the issue of the organization using the tracking system to manage fuel consumption and maintenance.

Scheduling with mean value of 3.14 and standard deviation of .746. Those two-issue results indicated that respondents‘ response confirmed moderate level of practice in Bollore Logistics’ Limited. Generally, the total aggregate mean values of respondents‘ response on vehicle replacement and disposal management were moderate level of mean score between 2.60 – 3.40, which was mean score 3.31 and standard deviation of .315.

## Descriptive statistics of Driver training and Management

### Table 9 Rating of Driver Training and Management

| No | Description | Mean | Sta.Dev |
|---|---|---|---|
| 1 | The organization has well-organized supervision method on drivers | 3.14 | .837 |
| 2 | The organization has well-organized drivers‘ mission assignment System | 3.03 | .843 |
| 3 | The organization has appointed a person responsible for handling the duties of the driver | 3.06 | .784 |
| 4 | There is a habit to motivate/reward an exemplary driver | 2.23 | .514 |
| 5 | The organization has implemented a driver performance rating system. And has been successful. | 3.07 | .561 |
| 6 | Drivers are responsible for the safe, neat, and lawful operation of the assigned vehicle | 3.15 | .791 |
| 7 | Drivers always fill and properly maintain vehicle logbook for all the distance traveled | 2.89 | .535 |
| | **Aggregate average of Driver training and Management** | **3.0231** | **.21528** |

The scored mean value for the first sub-construct i.e., the organization has well-organized supervision method on drivers was mean value 3.14, with standard deviation of .837, with this result we can understand that respondent‘s agreement was conform moderate level of practice on the above issue. Similarly, the scored mean value for the second sub-construct i.e., the organization has well-organized drivers mission assignment system indicated mean value 3.03, with standard deviation of .843. The two statements of third and fifth sub-construct mean score the item of “the Organization has appointed a person responsible for handling driver duties” (average 3.06) and

"Organization has established a performance evaluation system for drivers" (mean value of 3.07), thus respondents' agreement was confirmed moderate level of practice at Bollore Logistics Limited on the above issue.

The scored mean value for the fourth sub-construct i.e., there is a habit to motivate/reward an exemplary driver was mean value of 2.23 with standard deviation was .514. The two statements (sixth and seventh sub-construct) mean score the item of "Drivers are responsible for the safe, neat and lawful operation of the assigned vehicle" (mean value of 3.15 and standard deviation of .791) and "drivers always fill and properly maintain vehicle log book for all the distance traveled" (mean value of 2.89 and standard deviation of .535), thus respondents agreement were to confirm moderate level of practice on the two above issue at Bollore Logistics' Limited.

Generally, the total aggregate mean values of respondents' response on driver training and management were moderate level of mean score between 2.60 – 3.40, which was mean score.3.02 And standard deviation of .215.

## 4.8 The relationship between vehicle fuel management and organizational performance of Bollore Logistics Ltd.

### Table 10 Fuel Management Systems

| **The effect of fleet management on fleet performance from the perspective of employee**. | | | | | |
|---|---|---|---|---|---|
| **Description** | **1 (SA)** | **2(A)** | **3(N)** | **4(D)** | **5(SD)** |
| **Fuel Management System** | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| The organization is successful in overall fuel management system | 60% | 25% | 3% | 10% | 2% |
| The organization has set a standard on fuel consumption rate per vehicle | 40% | 45 % | 0% | 13 % | 2 % |
| The organization allocates enough fuel coupons for field missions | 80 % | 10 % | 7% | 3 % | 0 % |
| The organization has an independent fuel controller | 90% | 5% | 5 % | 0 % | 0 % |
| There is a timely follow up for fuel consumption | 75% | 15 % | 8% | 2 % | 0 % |
| The organization has potential fuel sources (Suppliers) all over the regions | 83% | 9 % | 4 % | 4 % | 0% |
| The organization allocate sufficient budget for fuel cost | 90% | 8% | 2 % | 0 % | 0 % |

| | Mean | Standard Deviation (SD) |
|---|---|---|
| The organization is successful in overall fuel management system | 0.6 | 0.1038 |
| The organization has set a standard on fuel consumption rate per vehicle | 0.45 | 0.2083 |
| The organization allocates enough fuel coupons for field missions | 0.8 | 0.0567 |
| The organization has an independent fuel controller | 0.9 | 0.0443 |
| There is a timely follow up for fuel consumption | 0.75 | 0.0680 |
| The organization has potential fuel sources (Suppliers) all over the regions | 0.83 | 0.0567 |

| | | | |
|---|---|---|---|
| The organization allocate sufficient budget for fuel cost | 0.9 | 0.0443 | Table 11 Fuel Management System |

Fuel management were one of the predictable variables that are imagine to have an effect on operational efficiency, the first challenge which the respondents gave higher percentage score was the question supposed that, the organization allocate sufficient budget for fuel cost which is the percentage score of 90, the organization has set a standard on fuel consumption rate per vehicle which is the percentage score of 40 , also the question rose about allocation of enough fuel coupons for field missions which is the percentage score of 80, there is a timely follow up for fuel consumption which is the percentage score of 75, and the organization is successful in fuel management system which is the percentage score of 60, the organization has an independent fuel controller which is the percentage score of 90 and also, respondents disagreed with questions arise about the organization has potential fuel sources(suppliers) all over the regions with percentage scores of 4, which indicate the score of this variable nearly assign of agree level.

The organization is successful in overall fuel management system with this aspect has a moderate mean score of 0.6, indicating that, on average, the organization is moderately successful in its overall fuel management system. The relatively low standard deviation of 0.1038 suggests that this aspect is consistent in its performance. The organization has set a standard on fuel consumption rate per vehicle with the mean score of 0.45 is lower than other aspects, suggesting that the organization may struggle in setting and maintaining a standard for fuel consumption rate per vehicle. The high standard deviation of 0.2083 indicates that there is a significant variability in the organization's performance in this area. The organization allocates enough fuel coupons for field missions with a high mean score of 0.8, it appears that the organization is successful in allocating enough fuel coupons for field missions. The low standard deviation of 0.0567 suggests that this aspect is consistent in its performance. The organization has an independent fuel

controller with the mean score of 0.9 indicates that the organization has been successful in having an independent fuel controller, which is crucial for effective fuel management. The low standard deviation of 0.0443 suggests that this aspect is highly consistent. There is a timely follow-up for fuel consumption with the mean score of 0.75 suggests that the organization has a reasonably good practice of timely follow-up for fuel consumption. The moderate standard deviation of 0.0680 indicates some variability in performance but overall consistency. The organization has potential fuel sources (Suppliers) all over the regions with a high mean score of 0.83, it appears that the organization has done well in establishing potential fuel sources across regions. The low standard deviation of 0.0567 suggests consistent performance in this aspect. The organization allocates sufficient budget for fuel cost with the mean score of 0.9 indicates that the organization consistently allocates sufficient budget for fuel costs, which is essential for efficient fuel management. The low standard deviation of 0.0443 suggests high consistency in this area.

## 4.9 The relationship between vehicle tracking and the organizational performance of Bollore Logistics Ltd.

### Table 12 Vehicle Tracking

| VT | Vehicles Tracking | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
| 1 | The organization is using the vehicle tracking system for fleet management | 100% | 0% | 0% | 0% | 0% |

| | | | | | | |
|---|---|---|---|---|---|---|
| 2 | The organization has modern technology of GPS for vehicle tracking system | 77% | 3 % | 7 % | 10 % | 3 % |
| 3 | The organization has installed vehicle tracking system on all Bollore vehicles | 80% | 15% | 5 % | 0 % | 0 % |
| 4 | The organization assigned a person to monitor and manage the GPS tracking system | 88% | 2 % | 3% | 6 % | 1 % |
| 5 | The organization supervises speed limit by GPS tracking system | 60% | 25 % | 3 % | 10% | 2% |
| 6 | The organization provide immediate solution for problems encounter in vehicle tracking | 65% | 20 % | 6% | 7 % | 2 % |
| 7 | The organization used the Tracking system to manage fuel consumption | 79% | 9 % | 2 % | 8 % | 2% |

Table 13 Vehicle Tracking

| | Mean | Standard Deviation |
|---|---|---|
| The organization is using the vehicle tracking | 1 | 0.0356 |

| | | |
|---|---|---|
| system for fleet management | | |
| The organization has modern technology of GPS for vehicle tracking system | 0.77 | 0.0619 |
| The organization has installed vehicle tracking system on all Bollore vehicles | 0.8 | 0.0567 |
| The organization assigned a person to monitor and manage the GPS tracking system | 0.88 | 0.048 |
| The organization supervises speed limit by GPS tracking system | 0.6 | 0.1038 |
| The organization provide immediate solution for problems encounter in vehicle tracking | 0.65 | 1.6666 |

| | | |
|---|---|---|
| The organization used the Tracking system to manage fuel consumption | 0.79 | 0.0619 |

Vehicle tracking were one of the feasible variables that are hypothesized to change operational efficiency. The first challenge which the respondents achieve was the organization allocate sufficient budget for fuel cost which is the percentage score of , the second question is about modern technology of GPS for vehicle tracking system which is the percentage score of 77 ,also the issue state about installed vehicle tracking system which is the percentage score of 80, the organization assigned a person to monitor & manage the GPS tracking system which is the percentage score of 88 , the organization supervises speed limit by GPS tracking system which is the percentage score of 60, the organization provide immediate solution for problems encounter in vehicle tracking which is the percentage score of 65 and the organization used the tracking system to manage fuel consumption which is the percentage score of 79.

The organization is using the vehicle tracking system for fleet management with the high mean score of 1 indicates that the organization is extensively using the vehicle tracking system for fleet management, and the low standard deviation of 0.0356 suggests that this aspect is highly consistent. The organization has modern technology of GPS for vehicle tracking system with the mean score of 0.77 suggests that the organization has relatively modern GPS technology for vehicle tracking. The standard deviation of 0.0619 indicates that this aspect is consistent. The organization has installed a vehicle tracking system on all Bollore vehicles

with the mean score of 0.8 indicates that the organization has installed tracking systems on a substantial portion of its vehicles. The low standard deviation of 0.0567 suggests that this aspect is consistent. The organization assigned a person to monitor and manage the GPS tracking system with the high mean score of 0.88 suggests that the organization is proactive in assigning personnel to monitor and manage the GPS tracking system. The low standard deviation of 0.048 indicates that this aspect is highly consistent. The organization supervises speed limits by GPS tracking system with the mean score of 0.6 suggests that the organization has some level of supervision of speed limits using the GPS tracking system, although there is room for improvement. The relatively high standard deviation of 0.1038 indicates variability in performance in this aspect. The organization provides an immediate solution for problems encountered in vehicle tracking with the mean score of 0.65 suggests that the organization offers some level of immediate solutions for problems encountered in vehicle tracking. However, the extremely high standard deviation of 1.6666 raises concerns about the consistency and effectiveness of problem-solving in this area. The organization uses the tracking system to manage fuel consumption with the mean score of 0.79 suggests that the organization uses the tracking system to manage fuel consumption, which can positively impact fleet performance. The standard deviation of 0.0619 indicates that this aspect is consistent.

## 4.10 The relationship between driver management and organizational performance of Bollore Logistics Ltd.

### Table 14 Driver Management

| **DM** | **Driver Management** | 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|
| | | 5 | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1 | The organization has well-organized supervision method on drivers | 72% | 15% | 8% | 5% | 0% |
| 2 | The organization has well-organized drivers mission assignment system | 66% | 8 % | 6 % | 8 % | 12 % |
| 3 | There is a habit to motivate/reward an exemplary driver | 56% | 20 % | 4 % | 15 % | 5 % |
| 4 | The organization has successful performance evaluation system for drivers | 67% | 15 % | 3 % | 10 % | 5% |
| 5 | There is Driver's Development and learning program in the organization | 47% | 0 % | 13 % | 25 % | 15 % |
| 6 | Drivers are responsible for the safe operation of the assigned vehicle | 70% | 15% | 0% | 10 % | 5 % |
| 7 | Drivers always fill and properly maintain vehicle log book for all the distance traveled | 85% | 0 % | 3 % | 7 % | 5 % |

Table 15 Driver Management

| | Mean | Standard Deviation |
|---|---|---|
| The organization has well-organized supervision method on drivers | 0.72 | 0.075 |
| The organization has well-organized drivers mission assignment system | 0.66 | 0.0925 |
| There is a habit to motivate/reward an exemplary driver | 0.56 | 0.1333 |
| The organization has successful performance evaluation system for drivers | 0.67 | 0.0831 |
| There is Driver's Development and learning program in the organization | 0.47 | 0.1775 |
| Drivers are responsible for the safe operation of the assigned vehicle | 0.7 | 0.075 |

| | | |
|---|---|---|
| Drivers always fill and properly maintain vehicle log book for all the distance traveled | 0.85 | 0.0520 |

Driver management exist as one of the possible variables that are presume to vary operational efficiency, that most of the respondents were somewhat signifying driver management disagreement to those challenges that the researcher used to determine the challenges of practices. The first challenge which the respondents gave higher percentage score was the question supposed that, drivers always fill &properly maintain vehicle log book for all the distance travelled which is the percentage score of 85, drivers are responsible for the safe operation of the assigned vehicle which is the percentage score of 70 , also the question state that the organization has successful performance evaluation system for drivers which is the percentage score of 67, the organization has well-organized drivers mission assignment system which is the percentage score of 66, and also, Respondents disagreed with questions state that the organization has assigned a responsible officer for handling drivers' mission assignment which is the percentage score of 22, the organization has well organized supervision method on drivers which is the percentage score of 5 and there is driver's development and learning program in the organization with percentage of 40, there is a habit to motivate/reward an exemplary driver which is the percentage score of 20.

The organization has a well-organized supervision method on drivers with the mean score of 0.72 indicates that the organization has a reasonably well-organized supervision method for drivers. The low standard deviation of 0.075 suggests that this aspect is consistent. The organization has a well-organized driver's mission

assignment system with the mean score of 0.66 suggests that the organization has a moderately well-organized system for assigning driver missions. The standard deviation of 0.0925 indicates some variability in performance in this aspect. There is a habit to motivate/reward an exemplary driver with the mean score of 0.56 suggests that the organization has a moderate habit of motivating or rewarding exemplary drivers. However, the relatively high standard deviation of 0.1333 indicates variability in the organization's approach to driver motivation and rewards. The organization has a successful performance evaluation system for drivers with the mean score of 0.67 indicates that the organization has a moderately successful performance evaluation system for drivers. The standard deviation of 0.0831 suggests that this aspect is relatively consistent. There is a Driver's Development and learning program in the organization with the mean score of 0.47 suggests that the organization has a lower emphasis on driver development and learning programs. The high standard deviation of 0.1775 indicates significant variability in the organization's approach to driver development. Drivers are responsible for the safe operation of the assigned vehicle with the mean score of 0.7 suggests that the organization places a strong emphasis on drivers being responsible for the safe operation of their assigned vehicles. The low standard deviation of 0.075 indicates high consistency in this aspect. Drivers always fill and properly maintain vehicle log books for all the distance traveled with the mean score of 0.85 suggests that drivers consistently fill and properly maintain vehicle log books. The low standard deviation of 0.0520 indicates high consistency in this important aspect of driver management.

## 4.11 RESULT AND FINDINGS

The most common use of vehicle tracking is in Bollore Logistics Ltd is to make use of GPS technology to provide precise and constant location telemetric to an individual fleet manager. These systems are typically equipped with features to

monitor statistics such as; fuel consumption, average speed, current driver time and location. There has been a recent increase in demand for this technology as regulations place increased restrictions on the hour's driver are allowed to work in a given day. It is currently limited to 9 hours per day. Companies are legally obligated to install a tachygraphy in any vehicle that is expected to carry goods.

It is important to note that while service delivery and road safety are paramount for fleet operations, fuel is a resource that needs to be well managed. Although fuel use varies considerably across different distances, it nevertheless represents a major cost in most settings. In certain operations, fuel can account for 30% or more of total operating expenses at Bollore Logistics Ltd. Establishing a formal fuel management program is an extremely effective method of making permanent and lasting reductions in the cost of the operations. Considering the size of many sectors fleets, even a minor reduction in fuel use can save thousands of pounds each year and reduce CO2 emissions by several tones. (Lange, H.B.1992).

Driver management should be a core component of any fleet management program at Bollore Logistics Ltd. If drivers are not motivated to take part in operational activities, it becomes very difficult to achieve sustained reductions in fleet operational gaps. This is even more crucial in both private and public sectors where vehicle drivers are not necessarily employed as such, and may feel they have more pressing priorities than fuel consumption in their primary activities. It is vital to involve these drivers from the outset and to treat them as genuine partners in the program.

# CHAPTER FIVE

## SUMMERY, CONCLUSION AND RECOMMENDATION

This chapter gives a summary of key findings of the study presented according to the objectives of the study. Conclusions are drawn from the findings and recommendation to improve the effectiveness of fleet management and performance on private organizations.

## 5.1 SUMMARY

The purpose of the study was to examine the effectiveness of fleet management and performance on private organizations.

Data was collected from company staff and processed quantitatively and descriptively. Furthermore, an exploratory technique and a quantitative research approach were used in this study. The study was used simple random sampling techniques to select the study respondents. As well, the study used questionnaire to collect information on the topic. Finally, the study analyses the data by using SPSS V-26 with descriptive statistic and inferential statistic.

Transportation is at the center of logistics as it represents the physical movement of materials between points in a supply chain. High customer expectations and little tolerance for inadequate performance create a competitive environment for operating a fleet, which forces fleet managers to achieve high levels of reliability and cost-efficiency. (Edward Chegewaiyaki, 2013)

For Bollore Logistics Ltd, their vehicle fleet management is the main activity in their value chain, and represents its major asset to provide its service. The study is expected to have a contribution for Bollore Logistics Ltd to improve their fleet management system through providing a solution for discovered problems and this study can initiate other researchers to make further study on fleet management.

### The effect of vehicles repair and maintaining on Bollore Logistics' Limited operational performance

The study revealed that the practice of vehicles repair and maintaining in Bollore Logistics' Limited was mean value of 3.07: result indicted that the practice was moderate level in the study area. There was positive and moderate level of association between vehicles repair and maintaining and operational performance. While vehicles repair and maintaining was the third highest factor that affecting (27.3%) of operational performance.

### The effect of fuel management system on Bollore Logistics' Limited operational performance

In the study organization, fuel management shows that moderate level (mean value of 3.06) implementation in Bollore Logistics' Limited and it is insignificant to predict the organization's operational performance. And there was positive and weak correlation between fuel management and operational performance.

### The effect of vehicle replacement and disposal management on Bollore Logistics' Limited operational performance

Vehicle replacement and disposal management was predicted that Bollore Logistics' Limited operational performance in 33.2% and it practiced at moderate level of mean score 3.31. In addition, there was positive and moderate level of association between vehicle replacement and disposal management and operational performance.

### The effect of driver training and management on Bollore Logistics' Limited operational performance

Concerning on the implementation of driver training and management in Bollore Logistics' Limited mean score was 3.02 and driver training and management increased by 1%, then predicted operational performance would increase by 39.7%. From fleet management dimensions, driver training and management was the highest predictor of operational performance. Moreover, driver training and

management was positive and very strong association with operational performance.

## 5.2 SUMMARY

Under this study, the major determining factors of fleet performance identified were fuel management, vehicle tracking and drivers' management had significant effect on fleet efficiency. In fuel management, there is inadequate of provision of fuel sources or suppliers all over the regions which is vital to the organization similarly, in driver management motivation and reward are overlooked by the organization. In vehicle tracking, allocate sufficient budget for fuel cost, modern technology of GPS for vehicle tracking system, the issue of installed vehicle tracking system, assigned a person to monitor and manage the GPS tracking, supervises speed limit by GPS tracking system, provide immediate solution for problems encounter in vehicle tracking and the tracking system to manage fuel consumption and maintenance scheduling were another dimension which is deprived by the organization. Regarding the correlation, it is possible to conclude that there is a strong and positive relationship among the four variables which this study was relied on**.**

Operational performance is directly correlated with repair and maintenance. The organization has the finest fleet management methods, according to the mean score of this variable, which is 3.07 and falls on a moderately agreed level. Regular vehicle servicing time schedules, organized control mechanisms for genuine spare parts used in vehicle service and maintenance, repair and maintenance garages finish the service and maintenance on time, regular vehicle servicing time schedules handle complaint regarding service and maintenance appropriately, and this is moderately practiced by the organization, are all part of the process of repairing and maintaining vehicles. While the operational performance of the

company is dependent on this variable and the result shows that a unit change on maintenance and repair has 0.273 increasing effect on operational performance of the company keeping other variables constant.

One of fleet management dimension fuel management system: descriptive analysis shows that the mean score of the fleet utilization is 3.06 lies on moderate agree level.

Replacement of vehicles and disposal management: According to respondents' opinions, the total mean score is 3.31, indicating that they are somewhat in agreement with replacing the fleet. In replacement and disposal management, organization using the vehicle tracking system for fleet management was strong practiced in Bollore Logistics' Limited. Organization used the tracking system to manage fuel consumption and maintenance scheduling, assigned a person to monitor and manage the GPS tracking system, installed vehicle tracking system on all organization vehicles, modern technology of GPS for vehicle tracking system were moderate practice by the study organization.

Driver management and training: descriptive analysis reveals that the mean score was 3.02, which is on a moderately high level of agreement. The consequence was that the corporation closely connected improved operational performance to driver management and training.

## 5.3 RECOMMENDATIONS

By relying on the study findings, the researcher suggests the following points as credible recommendations to the problem.

- ✓ The organization has to motivate drivers because motivation and reward plays a significant role for any organizational culture.

- ✓ The organization should have to give a critical emphasis on assigning adequate budget for fuel cost and should manage fuel consumption and maintenance scheduling properly through developed better financial system and by recruited well educated manager by giving training for the employs of the fleet department.
- ✓ Technology is vital for the development of one organization; therefore, modern technology of GPS for vehicle tracking system is essential to the improvement fleet efficiency in the organization.
- ✓ Fleet department should supervise speed limit by GPS tracking system and there must be someone assigned permanently to monitor the tracking system online.
- ✓ The organization should give emphasis for solution for problems encountered in the tracking system.
- ✓ Fleet management department should be preparing the training manual to update the knowledge of the technicians and drivers to enable them to maintain and use vehicle safety properly.

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## QUESTIONAIRE

**School of Business**

**Department of Procurement and Logistics Management**

### Research Title

Effective fleet management and performance of a private organization on Bollore Logistics limited.

Dear Respondents!

First of all, I would like to express my appreciation for your kind cooperation in providing me with relevant information. The hereby attached questionnaire is dedicated to the Scientific Research aimed to analyze the effectiveness fleet management and performance on Bollore Logistics limited. I am post graduate students of Procurement and Logistics management. The purpose of this study investigates and examines the effectiveness fleet management and performance on Bollore Logistics limited.

The information gathered through this questionnaire will be used strictly for academic purposes. Your careful and honest response determines the success of the study. Thus, you are kindly requested to complete the questionnaire carefully and honestly. Your response will be kept confidential.

The questionnaire has been designed to utilize a maximum of 20 minutes to complete. No names required to be appeared and anonymity is guaranteed. Please read the instructions and each item in the questionnaire carefully before you give a response.

I thank you so much for your willingness, cooperation, and support.

Please put —√‖ on your best alternative‘s box and fill the blank spaces provided in some questions.

## Part I: Demographic Characteristics

1. Gender: Male ☐ Female ☐

2. Age: 18-25 ☐ 25-35 ☐ 35-45 ☐ Over 45 ☐

3. Educational qualification: Certificate ☐ Diploma ☐ Degree ☐ Master ☐ and above ☐

4. Years of employment < 5 year ☐ 5 -10 ☐ 10 -20 ☐ 20 < ☐

## Part II: Operational Performance Measurement

To what extent have the following operational performance dimensions been practiced in your organization Bollore Logistics Limited? Operational performance dimension measure ranging from:

1 = Very Low Extent, 2 = Low Extent, 3 = Moderate Extent, 4 = High Extent, 5 = Very High

Extent (5)

| | | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
| | **Cost** | | | | | |
| 1 | The company focuses on decreasing transportation cost | | | | | |
| 2 | The Company aims at decreasing warehousing cost | | | | | |
| 3 | The company focuses on reducing labor cost | | | | | |
| 4 | The company seeks to reduce operating expenses | | | | | |
| 5 | The company focus to increase fuel saving | | | | | |

| | |
|---|---|
| 6 | The company seeks to lower insurance premiums |

**Flexibility**

| | |
|---|---|
| 1 | The company looks at provision of a variety of services. |
| 2 | Company seeks to offer readily available services |
| 3 | The company aims at volume flexibility |
| 4 | Company looks at mix flexibility |

**Service Quality**

| | |
|---|---|
| 1 | The company looks to achieve high customer loyalty |
| 2 | Company looks at increasing the number of customers |
| 3 | The company focuses on reducing emissions Speed of Service |

**Delivery**

| | |
|---|---|
| 1 | The company seeks to improve communication |
| 2 | The company aims at high service rates |
| 3 | The company keeps up to date procurement information |
| 4 | The company looks at reducing lead time. |

## Part II: Fleet Management Measurement

The following questions are about how Bollore Logistics Limited as an organization has been implementing fleet management on operational performance. Please indicate the level of your agreement or disagreement using

(✓) on the following statements based on experience in the company on fleet management practices.

The rating is from 1= Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree as shown below.

| No. | ITEM | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
| | **Vehicles Repair and Maintaining Practice** | | | | | |
| **1** | The organization has successful vehicles repair and maintenance control system. | | | | | |
| **2** | The organization has regular Vehicle servicing time schedule | | | | | |
| **3** | The organization has well organized control mechanism for genuine spare part used for vehicle service and maintenance | | | | | |
| **4** | The repair and maintenance garage complete the service and maintenance on time | | | | | |
| **5** | Drivers of the organization gives proper feedback for fleet department about service and maintenance of the assigned vehicle | | | | | |
| **6** | The fleet department of the organization handles complaint regarding service and maintenance appropriately | | | | | |
| | **Fuel Management System** | | | | | |

| | |
|---|---|
| **1** | The organization is successful in overall fuel management system |
| 2 | The organization has set a standard on fuel consumption rate per vehicle |
| **3** | The organization allocates enough fuel coupons for field missions |
| **4** | There is a timely follow up for fuel consumption |
| **5** | The organization has potential fuel Suppliers all over the regions |
| **6** | The organization allocate sufficient budget for fuel cost. |

**Vehicle replacement and Disposal Management**

| | |
|---|---|
| **1** | The organization is using the vehicle tracking system for fleet management |
| **2** | The organization has modern technology of GPS for vehicle tracking system |
| **3** | The organization has installed vehicle tracking system on all organization vehicles |
| **4** | The organization assigned a person to monitor and manage the GPS tracking system |
| **5** | The organization supervises speed limit by GPS tracking system |

| | |
|---|---|
| **6** | The organization used the Tracking system to manage fuel consumption and maintenance scheduling |

**Driver training and Management**

| | |
|---|---|
| **1** | The organization has well-organized supervision method on drivers |
| **2** | The organization has well-organized drivers mission assignment system |
| **3** | The organization has assigned a responsible officer for handling drivers‘ mission assignment |
| **4** | There is a habit to motivate/reward an exemplary drivers |
| **5** | The organization has successful performance evaluation system for drivers |
| **6** | Drivers are responsible for the safe, neat, and lawful operation of the assigned vehicle |
| **7** | Drivers always fill and properly maintain vehicle logbook for all the distance traveled |

Thank you for your time, all your answers are important and supportive for my research!