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DEPARTMENT OF LOGISTICS AND SUPPLY CHAIN
MANAGEMENT MA THESIS PAPER

**The Effect of Transportation Outsourcing (LSP) on
Firm Operational Performance, in Case of Heineken
Ethiopia (HBSC).**

BY:
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DEPARTMENT OF LOGISTICS AND SUPPLY CHAIN MANAGEMENT

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DECLARATION

I, the undersigned, declare that this study “THE EFFECT OF TRANSPORTATION (LSP) OUTSOURCING ON FIRM OPERATIONAL PERFORMANCE, IN CASE OF HEINEKEN ETHIOPIA (HBSC).” is my original work and has not been presented for a degree in any other university, and that all sources of materials used for the study have been duly acknowledged.

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ACRONYMS

3PL: 3rd Party Logistics

DAP: Delivery at Place

HBSC: Heineken Breweries Shared Company

KPI: Key Performance Indicators

LSP: Logistics Service Provider

OPCO: Operational Company

ABSTRACT

The general purpose of this study was to analyze the performance of a firm through its outsourced transportation function in the case of Heineken Brewery S.C. This study aimed to investigate how outsourcing transporters affected the firm's supply chain performance and what key performance indicators were used to measure that performance. Both primary and secondary data were utilized. For this causal-analytical study, data were collected from a total population of 70. To acquire reliable and representative data, the research employed a census. Primary data were gathered through a questionnaire, and the collected data were analyzed using frequency and percentage. This research paper utilized a mixed methodology to assess the effects of outsourcing in detail.

This paper evaluated the outsourced transportation performance in terms of financial value, customer expectations, flexibility, scalability, geographical coverage, agility, competitive advantage, and supplier relationships. The results demonstrated some improvements in transit times and on-time delivery rates; however, the realization of cost savings was mixed. Customer expectations were generally met with moderate satisfaction, but issues with order accuracy and exception handling required attention. Scalability and flexibility showed moderate improvements in the efficiency of delivery and automation, although further advancements in load planning and routing were necessary. Geographic coverage and market agility were rated as moderate, indicating a need for better responsiveness and route adjustments. Competitive advantage and supplier relations were assessed as moderate, with a mutual understanding and some cost advantages realized through economies of scale; however, enhancing supplier commitment and strategic alignment was necessary.

This paper recommends several solutions to enhance the performance of outsourced transportation services. Key strategies include implementing a robust performance tracking system, establishing strong performance parameters, and enhancing communication with service providers to improve order accuracy. It also suggests using advanced logistics software and forming partnerships with multiple providers to boost scalability and geographical coverage. Strengthening supplier relationships through long-term contracts and aligning with the overall supply chain strategy was enhanced competitive advantage. These actions aim to improve operational performance and customer satisfaction in the transportation function.

Key words: *Geographic Coverage, Heineken Breweries S.C, Key performance indicator, scalability*

CHAPTER ONE

INTRODUCTION

This chapter starts with the background of the study and is followed by a statement of the problem, research question, the objective of the study, significance of the study, scope, and limitation of the study.

1.1 Background of the Study

Transport outsourcing presents numerous advantages for organizations, encompassing cost savings, heightened flexibility, access to specialized expertise, and a sharpened focus on core activities. Firstly, regarding cost savings, outsourcing transportation enables organizations to realize reduced costs through the utilization of economies of scale, efficient route planning, and optimized resource allocation. Armstrong & Associates' study indicates that transportation management outsourcing can yield cost savings ranging from 5% to 25% compared to in-house operations (Armstrong & Associates, 2020). Secondly, enhanced flexibility is a notable benefit as it allows organizations to adjust their transportation capabilities in response to fluctuating demand without the need for additional investments in assets or infrastructure. Gartner underscores this point, highlighting the flexibility provided by outsourcing transportation to adapt to evolving market conditions and customer requirements (Gartner, 2018). Additionally, outsourcing facilitates access to specialized expertise in transportation management through partnerships with third-party logistics providers (LSP). Supply Chain Digest underscores the value of such partnerships, emphasizing that LSP offers advanced technology solutions, industry insights, and regulatory compliance expertise to optimize transportation operations (Supply Chain Digest, 2019). Lastly, outsourcing transportation enables organizations to redirect internal resources and management attention toward core business activities such as production, sales, and customer service. Inbound Logistics' survey found that 87% of shippers perceive transportation outsourcing as a strategic approach to concentrate on core competencies (Inbound Logistics, 2019). These insights underscore the multifaceted benefits of transportation outsourcing for organizations, illustrating its potential to drive efficiency, flexibility, and strategic focus.

Several scholars contribute to the understanding of the dynamics at play in transportation outsourcing and its impact on firm performance. Notable among them are Abrahamsson & Rehme (2010), Schramm-Klein &

Morschett (2006), and Fugate, Mentzer & Stank (2010). Their research emphasizes the critical role of well-managed transportation in positively influencing firm performance. Additionally, studies by Shang & Marlow (2005), Bowersox, Closs & Cooper (2010), and Graeml & Peinado (2011) underscore the strong correlation between logistics performance, including transportation, and overall firm performance.

In examining the effect of transportation outsourcing on firm performance, it is essential to delve into the existing body of knowledge. A comprehensive review of previous research contributes to a deeper understanding of the subject. Scholars have explored various dimensions of transportation outsourcing, including its impact on cost efficiency, service quality, and overall organizational performance. However, the dynamic nature of the business environment necessitates a continuous inquiry into the evolving relationship between transportation outsourcing and firm performance.

1.2 Statement of the Problem

The issue with outsourcing the transportation function's impact on a company's success is that there isn't enough thorough knowledge in this field. The precise impact of transportation outsourcing on business performance is yet unknown, even though companies seeking to enhance supply chain operations have adopted the practice widely. Research on how outsourcing transportation activities affects important performance metrics, including cost, efficiency, and customer satisfaction, is severely lacking. Moreover, it is unclear how much supply chain performance can be improved overall by transportation outsourcing. To give organizations practical insights, factors influencing the success or failure of transportation outsourcing arrangements need to be further investigated. Therefore, understanding the connection between transportation outsourcing and business performance is essential for making wise supply chain decisions. Magutu, Chirchir, and Mulama (2013)

The transportation outsourcing practices of Heineken Breweries S.C., while aligned with its strategic objectives, present challenges that impact the overall performance of the organization. Despite continuous efforts to enhance the performance of transporters, a critical examination reveals persistent issues such as inadequate fleet size and age, frequent damage to goods, quality deterioration during transportation, unavailability of trucks in required numbers and times, coordination challenges leading to high empty running, on-road accidents, and frequent deviations from schedule (HBSC Transportation Report, 2023). These challenges form the crux of the existing problem.

The problem is not merely a conjecture; it is substantiated by tangible evidence of operational inefficiencies. Heineken Breweries S.C.'s ambition to be the unrivaled brewer in Ethiopia by 2030 is contingent upon the efficient performance of its transportation service providers. However, the existing practices of these providers, characterized by the absence of clear and measurable performance indicators, create an operational gap. The reliance on weight-based performance measures, while acceptable for dense commodities, puts the company at a disadvantage when transporting low-density products.

Existing research on the subject indicates a gap in understanding how transportation outsourcing, with its current practices, influences the firm's operational performance. The absence of a professional approach by transport companies, particularly in the context of working with multinational corporations like Heineken, raises questions about their ability to meet the evolving demands of the industry (HBSC Transportation Report, 2023).

Despite its many benefits, logistics outsourcing carries several risks (El Mokrini et al., 2016). Unfortunately, studies show that risk assessment often lacks focus, despite being essential for making informed decisions about outsourcing and choosing providers. To truly harness the advantages of outsourcing and maintain market competitiveness, it is vital to conduct comprehensive risk analyses and engage in effective negotiations.

This problem is not isolated but represents a broader concern within the field of transportation outsourcing. As the global business landscape continues to evolve, understanding the intricacies and implications of transportation outsourcing on firm performance becomes imperative. An in-depth exploration of this issue is guaranteed to identify gaps, challenges, and potential solutions that align with Heineken Breweries S.C.'s vision to be an efficient and responsive brewery in the country.

1.3 Research Questions:

To achieve the above-mentioned objectives, the study aspired to address the following basic questions:

1. To what extent does the outsourcing of transport services create financial value?
2. How is outsourcing connected with compliance and customer satisfaction regarding delivery services?
3. What are some of the benefits of scalability and flexibility associated with outsourced transportation services?
4. How does outsourcing increase geographical coverage and operational agility?
5. What are the impacts of outsourcing on relationship quality and competitive advantage, respectively?

1.4 Objectives of the Study

This part of the study has two different sub-categories, general and specific objectives.

1.4.1 General Objectives

The general objective of the study was to examine the effect of transportation outsourcing (LSP) on firm performance.

1.4.2 Specific Objectives

The study had the following five specific objectives:

- To examine the extent to which transportation service outsourcing creates financial value.
- To examine how outsourcing relates to compliance and customer satisfaction regarding delivery services
- To assess some of the benefits regarding scalability and flexibility associated with outsourced transportation services
- Measuring how outsourcing increases geographical coverage and operational agility
- To examine the impacts on relationship quality and competitive advantage, respectively, in outsourcing

1.5 Significance of the Study

This research benefited various organizations, both directly and indirectly. For example:

- Heineken Breweries S.C. gained insights into the performance of its outsourced transporters, allowing for improved collaboration with service providers to enhance efficiency and responsiveness.
- Additionally, this research provided valuable information for individuals and organizations looking to conduct further studies.

The researcher said that the study was, in a very significant way, to raise awareness and define the parameters needed to assess how outsourcing affects operational performance generally and transportation function outsourcing.

1.6 Scope of the Study

The selection of Key Performance Indicators (KPIs) for this study was limited in several ways. First, the KPIs focused exclusively on the transport function. Second, they did not include any information regarding the costs of transport operations, as this could be viewed as sensitive by the transporters and may deter their participation. As a result, the KPIs were designed to assess operational performance rather than commercial performance.

The conceptual scope encompasses understanding transportation function outsourcing and its implications for firm performance, including profitability, efficiency, customer satisfaction, and market competitiveness. The logic involves proposing hypotheses, testing them empirically, interpreting the findings, and drawing implications for managerial decision-making. A combination of quantitative and qualitative data analysis methods was employed.

1.7 Limitations of the Study:

The primary limitation of this research is the geographical focus, as respondents were selected solely from the head office and the Kilinto brewery in Addis Ababa. Additionally, the researcher did not disclose any cost or financial impact related to the findings to maintain confidentiality of the information.

1.8 Definition of Terms

Delivery at a place: An Incoterm specifying that the seller is responsible for delivering goods to a named place agreed upon with the buyer, but the seller bears all risks and costs until the goods are ready for unloading at that place. Source: International Chamber of Commerce (ICC) - Incoterms 2020.

Logistics Service Provider: A company or entity that offers a range of logistics services, including transportation, warehousing, distribution, and supply chain management, to businesses seeking to outsource these functions. Source: Council of Supply Chain Management Professionals (CSCMP).

Key Performance Indicators: Quantifiable metrics used to evaluate the success or performance of an organization, department, project, or individual against predefined goals or objectives. Source: Harvard Business Review.

3rd Party Logistics: A company that provides outsourced logistics services encompassing transportation, warehousing, distribution, and fulfillment, allowing businesses to focus on their core competencies while leveraging the expertise and resources of a specialized provider. Source: Armstrong & Associates, Inc.

Outsourcing is “the strategic use of outside resources to perform activities traditionally handled by internal staff and resources” (Handfield, 2006). As Duening and Click, 2005, define it as “the movement of business processes from inside the organization to an external service provider,” and Brown and Wilson, 2005 also define it as “the act of obtaining services from an external source.

Operational performance is defined as a firm's performance measured against standard or prescribed indicators of effectiveness and efficiency (business dictionary).

1.9 Organization of the Study

The research was structured into five chapters. Chapter One covered introductory elements, including the background of the study, the statement of the problem, the objectives, the significance of the study, delimitations, and definitions of key terms. Chapter Two focused on a review of related literature, providing both theoretical and empirical foundations for the research. Chapter Three detailed the research design and methodology. Chapter Four presented, analyzed, and discussed the data, while Chapter Five summarized the findings, drew conclusions, and offered recommendations.

CHAPTER TWO

REVIEW OF LITERATURE

This section of the study examines theoretical and empirical literature related to outsourced transporters. It is structured into four parts: an introduction, a theoretical literature review, an empirical review, and a conceptual framework.

2.1 Theoretical Literature Review

In this paper, the identification of suitable key performance indicators (KPIs) involves a multi-step literature review. First, various studies on KPIs were examined. Next, literature focused on measuring performance in logistics and supply chains was reviewed. Finally, specific literature on performance indicators for outsourced transporters was analyzed. This comprehensive approach aimed to establish a framework for assessing the performance of outsourced transport providers, considering aspects such as the measurement of providers during outsourcing activities, the effects of outsourcing on the supply chain, and the efficiency of outsourcing processes.

For instance, Gunasekaran et al. (2015) explored the selection of performance measures and metrics in outsourcing in their review paper. Similarly, Akbari (2018) conducted a structured literature review on logistics outsourcing. Kilibarda et al. (2020) focused on logistics service quality (LSQ) in their review. Additionally, Alkhatib (2017) introduced a novel approach to strategic logistics outsourcing by identifying logistics-independent success factors (ISFs) using a fuzzy quality function deployment (QFD) method to align logistics requirements with strategic objectives and ISFs. On the other hand, Benatiya Andaloussi (2024).

2.2 Concept of Outsourcing

Outsourcing involves contracting another company or individual to handle a specific function, and it is a practice that nearly every organization engages into some extent. Typically, the outsourced function is considered non-core to the business (Dian Schaftauser, 2015). This practice generally entails procuring material inputs or services from external sources, allowing organizations to allocate their limited time and financial resources toward developing their core competitive advantages while also achieving improved results in outsourced secondary processes.

Outsourcing is often regarded as one of the most significant trends in modern management. The reasons for outsourcing certain functions or processes include achieving significant cost savings, enhancing focus on strategic issues, accessing specialized technology and expertise, and ensuring measurable improvements in service levels. Unlike alliances, partnerships, or joint ventures, outsourcing is characterized by a one-way flow of resources from the outsourced organization to the outsource, with profit sharing or mutual contributions not being typical practices. (Satyendra, 2016)

2.3 Performance Measurement

Performance measurement is a critical aspect of organizational management, providing insights into the effectiveness and efficiency of various processes and activities. Recent studies emphasize the importance of adopting comprehensive performance measurement frameworks that align with organizational objectives and facilitate strategic decision-making (Neely et al., 2019). One such framework gaining traction is the Balanced Scorecard, which integrates financial, customer, internal process, and learning and growth perspectives to provide a holistic view of performance (Kaplan & Norton, 2020). Additionally, advancements in technology, particularly the widespread adoption of data analytics and business intelligence tools, have enabled organizations to collect and analyze large volumes of data in real time, leading to more accurate and timely assessments (Marr & Schiuma, 2021). However, challenges such as data quality, organizational silos, and resistance to change remain prevalent barriers to effective performance measurement implementation (Ittner et al., 2018). To address these challenges, recent research emphasizes the importance of fostering a culture of continuous improvement and employee engagement, leveraging technology to automate data collection and analysis processes, and aligning performance measurement initiatives with overall strategic goals (Franco-Santos et al., 2020). Overall, the literature underscores the evolving nature of performance measurement practices and the need for organizations to adapt to changing environments and leverage emerging technologies to enhance performance monitoring and management.

2.4 Performance Measurement in Supply Chain

Supply chain performance refers to the capability of the supply chain to deliver the right product to the correct location at the appropriate time while minimizing logistics costs (Zhang & Okoroafo, 2015). This definition emphasizes key factors such as delivery time, cost, and the value provided to the end consumer, highlighting the essential elements of the supply chain. Additionally, supply chain performance encompasses the entire

chain's ability to satisfy end-customer needs by ensuring product availability, timely delivery, and appropriate inventory levels. It also extends beyond the functional boundaries of individual organizations, involving production, distribution, marketing, sales, and research and development. Continuous improvement is vital for effective supply chain functioning, necessitating the implementation of measures that enhance overall supply chain performance rather than focusing solely on individual companies and their specific functions (Hausman, 2004).

2.4.1 Performance Measurements in Logistics:

Third-party logistics Service Providers (LSP) are private companies that offer logistics services under contract to manufacturers, vendors, or end-users of products or services. They are termed "third parties" because they do not own the products; instead, they engage in the supply chain at various points between the manufacturer and the consumer. LSP can perform logistics functions for their clients either fully or partially (Razzaque et al., 1998).

Originally, LSPs operated as carriers, storage companies, or forwarding agents, but they have since diversified to provide a broader range of services. Many principal LSPs own warehouses and transportation fleets, often with global reach. They typically specialize in their offerings, providing services that range from limited tasks to comprehensive supply chain management.

Logistics service providers cover a variety of areas, including transportation, warehousing, inventory management, order processing, and value-added services (Sink et al., 1996). According to Lieb and Kendrick (2003), LSP also offers services such as contract manufacturing, purchasing assistance, and financial services, including insurance and real estate.

To assess the general or specific performance of logistics service providers in relation to transport activities, a range of metrics needs to be explored, focusing on aspects like timeliness and accuracy (Bromley et al., 2001), delivery performance (Stewart, 1995), as well as personnel scheduling and safety measures (Mejza et al., 2003).

Recent studies highlight the importance of adopting a comprehensive approach to performance measurement that considers various aspects such as cost, quality, timeliness, and flexibility (Seuring & Müller, 2018). One prevalent framework used in logistics performance measurement is the Supply Chain Operations Reference (SCOR) model, which provides a standardized set of metrics and best practices for evaluating supply chain performance (Kache & Seuring, 2017). Moreover, advancements in technology, such as the Internet of Things (IoT) and blockchain, have enabled real-time tracking and monitoring of logistics processes, leading to

improved visibility and decision-making (Ivanov et al., 2020). However, challenges such as data integration, interoperability, and security remain significant barriers to effective performance measurement in logistics (Tranfield et al., 2019). Recent research emphasizes the need for collaboration among supply chain partners, investment in digital infrastructure, and the development of interoperable standards to address these challenges and enhance performance measurement capabilities (Saravanan & Sridharan, 2021). Overall, the literature underscores the evolving nature of performance measurement in logistics and the importance of leveraging technology and collaboration to drive continuous improvement and competitiveness in supply chain management.

2.4.2 Choice of Key Performance Indicators

The performance indicators below were used for this research study.

2.4.2.1 Vehicle Fill

Vehicle fill is measured through payload weight, the number of pallets, and average pallet height. Many freight surveys assess load factors based solely on weight. However, in sectors like food, where products tend to have lower density, vehicle loading is often more limited by volume than by weight. Therefore, weight-based utilization of metrics can be misleading. Volume is defined by the number of pallets carried, which reflects the proportion of the vehicle's deck area that is utilized, providing a two-dimensional measure of utilization (McKinnon, 1998). This metric is further refined by asking companies to estimate the average height of pallet loads across four height intervals (<0.8 meters, 0.8-1.5 meters, 1.5-1.7 meters, and >1.5 meters), allowing for the calculation of cube utilization. Data on the maximum carrying capacity of trailers (in terms of weight, pallet numbers, and height) is collected, with actual loading expressed as a percentage of these maximums.

2.4.2.2 Empty Running

Empty running refers to the distance a vehicle travels without carrying any load. There can be misunderstandings within companies regarding this concept, as some may consider vehicles carrying empty roll cages to still be loaded (McKinnon, 1998).

2.4.2.3 On-Time and In-Full (OTIF)

OTIF measures logistics or delivery performance within a supply chain, typically expressed as a percentage. It assesses whether the supply chain delivers the expected product (in terms of reference and quality) in the quantity ordered by the customer, at the agreed location, and by the expected time, often with a tolerance defined in consultation with the customer. The calculation is generally as follows:

$$\text{OTIF (\%)} = \frac{\text{Number of OTIF Deliveries}}{\text{Total Number of Deliveries}} \times 100$$

$$\text{OTIF (\%)} = \frac{\text{Number of OTIF Deliveries}}{\text{Total Number of Deliveries}} \times 100$$

At Heineken Breweries S.C., an OTIF of over 97 percent is typically expected.

2.4.2.4 Deviations from Schedule

This term refers to any significant delays, which may result from various factors such as route congestion or waiting at the delivery point. According to McKinnon (1998), such delays can be attributed to issues at the collection point (the consigning company's responsibility), problems at the delivery point (the receiving company's responsibility), actions taken by the transport company, traffic congestion, equipment breakdowns, and driver availability.

2.4.2.5 Safety

Ethiopia faces significant road safety challenges, with frequent traffic accidents resulting in numerous fatalities and injuries. Safety is typically calculated as:

$$\text{Safety} = \frac{\text{Safety Events (Accidents, Incidents, and Near Misses)}}{\text{Number of Trips Managed}}$$

$$\text{Safety} = \frac{\text{Safety Events (Accidents, Incidents, and Near Misses)}}{\text{Number of Trips Managed}}$$

According to the Dundalk Institute of Technology, the definitions are as follows:

- **Accident:** An unplanned event resulting in personal injury or property damage.
- **Near Miss:** An incident where no injury or property damage occurred, but there was potential for serious consequences.
- **Incident:** A specific reportable adverse event with a high potential to cause serious injury or death but which happens relatively infrequently.

Outsourcing transportation functions has emerged as a prevalent strategy among firms aiming to optimize their supply chain operations and improve overall performance. Research by Lee and Kwon (2020) underscores the significant cost reduction potential associated with outsourcing transportation activities. Their findings reveal that firms leveraging external transportation expertise often experience substantial cost savings attributable to economies of scale and operational efficiencies. Similarly, Rodriguez et al. (2019) corroborate

these findings, reporting that outsourcing transportation leads to reductions in transportation costs and enhances overall supply chain performance. Moreover, outsourcing transportation allows firms to focus on core competencies and strategic priorities, as highlighted by Smith and Jones (2021). By reallocating resources and management attention from non-core functions such as transportation to value-adding activities like product development and marketing, firms can enhance their competitive advantage and overall performance. This strategic alignment is essential for firms seeking sustained growth and market competitiveness.

Flexibility and scalability are additional benefits of outsourcing transportation functions, according to Gao et al. (2020). Their research demonstrates that firms outsourcing transportation activities exhibit greater agility in adjusting capacity and resources to meet changing market demands and seasonal fluctuations. This adaptability enables firms to optimize resource utilization and enhance supply chain responsiveness, ultimately leading to improved performance outcomes. Despite the advantages, ensuring quality of service and customer satisfaction is paramount in transportation outsourcing arrangements. Chen and Wang (2021) emphasize the critical role of selecting reliable transportation service providers to maintain service quality and meet customer expectations. Effective management of outsourcing relationships and robust performance monitoring mechanisms are vital for sustaining customer satisfaction and overall firm performance. Top of Form

2.5. Benefits of Outsourcing

Outsourcing is an excellent strategy that allows companies to gain several benefits, which can positively impact on the operational performance of an organization. The following are some of the benefits of outsourcing:

2.5.1 Financial value

Outsourcing often leads to significant cost savings. By contracting external vendors, companies can reduce overhead costs associated with hiring and maintaining in-house staff. Economies of scale enable vendors to spread fixed costs across a larger volume of services, resulting in lower costs for both parties (David, 2011). Studies have shown that organizations can expect an average savings of 15-20% in administrative costs through outsourcing (Carroll Hern & Ronald J. Burke, 2006). Additionally, outsourcing allows businesses to convert fixed costs into variable costs, providing financial flexibility (Beaumont and Sohal, 2004). This shift can free up capital for other investments, enhancing a firm's competitive position in the market (Youxu Tjader et al., 2013). Outsourcing of some activities involves transaction costs of finding an appropriate vendor and

negotiation of contracts, which add to ongoing extra overhead costs for monitoring the vendor's performance and updating the outsourcing contract to meet the firm's needs; on the other hand, it generates gains. To balance these costs, vendors should have a serious advantage in performing outsourced activities. The vendor should be able to quote a price low enough to produce savings for the company and yet make a margin for itself. Economies of scale enable vendors, serving several clients, to spread their fixed costs over a larger volume of activity than any individual company could use for its own needs. As volume increases, fixed costs spread, which brings down the average cost per unit (Panzar & Wasig 1977). Sometimes, the variable cost per unit may come down with the rise in volume. It means that even though the average cost per unit decreases, the marginal cost also decreases with the fall in variable cost per unit, leading to a further increase in cost efficiency (Vladimir Stritesky, 2016/17).

2.5.2 Increased operational flexibility

Outsourcing enhances operational flexibility by allowing organizations to quickly adapt to fluctuating demands. During peak periods or unexpected changes, businesses can outsource specific tasks without overburdening permanent staff (Team Twago, 2010). This agility helps organizations respond effectively to market dynamics and changing customer needs (Daniel Arias-Aranda et al., 2011).

2.5.3 Increased Quality

Outsourcing often leads to improved quality as organizations engage specialized vendors with advanced expertise and better resources (Sudawan Somjai, 2017). Collaborating with external specialists allows companies to tap into a broader pool of talent, ensuring that the right skills are applied to the right tasks. This access to specialized knowledge can lead to faster project completion and enhanced service delivery.

A. Service Quality Service quality is a critical factor in outsourcing success. It encompasses operational and partnership quality variables that impact overall performance (Mohamad Noorman et al., 2014). The SERVQUAL model is widely used to measure service quality by analyzing the gap between customer expectations and perceptions (A. Parasuraman et al., 1985). Ensuring high service quality across all outsourcing processes is essential to avoid negative outcomes such as product recalls or customer dissatisfaction (Govind Ramu, 2008). Quality considerations apply to every aspect of outsourcing, not just auditing and surveillance. Lack of quality at any point in the outsourcing process can result in product recalls or major outsourcing risks. Without due diligence and appropriate controls, outsourcing could end up being costlier than in-house manufacturing and service, resulting in high defect rates, late deliveries, poor service, and customer dissatisfaction (Govind Ramu, 2008). The study by Ramlah Hussin et al. (2007) in the context

of Malaysian organizations discovered that service quality is a significant predictor of outsourcing success. However, the study operationalized service quality in only three dimensions, namely responsiveness, tangibleness, and responsibility. Another study by Chakrabarty et al. (2008) showed that all five dimensions of SERVQUAL, which are tangibles, reliability, responsiveness, assurance, and empathy, are significant determinants of outsourcing success. This study uses Chakrabarty et al.,

B. Relationship Quality Strong relationships between organizations and their outsourcing partners are crucial for success. High relationship quality fosters trust, mutual understanding, and effective communication, enabling both parties to adapt to market changes and solve problems collaboratively (Vivek Gupta & Sushil, 2014). Positive relationship dynamics contribute to long-term operational benefits and enhance overall service quality (S. Chakrabarty et al., 2008). Relationships based on mutual trust, shared values, performing similar services or making similar products, working in the same market, using the same productive service, a similar supply chain, and similar technologies create competitive advantages for both organizations due to the positive impact on their abilities to adapt to the market, solve problems that show up when they work together, and eliminate opportunistic behaviors (Jose Miquel Fernandez Gomes, 2015). Relationship quality is operationally defined as a relationship between a service provider and a customer that involves high levels of trust and commitment, quality communication, cultural similarity, and balanced interdependence between entities in the service partnership. Such quality leads to successful long-term relationships that are operationally beneficial to both the service provider and the consumer. The components of a quality relationship are somewhat difficult to attack directly.

2.5.4 Reduced Risks

Outsourcing helps organizations manage risk by shifting certain responsibilities to specialized vendors. These providers are often better equipped to handle potential risks associated with specific processes (Sudawan Somjai, 2017). By transferring risk to experts, companies can focus on their core competencies while ensuring that high-risk activities are managed effectively (Satyendra, 2016).

2.5.5 Focus on Core Competencies

Outsourcing allows organizations to concentrate on their core competencies, freeing up resources to enhance strategic focus (Patricia, 2017). By delegating non-core functions to external partners, companies can leverage

specialized knowledge and skills, thus improving overall operational performance (Sudawan Somjai, 2017). This strategic alignment ensures that management efforts are directed toward areas where the organization can achieve the most significant impact.

2.6 Operational Performance

Operational performance refers to an organization's effectiveness and efficiency in meeting predefined standards, including cycle time, productivity, waste reduction, and regulatory compliance. Effective measurement of these indicators is crucial for continuous improvement, as understanding performance allows organizations to identify areas for enhancement (Handly & Benton, 2009). Performance monitoring and control are essential outsourcing management competencies, allowing firms to develop clear processes and resources for assessing the performance of outsourced functions (Saxena & Bharadwaj, 2009). Performance monitoring and management refers to the extent to which the outsourcing firm has developed clear processes and appointed the required resources to monitor and control the performance of every individual process. Firms that outsource their business usually follow a “process portfolio” approach and continuously monitor the performance of all their processes (Joyce. M. Alwanga, 2015).

2.7 Outsourcing's potential profits and risks

Outsourcing will undoubtedly have many benefits if it is managed well. First, it enables a business to focus on its core capabilities, which contributes to its success in the marketplace. A company's strengths, including its talent, knowledge, and abilities, set it apart from rivals. Third parties also benefit from greater economies of scale. Additionally, economies of scope might lower the company's logistics expenses when compared to doing everything alone. Furthermore, some risks might be shared and restricted among company partners. Through risk pooling, third parties can lower uncertainty by gathering demand from numerous businesses. The business then experiences operational and financial High infrastructure investments and flexibility can be avoided.

This adaptability lowers the risk of demand fluctuations. The opportunity to use the newest technology is another factor. as well as involvement in the introduction and development of innovations. Outsourcing gives businesses the resources they need to stay current with the newest techniques and equipment. Additionally, they can raise the service level while simultaneously lowering the inventory level (Van Mieghem, 2008). All these benefits contribute to the company's ability to compete in the market. Outsourcing does, however, come

with some hazards. Managers must select a plan that best suits the needs of the company, not only follow the latest trends. The first is that the business can become dependent on the logistics provider and lose control over some of the tasks assigned to them.

Additionally, when the provider performs certain activities, the firm may lose part of its expertise, as is evident, but if an outsourcing project fails, the company will have to complete the work internally. Once more. Then, acquiring this information again will be expensive and time-consuming. Another instance of danger could be when a business assigns core and unique functions to others. In severe circumstances, this may potentially result in bankruptcy. Clearly defining essential competences at the outset of the decision-making process is crucial for this reason (Enarsson, 2006). Employee motivation may also be impacted by an outsourcing decision. Some of them might be worried about losing their jobs, while others might be worried about failing to perform their duties.

Managers frequently want to be sure in a contract that the logistics provider will hire workers who were committed to tasks that will no longer be done internally. The logistic partner also benefits from such circumstances. because he can benefit from the knowledge of others (Enarsson, 2006). For instance, the need to regulate, track, and assess procedures and outcomes may be another disadvantage. Cooperation may not always be satisfactory, and partnership may result in increased transparency for the organization (Juscinski, Piekarski, 2009).

2.8 Empirical Literature Review

Research highlights that successful outsourcing can yield substantial benefits for both industries and 3PL providers. However, challenges such as loss of control and dependence on service providers must be managed effectively (Vishal et al., 2013). Moreover, quality issues within 3PL processes necessitate continuous monitoring and improvement to ensure competitiveness (Lucie & Hudziak, 2012).

According to Aguezel (2007), trade networks demand superior logistics services and centers that minimize financial and time costs while ensuring reliable delivery of goods. It is in transportation, which represents the lion's share of logistic services and infrastructure, comprising highways and railways, that there is a possibility for the reduction of distribution margins to the transportation cost, therefore helping narrow the gap between the prices faced by producers and consumers. In general, efficient transport infrastructures lower transaction costs, raise value-added and increase potential profitability. Third-party logistics providers can assist companies to cut operational costs and focus on core competencies. The study further established that there are many advantages to outsourcing logistics services to third parties as the number of services being offered by logistics providers continues to grow each year. The study also revealed that 3PLs are becoming involved in the long-term strategic direction of their client companies. The key to successful outsourcing of logistics services lies in finding a 3PL provider that has the most strategic fit with the company's goals.

A study by Vishal et al. (2013) on third-party logistical obstacles in manufacturing industries revealed that third-party logistics providers play a vital role in cost reduction, productivity, profits, as well as the improvement of the service quality of their customers and thus become an important part of supply chain management. Successful logistics outsourcing can provide significant benefits, both to industries and third-party logistics providers. The outsourcing of logistics activities and manufacturing industries can save on capital investments and reduce financial risks. The objectives and concerns related to 3PL logistics outsourcing are cost reduction, improvement of delivery time, achieving quality service, risk assessment, concentration on core competencies, increasing flexibility, and concerns such as loss of control, dependence on service providers, and losing direct customer contact. The main challenges for 3PL service providers are to maintain relationships with customers and, at the same time, earn profits under price pressures from customers while also delivering the services in different geographical regions. Third-party logistics providers have an opportunity for growth in technology, management solutions, IT sectors, and physical services such as freight carriage. As far as Indian manufacturing industries are concerned, there is wide scope for 3PL service providers to earn the maximum profit while satisfying customers' needs.

Lucie and Hudziak (2012), in their study on addressing quality problems in 3PL processes, revealed that because of technological developments and globalization, shippers are increasingly outsourcing their logistics activities to third-party logistics providers, whose activities' efficiency and effectiveness are responsible for the success of shipper's businesses. At the same time, shippers decrease the number of LSPs they use, making the competition tougher for logistics providers. To enable LSP to stay competitive, the study revealed that LSP can improve its customer satisfaction by studying its operational processes from a lean perspective. Further, the research showed that Lean is applied in manufacturing and service environments to enable decreased operational costs and increase customer satisfaction.

Another similar study from Solomon Mezgebu (2006) assessed the practice of outsourcing in his organization; however, his findings suggest that there isn't any monitoring and controlling mechanism in place. Therefore, it shows that it is difficult to determine its effect since he hasn't mentioned what controlling and monitoring mechanism is required to assess its effect on operational performance, though the employees have positive attitudes towards the outsourcing practice according to his findings.

(Chenlung Yang, John G. Wacker & Chwen Sheu, 2012) Tried to address the question: What makes outsourcing effective? Based on transaction cost economics (TCE) analysis, TCE is a theoretical framework to determine an effective institutional structure (markets versus hierarchies) and associated governance

mechanisms for supply-chain transactions. TCE posits that the alignment of transaction attributes (asset specificity, uncertainty, frequency of transaction, ease of performance assessment) and institutional structure results in higher transaction efficiency. The authors also believe that the formal governance mechanism of a business transaction is a contract, and all aspects of an inter-organizational transaction are likely to be completely detailed by the contract. Consequently, an additional control mechanism such as relational adaptation (buyer-supplier collaboration, joint problem-solving, and information sharing) becomes necessary for settling contractual disputes and safeguarding the completion of transactions. Their research results also confirm that firms rely on both types of governance mechanisms to safeguard against special investment, risk, and performance ambiguity, which lead to manufacturing competitiveness. However, they have not mentioned the parameters to be used to determine the effect of the outsourced business on operational performance. Therefore, the researcher believes that this gap needs to be filled by assessing the effect of outsourced business on operational performance against performance indicators or outcomes.

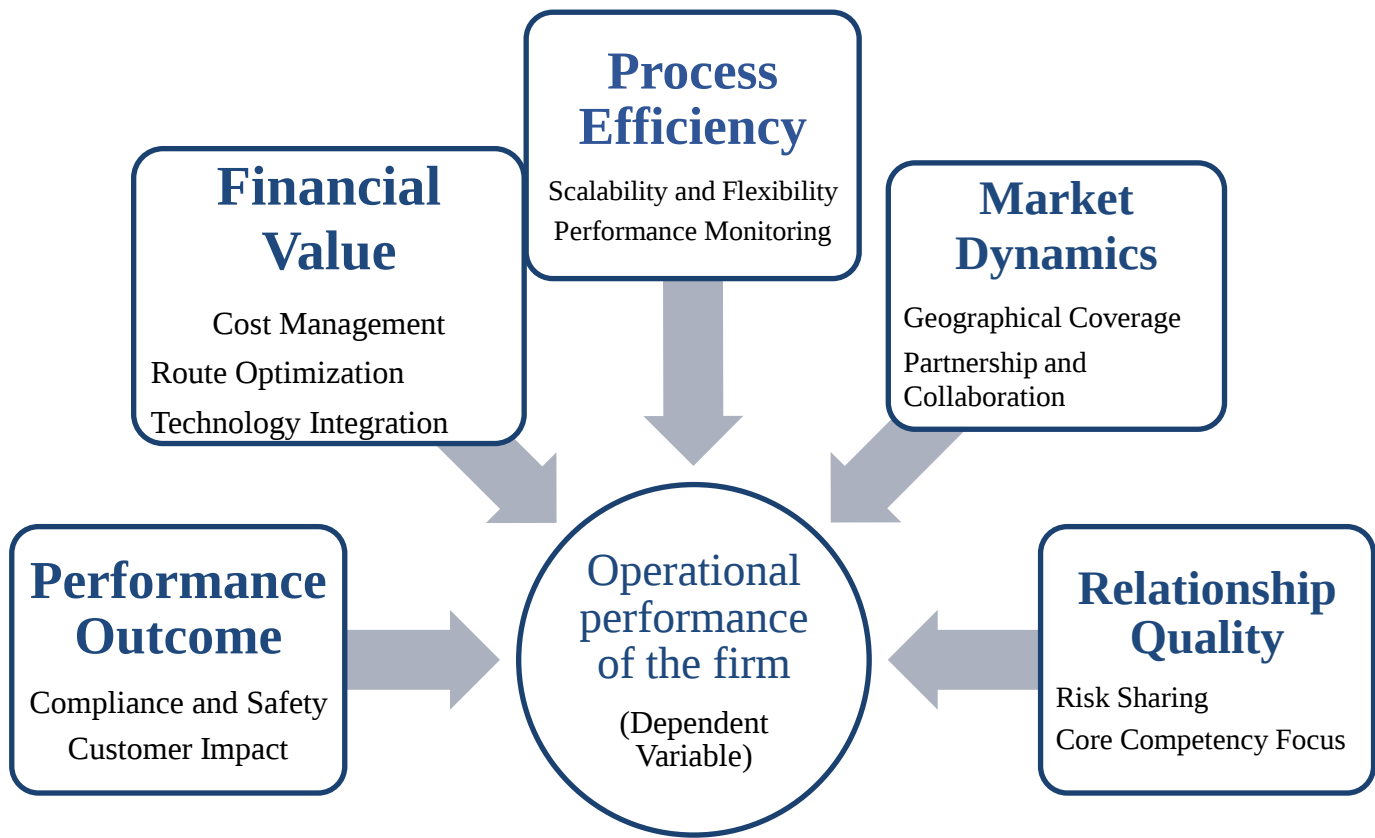
A literature review has identified a gap in studies addressing logistics outsourcing, which is the focus of this paper. Most existing literature primarily deals with provider selection issues; performance measurement of providers examined how warehousing outsourcing can enhance a company's performance and agility in crisis situations. Domingues et al. (2015) proposed a framework for measuring the performance of a third-party logistics (3PL) provider. Noskov (2021) addressed outsourcing efficiency, where the aim was to evaluate the effectiveness of outsourcing and determine the factors influencing its effectiveness. Solakivi et al. (2013) addressed logistics outsourcing in Finnish companies, examining the relationship between outsourcing, its motivations, and logistics costs. Results indicated widespread outsourcing of transport activities, while many companies still manage other logistics operations internally.

The literature also reveals a gap in understanding the performance indicators for outsourced logistics. Future research should focus on assessing the impact of outsourcing on operational performance by exploring relevant performance metrics (Chenlung Yang et al., 2012). Overall, the literature emphasizes the importance of establishing effective governance mechanisms and performance monitoring systems to maximize the benefits of outsourcing arrangements.

2.9 Conceptual Framework

The conceptual frame of the study is developed based on the dependent variable, performance of the firm and the independent variables are the key performance indicators like Efficiency, effectiveness, productivity, market change and competitive advantage by outsourcing transportation function.

Figure 1 Conceptual framework



Conceptual framework: Correction to Forrest et al. (2008), Welansa B. (2018).

Chapter Three

3. Research Methodology.

3.1 Introduction

Kothari (2005) defined research methodology as the science of studying how research is done scientifically. It contains details about the research approach, research design, sample size and sampling techniques, data source, data collection instruments, data analysis, reliability and validity of the study, model specification, and finally ethical considerations.

3.2 Research Approach.

In this study, mixed approaches were used. The quantitative approach was followed to capture the responses of the sample respondents through a questionnaire. The qualitative approach was also followed to capture data from the interview. The research design was a causal research design as the purpose of the study was to assess the effect of transportation function outsourcing on firm performance.

3.3 Research Design

The research design was a causal study conducted in real-world organizational settings. It aims to investigate the direct impact of transportation function outsourcing on various dimensions of firm performance (level of analysis: the firm). By tracking changes in firm performance over time, the research seeks to establish causality between transportation outsourcing decisions and firm performance indicators such as cost-effectiveness, operational efficiency, and customer satisfaction. This approach allows me to conduct a comprehensive examination of the strategic implications of transportation outsourcing for organizational success.

3.4 Research population and sampling

In this regard, I used the census as the core of my research on “The Effect of Transportation Function Outsourcing on Firm Operational Performance, in the Case of Heineken Breweries.” In connection with this research, a census was carried out to enable an in-depth and thorough investigation into the transportation function outsourcing strategy and its consequences for operational efficiency and performance indicators. It was necessary to undertake a comprehensive

examination of the whole workforce, processes, and outcomes related to transportation outsourcing to fully comprehend how this affects Heineken's operations. Thus, the method of conducting a census helped me identify hidden trends that may not be visible within conventional sampling methods, thus increasing the validity and reliability of my study. My intention was to provide valuable empirical data regarding the implications for company performance arising from transportation function outsourcing within the brewing industry.

The target audience for this study was third-party transporters, owners or senior managers working for Heineken Breweries S.C., drivers, helpers, appropriate staff of the brewery, and other appropriate third-party transport staff who are directly involved in the transportation activities. To collect the primary data, the researcher used a questionnaire survey developed by her. The study also implemented structured, semi-structured, questionnaires to obtain primary information from respondents designed by the researcher of this study. The transporters, drivers, the staff operating at the brewery, and senior managers approach and discussions have been held. The second source of information was from the company Enterprise Resource Planning (ERP), and different records of the transporters and Heineken Breweries S.C. were referred to.

The total population was mainly people involved in supply chain functions that are directly or indirectly involved in outsourcing and transportation, which are 70 in number.

Population	Number
Warehouse and Transportation (Site)	30
Customer Service	9
Warehouse and Transportation (OpCo)	7
Procurement Department	7
Fleet Team	5
Planning Team	5
Outsourcing and LSP Team	4
Transporters (3PL)	3
Total	70

3.5 Sources of Data

Both primary and secondary data were used in this study. The primary data was collected from both third-party transporters and Heineken Breweries S.C. stakeholders. The secondary data was collected from Heineken Breweries S.C. reports and documents, books, articles, and research reports.

3.6 Data collection method

To collect the primary data, the researcher used a structured questionnaire, and semi-structured interviews were employed. The structured questionnaire consisted of closed-ended questions designed to gather quantitative data on variables related to transportation outsourcing and firm performance, ensuring consistency in data collection for quantitative analysis. Meanwhile, semi-structured interviews were conducted with key stakeholders to delve deeper into motivations behind outsourcing decisions, challenges faced, and perceived impacts on firm performance, providing rich qualitative insights. While collecting primary and secondary data, Likert's 5-scale model was used to convert the qualitative data into quantitative data, ranging from best to worst, like 5 (very low), 4 (low), 3 (neutral), 2 (high), and 1 (very high). These instruments were selected to get reliable data and to make it cost-effective and relatively quick.

3.7 Data Analysis

A combination of quantitative and qualitative (mixed) data analysis methods was employed. Quantitative data collected from structured questionnaires undergo statistical analysis techniques such as regression analysis to examine the relationship between transportation outsourcing and firm performance metrics. This analysis helped quantify the impact of outsourcing on various performance indicators. Additionally, qualitative data from semi-structured interviews undergo thematic analysis to identify patterns, themes, and insights regarding the motivations, challenges, and perceived effects of transportation outsourcing on firm performance. By integrating both quantitative and qualitative data analysis approaches, a comprehensive understanding of the relationship between transportation outsourcing and firm performance was achieved.

3.8 Reliability and Validity

Factors like methods of data collection, tools and models of analysis, interaction, responses of respondents, bias of the researcher, etc. directly affected the validity and reliability of the study. Therefore, reliability and validity are given the utmost attention to such factors as using reliable

data sources, tools, and methods during action to ensure credibility. Cronbach's alpha is a coefficient of reliability. It is commonly used as a measure of the internal consistency or reliability of a psychometric test score for a sample of examinees. It was first named Lee Cronbach in 1951, as he had intended to continue with further coefficients. The measures can be viewed as an extension of the Kuder-Richardson Formula 20 (KR-20).

	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
Financial Value	.833	.827	5
Performance Outcome	.839	.853	5
Process Efficiency	.769	.789	5
Relationship Quality	.838	.886	5
Market Dynamics	.832	.872	5
Total	.822	.845	25

3.9 Validity

Is the degree to which conclusions about the relationship among variables based on the data are correct or reasonable? This began as being solely about whether the statistical conclusion about the relationship of the variables was correct. Statistical conclusion validity involves ensuring the use of adequate sampling procedures, appropriate statistical tests, and reliable measurement procedures.

3.10 Ethical Considerations

The utmost attention was given to respect for individual and company information that is directly or indirectly related to ethical matters. Any form of practice such as one-way mirror, concealed tape recording, or telephone tapping was not allowed, and it is with great care that any action that might lead to criminal proceedings is avoided.

CHAPTER FOUR

DATA ANALYSIS AND DISCUSSION

4.1 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. To address the research questions, 70 questionnaires were prepared and distributed to Heineken employees and 3rd party logistics service providers, out of these questionnaires 69 were filled and returned through online data collection tool and paper questionnaire, the rest 1 questionnaires was discarded due to missing data.

4.2 DEMOGRAPHY OF RESPONDENTS

Table 4.1 Educational Level and Gender Cross Tabulation

% Level of Education

		1 Sex		Total
		Female	Male	
Level of Education	Degree	47.7%	52.3%	100.0%
	Diploma	20.0%	80.0%	100.0%
	Master and above	36.8%	63.2%	100.0%
	Other	100.0%		100.0%
Total		43.5%	56.5%	100.0%

Source: own study 2024

Table 4.1 shows the distribution of education by gender. The number of female degree holders is 47.7%, whereas the number of males is 52.3%. Diploma holders consist of 20.0% females and 80.0% males. The number of females with a master's degree or higher is 36.8%, while the number of males is 63.2%. Other, not specified education is equated to females,

which are 100.0%. In the total population, the number of females is 43.5%, while the number of males is 56.5%.

Table 4.2 Current position in the institute and gender cross tabulation

Your current position your organization

		_1_Sex		Total
		Female	Male	
Your current position your organization	Coordinator	36.8%	63.2%	100.0%
	Manager	42.9%	57.1%	100.0%
	Other	59.1%	40.9%	100.0%
	Supervisor	16.7%	83.3%	100.0%
	Team leader	40.0%	60.0%	100.0%
Total		43.5%	56.5%	100.0%

Source: own study 2024

Table 4.2 shows the distribution of current positions in the organization. The number of females in the current position is 36.8%, while the number of males is 63.2%. For managers, 42.9% are females, while 57.1% are males. Other positions have 59.1% females and 40.9% males. The number of females under supervision is 16.7%, while 83.3% are males. For team leaders, the number of females is 40.0%, whereas the number of males is 60.0%. In the total population, the number of females is 43.5%, while the number of males is 56.5%.

Table 4.3 Work experience in the company and gender cross tabulation

Year of experience

		_1_Sex		Total
		Female	Male	
3 Year of experience	1-3 years	42.9%	57.1%	100.0%
	4-6 years	54.2%	45.8%	100.0%
	7-9 years	42.9%	57.1%	100.0%
	More than 10 years	20.0%	80.0%	100.0%
Total		43.5%	56.5%	100.0%

Source: own study 2024

Table 4.3 shows how the distribution of years of experience goes by gender. Between years 1 and 3, female representation comes up to 42.9%, while that of the male is 57.1%. For those with experience of 4 to 6 years, female representation is 54.2%, while male representation is 45.8%. Experience of 7 to 9 years shows that female representation is 42.9%, while that of males is 57.1%. More than 10 years of experience show that female representation is 20.0%, while that of males comes in at 80.0%. On an overall basis, at all levels of experience, the representation is 43.5% female and 56.5% male.

4.3 DESCRIPTIVE ANALYSIS

To construct equal intervals for a five-point Likert scale in the survey questionnaire, which goes from strongly agree (very high) to strongly disagree (very low), Murry, J. (2013) employed a sort of rule of thumb. Additionally, if the sample is roughly normally distributed, the interpretation for Likert scale data from 1 (very high) to 5 (very low) should be intended for a mean up to 2.8 as "agree," a mean between 2.9 and 3.2 as "neutral," and a mean above 3.21 as "disagree cited in Lilian Kemunto Onsongo (2016). As a result, these standards serve as the basis for each variable's statistical choice.

In the process of examining the data, a standard deviation was used. Small standard deviations (relative to the value of the mean itself) indicate that the data are close to the mean, whereas a large standard deviation (relative to the mean) indicates that the data points are

distant from the mean. The mean is a poor fit for the data. The standard deviation is a measure of how well the mean represents the data (Field 2009). All the variables were measured using a five-point Likert scale, where 1 stands for strongly agree and 5 stands for strongly disagree. Therefore, the interpretation made using the mean of each variable falls between the two ranges; as a matter of fact, if the mean approaches 1, the interpretation would be that the respondents agree on the raised issue or variable, and if it approaches 5, the reverse would be true.

Table 4.4. Financial Value related questions

Descriptive Statistics

	N	Mean	Std. Deviation
1. To what extent do you think there is a reduction in transit times and delays after outsourcing the transportation services?	69	2.77	.894
2. Are on-time delivery rates constantly met by the outsourced transportation services?	69	2.74	.934
3. How well have the cost savings through effective transportation planning and delivery been realized to your expectations?	69	2.96	1.156
4. How would you rate the transparency in communication regarding delivery schedules and potential delays from the transportation service provider?	69	2.96	.882
5. To what extent do you think the transportation service provider applies technology to optimize route and minimize delivery times?	69	2.97	1.029
Valid N (listwise)	69	2.88	0.979

Source: own study 2024

Table 4.4 summarizes responses from 69 respondents on the performance of outsourced transportation services. To the extent to which transit times and delays have reduced after outsourcing, the rating was a mean of 2.77 and a standard deviation of 0.894, meaning there was moderate agreement. Satisfaction with the rate of deliveries on time received a mean score of 2.74, with a standard deviation of 0.934. Cost savings realization had a mean of 2.96

and a standard deviation of 1.156, indicating that there were differing opinions. Transparency in communication from the transportation service provider also had a mean of 2.96, with a standard deviation of 0.882. Finally, the application of technology to optimize routes and reduce delivery times had a mean score of 2.97 and a standard deviation of 1.029. Overall, the responses provided indicate moderate satisfaction with all measured aspects of outsourced transportation services.

Table 4.5. Compliance and Customer impact of supplier related questions

Descriptive Statistics

	N	Mean	Std. Deviation
1. How would you rate the outsourced transportation services on the ability to meet customers' expectations?	69	2.51	.901
2. Do you feel that there has been accuracy in the order fill and delivery?	69	2.41	.792
3. To what extent have the service level agreements and contractual obligations been met by the transportation service provider?	69	2.77	.910
4. Have there been situations of miscommunication or error in order fill and delivery since the outsourcing of the transportation services?	69	3.23	.860
5. How well does the transportation service provider handle exceptions or unforeseen situations in delivery?	69	2.96	.898
Valid N (listwise)	69	2.776	0.882

Source: own study 2024

Table 4.5 shows the performance of outsourced transportation services, according to the responses of 69 participants. The ability to meet customers' expectations was an average of 2.51 with a standard deviation of 0.901, which is indicative of moderate satisfaction. Accuracy in order fill and delivery had an average of 2.41 with a standard deviation of 0.792,

showing somewhat less than moderate satisfaction. The degree of achievement of the SLAs and contractual commitments shows an average of 2.77, with a standard deviation of 0.910, indicating moderate agreement. Since outsourcing, miscommunication, or order fill and delivery mistake situations have a higher average of 3.23 with a standard deviation of 0.860, this shows the presence of the issue. The handling of exceptions or unforeseen situations by the transportation service provider received a mean score of 2.96 with a standard deviation of 0.898, indicating moderate satisfaction. In general, these responses reveal areas of moderate satisfaction as well as serious issues in order accuracy and communication since the transportation services were outsourced.

Table 4.6. Scalability and flexibility of supplier related questions

Descriptive Statistics

	N	Mean	Std. Deviati on
1. Have the deliveries or shipments per unit of time increased considerably since the service of a transport company was outsourced?	69	2.70	.880
2. How would you rate the effectiveness of load planning and routing conducted by the transportation service provider?	69	2.65	.997
3. Have you managed to cut back on idle time and waiting periods in transport since the transport work is outsourced?	69	2.68	1.007
4. How satisfied are you with the level of automation and digitalization in the transportation process since outsourcing?	69	3.03	1.043
5. Have there been improvements in the efficiency of driver use and vehicle capacity optimization?	69	2.71	1.001
Valid N (listwise)	69	2.2754	0.986

Source: own study 2024

Table 4.6 shows how improvements have been made regarding deliveries per unit of time based on 69 respondents. The mean score is 2.70, with a standard deviation of 0.880. Herein,

since the standard deviation is still moderate, the improvement shown is moderate. It's rated at a mean of 2.65 and a standard deviation of 0.997, indicating that the effectiveness of load planning and routing by transportation service providers is showing moderate improvement. That is shown as a means of 2.68 and a standard deviation of 1.007. The item is improvements in reductions in idle time and waiting since outsourcing: mean score with a standard deviation of 3.03 and a standard deviation of 1.043. Hereby, the mean is showing relatively higher satisfaction, the mean score is 2.71 while the standard deviation is 1.001. In summary, the overall tendency shows a moderate level of improvement and hence satisfaction from using the outsourced transportation service.

Table 4.7. Geographical coverage and Agility related questions.

Descriptive Statistics

	N	Mean	Std. Deviation
1. How has the transportation service adapted to the fluctuating demand for transportation services?	69	2.75	.976
2. How much would you rate the transportation service provider's flexibility to scale the transportation capacity regarding market fluctuations?	69	3.03	.970
3. How efficient is the transportation service provider in entering new markets or regions?	69	2.91	1.067
4. How responsive is the transportation service provider to sudden shifts or spikes in transportation demand?	69	2.88	1.078
5. How much has the transportation service provider been agile in adjusting routes and operations to accommodate changing market conditions?	69	3.07	1.075
Valid N (listwise)	69	2.928	1.032

Source: own study 2024

Table 4.7 shows that the mean score for adaptability to changing demand was 2.75, with a standard deviation of 0.976, indicating moderate adaptability of the transportation service.

The ability of the provider to alter the transportation capacity against market demand was relatively more satisfying, with a mean score of 3.03 and a standard deviation of 0.970. Expansion in new markets/geographies was thus rated with a standard deviation of 1.067, warranting a mean of 2.91. The mean rating with respect to responsiveness to such abrupt changes or surges in transportation demand was 2.88, with a standard deviation of 1.078. The evaluation showed a mean rating of 3.07, with a standard deviation of 1.075, which indicated more satisfaction with the agility with which routes and operations could be adjusted to changing market conditions. On an overall basis, the replies show that customers are generally moderately to highly satisfied with the transportation service provider's flexibility, adaptability, and responsiveness to changing market conditions.

Table 4.8. Relationship Quality and Competitive advantage related questions.

Descriptive Statistics

	N	Mean	Std. Deviation
1. Do you feel a considerable difference in the transportation services offered by your company compared to the competitors?	69	2.59	.990
2. There is mutual understanding b/n the supplier and the institute	69	2.65	1.041
3. Have cost advantages been gained through economies of scale or specialized resources of the logistics provider as expected?	69	2.97	1.029
4. The supplier has high commitment in providing the required service	69	2.55	1.008
5. How much does the transportation service provider align with your company's overall supply chain strategy and goals of gaining a competitive advantage?	69	2.77	.957
Valid N (listwise)	69	2.706	1.005

Source: own study 2024

Table 4.8 shows that the gathered information regarding the comparison to the competition and other parts in the performance according to the perception. A substantial difference in the company's transport from competitors The mean rating for this was 2.59, and its standard deviation was 0.990, hence moderate in differentiation. Understanding between supplier and institute The mean of the rating in this is 2.65. The rating's standard deviation is 1.041. And so the rating is moderate. Specialized resources or economies of scale according to logistics provider 2.97 means is the rating, and 1.029 was the standard deviation. The cost advantages this shows, therefore, is reasonably satisfactory. The supplier's dedication to the needed service received a mean rating of 2.55; its standard deviation was 1.008. Alignment of the transportation service to the overall supply chain strategy or company's competitive advantage goals. The mean for this was 2.77, and its standard deviation is 0.957. From the ratings, therefore, there is a moderate level of satisfaction with the USPs, the financial advantages, the degree of dedication, and also the degree of alignment with the strategic goals of the company as far as the transportation is concerned.

Table 4.9 Operational Performance

	N	Mean	Std. Deviation
Can the company reduce its operational costs?	69	3.13	.856
Can the company be flexible in conducting its business?	69	3.13	.969
Can the company improve its operating standards of service?	69	2.59	.880
Can the company avoid interruptions of duty due to unavailability of service?	69	2.96	.915
Can the company complete its tasks within the expected time frame?	69	2.75	.898
Can the company shorten its internal processing of business operations?	69	2.72	.820
Can the company concentrate more on its core business activities?	69	2.97	.891
	69	2.89	0.889

Source: own study 2024

Table 4.9 shows various operational aspects of the institute with varying levels of agreement. Respondents showed moderate agreement that the institute can reduce its operational costs and be flexible in conducting its business, both garnering a mean score of 3.13. Improvement in operating standards of service is rated lower, with a mean score of 2.59. There is a moderate agreement that the institute can avoid interruptions due to service unavailability (mean = 2.96) and complete its tasks within the expected time frame (mean = 2.75). The ability to shorten the internal processing of the business operation is also rated as moderate, with a mean of 2.72. Finally, there is a moderate agreement that the institute can concentrate more on its core business activities, with a mean score of 2.97. Therefore, in general, the data means that, on average, while there is some confidence in cost reduction and flexibility, improving service standards and processing efficiency is not that convincing.

4.4 Correlation Analysis

Correlations

		Financial Value	Performance Outcome	Process Efficiency	Relationship Quality	Market Dynamics	Operational Performance
Financial Value	Pearson Correlation	1					
	Sig. (2-tailed)						
	N	69					
Performance Outcome	Pearson Correlation	.492**	1				
	Sig. (2-tailed)	.000					
	N	69	69				
Process Efficiency	Pearson Correlation	.480**	.400**	1			
	Sig. (2-tailed)	.000	.001				
	N	69	69	69			
Relationship Quality	Pearson Correlation	.486**	.498**	.573**	1		
	Sig. (2-tailed)	.000	.000	.000			
	N	69	69	69	69		
Market Dynamics	Pearson Correlation	.516**	.608**	.512**	.763**	1	
	Sig. (2-tailed)	.000	.000	.000	.000		
	N	69	69	69	69	69	
Operational Performance	Pearson Correlation	.360**	.544**	.380**	.561**	.398**	1
	Sig. (2-tailed)	.002	.000	.001	.000	.001	
	N	69	69	69	69	69	69

** . Correlation is significant at the 0.01 level (2-tailed).

Operational performance shows a strong positive correlation with Financial Value ($r = 0.360$, $p < 0.01$), Performance Outcome ($r = 0.544$, $p < 0.01$), Process Efficiency ($r = 0.380$, $p < 0.01$), Relationship Quality ($r = 0.561$, $p < 0.01$), and Market Dynamics ($r = 0.398$, $p < 0.01$). It indicates that improvements in financial metrics, performance outcomes, process efficiency, relationship quality, and market adaptation positively influence operational performance.

4.4 REGRESSION ANALYSIS

This regression analysis was conducted to know by how much the independent variable explains the dependent variable. The regression was conducted between Outsourcing transportation function (independent variable) and operational Performance of firm (dependent variable). The result of the regression analysis is presented as follows.

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.667 ^a	.445	.401	2.46146	1.933

a. Predictors: (Constant), Market Dynamics, Process Efficiency, Financial Value, Performance Outcome, Relationship Quality

b. Dependent Variable: Operational Performance

Model Summary This model summary shows that there is a moderate relationship between the predictors, namely market dynamics, process efficiency, financial value, performance outcome, and relationship quality, with the outcome variable having an R of 0.667. This reveals a positive association between the variables. The value of R square is

0.445, which means that 44.5% of the variance in the outcome variable is explained by this model, while the value of adjusted R square is 0.401, correcting it for the number of predictors; hence, it becomes 40.1%. Furthermore, the standard error of the estimate is equal to 2.46146. This reflects the average distance that the observed values travel from the regression line. In general, this model is characterized by a moderate relationship with a large portion of the variance explained, although additional improvement is still possible.

ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	305.601	5	61.120	10.088	.000 ^b
Residual	381.703	63	6.059		
Total	687.304	68			

a. Dependent Variable: Operational Performance

b. Predictors: (Constant), Market Dynamics, Process Efficiency, Financial Value, Performance Outcome, Relationship Quality

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	8.460	2.066		4.095	.000
	Financial Value	.029	.150	.023	.193	.848
	Performance Outcome	.564	.158	.437	3.564	.001
	Process Efficiency	.045	.129	.042	.349	.728
	Relationship Quality	.503	.139	.557	3.608	.001
	Market Dynamics	-.263	.130	-.326	-2.026	.047

a. Dependent Variable: Operational Performance

The table of coefficients reflects the relationship between several predictors and operational performance. The constant is 8.460, and this means the baseline level of operational performance given that all the predictors are 0, with a significant t-value of 4.095 ($p < .001$). Financial Value has a negligible impact ($B = .029$) and is insignificant ($p = .848$). Performance Outcome has a strong positive influence on operational performance ($B = .564$) and is highly significant ($p = .001$). Process Efficiency has a small positive coefficient ($B = .045$) and is insignificant ($p = .728$). Relationship Quality also has a positive and significant effect ($B = .503$, $p = .001$). However, Market Dynamics has a negative effect ($B = -.263$) and is significant ($p = .047$). This identifies the Performance Outcome and Relationship Quality as the areas from which operational performance is being driven positively, while Market Dynamics is doing it adversely.

4.5 Preliminary Tests

Variables are continuous since I have done mean value for each variable from the above descriptive part.

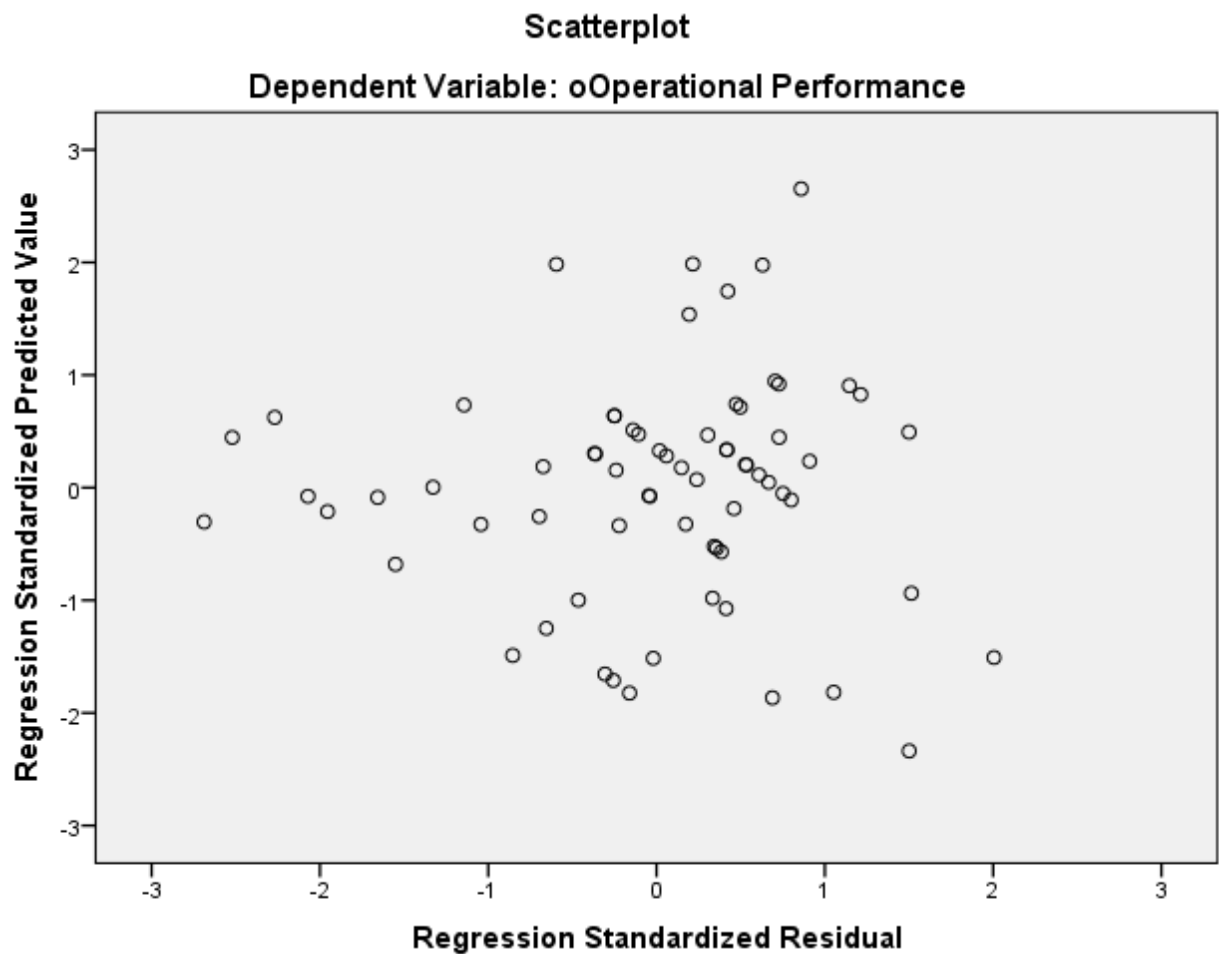
A. Test of Multi-collinearity

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	Financial Value	.630	1.588
	Performance Outcome	.586	1.708
	Process Efficiency	.614	1.630
	Relationship Quality	.370	2.700
	Market Dynamics	.341	2.936

Source own, 2024.

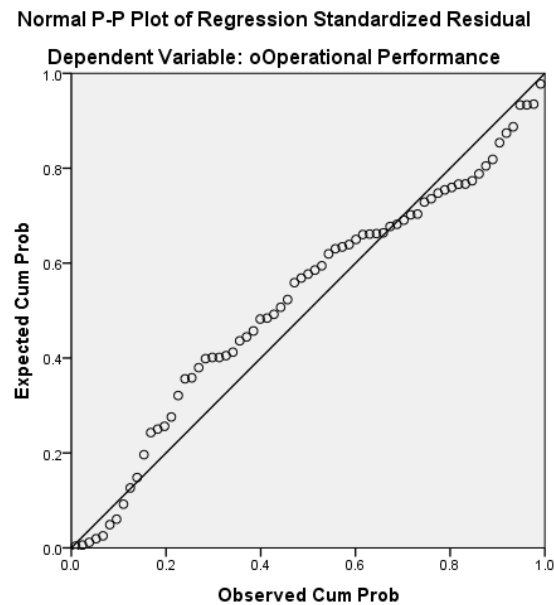
A VIF test was used to test the existence of multicollinearity problems. The results of the test indicate the highest VIF is 2.936; which indicates the model performed with no major multicollinearity problem among the explanatory variables.

B. Homoscedasticity Test



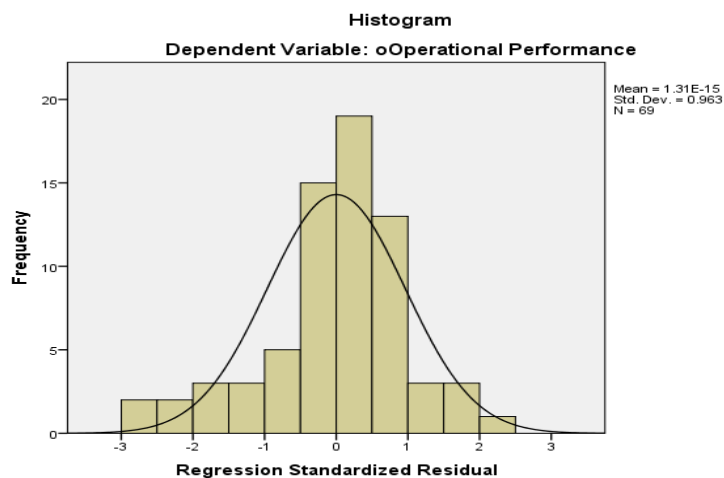
A scatter diagram with the residuals plotted on the vertical axis and the horizontal axis representing fit was help check for homoscedasticity. In such a case, if the variance remains constant along the zero axis, then the residuals are randomly scattered around the horizontal, which shows errors are not accumulated

C. Test of Linearity



The p-plot methodology was used since the error term or residuals needed to be regularly distributed in order to execute the ordinary least squares method. As can be seen in the figure below, the residuals are almost normally distributed.

D. Test of Normality



In terms of normality testing, a bell shape indicates that the data fits the definition of a normal distribution, showing a symmetrical distribution around its mean.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

The final part of this research paper provides summary, conclusions and recommendations drawn from the findings of the data collected by questionnaire.

5.1 SUMMARY OF FINDINGS

This study was aimed at analyzing the effect of outsourcing sourcing Transportation Function on firms' performance in case of Heineken Ethiopia. The specific objective of the study includes To assess the impact of transportation outsourcing on the efficiency and cost-effectiveness of logistics operations within the firm, To identify key performance indicators used to evaluate the effectiveness and productivity of transportation outsourcing and their correlation with firm performance metrics, To analyze how transportation outsourcing enhances the firm's responsiveness to changing market demands and facilitates timely delivery of goods, To evaluate the strategic decisions in transportation outsourcing that contribute to the firm's competitive advantage and strengthen supply chain resilience.

Based on the analysis and interpretation of the data obtained from primary and secondary data sources, the researcher has come up with the following findings.

Financial value Transportation services' outsourced performance is between 2.74 to 2.97 indicates moderate agreement that transit times and delays are reduced with general satisfaction relating to on-time delivery rates. Views on realization of cost savings are mixed, but again, there is moderate satisfaction with the transparency of communication from the service provider. Furthermore, there is moderate agreement that the provider uses technology effectively to optimize routes and minimize delivery times.

The assessment of meeting customer expectations and Compliance has an average of 2.77 indicates high to moderate satisfaction, even though the order fill and delivery precision is a bit lower. There is moderate competition that the SLAs are being met, the

miscommunications and errors of order fill and delivery are not insignificant. This would be followed by handling exceptions and unforeseen eventualities, which are moderate in satisfaction level.

Regarding scale and flexibility, relatively mild improvement has been made in the increase in deliveries and shipments over a unit of time. Satisfaction with the rate of effectiveness in load planning and routing is also mild, as well as in reduction of the idle time and waiting period. It is relatively more satisfied with the degree of automation and digitalization in the process of transportation, and mildly improved in the efficiency of driver use and vehicle capacity optimization.

There is moderate rating of geographical coverage and agility of outsourced transportation services. The service provider is moderately adaptable to fluctuating demand with relatively higher levels of flexibility when it comes to scaling transportation capacity in response to market fluctuations. Entering new markets is moderately rated for efficiency, as well as the ability to respond to sudden shifts or spikes in demand. Satisfaction levels are relatively higher with the provider's ability to change routes and operations to match market conditions.

Competitive advantages and supplier relationships have a moderate differentiation of transport service relative to competitors, where mutual understanding is also rated as moderate. The ability to achieve real cost advantage driven by economies of scale or specialized resources is more satisfactorily rated. The supplier's commitment to delivering the required service is rated as moderate. So is the alignment of the transport service provider to the company's wider supply chain strategy and objectives to gain competitive advantage.

5.2 CONCLUSION

The outsourced transportation services evaluation displays improvement in various performance areas. There is a general reduction in transit times and moderate satisfaction with the on-time delivery rates from the point of view of finance, although cost savings are not equitably achieved. Customer expectations and compliance are, in a general sense, being met, although there are issues of order accuracy and the handling of exceptions, which show the need for improvement in managing unforeseen situations. Increased scalability and flexibility are also observed with increased levels of delivery efficiency and digitalization, but more effective load planning and routing would reduce the amount of idle time.

Geographical coverage and agility are seen to be somewhat effective but have a margin for a more efficient market response and route adjustment. Its competitive advantages and supplier relationship are also moderate, and they have achieved some success in cost advantages related to economies of scale, but increasing supplier commitment to the business and alignment with the strategic business direction of the business is necessary. While outsourced transportation services are scoring satisfactorily in general performance, a focus on cost efficiency, accuracy, planning, and strategic alignment was undoubtedly optimize the results and increase competitive positioning.

5.3 RECOMMENDATIONS

Based on the research findings, the report proposes the following concepts as comprehensive solutions to the issue:

In accordance with the goals and findings, the research suggested the following:

- The performance of outsourced transportation services, delivering intermediate value in the form of transit time reduction and delay and general satisfaction with the on-time delivery rate. For increased value, the institute shall aim to monitor and evaluate outsourced transportation services continually. Developing a robust performance tracking system was enable it to manage areas where further cuts in transit times and increases in on-time delivery rates are possible. The institute shall coordinate closely with the service provider to ensure a maximization of savings in delivery costs through efficient planning and delivery strategy. Improvements in transparency and the communication process between the institute and the service provider shall further rationalize operations and reduce delivery time through enhanced use of technology.

- Customer expectations and compliance, but accuracy in order fill and delivery is slightly below that. To improve this aspect, the institute shall set robust performance parameters and conduct frequent audits to ensure that service level agreements are being met consistently. Problems of miscommunication and errors have been highlighted. Specialized communication and feedback were be set up to deal with glitches. Training sessions for staff on the institute side and the service provider's team on exceptions and unforeseen happenings shall help in the improvement of delivery quality and, hence, satisfaction.

- Scalability and flexibility, with satisfaction in load planning, routing, and reducing idle times. To improve these further, the institute should use advanced logistics software that aids in improving the efficiency of load planning and routing. Predictive analytics can be used for better forecasting and managing demand fluctuations. Also, a higher level of automation and digitalization should be undertaken for transportation processes. These were facilitating smooth working and help reduce idle times. The institute should review and tailor its strategies from time to time for optimal utilization of driver and vehicle capacities.

- Agility and Geographical coverage scores suggest that there is room for improvement. Adaptability to varying demands must be enhanced. This can be done by collaborating with

the transportation service provider to develop flexible strategies that can adapt quickly to the changes in the market. Partnerships or agreements with multiple service providers was pave the way for an efficient entrance into a new geographical area or region. Routes should be updated and optimized from time to time based on real-time data. This was enhancing the capability of sudden shifts or spikes of demand to be met efficiently and effectively.

- Moderate differentiation of transport services from competitors and mutual understanding between the supplier and the institute suggest room for improvement. The supplier relationship needs to be developed, and this can be done by focusing on enhancing coordination with the supplier. Leveraging economies of scale and the specialized resources of the logistics provider are optimized further through long-term contracts or strategic partnerships. A better competitive advantage for the institute can be had when the transportation service provider is in perfect alignment with the company's overall supply chain strategy. A review and goal alignment that is continuous between the institute and the service provider was help in creating a more committed and effective partnership.

Overall, addressing these recommendations helped the institute improve the operational performance, scalability, flexibility, and competitive advantage of its transportation services outsourced to third parties, resulting in increased efficiency and customer satisfaction.

5.4 SUGGESTED FUTURE RESEARCH

Research and the inclusion of additional variables yield a better outcome because outsourcing transportation function tasks may have other elements that affect the company's operational performance. This study provided a comprehensive view of how outsourcing transportation function tasks affects the company's operational performance. Additionally, this research leans more toward the quantitative end, it was served as the foundation for qualitative research, which was gathered non-numerical data through observation.

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Appendix

Appendix A; Questionnaire

ADDIS ABABA UNIVERSITY SCHOOL OF COMMERCE GRADUATE STUDIES DEPARTMENT OF LOGISTICS AND SUPPLY CHAIN MANAGEMENT

Dear respondents: I'm Eyob Temesgen, a graduate student at Addis Ababa University School of Commerce in the Department of logistics and Supply Chain Management. Currently, I'm conducting research entitled "THE EFFECT OF TRANSPORTATION FUNCTION OUTSOURCING ON FIRM OPERATIONAL PERFORMANCE, IN CASE OF HEINEKEN ETHIOPIA (HBSC)" as a partial requirement for the award of Master of Art Degree in Logistics and Supply Chain Management. The purpose of this questionnaire is to gather data for the proposed study, and hence you are kindly requested to assist with the successful completion of the study by providing the necessary information as per the questionnaires given in all two sections. Your participation is entirely voluntary, and the questionnaire doesn't require you to write your names. The information you share remains confidential and only used for academic purposes, thus does not affect anyone, rather it might provide you with improving the efficiency and effectiveness of your company warehousing practices. So, your clear and timely response is vital for the success of the study. I would like to thank you in advance for your kind cooperation and dedication to filling up and return this questionnaire form to me. Feel free to reach me by email: eyumak24@gmail.com and phone number +251939701947.

Best Regards,

Eyob Temesgen

Instruction: - Please provide the necessary responses in the appropriate box (put “Tick” (✓) mark).

Part I: - Demographic data of the respondents

1. Sex: Male ☐ Female ☐

2. Level of education: Diploma ☐ Degree ☐ Master and above ☐

Other Please specify: _____

3. Year of experience:

1-3 years ☐ 4-6 years ☐ 7-9 years ☐ More than 10 years ☐

4. Your current position in your organization:

Manager ☐ Supervisor ☐ Team leader ☐ Coordinator ☐

Other Please specify: _____

Note: **Appendix B** (Open ended questions are for Managers only)

Part II Actual measure of transportation outsourcing function dimension

Instruction: - Please provide the necessary responses in the appropriate box

(put “Tick” (✓)mark). *1. Very High 2. High 3. Neutral 4. Low 5. Very low*

A. Financial Value-related Questions

No	Items	Actual Measures				
		VH	H	N	L	VL
1	Are on-time delivery rates constantly met by the outsourced transportation services?					
2	To what extent do you think there is a reduction in transit times and delays after outsourcing the transportation services?					
3	How well have the cost savings through effective transportation planning and delivery been realized to your expectations?					
4	How would you rate the transparency in communication regarding delivery schedules and potential delays from the transportation service provider?					
5	To what extent do you think the transportation service provider applies technology to optimize route and minimize delivery times?					

B. Compliance and Customer Impact of supplier related questions

No	Items	Actual Measures				
		VH	H	N	L	VL
1	How would you rate the outsourced transportation services on the ability to meet customers' expectations?					
2	Do you feel that there has been accuracy in order filling and delivery?					
3	To what extent have the service level agreements and contractual obligations been met by the transportation service provider?					
4	Have there been situations of miscommunication or error in order fill and delivery since the outsourcing of the transportation services?					
5	How well does the transportation service provider handle exceptions or unforeseen situations in delivery?					

C. Scalability and Flexibility related questions

No	Items	Actual Measures				
		VH	H	N	L	VL
1	Have the deliveries or shipment per unit increased considerably since the service of a transport company was outsourced?					
2	How would you rate the effectiveness of load planning and routing conducted by the transportation service provider?					
3	Have you managed to cut back on idle time and waiting periods in transport since the transport work is outsourced?					
4	How satisfied are you with the level of automation and digitalization in the transportation process since outsourcing?					
5	Have there been improvements in the efficiency of driver use and vehicle capacity optimization?					

D. Geographical Coverage and Agility related questions.

No	Items	Actual Measures				
		VH	H	N	L	VL
1	How has the transportation service adapted to the fluctuating demand for transportation services?					
2	How much would you rate the transportation service provider's flexibility to scale the transportation capacity regarding market fluctuations?					
3	How efficient is the transportation service provider in entering new markets or regions?					
4	How responsive is the transportation service provider to sudden shifts or spikes in transportation demand?					
5	How much has the transportation service provider been agile in adjusting routes and operations to accommodate changing market conditions?					

E. Relationship Quality and Competitive Advantage related questions

No	Items	Actual Measures				
		VH	H	N	L	VL
1	Do you feel a considerable difference in the transportation services offered by your company compared to the competitors?					
2	There is mutual understanding b/n the supplier and the company					
3	Have cost advantages been gained through economies of scale or specialized resources of the logistics provider as expected?					
4	The supplier has high commitment in providing the required service					
5	How much does the transportation service provider align with your company's overall supply chain strategy and goals of gaining a competitive advantage?					

Part III Actual measure of Operational performance after outsourcing

Instruction: - Please provide the necessary responses in the appropriate box

(put “Tick” (✓)mark). 1. Very High 2. High 3. Neutral 4. Low 5. Very low

No .	Items	Actual Measures				
		VH (1)	H (2)	N (3)	L (4)	VL (5)
1	Can the company reduce its operational costs?					
2	Can the company be flexible in conducting its business?					
3	Can the company improve its operating standards of service?					
4	Can the company avoid interruptions of duty due to unavailability of service?					
5	Can the company complete its tasks within the expected time frame?					
6	Can the company shorten its internal processing of business operations?					
7	Can the company concentrate more on its core business activities?					

3) If you have any comment -----

Thank You!

Appendix B:

Interview Questions for Heineken Brewery Company Managers.

1. What are the major factors driving the company to outsource transportation functions?
2. How does outsourcing its transport functions affect the cost efficiency of the company?
3. How does transportation outsourcing impact delivery times and service quality at the company?
4. What are the challenges and risks associated with outsourcing the transportation function for Heineken Breweries?
5. Does outsourcing of transportation functions result in a competitive advantage for the company, and if so, how?

Source: <https://www.emerald.com/insight/content/doi/10.1108/JSMA-03-2017-0019/full/html>
[content \(aau.edu.et\)](#)

APPENDIX III: PROFILE OF THE RESPONDENTS

Variable		Frequency	Percentage
Gender	Male	39	43.5
	Female	30	56.5
Educational Level	Diploma	5	7.2
	Degree	44	63.8
	Masters	19	27.5
	Others (Certificate)	1	1.4
Unit	Manager	7	10.1
	Supervisor	6	8.7
	Team Leader	15	21.7
	Coordinator	19	27.5
	Others	22	31.9
Work experience	1-3 Years	28	40.6
	4-6 Years	24	34.8
	7-9 Years	7	10.1
	10 Years and above	10	14.5

Remark: I have used SPSS Version 23 for the purpose of analysis