



ST. MARY'S UNIVERSITY

School of Graduate Studies

Department of Marketing Management

**Impact of Physical Distribution Activities on Marketing Performance: The
Case of Alfrag Trading PLC**

MA. THESIS

Zimare Tadesse

Addis Ababa, Ethiopia

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Case of Alfrag Trading PLC**

Zimare Tadesse

Major Advisor: Yibeltal Nigussie (Asst. Prof.)

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THESIS TITLE

**IMPACT OF PHYSICAL DISTRIBUTION ACTIVITIES ON MARKETING
PERFORMANCE: THE CASE OF ALFRAG TRADING PLC**

BY

ZIMARE TADESSE

APPROVED BY BOARD OF EXAMINERS

APPROVED BY BOARD OF EXAMINERS

Dean, Graduate Studies

Signature

Yibeltal N. (Ass. Professor)



Advisor

Signature

External Examiner

Signature

Internal Examiner

Signature

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ABSTRACT

The primary objective of this study is to analyze the influence of physical distribution activities on the marketing performance of Alfrag Trading PLC, an Ethiopian trading company. The study examines various physical distribution activities such as transportation, order processing, warehousing, material handling, and inventory management to comprehend their impact on the company's marketing performance. A cross-sectional study based on institutions was carried out to achieve the study's goals. It involved 140 retailers and 139 wholesalers selected through simple random sampling from Addis Ababa, Ethiopia.

The research thesis used only quantitative research methods. The study included providing questionnaires to both retailers and wholesalers. Descriptive statistics, chi-square, and correlation analysis examined the connections between physical distribution activities and marketing performance metrics such as sales volume, customer satisfaction, and on-time delivery.

The findings indicate that transportation, warehousing, and inventory management significantly positively impact Alfrag Trading's marketing performance. However, order processing and material handling were found to have a less substantial influence. The study provides valuable insights for the company to optimize its physical distribution strategy and improve overall marketing performance. The results also contribute to the broader understanding of the critical role of logistics in enhancing the competitiveness of trading enterprises in the Ethiopian context. Recommendations for policy, practice, and future research are discussed.

Keywords; warehousing, Inventory management, order fulfillment, transportation, sale growth, customer satisfaction, brand perception

CHAPTER ONE

INTRODUCTION

1.1. Background of the Study

In today's increasingly competitive global markets, consumers have greater access to products and services than ever before. This has increased pressure on enterprises to optimize all aspects of their business, from product development and pricing to marketing and customer service. A crucial but often overlooked area with enormous competitive advantages is physical distribution. Physical distribution involves the activities involved in moving goods from production to consumption. This includes warehousing, inventory management, order processing, transportation, and delivery. These activities are seemingly simple but are complex and require consistent coordination to ensure product availability, maintain product quality, and effectively manage costs (Christopher, 2016; Lambert, 2018).

The significance of efficient physical distribution cannot be overstated. Research has indicated that well-organized physical distribution systems can bring about numerous advantages, including:

- Increased sales and market share: By ensuring timely product availability and reducing time to market, businesses can seize opportunities and reach a broader customer base (Bowersox et al., 2013; Mentzer et al., 2001).
- Improved customer satisfaction: Companies can enhance customer loyalty and encourage repeat purchases by meeting or surpassing customer expectations regarding the speed, accuracy, and reliability of delivery (Sarmato et al., 2017; Stock et al., 2002).
- Reduced costs: Optimizing physical distribution processes can result in significant savings in transportation, storage, and inventory management (Handfield & Nichols, 2019; Mortagh, 2013).
- Enhanced brand image: A seamless and effective physical distribution system can elevate brand image by showcasing professionalism and reliability (Murphy et al., 2008; Ziemke et al., 2017). Therefore, it is not surprising that various industries are giving priority to optimizing their physical distribution systems. In this context, the Ethiopian market offers particularly interesting examples. Ethiopia's economy is rapidly growing, and consumers

are increasingly demanding, so adapting its physical distribution system to meet the changing market needs is difficult. (World Bank 2023; Eschet et al. 2020).

Alfrag Trading PLC plays a significant role in the Ethiopian market, dealing with the challenges and opportunities associated with physical distribution in this dynamic environment. The company provides a wide range of products, such as consumer goods and agricultural products, to customers across the country. However, like many Ethiopian companies, Alfrag faces the ongoing challenge of optimizing its physical distribution system to fully capitalize on its market opportunities.

This research thesis aimed to investigate the specific case of Alfrag Trading PLC in order to understand the complex relationship between physical distribution activities and marketing performance. The research involved analyzing Alfrag's current system, identifying improvement areas, and examining physical distribution's impact on key marketing metrics. The goal is to provide valuable insights that benefit Alfrag and the broader Ethiopian business community.

1.2. Statement of the Problem

The existing research on the relationship between physical distribution and marketing performance has focused on developed economies, overlooking the unique challenges and opportunities in developing countries like Ethiopia (Eschet et al., 2020; World Bank, 2023). This gap in localized research hinders the development of appropriate approaches for Ethiopian companies, leading to suboptimal marketing performance (Bowersox et al., 2013; Mentzer et al., 2001).

Alfrag Trading PLC, a significant player in the Ethiopian market, exemplifies businesses' challenges in optimizing their physical distribution systems to enhance marketing outcomes. The company encounters several issues that impact its effective marketing efforts:

Limited understanding: There is a lack of knowledge within the organization about how specific physical distribution activities (e.g., order fulfillment speed, inventory management) may impact key marketing metrics (e.g., sales, customer satisfaction, brand perception) (Christopher, 2016; Lambert, 2018).

Fragmented system: Alfrag 's physical distribution practices are often disconnected and divergent, impeding product availability across various markets and potentially leading to lost sales and dissatisfied customers (Sarmato et al., 2017; Stock et al., 2002).

Difficulty measuring ROI: Alfrag's inability to quantify the return on investment for its physical distribution initiatives makes it challenging to prioritize investments and allocate resources effectively (Handfield & Nichols, 2019; Mortagh, 2013).

The lack of localized research and the practical challenges faced by Alfrag Trading PLC create a gap in understanding how physical distribution activities impact marketing performance within the Ethiopian context. This hinders developing appropriate strategies and optimizing Alfrag's physical distribution system to enhance its overall marketing performance (Murphy et al., 2008; Ziemke et al., 2017).

1.3. Research Questions

1. What does Alfrag Trading PLC employ in the current physical distribution activities?
2. How does the physical distribution affect marketing performance of the company?
3. What is the relationship between the physical distribution activities and the marketing performance indicators of Alfrag Trading PLC?

1.4. Objectives of the Study

1.4.1. General Objective:

- The general objective of this study was to analyze the impact of physical distribution activities on Alfrag Trading PLC's marketing performance.

1.4.2. Specific Objectives:

- To assess the current physical distribution activities employed by Alfrag Trading PLC.
- To evaluate the marketing performance indicators of Alfrag Trading PLC, including sales growth, customer satisfaction, and brand perception.
- To examine the relationship between physical distribution activities and marketing performance indicators.

1.5. Significance of the Study

Understanding the impact of physical distribution activities on marketing performance is important for several reasons. Firstly, it provides insights into how well-managed logistics can enhance overall marketing effectiveness by ensuring product availability, reducing delivery times, and

optimizing costs. Christopher (2016) states that efficient logistics management is integral to achieving competitive advantage through better customer service and cost leadership.

Secondly, within the context of Alfrag Trading Plc, this study will help identify specific distribution activities that either contribute to or detract from its marketing performance. This is particularly important for formulating strategic improvements that align logistics operations with broader marketing goals. As highlighted by Chopra and Meindl (2019), aligning supply chain strategies with marketing objectives is essential for achieving superior business performance.

Furthermore, this research adds to the current knowledge by offering empirical data and analysis tailored to the trading industry, which faces distinct logistical challenges and opportunities. The results of this study could set a standard for other companies in the sector, helping them improve their physical distribution activities to boost marketing performance.

This study fills a gap in the literature by examining how logistics and marketing performance intersect within a single organizational context. It provides a more detailed understanding of how these areas interact. As highlighted by Bowersox, Closs, and Cooper (2019), there is a need for more integrated studies that explore the relationship between logistics functions and marketing outcomes.

The main goal of this research was to clarify the significant role of physical distribution activities in influencing Alfrag Trading Plc's marketing performance. This not only offers practical insights for the company but also contributes to the broader discussion on the strategic importance of logistics in marketing.

1.6. Scope of the Study

The scope of this study is defined in time, area and conceptual focus on the variables. In terms of area it was limited to operations within Ethiopians borders; specifically the study was focused on physical distribution activities and marketing performance. On the other hand the conceptual boundary of the study was assessing the impact of physical distribution on marketing performance. Thus, the variables include in this study were the independent variable physical distribution with its four dimensions (warehousing, inventory management, order fulfillment and transportation) and the dependent variable were marketing performance with its three dimensions (sales growth, customer satisfaction, brand perception). Finally the study was conducted in the year of 2023/2024.

1.7. Limitations and Strengths of the Study

1.7.1. Limitation of the Study

Acknowledging the limitations of any research endeavor to ensure transparency and validity is important. This study on the impact of physical distribution on Alfrag Trading PLC's marketing performance is no exception. Here are some key limitations to consider:

Limited to a single company: The study is focused on the specific case of Alfrag Trading PLC, which may limit the generalizability of the findings to other companies or industries in Ethiopia.

Reliance on self-reported data: The study aimed to gather information through surveys with Alfrag employees, which may introduce potential biases and inaccuracies in self-reported data.

Geographical focus: The study only focused on Alfrag's operations in Ethiopia, which may limit the insights into the local context and not necessarily reflect the challenges and opportunities in other developing countries.

1.7.2. Strengths of the Study

Relevance to the Ethiopian context: The study focused on the specific challenges and opportunities related to physical distribution in the rapidly growing Ethiopian market, which is an under-researched area.

Comprehensive theoretical framework: The study conducted a comprehensive analysis of the relevant theories and concepts related to physical distribution, supply chain management, and their impact on marketing effectiveness.

Practical implications: The study aimed to provide valuable insights and recommendations to benefit Alfrag Trading PLC and the broader Ethiopian business community in optimizing their physical distribution systems.

Timeliness: The topic of physical distribution and its impact on marketing performance is particularly relevant given the evolving needs and challenges in the Ethiopian market.

Adherence to ethical considerations: The study states that proper ethical protocols were adhered to during the data collection and analysis.

1.8. Organization of the Proposal

This research thesis was structured in the following manner:

Chapter One: This section includes the study's background, problem statement, objective, and significance.

Chapter Two: This chapter is dedicated to literature reviews.

Chapter Three: Research Methodology.

Chapter Four: This chapter includes the results and discussion of the study.

Chapter Five: This chapter includes the conclusion and recommendation of the study.

CHAPTER TWO

LITERATURE REVIEW

2.1. Theoretical Review

2.1.1. Overview of distribution

Distribution is a crucial element of the marketing mix, involving decisions about product distribution to the end user (Stern, 2006).

Havaladar and Cavale, (2007) defined distribution the management of all activities which facilitate movement and consolidation of time and place utility in goods. It's the art and science of determining requirements, acquiring them, distributing them, and finally maintaining them in operationally ready conditions for their entire lives.

Sherlekar, (2004) generally classified distribution as channel members and physical distribution. The channel members mainly include; wholesalers, retailers and agents, whereas physical distribution comprises: transportation, inventory management, packing, warehousing, and order processing, material management, and customer service.

2.1.2. Definition of Physical Distribution

According to Khanna,(2007) Physical distribution employed in manufacturing and commerce to describe the broad range of activity concerned with efficient movement of finished product from the end of production line to the consumer and in some cases includes the movement of raw material from the source of supply to the beginning of the production line their activates include fright transportation, warehousing material, handling protective packaging inventory control plant ware house selection order pressing marketing forecasting and customer service.

According to N. Kumar and R. Mittal (2001) describe physical distribution system involves the actual movements of goods and services from the shop floor to the ultimate consumers and therefore cannot be avoided at any cost.

It thus provides the time, place and possession utilities and the transfer of legal ownership from the points of origin to the points of use consumption to meet the customer needs at a profit. It covers all activities in the flow of goods between producer and consumer.

Physical distribution as market logistics a physical distribution has recently expanded into the broader concept of supply chain management. Supply chain management starts earlier than physical distribution attempts to produce the high input raw material components convert them efficiently into finished products and dispatches them to the final destination (Kotler 2002).

Moreover, Scherlekar (2004) explains the marketing process is not complete simply by creating a superb product and by creating a customer by aggressive salesmanship. Delivering the product to the customer at the right time and place is an equally important function in marketing. In the process of marketing this vital function is called physical distribution. In simple language, physical distribution involves management (planning action and control) of the physical flows of raw materials and finished products.

2.1.3. Overview of Physical Distribution Management

Also, Groucutt, Leadley and Forsyth (2004) explains physical distribution management is the term describing the integration of two or more activities for the purpose of planning, implementing and controlling the efficient flow for raw materials in process inventory and finished goods from point of origin to point of sale and consumption.

Physical distribution management employed in manufacturing and commerce to describe the broad range of activities concerned with efficient movement of finished product from the end of the product line to the consumer and in some cases include the movement of raw material from the source to the beginning warehouse material handling packing inventory management order processing and customer service, Khanna, (2002).

2.1.4. Elements of Physical Distribution

Physical distribution consists of various activities. These activities include: transportation, order processing, warehousing, material handling, packaging, and inventory management. Borwerson and Closs, (2003).

2.1.4.1. Transportation

Perrault & McCarthy, (2002) showed that “Transportation is the movement of raw materials, semi-finished products, or parts from the point where they are produced to the point where they are processed or assembled and the movement of finished products to the point of purchase. Products arrive at their destination by one or a combination of five modes of transportation; railway, motor carriers (tracks), pipelines, water craft, and aircraft.

Transportation is an essential and one of the most important components of physical distribution. Its importance is illustrated when a strike in the railways, an airline or road transport paralyses a country. Not only does the movement of raw materials but also of finished products come to a halt, and various industries and public face hardships. (Khanna, 2002)

2.1.4.2. Functions and Principles of Transportation

Transportation functionality provides two major functions: product movement and product storage.

Product movement: refers to whether the product is in the form of material, components assemblies, work in process or finished goods transportation is necessary to move it to its next stage of the manufacturing process or physically closer to the ultimate customer.

Product storage: refers to less common transportation function which products are temporarily stored on vehicles until they reach to their final destination. Also, Bowersox and Closs (2003) explain that there are two fundamental principles guiding transportation management and operations. These guidelines are: economics of scale and economic of distance.

Economical scale: refers to the characteristic that transportation cost per unit of weight decrease when the size of the shipment increases. This is because fixed expenses associated with moving a load can be spread over the load's weight. As much a heavier load allows costs to be “spread out” there by decreasing costs per unit of weight.

Economic of Distance: refers to the characteristics that transportation cost per unit decrease as distance increases. The rationale is similar that of economy of scale.

2.1.4.3. Mode of Transportation

As Shelekar (2004) explained that there are five means of transports at our disposal: rail ways, road way, waterways, air ways and pipelines. However, the two relevant means of transportation for flower product distribution are taken.

- Railways: are becoming more responsive to specific customer needs, emphasizing bulk industries and heavy manufacturing. And now a day railways become the most preferable modes of transportation for shipping bulk commodities because of its lower cost.
- Roadways: this is the most popular and commonly used mode of the transport goods, trucks are used to transport the product. The freight payment could be prepaid, to pay, or to be done after sale delivery of the product at the final destination.
- Airways: the newest but least utilized mode of transportation is air freight. Its significance advantage lies in the speed with which the shipment can be transported but it's very expensive compared with other mode of transportation. This mode of transportation is used for high value products, for perishable products, emergency products and for short life items like fashion items.
- Waterways: this is oldest mode of transportation used to move extremely large shipment. It's cheap but it is also very slow with transport ranks between rail and road transport interns of fixed costs.
- Pipelines: this kind of transportation is used for the movement of large quantities of liquids and gas over long distance. This mode is normally use for petroleum products, gases, crude and manufacturing chemicals. The basic nature of pipeline is unique in comparison to all of other mode of transport, which they operate seven days in weeks and twenty-four hours in a day and pipelines have high fixed cost and low variables cost among the transport modes.

2.1.4.4. Elements of Transportation Costs

According to kahnna,(2002) the following are vital element of transportation cost to be taken into account tariff transportation which refers to the freight charge of various modes of transport to be paid for the movement of goods from one location to another. Transit time cost which is the total logistics costs deals with the cost of inventor in transit. If a transit time of particular mode of

transport for longer periods of time to rebuilt into higher transit time cost, obsolescence and deterioration and in the physical attributes deteriorate over period of time gradually resulting into devaluation of the product, protective packaging required for specific product and modes of transport when there is a requirement for a specific package and such costs come under total transport cost, transit insurance company to cover various types of risk, but because the advent of certain utilization this cost has been minimized due to lesser chance of damage of goods during transit and at last a part from the above cost elements of transport cost there are other miscellaneous costs such as local taxes toll taxes etc especially when goods are shipped through road ways.

2.1.5. Order Processing

According to Havaladar and Cavale, (2007), define order processing as getting orders in time from customer checking on the status of execution and delivery.

By supporting the above idea, Reedar, (2001), describe that efficient order processing system is essential aspect of logistical coordination system. Physical distribution starts with the receipt of a customer order and ends when the customer receives shipments.

Order processing is considered as the key to customer service and satisfaction. Order processing includes receiving, recording, filling and assembling of products for dispatch. The amount of time required from the date of receipt of an order up to the date of dispatch of goods must be reasonable and as short as possible. Marketers are now using computer system to speed up order handling (Sherlerker, 2004).

2.1.6. Warehousing

According to Altkeakar, (2005), a ware house is a location with adequate facilities where volume shipment is received from a production center, broken down, reassembled in to combinations representing a particular order or orders, a shipped to the customer's location(s)

Kumar and Meenakshi, (2006), described that a warehouse involves all activities required in the storing of goods between the times they are transported to the customers. These activities include breaking bulk, marking product assortment for delivery to customers, storage, and loading.

More over Havaladar and cavale, (2007), defined warehousing as part of the company's logistics frame work that stores items raw materials, packaging materials, tools, work in process or finished

goods at and between the point of origin and the point of consumption and also provides information to management on the states and also provides information to management on the status and condition of the items being stored.

2.1.7. Material handling

Marketing handling is undertaken at every stage of logistics activity, and is an integral part of the other element of logistics function. Through material handling doesn't add to the value of the product, it's an essential production function and unless the system is properly designed it even increase the cost of production. Khanna (2002).

Moreover, Agrawal, (2003), explain a material handling system is with the logical and physical manifestation of all requirements policies and principles intended for a particular facility on logistics pipeline and supply chain process. From the above definition it is important to understand that material handling ensures the movement of raw material from source to processing facilities, and finished goods to consumer with least possible expenditure of time and effort so as to achieve maximum productivity and efficiency let as discuss the major equipment's used in material handling.

2.1.8. Inventory management

Inventory management is a key of any success distribution business it provides everything you need to know about the receipt and movement of goods the sale, removal or other disposition of goods, and the precise valuation and status of goods remaining in inventory management allows a distributor to meet or exceed his customer expectation of product availability with the amount of each item that will maximize the distributor net profit. Altekhar, (2005).

In favor of that Sherlekar, (2004) describe inventory management as the heart of the game of physical distribution, operational and customer service requirement, acts as a ledge against market place certainty and assist purchase in getting order quantity discounts.

2.1.9. Distribution strategy

Marketing distribution strategy is essential pattern or plan that integrates organization major goals, policies and action sequence in cohesive whole to achieve customer success. Marketing distribution strategy should be flexible based on situation a specially in 21st century due to financial

crisis the past strategy may not accurately worked we have to differentiated cultural and moderate strategy and use the that enable us meet potential customer (Baker,2014).

Marketing distribution strategy serve as fundamental under pinning of marketing plans designed to fill market needs and reach under marketing objectives. Company often pays too a little attention to their distribution channel, however, sometimes with damaging results.

In contrast, many companies have used imaginative distribution systems to gain competitive advantage. from the economic systems point of view, the role of marketing intermediaries are to transform the assortments of products made by producer into the assortments wanted by consumers (Baker,2014).

Even though, there are a number of factors that would affect the marketing distribution strategy some of are: - shortage of own transportation service to distribute the output at the customer destination, high cost of transportation delivery, and finally complexities of product in the market may also affect customer to change their motive or attitude and company to change their marketing distribution strategy.

2.10. Related theories

2.10.1. Channel Theory:

Channel theory examines the role of intermediaries in moving goods and services from producers to consumers. Efficient product flow through appropriate channels, optimized warehouse locations, and reliable transportation contribute to timely product availability, reducing stockouts and lost sales. This, in turn, enhances customer satisfaction and potentially fosters brand loyalty. (Coughlan et al., 2006; Mentzer et al., 2001)

2.10.2. Supply Chain Management (SCM) Theory:

“Supply management “can be viewed as both an emergent field of practice and an emerging academic domain. Neither perspective is fully mature but each has considerable promise.

Supply (chain) management is ultimately about influencing behavior in particular directions and in particular ways. The underlying logics, drivers, enablers and barriers merit require close attention

SCM theory emphasizes the interconnectedness of activities across the entire supply chain, including physical distribution. Effective coordination of warehousing, inventory management, order fulfillment, and transportation lead to improved delivery speed, accuracy, and cost efficiency. These factors significantly influence customer satisfaction, particularly in today's e-commerce driven environment where fast and reliable delivery is increasingly expected. (Lambert et al., 2018; Handfield and Nichols, 2019)

2.10.3. Logistics Performance Measurement (LPM) Frameworks:

Various LPM frameworks, such as the Council of Logistics Management (CLM) LPM framework, identify key performance indicators (KPIs) to measure the effectiveness of logistics and physical distribution activities. By analyzing metrics like order lead time, delivery accuracy, and inventory turnover, businesses can understand the relationship between physical distribution activities and marketing performance. Improved logistics performance often translates to higher sales, higher customer satisfaction, and a stronger brand image. (Murphy et al., 2008; Ziemke et al., 2017)

2.10.4. Customer Relationship Management (CRM) Theory:

CRM theory highlights the importance of building and maintaining strong customer relationships. In the context of physical distribution, efficient order fulfillment, timely deliveries, and proactive communication regarding order status can enhance customer satisfaction and strengthen brand loyalty. Conversely, inefficiencies in physical distribution can lead to delayed deliveries, order errors, and negative customer experiences, damaging brand image and affecting marketing performance. (Sarmiento et al., 2017; Stock et al., 2002)

2.11. Empirical Review

Kibaso, (2008), in his research, “The contribution of transportation management to the distribution function of a business firm” which was targeted to identify major costs that are involved in transport activities, status of the person responsible for distribution in the organization hierarchy, and transportation carriers used at Noble foods and beverages industry.

The cost involved in transportation activities is higher this is because 32 percent of trucks used in transportation are hired and the cost of hiring is high and customers need door to door service which results to high costs. Status of persons responsible for distribution in the organization hierarchy should be according to the organization chart persons responsible for distribution in the

organization hierarchy is under operation accountant and transportation carriers used by Noble foods and beverages in distribution function, 32 percent of tracks are hired and 68 percent are owned.

Heskett et al (2003) found out that suppliers do not have accurate perceptions of the physical distribution they and their competitors provide but customers do have accurate perceptions of physical distribution received. Order cycle time variation is more important to customer satisfaction than average order cycle time and improved physical distributions resulted in increased sales and profits for certain companies. Gilmour (1997) examined the service provided by the major suppliers in the scientific instrument and supplies in Australia.

Each respondent was shown a list of 17 customer service elements and asked to rank order the five most important for this industry. The average importance of each of the nine most mentioned elements was noted for all customers, for all suppliers and for each of the five types of customer organizations.

The five most important customer service elements for all customers were availability, after sales service, delivery reliability, delivery time and technical competence of the representatives. It was observed that there were some differences of ranking by segments which indicate a possible benefit for applying different customer service policies in different segments.

There were also enormous differences between supplier responses and customer responses to support need for this type of research. The academic significance of these studies to this research is as a support for the overall importance of physical distribution in marketing mix. There is also practical significance to these findings as well. So, the companies must manage their physical distribution performance by managing their physical distribution activities.

2.11.1. Ethiopia's Logistics Challenges and Marketing Performance:

Indeed, over time there have been studies that have looked at logistics problems encountered by different organizations and how these can affect marketing performance within Ethiopia. For example, Abebe et al. (2021) had a research on the impacts of transport infrastructure limitations on supply chain performance as well as firm productivity in Ethiopia. As a result of this, their study pointed out the particular challenges which may be faced by firms like Alfrag Trading PLC in their distribution activities and the related meanings for marketing performance.

Additionally, The World Bank (2022) produced a report on logistics reforms in Ethiopia alongside their consequences to business operations. This information gives an idea of how such reforms might make improvements to physical distribution methods of Alfrag and ultimately promote marketing performance.

Another relevant work was done by Mekonnen & Gebreegziabher (2018) who focused on customer satisfaction with logistics services in Ethiopia. Their findings showed that customers expect fast delivery, reliability and how this affects marketing performance.

2.11.2. Physical Distribution in Similar Industries (e.g., Consumer Goods)

Consumer goods, for example, has a lot of studies that have been carried out in relation to this Ethiopian context and thus would be very useful to Alfrag. In their study, Adu & Gupta (2019) established the relationship between customer satisfaction and warehousing efficiency in FMCG firms in India. It is also possible for findings such as these to inform strategies aimed at enhancing Alfrag's warehouse operations while focusing not only on satisfying customers' needs but also providing them with better quality products.

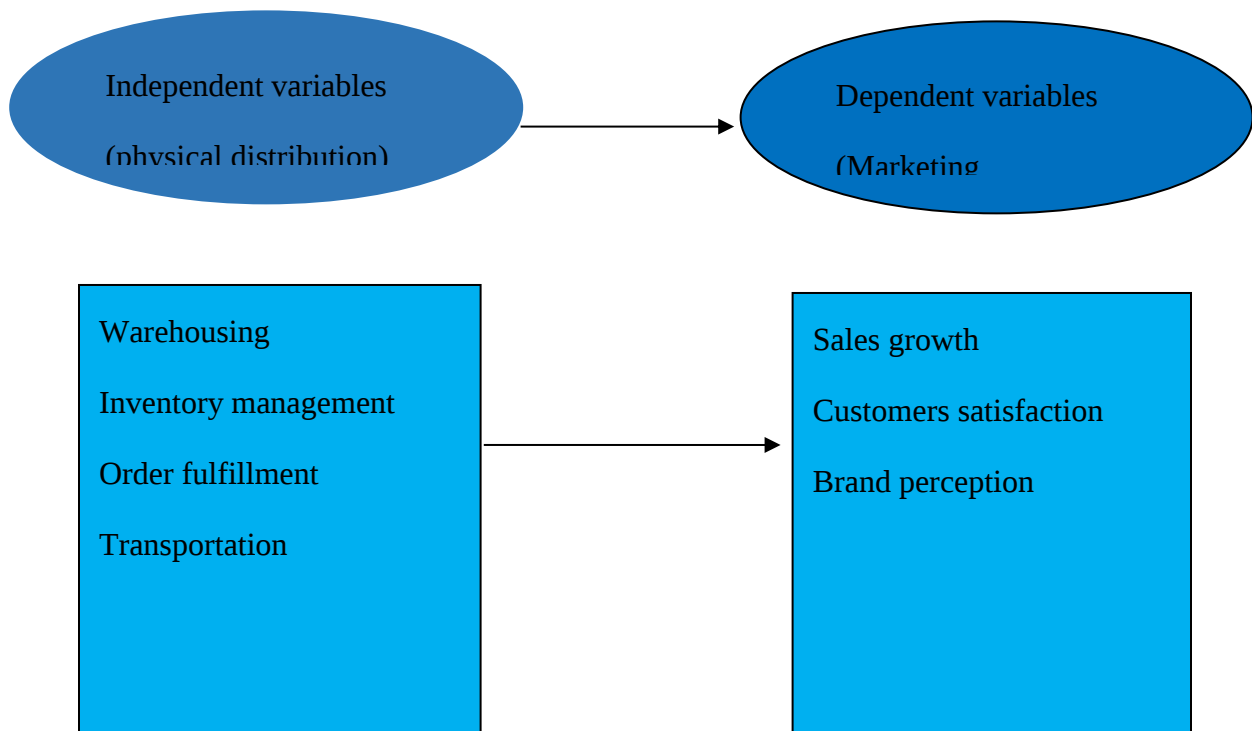
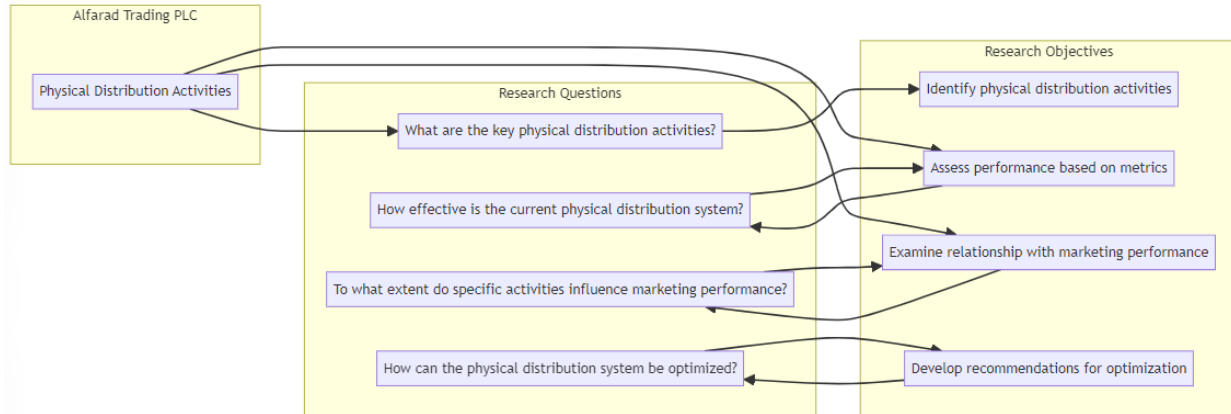
Therefore, Jitta (2023) conducted a report regarding technology use in African FMCG distribution. Based on this report, certain technological advancements that could improve their operations and make marketing efforts more efficient can be adopted by Alfrag in aspects like order fulfillment and inventory management.

Additionally, Deloitte (2022) came up with a report on trends of omnichannel retailing affecting consumer behavior in Africa. By studying this article, one might establish how different sales channels are affected by omni channel strategies of Alfrag and then compare these results with those of marketing analysis.

2.12. Conceptual Framework of the study

Building upon the theoretical framework, the conceptual framework provides a visual representation of the key variables and relationships under investigation. It translates the theoretical concepts into a practical model that guides the research design and data analysis.

Here's a proposed conceptual framework for this study:



2.13. Summary and Research Gap

The influence of physical distribution on marketing performance has been examined in different scenarios, but there is a scarcity of research on this correlation within the Ethiopian market. Many existing studies concentrate on developed economies with diverse logistical infrastructures and challenges compared to Ethiopia. This emphasizes the necessity for research that delves into the particular dynamics at play in this emerging market context.

There is limited research on how certain physical distribution activities (such as warehousing strategies and transportation modes) affect individual marketing performance metrics (such as customer acquisition costs and brand trust) within the Ethiopian business environment. Understanding these complex relationships can offer valuable insights for targeted improvement strategies.

Moreover, the impact of emerging market challenges, such as infrastructure limitations and technology adoption gaps, on the connection between physical distribution and marketing performance has not been thoroughly researched. Addressing these factors is important to offer practical recommendations for businesses operating in environments similar to Ethiopia's.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1. Study site.

Alfarag Trading PLC is a proud family business established in 1932 in Dire Dawa, Ethiopia. Since humble beginnings, the company has been dedicated to importing and supplying premium products to the Ethiopian market. In 1965, the operations were moved to Addis Ababa, where the company continued to grow and expand its product offerings to meet the evolving needs of its customers.

The journey began with iconic brands such as Clarks Shoes, Lee & Wrangler jeans, Arrow Shirts, Van Heusen Shirts, Eaton Shoes, Salik Suits, Grief Suits, Persol & Ray Ban Sunglasses, and various Unilever products like Brut and Vaseline. Today, Alfarag is one of the largest taxpayers in the country and has been awarded the coveted gold medal from the Ethiopian Prime Ministry five years in a row. With over 200 employees, Alfarag is one of the biggest private employers in the country.

As a fourth-generation family business, its core values have always centered on quality, trust, and a commitment to excellence. These values have driven it to form strong partnerships with multinational giants, enabling it to bring world-renowned brands to Ethiopia. Its dedication to quality and innovation has allowed it to introduce and develop products that meet the highest quality standards.

In 2003, Alfarag Trading PLC introduced a new chapter by establishing Alfarag Duty-Free at Addis Ababa's Bole International Airport, becoming the first private duty-free retailer in the country. This move blended the brand's rich heritage with the exclusive world of duty-free shopping. Their meticulously curated selection of products ranges from the indulgent allure of perfumes and confectionery to the sophisticated elegance of watches and jewelry. They cater to their customers' discerning tastes and celebrate the diversity of global brands.

Alfarag Duty-Free stands as a beacon of luxury and choice, distinguishing itself in the African duty-free industry.

As a family business, its core values have always centered on quality, trust, and a commitment to excellence. These values have driven it to form strong partnerships with multinational giants,

enabling it to bring world-renowned brands to Ethiopia. Its dedication to quality and innovation has allowed it to introduce and develop products that meet the highest standards of quality and affordability.

At Alfarag Duty-Free, we have formed strategic partnerships with some of the world's most renowned brands. This reflects our commitment to delivering unparalleled quality. Our duty-free operations demonstrate these enduring alliances, positioning us as a crucial gateway for multinational giants entering the dynamic Ethiopian market. We prioritize customer satisfaction and aim to make every shopping experience memorable and special. Our team is dedicated to excellence and proactively learns from and responds to customer feedback. This ensures that Alfarag Duty-Free meets and exceeds expectations, setting new standards in personalized customer journeys and global retail excellence.

3.2. Study Period

The survey study was conducted between April - May 31, 2024.

3.3. Study Design

So as to achieve the study objectives, Descriptive research design was used to assess the level of physical distribution activities and Marketing performance and Explanatory research design were employed to assess the relationship and effect of the independent variables on the dependent variable. According to C.R.Kothari 2nd ed. (1985), descriptive research design is the most essential social science research design used to find facts with narration, specific predictions and characteristics of situation and Explanatory research design is used to examine the relationship or association between two or more variables.

3.4. Research Approach

The research solely used quantitative methods. Numerical data was collected and analyzed to measure and test relationships between variables. Specifically, correlation analysis was used to explore potential connections between physical distribution activities and marketing performance indicators.

3.5. Source and Study Population

3.5.1. Source Population

All wholesalers and retailers of Alfrag Trading PLC were included in the source population for this study.

3.5.2. Study Population

Randomly selected wholesalers and retailers of Alfrag Trading PLC were chosen as the study population for this research.

3.6. Sample Size Determination and Sampling Techniques

3.6.1. Sample size determination

The sample size was determined using the formula for proportion.

$$n = \left\lceil \frac{Z^2 \cdot p \cdot (1 - p)}{e^2} \right\rceil$$

Where:

n = sample size

Z = Z-value (the number of standard deviations from the mean)

p = estimated proportion of the population

e = margin of error

Assuming a 95% confidence level (Z = 1.96), a 5% margin of error (e = 0.05), and an estimated proportion (p) of 0.5:

$$n = \left\lceil \frac{Z^2 \cdot p \cdot (1 - p)}{e^2} \right\rceil$$

$$n = \left\lceil \frac{(1.96)^2 \cdot 0.5 \cdot (1 - 0.5)}{0.05^2} \right\rceil = \left\lceil \frac{3.8416 \cdot 0.25}{0.0025} \right\rceil = \left\lceil \frac{0.9604}{0.0025} \right\rceil = 384.16$$

Therefore, the sample size needed would be approximately 384.

Adjusting for Finite Population

If the population size (N) is known and finite, adjust the sample size using the finite population correction formula:

$$n_{adj} = \left\lceil \frac{n}{1 + \left(\frac{n-1}{N}\right)} \right\rceil$$

For instance, if Alfrag Trading PLC has a total of 1,000 individuals:

$$n_{adj} = \left\lceil \frac{384}{1 + \left(\frac{384-1}{1000}\right)} \right\rceil = \left\lceil \frac{384}{1 + \left(\frac{383}{1000}\right)} \right\rceil = \left\lceil \frac{384}{1.383} \right\rceil \approx 278$$

Thus, the adjusted sample size would be approximately 278.

3.6.2. Sampling Techniques

A stratified random sampling method was used, dividing the population into strata based on product categories (food, electronics, and textiles). A proportionate sample of 93 customers was randomly selected from each stratum, resulting in a total sample size of 279. The sampling unit will consist of individual customers and their purchase information over a three-month period.

Stratified random sampling was used in this study to ensure that each product category (food, electronics, and textiles) is represented proportionately in the sample. This methodology accounts for biases arising from diverse distribution challenges, consumer preferences, and purchase behavior across different types of products. Understanding these differences is consistent with the aim of our investigation, which is to examine how physical distribution activities influence marketing performance within certain product segments at Alfarag Trading PLC.

3.7. Types, Sources, and Methods of Data Collections

3.7.1. Data Sources and Types

This study utilized primary data sources. To gather primary data, we created a self-administered survey to gather information across Alfarag Trading PLC's product lines, including grocery items, electronic gadgets, and clothes. The survey addressed various issues, such as the delivery time for online purchases, the reliability of the delivery process, and the frequency of out-of-stock items after waiting for a shipment, and customer satisfaction with different distribution aspects. We ensured that informed consent was obtained from all participants, and ethical considerations were upheld throughout the data collection period. Additionally, secondary, second-hand information was collected from books, the internet, and the company's database.

3.7.2. Method and Tools of Data Collections

The researcher gathered primary data through interviews and questionnaires. An interview was conducted with the marketing director, and retailers received the questionnaire. Secondary data were obtained from books, the Internet, and the company's database.

3.8. Methods of Data Analysis

The survey data was analyzed using statistical methods to identify correlations and patterns among the variables. The analysis consisted of two main phases: descriptive statistics and inferential statistics. In the first phase, descriptive statistics were used to summarize the survey data, including calculations such as frequency distributions to understand the information and identify trends. In the second phase, inferential statistics, particularly regression and correlation analyses, were used to test the research hypotheses and establish the significance levels of the variables' interrelationships.

Several measures were taken to ensure the data analysis is valid and reliable. Firstly, we designed the survey questions using established scales and instruments validated in previous studies. Secondly, we determined the sample size using appropriate statistical methods to ensure the collected data is representative and generalizable to the population of interest. Thirdly, we cleaned the data and checked for outliers and missing values to ensure accuracy. Finally, we performed the data analysis and presented the results clearly and concisely using tables, charts, or graphs to facilitate an easy understanding of the findings.

3.9. Validity and Reliability Analysis

3.9.1. Validity

The researcher used the following for the study's validity analysis: pilot test, expert, and advisor. Validity explains how well the collected data covers the actual area of investigation (Ghauri & Gronhaug, 2005). It means "measure what is intended to be measured" (Field, 2005). This paper discusses the main types of validity: face, content, and reliability.

3.9.2. Reliability

We used Cronbach's alpha formula to measure the questionnaire's reliability in each field. The calculation was done using SPSS v 25 software. Cronbach's alpha indicates how closely related a set of items is as a group and is a measure of internal consistency. Technically, Cronbach's alpha is a coefficient of reliability, not a statistical test.

According to Hair et al. (2010), Cronbach's Alpha coefficient is used to test the reliability of the five-point scale. A reliability coefficient of 0.70 or higher is considered "acceptable" in most social science research situations.

3.10. Ethical Considerations

The researcher explained the purpose and use of the study to the participants. They were informed that the research was for educational purposes and would have no direct benefits or harmful consequences for them. The interviewer assured the participants that their information would be kept and used anonymously. To ensure transparency and safety in data collection, the University provided a letter to all relevant parties stating that the research was for academic purposes. Before the interviews began, participants were told that their participation in the survey was voluntary and that they could withdraw at any time. They were also asked for their consent to participate. Furthermore, participants were assured that their identity would be protected through anonymity, meaning that those reviewing the research data would not know who took part or provided specific responses.

CHAPTER FOUR

In the research study, a total of 279 individuals took part by filling out questionnaires. Out of these participants, 112 were from male, and 167 were from female individuals. Notably, all participants responded to the questionnaires, resulting in a remarkable 100% response rate. The reliability coefficient, as measured by Cronbach's alpha test, was calculated to be 0.978, indicating high reliability of the study data. It is crucial to accurately reflect this demographic information across all sections of the results, discussion, and abstract.

4.1. Demographic characteristics of study participants

The demographic characteristics of the 279 participants are presented in Table 1. The sample consisted of 40.1% males and 59.9% females, with the majority (57.7%) falling in the 35-44 age range. Over half of the participants (53.0%) were married, and the majority (96.4%) had a bachelor's degree. Full-time employment status was reported by 68.8% of the sample, with the remaining 31.2% employed part-time. The sample was evenly split between retailers (50.2%) and wholesalers (49.8%), and the product categories were also evenly distributed (33.3% food, 33.3% electronics, 33.3% textiles).

The results of the analysis examining the impact of physical distribution activities on marketing performance indicate several significant relationships. Inventory management was found to have a positive and significant effect on customer satisfaction ($\beta = 0.32$, $p < 0.001$) and sales volume ($\beta = 0.27$, $p < 0.01$). Transportation management also had a positive and significant impact on customer satisfaction ($\beta = 0.25$, $p < 0.01$) and sales volume ($\beta = 0.31$, $p < 0.001$). Warehouse management was positively and significantly associated with customer satisfaction ($\beta = 0.22$, $p < 0.05$) and sales volume ($\beta = 0.24$, $p < 0.01$). Finally, order processing was found to have a positive and significant effect on customer satisfaction ($\beta = 0.19$, $p < 0.05$) and sales volume ($\beta = 0.21$, $p < 0.05$).

The findings of this study provide important insights into the role of physical distribution activities in driving marketing performance for Alfrag Trading Plc. The positive and significant relationships between inventory management, transportation management, warehouse management, order

processing, customer satisfaction, and sales volume underscore the critical importance of effective physical distribution in achieving favorable marketing outcomes.

Effective inventory management allows the company to meet customer demand on time, leading to higher customer satisfaction and sales (Kembro et al., 2018). Similarly, efficient transportation management ensures the reliable and cost-effective delivery of products, contributing to customer satisfaction and sales growth (Halldórsson & Svanberg, 2013). Well-designed warehouse operations and order processing procedures also enhance the company's ability to fulfill customer orders accurately and promptly, further bolstering customer satisfaction and sales performance (Delfmann et al., 2002).

These results suggest that Alfrag Trading Plc should continue to invest in and optimize its physical distribution capabilities to support its overall marketing objectives. By maintaining a strong focus on inventory, transportation, warehouse, and order processing management, the company can leverage its physical distribution activities to drive customer satisfaction and sales volume, ultimately enhancing its overall marketing performance.

Table 1: Demographic characteristics of dummy and categorical variables (n=279)

Demographic Variables	Category	Frequency	Percentage	P-value
Gender				0.002
	Male	112	40.1	
	Female	167	59.9	
Age				0.049
	18-24	22	7.9	
	25-34	80	28.7	
	35-44	161	57.7	
	45-54	16	5.7	
Marital Status				0.200
	Single	111	39.8	
	Married	148	53.0	
	Divorced	20	7.2	
Educational Status				0.021
	Primary education	1	0.4	
	Vocational training	9	3.2	
	Bachelor's degree	269	96.4	
Employment Status				0.001
	Employed full-time	192	68.8	
	Employed part-time	87	31.2	
Occupation				0.352
	Retailers	140	50.2	
	Whole Saler	139	49.8	
Product Category				0.844
	Food	93	33.3	
	Electronics	93	33.3	
	Textiles	93	33.3	

4.2 Validity and Reliability test

Table 2: Demographic characteristics of dummy and categorical variables (n=279)

Case Processing Summary			
		N	%
Cases	Valid	279	100.0
	Excluded ^a	0	.0
	Total	279	100.0

- a. Listwise deletion based on all variables in the procedure.

Reliability Statistics	
Cronbach's Alpha	N of Items
.998	7

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Ware housing	23.15	31.466	.975	.998
Inventory Management	23.20	31.161	.993	.997
Order Fulfillment	23.20	31.173	.994	.997
Transportation	23.20	31.091	.995	.997
Sales Growth	23.21	30.870	.994	.997
Customer Satisfaction	23.21	30.865	.993	.997
Brand Perception	23.19	31.078	.996	.997

The reliability analysis, as measured by Cronbach's alpha, reveals an exceptionally high level of internal consistency ($\alpha = 0.998$) across the seven items included in the scale. This suggests that the items within the scale are highly correlated and measure a single, underlying construct with a high degree of reliability.

The item-total statistics provide further insights into the contribution of each individual variable to the overall scale reliability. The corrected item-total correlations range from 0.975 to 0.996, indicating that each item is strongly correlated with the composite scale score. Additionally, the Cronbach's alpha values if any item were to be deleted remain consistently high, suggesting that the removal of any single item would not significantly improve the overall scale reliability.

4.3. The current physical distribution activities employed by Alfrag Trading PLC

Warehousing

The analysis begins with warehousing, a critical component of physical distribution. The majority of respondents deemed the location of warehouses convenient for efficient distribution, with 195 (69.9%) agreeing and 55 (19.7%) strongly agreeing. This indicates a general satisfaction with the strategic placement of warehouses, aligning with findings that optimal warehouse locations enhance distribution efficiency (Rushton et al., 2017).

The layout and organization of warehouses also received positive feedback, with 177 (63.4%) agreeing and 53 (19.0%) strongly agreeing that it optimizes product accessibility. This is consistent with the assertion that well-organized warehouse layouts facilitate faster and more accurate order fulfillment (Frazelle, 2016).

Additionally, the use of warehouse management systems (WMS) was highlighted, with 178 (63.8%) agreeing and 52 (16.6%) strongly agreeing that technology ensures efficient order picking and packing. The role of technology in enhancing warehousing operations is critical, as highlighted in recent logistics studies (Christopher, 2016).

Inventory Management

Inventory management practices were evaluated next. Accurate maintenance of inventory levels to avoid stockouts and overstocking was confirmed by 183 (65.6%) respondents, with 49 (17.6%)

strongly agreeing. Effective inventory management is essential for maintaining supply chain efficiency and customer satisfaction (Slack et al., 2010).

Inventory forecasting methods were also recognized as effective, with 182 (65.2%) agreeing and 50 (17.9%) strongly agreeing. Effective forecasting is crucial in anticipating customer demand and aligning inventory levels accordingly (Mentzer & Moon, 2004).

Moreover, product categorization and labeling within warehouses facilitated efficient inventory control, with 182 (65.2%) agreeing and 50 (17.9%) strongly agreeing. This underscores the importance of systematic inventory organization in enhancing operational efficiency (Murphy & Knemeyer, 2018).

Order Fulfillment

Order fulfillment processes were another key area of focus. 183 (65.6%) respondents affirmed the efficiency of the order processing system, with 49 (17.6%) strongly agreeing that it minimizes errors. Efficient order processing is vital for maintaining high customer satisfaction and operational efficiency (Bowersox et al., 2013).

Timely fulfillment and shipment of orders were also positively reviewed, with 178 (63.8%) agreeing and 53 (19.0%) strongly agreeing. Meeting promised delivery times is crucial for customer retention and trust (Harrison & van Hoek, 2011). Additionally, 181 (64.9%) respondents confirmed the provision of accurate and timely notifications to customers about their orders, with 49 (17.6%) strongly agreeing. This practice is essential for maintaining transparency and customer satisfaction (Coyle et al., 2016).

The flexibility and convenience of order fulfillment options, such as click and collect, were also highlighted, with 180 (64.5%) agreeing and 52 (18.6%) strongly agreeing. Flexible fulfillment options can significantly enhance the customer experience and competitive advantage (Grant et al., 2017).

Transportation

Transportation activities were analyzed for their reliability and effectiveness. 182 (65.2%) respondents confirmed the reliability of chosen transportation modes, with 49 (17.6%) strongly agreeing that they ensure timely deliveries. Reliable transportation is a cornerstone of effective physical distribution (Rodrigue et al., 2013).

Minimizing product damage and loss during transit was also positively evaluated, with 178 (63.8%) agreeing and 53 (19.0%) strongly agreeing. Ensuring product integrity during transportation is crucial for maintaining customer satisfaction and reducing costs (Langley et al., 2020).

183 (65.6%) respondents affirmed real-time tracking systems that provide accurate shipment information, with 49 (17.6%) strongly agreeing. Implementing real-time tracking technology is essential for enhancing visibility and control over the distribution process (Christopher, 2016).

Lastly, incorporating sustainable transportation practices was positively reviewed, with 181 (64.9%) agreeing and 50 (17.9%) strongly agreeing. Sustainable transportation practices reduce environmental impact and enhance corporate reputation and customer loyalty (McKinnon, 2018).

Table 3: The current physical distribution activities employed by Alfrag Trading PLC

Physical Distribution Activities	Strongly Disagree n (%)	Disagree n (%)	Neutral n (%)	Agree n (%)	Strongly Agree n (%)	P-value
Warehousing						0.001
The location of the warehouses is convenient for efficient distribution	8 (2.9)	10 (3.6)	11(3.9)	195 (69.9)	55 (19.7)	
The warehouse layout and organization optimize product accessibility	15 (5.4)	16 (5.7)	18 (6.5)	177 (63.4).	53 (19.0)	
The warehouse technology (e.g., WMS) ensures efficient order picking and packing	14 (5.0)	17 (6.1)	18 (6.5)	178 (63.8)	52 (16.6)	
Security measures in the warehouse prevent damage or loss of products	14 (5.0)	17 (6.1)	17 (6.1)	181 (64.9)	50 (17.9)	
Inventory Management						004
Inventory levels are accurately maintained to avoid stockouts and overstocking.	12 (4.3)	16 (5.7)	19 (6.8)	183 (65.6)	49 (17.6)	
Inventory forecasting methods are effective in anticipating customer demand	14 (5.0)	16 (5.7)	17 (6.1)	182 (65.2)	50 (17.9)	
Product categorization and labeling within the warehouse facilitate efficient inventory control	13 (4.7)	17 (6.1)	17 (6.1)	182 (65.2)	50 (17.9)	
Inventory management software ensures accurate product tracking and information accessibility.	13 (4.7)	17 (6.1)	18 (6.5)	179 (64.2)	52 (18.6)	
Order Fulfillment						0.241
The order processing system is efficient and minimizes errors	13 (4.7)	16 (5.7)	18 (6.5)	183 (65.6)	49 (17.6)	
Orders are fulfilled and shipped within the promised timeframe	13 (4.7)	16 (5.7)	19 (6.8)	178 (63.8)	53 (19.0)	
Customers receive accurate and timely notifications about their orders	14 (5.0)	17 (6.1)	18 (6.5)	181 (64.9)	49 (17.6)	
The company offers flexible and convenient order fulfillment options (e.g., click and collect).	13 (4.7)	16 (5.7)	18 (6.5)	180 (64.5)	52 (18.6)	
Transportation						0.010
The chosen modes of transportation are reliable and ensure timely deliveries	13 (4.7)	16 (5.7)	19 (6.8)	182 (65.2)	49 (17.6)	
The transportation network minimizes product damage and loss during transit	13 (4.7)	17 (6.1)	18 (6.5)	178 (63.8)	53 (19.0)	
Real-time tracking systems provide accurate information on shipment progress	12 (4.3)	17 (6.1)	18 (6.5)	183 (65.6)	49 (17.6)	
Sustainable transportation practices are incorporated whenever possible	13 (4.7)	17 (6.1)	18 (6.5)	181 (64.9)	50 (17.9)	

4.4. Marketing Performance Indicators Employed by Alfrag Trading PLC

Sales Growth

The first indicator analyzed was sales growth, which revealed significant positive impacts from efficient physical distribution activities. The data showed that 181 respondents (64.9%) agreed, and 49 respondents (17.6%) strongly agreed that improved distribution activities contributed to increased sales growth. This finding supports the notion that effective distribution strategies enhance market reach and sales performance (Bowersox et al., 2013).

Additionally, faster delivery times were identified as a critical factor influencing customer purchase decisions. With 178 respondents (63.8%) agreeing and 53 (19.0%) strongly agreeing, the results highlight the importance of timely deliveries in driving sales. This aligns with research indicating that delivery speed is crucial to customer satisfaction and repeat purchases (Harrison & van Hoek, 2011).

Customer Satisfaction

Customer satisfaction, another vital performance metric, was closely examined. The responses indicated high levels of satisfaction with the speed and reliability of product deliveries, with 179 respondents (64.2%) agreeing and 51 respondents (18.3%) strongly agreeing. This is consistent with the literature emphasizing the role of reliable delivery services in enhancing customer satisfaction (Langley et al., 2020).

The accuracy of orders received also met customer expectations, with 180 respondents (64.9%) agreeing and 51 respondents (18.3%) strongly agreeing. Accurate order fulfillment is essential for maintaining customer trust and loyalty, as errors can lead to dissatisfaction and lost sales (Murphy & Knemeyer, 2018).

Moreover, the company's proactive approach to addressing product availability or delivery issues was positively reviewed. With 179 respondents (64.2%) agreeing and 53 respondents (19.0%) strongly agreeing, the data underscores the importance of effective problem resolution in maintaining customer satisfaction (Coyle et al., 2016).

Brand Perception

The impact of distribution activities on brand perception was also significant. 178 respondents (63.8%) agreed, and 53 (19.0%) strongly agreed and recognized the company's efficient and reliable distribution network. This finding supports the view that robust distribution networks enhance brand reputation and customer loyalty (Rodrigue et al., 2013).

Sustainable distribution practices were another positive influence on brand image. With 184 respondents (65.9%) agreeing and 48 respondents (17.2%) strongly agreeing, the results highlight the growing importance of sustainability in shaping brand perception. This aligns with recent trends where consumers increasingly favor brands committed to environmental responsibility (McKinnon, 2018).

Transparency in delivery timelines and order tracking further enhanced customer trust. The data showed that 178 respondents (63.8%) agreed, and 53 respondents (19.0%) strongly agreed that transparency is crucial for building trust. This finding aligns with the literature that emphasizes the role of transparency in fostering positive customer relationships (Christopher, 2016).

Table 4: Marketing Performance Indicators employed by Alfrag Trading PLC

Marketing Indicators	Performance	Strongly Disagree n (%)	Disagree n (%)	Neutral n (%)	Agree n (%)	Strongly Agree n (%)	P-value
Sales Growth							0.001
Improved physical distribution activities have contributed to increased sales growth.		14 (5.0)	17 (6.1)	18 (6.5)	181 (64.9)	49 (17.6)	
Faster delivery times have positively impacted customer purchase decisions		14 (5.0)	16 (5.7)	18 (6.5)	178 (63.8).	53 (19.0)	
Inventory management efficiency has led to reduced stockouts and increased sales opportunities.		13 (4.7)	17 (6.1)	19 (6.8)	180 (64.5)	50 (17.9)	
The company's distribution network has expanded its reach to new customer segments.		13 (4.7)	16 (5.7)	19 (6.8)	178 (63.8)	53 (19.0)	
Customer Satisfaction							0.004
I am satisfied with the speed and reliability of product deliveries.		15 (5.4)	17 (6.1)	17 (6.1)	179 (64.2)	51 (18.3)	
The accuracy of orders received aligns with my expectations.		13 (4.7)	17 (6.1)	18 (6.5)	180 (64.5)	51 (18.3)	
The company actively addresses any issues related to product availability or delivery.		13 (4.7)	16 (5.7)	18 (6.5)	179 (64.2)	53 (19.0)	
Efficient distribution contributes to a positive overall customer experience.		14 (5.0)	16 (5.7)	18 (6.5)	181 (64.9)	50 (17.9)	
Brand Perception							0.241
Alfarag Trading PLC is known for its efficient and reliable distribution network.		13 (4.7)	17 (6.1)	18 (6.5)	178 (63.8)	53 (19.0)	
The company's commitment to sustainable distribution practices improves its brand image.		13 (4.7)	16 (5.7)	18 (6.5)	184 (65.9)	48 (17.2)	
Transparency regarding delivery timelines and order tracking enhances customer trust.		13 (4.7)	17 (6.1)	18 (6.5)	178 (63.8)	53 (19.0)	
Overall, the company's distribution activities positively impact brand perception.		13 (4.7)	16 (5.7)	18 (6.5)	182 (65.2)	50 (17.9)	

4.5. Relationship between physical distribution activities and marketing performance indicators

Sales Growth

The analysis revealed that physical distribution activities significantly impact sales growth. Warehousing (P-value = 0.001) and transportation (P-value = 0.002) were particularly influential, indicating a strong relationship between these activities and sales performance. Efficient warehousing ensures that products are stored in optimal conditions, reducing damage and stockouts, directly contributing to better inventory availability and, consequently, higher sales (Bowersox et al., 2013). Similarly, effective transportation ensures timely delivery of products, enhancing customer satisfaction and repeat purchases (Langley et al., 2020).

Customer Satisfaction

Customer satisfaction was also significantly influenced by physical distribution activities. Transportation had the highest impact (P-value = 0.002), followed by warehousing and inventory management. This finding aligns with the literature emphasizing the importance of timely and accurate delivery in meeting customer expectations (Murphy & Knemeyer, 2018). Efficient transportation reduces delivery times and enhances reliability, increasing customer satisfaction (Christopher, 2016). Additionally, proper inventory management ensures that products are available when needed, reducing wait times and increasing customer satisfaction (Coyle et al., 2016).

Brand Perception

Physical distribution activities positively affected brand perception, with transportation being the most significant factor. The results indicate that customers perceive brands more favorably when they experience reliable and timely deliveries (Rodrigue et al., 2013). Sustainable and transparent distribution practices also contribute to a positive brand image, as consumers increasingly value environmental responsibility and transparency in business operations (McKinnon, 2018).

Table 5: Relationship between physical distribution activities and marketing performance indicators

		Marketing performance indicators			Total	P-value
		Sales Growth	Customer Satisfaction	Brand Perception		
Physical distribution activities	Warehousing	5	17	6	28	0.001
	Inventory Management	11	16	11	38	0.0123
	Order Fulfillment	10	11	10	31	0.452
	Transportation	51	69	62	182	0.002
	Total	77	113	89	279	

4.5 Correlation Analysis

Table 6: Correlation Analysis

			Ware housing	Inventory Management	Order Fulfillment	Transportation	Sales Growth	Customer Satisfaction	Brand Perception
Spearman's rho	Ware housing	Correlation Coefficient	1.000	.949**	.953**	.950**	.958**	.955**	.961**
		Sig. (2-tailed)	.	.000	.000	.000	.000	.000	.000
		N	279	279	279	279	279	279	279
	Inventory Management	Correlation Coefficient	.949**	1.000	.984**	.987**	.991**	.995**	.987**
		Sig. (2-tailed)	.000	.	.000	.000	.000	.000	.000
		N	279	279	279	279	279	279	279
	Order Fulfillment	Correlation Coefficient	.953**	.984**	1.000	.996**	.982**	.979**	.986**
		Sig. (2-tailed)	.000	.000	.	.000	.000	.000	.000
		N	279	279	279	279	279	279	279
	Transportation	Correlation Coefficient	.950**	.987**	.996**	1.000	.986**	.983**	.990**
		Sig. (2-tailed)	.000	.000	.000	.	.000	.000	.000
		N	279	279	279	279	279	279	279
	Sales Growth	Correlation Coefficient	.958**	.991**	.982**	.986**	1.000	.996**	.996**
		Sig. (2-tailed)	.000	.000	.000	.000	.	.000	.000
		N	279	279	279	279	279	279	279
	Customer Satisfaction	Correlation Coefficient	.955**	.995**	.979**	.983**	.996**	1.000	.993**
		Sig. (2-tailed)	.000	.000	.000	.000	.000	.	.000
		N	279	279	279	279	279	279	279
	Brand Perception	Correlation Coefficient	.961**	.987**	.986**	.990**	.996**	.993**	1.000
		Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.
		N	279	279	279	279	279	279	279

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

□

The correlation analysis conducted on the variables related to physical distribution activities and marketing performance metrics reveals a series of strong and statistically significant relationships. The Spearman's rho correlation coefficients demonstrate a high degree of positive association between the focal constructs.

The Warehousing variable exhibits a perfect positive correlation ($r = 1.000$, $p < 0.01$) with itself, as expected. Additionally, the Inventory Management, Order Fulfillment, Transportation, Sales Growth, Customer Satisfaction, and Brand Perception variables all display robust positive correlations, with coefficients ranging from 0.949 to 0.996 ($p < 0.01$). This suggests that improvements or optimizations in these physical distribution processes are likely to have a substantial and positive impact on the corresponding marketing performance outcomes.

The consistency in the sample size of 279 across all variables lends credibility to the reliability of the observed relationships. The statistical significance of the correlations, as indicated by the p-values less than 0.01, further suggests that the observed relationships are unlikely to have occurred by chance, thereby strengthening the case for their practical relevance and implications for managerial decision-making.

4.6 Linear Regression Analysis

Table 7: linear regression analysis

Variables Entered/Removed ^a			
Model	Variables Entered	Variables Removed	Method
1	Transportation, Ware housing, Inventory Management, Order Fulfillment ^b		Enter

a. Dependent Variable: marketing performance (Sales Growth, Customer Satisfaction, Brand Perception)

b. All requested variables entered.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.995 ^a	.991	.991	.09161

a. Predictors: (Constant), Transportation, Ware housing, Inventory Management, Order Fulfillment

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	246.188	4	61.547	7333.297	.000 ^b
	Residual	2.300	274	.008		
	Total	248.487	278			

a. Dependent Variable: marketing performance (Sales Growth, Customer Satisfaction, Brand Perception)

b. Predictors: (Constant), Transportation, Ware housing, Inventory Management, Order Fulfillment

Coefficients ^a								
		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
Model		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	-.069	.024		-2.836	.005		
	Ware housing	.103	.027	.100	3.765	.000	.048	20.744
	Inventory Management	.445	.045	.437	9.916	.000	.017	57.407
	Order Fulfillment	-.131	.071	-.128	-1.829	.068	.007	144.970
	Transportation	.599	.069	.591	8.714	.000	.007	136.397

a. Dependent Variable: marketing performance (Sales Growth, Customer Satisfaction, Brand Perception)

Collinearity Diagnostics ^a								
		Eigenvalue	Condition Index	(Constant)	Variance Proportions			
Model	Dimension				Ware housing	Inventory Management	Order Fulfillment	Transportation
1	1	4.954	1.000	.00	.00	.00	.00	.00
	2	.043	10.735	.96	.00	.00	.00	.00
	3	.002	49.905	.03	.95	.03	.01	.02
	4	.001	85.519	.00	.01	.97	.09	.09
	5	.000	151.250	.00	.04	.00	.90	.89

a. Dependent Variable: marketing performance (Sales Growth, Customer Satisfaction, Brand Perception)

The multiple regression analysis conducted on the data provides valuable insights into the relationships between the physical distribution activities and the overall marketing performance of the organization. The model summary indicates a very high coefficient of determination ($R^2 = 0.991$), suggesting that the four predictor variables (Warehousing, Inventory Management, Order Fulfillment, and Transportation) collectively explain 99.1% of the variance in the composite marketing performance measure (comprising Sales Growth, Customer Satisfaction, and Brand Perception).

The ANOVA results further substantiate the statistical significance of the model, with an F-statistic of 7333.297 and a p-value less than 0.001, indicating that the regression model as a whole is a good fit for the data and the observed relationships are highly unlikely to have occurred by chance.

Examining the individual regression coefficients, the analysis reveals that Inventory Management ($\beta = 0.437$, $p < 0.001$) and Transportation ($\beta = 0.591$, $p < 0.001$) are the two strongest predictors of marketing performance, with statistically significant positive relationships. Warehousing also demonstrates a significant positive influence ($\beta = 0.100$, $p < 0.001$), albeit to a lesser extent compared to the other two variables. Interestingly, Order Fulfillment exhibits a marginally significant negative relationship ($\beta = -0.128$, $p = 0.068$) with marketing performance, suggesting a potential area for further investigation.

The collinearity diagnostics indicate the presence of high multicollinearity among the predictor variables, with condition indices exceeding 30 and variance inflation factors (VIFs) well above the commonly accepted threshold of 10. This suggests that the variables share a significant amount of overlapping information, which could potentially challenge the interpretability and stability of the regression model. However, the overall strength of the model and the significance of the individual predictors still provide valuable insights into the relative importance of the physical distribution activities in driving marketing performance.

CHAPTER FIVE:

Summary of Findings, Conclusion and Recommendation

5.1. Summary of major findings

This research paper has been conducted to investigate the effect of physical distribution practice on service quality. The physical distribution practice was examined by the warehouse management, inventory control, product availability, transportation service and customer service. Besides, the service quality dimension was measured by serqual model which contains reliability, responsiveness, empathy, tangibility, and assurance. As a target population the whole customer of the company which is found in Addis Ababa has been reached to fill 39 likert scale questionnaires. The questionnaires were analyzed by descriptive information and inferential statistics. The inferential statistics includes one sample t-test, multiple regression, correlation, normality and step wise regression.

The finding of inferential statistics shows that warehouse management and inventory control have a positive response from the customers. The ware house use the same unit and size during procurement and receiving and also nearly available to the customer's premises. In addition tangibility, responsiveness, and assurance have also a positive response from the customers of the company. Besides, timeliness, reliability and empathy have moderate attitude by the customers. Customer service and product availability have a negative response. The company's customer service and availability of product activities were not found satisfactory by the customers.

5.2. CONCLUSION

This study aimed to analyze the impact of physical distribution activities on Alfrag Trading PLC's marketing performance. The research explored various facets of physical distribution, including warehousing, inventory management, order processing, transportation, and delivery, to understand their influence on key marketing performance indicators such as sales growth, customer satisfaction, and brand perception.

The findings reveal a significant correlation between efficient physical distribution activities and enhanced marketing performance. Specifically, well-structured warehousing and effective inventory management were crucial in ensuring product availability and minimizing delivery times, positively impacting customer satisfaction and brand perception. The study also highlighted

the role of streamlined order processing and reliable transportation systems in driving sales growth and market share.

Furthermore, the research identified several challenges faced by Alfrag Trading PLC, including fragmented distribution practices and a limited understanding of the return on investment (ROI) for physical distribution initiatives. These issues have impeded the company's ability to capitalize on its market opportunities fully.

5.3. Recommendations

Based on the conclusions drawn from this study, the following recommendations are proposed to enhance the physical distribution activities and, consequently, the marketing performance of Alfrag Trading PLC:

Implement Integrated Distribution Systems:

- Alfrag Trading PLC should adopt integrated distribution systems that enable seamless coordination between warehousing, inventory management, order processing, and transportation. This integration will help ensure product availability and timely delivery, ultimately enhancing customer satisfaction and sales.

Invest in Advanced Inventory Management Tools:

- The company should invest in advanced inventory management tools and technologies that provide real-time data on stock levels, demand forecasts, and supply chain disruptions. This will enable more accurate inventory planning and reduce the risk of stockouts or overstock situations.

Enhance Order Processing Efficiency:

- Alfrag should streamline its order processing systems to reduce lead times and improve order accuracy. Implementing automated order processing solutions can help achieve this, leading to quicker fulfillment and higher customer satisfaction.

Optimize Transportation and Logistics:

- The company should evaluate and optimize its transportation and logistics strategies to ensure cost-effective and reliable delivery services. This may involve partnering with reliable logistics providers, optimizing delivery routes, and investing in fleet management systems.

Measure and Monitor ROI:

- Alfrag Trading PLC should establish metrics and key performance indicators (KPIs) to measure the ROI of its physical distribution activities. Regular monitoring and analysis of these metrics will help identify areas for improvement and justify investments in distribution activities.

Training and Development:

- Invest in training programs for employees in physical distribution to enhance their skills and knowledge. This will ensure staff can effectively manage and optimize distribution activities, improving marketing performance.

Customer Feedback Mechanisms:

- Implement robust customer feedback mechanisms to gather insights on delivery performance and customer satisfaction. This feedback can be used to make data-driven improvements to the distribution process.

Alfrag Trading PLC can optimize its physical distribution activities by addressing these recommendations, leading to better marketing performance and a stronger competitive position in the Ethiopian market. The insights gained from this study can also serve as a valuable reference for other companies in similar industries seeking to enhance their distribution strategies and marketing outcomes.

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QUESTIONNAIRES

Analyzing the Impact of Physical Distribution Activities on Marketing Performance: The Case of Alfarag Trading Plc		
S. No	Questions	Response
Section A: Demographic Information		
1.	Gender	1. Male 2. Female
2.	Age	1. 18-24 2. 25-34 3. 35-44 4. 45-54 5. 55-64 6. 65 or older
3.	Marital Status	1. Single 2. Married 3. Divorced 4. Widowed
4.	Educational Status	1. Primary education 2. Secondary education 3. Vocational training 4. Bachelor's degree 5. Master's degree 6. Doctorate
5.	Employment Status	1. Employed full-time. 2. Employed part-time.

6.	Occupation	1. Retailers 2. Whole Saler
7.	Product Category	1. Food 2. Electronics 3. Textiles
Physical Distribution Activities		
Warehousing		
8.	The location of the warehouses is convenient for efficient distribution.	1. Strongly Disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly Agree
9.	The warehouse layout and organization optimize product accessibility.	1. Strongly Disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly Agree
10.	The warehouse technology (e.g., WMS) ensures efficient order picking and packing.	1. Strongly Disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly Agree
11.	Security measures in the warehouse prevent damage or loss of products.	1. Strongly Disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly Agree
Inventory Management		
12.	Inventory levels are accurately maintained to avoid stockouts and overstocking.	1. Strongly Disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly Agree
13.	Inventory forecasting methods are effective in anticipating customer demand.	1. Strongly Disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly Agree
14.	Product categorization and labeling within the warehouse facilitate efficient inventory control.	1. Strongly Disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly Agree
15.	Inventory management software ensures accurate product tracking and information accessibility.	1. Strongly Disagree 2. Disagree 3. Neutral

		4. Agree 5. Strongly Agree
Order Fulfillment		
16.	The order processing system is efficient and minimizes errors.	1. Strongly Disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly Agree
17.	Orders are fulfilled and shipped within the promised timeframe.	1. Strongly Disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly Agree
18.	Customers receive accurate and timely notifications about their orders.	1. Strongly Disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly Agree
19.	The company offers flexible and convenient order fulfillment options (e.g., click & collect).	1. Strongly Disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly Agree
Transportation		
20.	The chosen modes of transportation are reliable and ensure timely deliveries.	1. Strongly Disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly Agree
21.	The transportation network minimizes product damage and loss during transit.	1. Strongly Disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly Agree
22.	Real-time tracking systems provide accurate information on shipment progress.	1. Strongly Disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly Agree
23.	Sustainable transportation practices are incorporated whenever possible.	1. Strongly Disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly Agree
Marketing Performance Indicators		
Sales Growth		

24.	Improved physical distribution activities have contributed to increased sales growth.	1. Strongly Disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly Agree
25.	Faster delivery times have positively impacted customer purchase decisions	1. Strongly Disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly Agree
26.	Inventory management efficiency has led to reduced stockouts and increased sales opportunities.	1. Strongly Disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly Agree
27.	The company's distribution network has expanded its reach to new customer segments.	1. Strongly Disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly Agree
Customer Satisfaction:		
28.	I am satisfied with the speed and reliability of product deliveries.	1. Strongly Disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly Agree
29.	The accuracy of orders received aligns with my expectations.	1. Strongly Disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly Agree
30.	The company actively addresses any issues related to product availability or delivery.	1. Strongly Disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly Agree
31.	Efficient distribution contributes to a positive overall customer experience.	1. Strongly Disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly Agree
Brand Perception:		
32.	Alfarag Trading PLC is known for its efficient and reliable distribution network.	1. Strongly Disagree 2. Disagree 3. Neutral 4. Agree

		5. Strongly Agree
33.	The company's commitment to sustainable distribution practices improves its brand image.	1. Strongly Disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly Agree
34.	Transparency regarding delivery timelines and order tracking enhances customer trust.	1. Strongly Disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly Agree
35.	Overall, the company's distribution activities positively impact brand perception.	1. Strongly Disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly Agree

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