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Factors Influencing the Impact of Special Economic Zones on Ethiopia's Export Competitiveness: In the case of the Dire Dawa Free Trade Zone

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M.Sc. Thesis Submitted to the College of Business and Economics of Addis Ababa University in partial fulfillment of the Requirement for Award of the Degree of Master of Science in International Business.

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STATEMENT OF DECLARATION

I, Feben Bogale, hereby declare that the thesis entitled Factors Influencing the Impact of Special Economic Zones on Ethiopia's Export Competitiveness: In the case of the Dire Dawa Free Trade Zone is the outcome of my own effort and study and that all sources of materials used for the study have been duly acknowledged in the document. This study has not been submitted for any degree in this University or any other University. It has been submitted for the partial fulfillment of the degree of MA in International Business.

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Statement of Certification

This is to certify that Feben Bogale has carried out her research work on the topic entitled Factors Influencing the Impact of Special Economic Zones on Ethiopia’s Export Competitiveness: In the case of the Dire Dawa Free Trade Zone is her original work and is suitable for submission for the award of Master’s Degree in International Business. _____

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February, 2025

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LIST OF SYMBOLS, ABBREVIATIONS

AGOA	Africa Growth and Opportunity Act
AIP	Adama Industrial Park
AIV	Addis Industrial Village
BDIP	Bahir Dar Industrial Park
BLIP	Bole Lemi Industrial Park
Br	Ethiopian currency, the birr
CBE	Commercial Bank of Ethiopia
DBIP	Debre Berhan Industrial Park
DDIP	Dire Dawa Industrial Park
DDFZ	Dire Dawa Free Trade Zone
EIC	Ethiopian Investment Commission
EIP	Eastern Industrial Park
ETP	Effluent treatment plant
EPZ	Export Processing Zones
FDI	Foreign direct investment
FTZ	Free Trade Zones
HIP	Hawassa Industrial Park
HuIP	Huajian Industrial Park
IAIP	Integrated Agro Industrial Park
IMF	International Monetary Fund
IPDC	Industrial Parks Development Corporation

JIP	Jimma Industrial Park
KIP	Kombolcha Industrial Park
MIP	Mekelle Industrial Park
OSS	One-stop shop
SEZ	Special economic zone
US\$	US dollars
VIP	Velocity Industrial Park
WB	World Bank
WTO	World Trade Organization
WWTP	Wastewater treatment plant
ZLD	Zero liquid discharge

ABSTRACT

The study aims to assess the impact of logistics efficiency, infrastructure development, trade policies, regulations, and trade liberalization on the export competitiveness of businesses in the Dire Dawa Free Trade Zone. Both quantitative and qualitative research approaches were employed. Primary data were gathered through questionnaires and analyzed using SPSS version 27, complemented by secondary data sources. A conceptual model was formulated by reviewing relevant literature to achieve the study's objectives. Descriptive statistics indicated high mean scores across five categories, reflecting positive evaluations. Pearson correlation analysis demonstrated significant positive relationships among the variables. The standardized coefficients highlighted Trade Liberalization and Policy and Regulation as the most influential factors in enhancing export competitiveness. The findings revealed that while logistics and infrastructure are recognized as positive contributors, they did not significantly affect export competitiveness in this study. Conversely, trade policies and regulations played a crucial role, showing a substantial and statistically significant positive effect on export competitiveness. The study underscores the importance of well-structured trade policies and regulatory frameworks in boosting export performance. The research recommends that the government prioritize the development of favorable trade policies and regulations, promote trade liberalization, strengthen logistics and infrastructure, and foster public-private partnerships. These strategies are essential for creating a conducive environment for export growth and driving sustainable economic development.

Key words: *Export Competitiveness, Trade Liberalization, Infrastructure Development, Logistics Efficiency*

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CHAPTER ONE

INTRODUCTION

This chapter encompasses the introductory part of the thesis. It comprises the background of the study, statement of the problem, research questions, the general and specific objective of the study, scope of the study, significance of the study, operational terms, and organization of the study.

1.1 Background of the Study

Special Economic Zones (SEZs) are designated areas within a country that operate under different economic regulations than the rest of the country, aimed at attracting foreign investment, encouraging export-oriented industries, and fostering economic growth (The Investopedia Team ,2024). In Ethiopia, SEZs have been established as part of the government's strategy to achieve economic transformation and industrialization (Generis Global Legal Services, 2024). The Dire Dawa Free Trade Zone (DDFTZ), Ethiopia's first free trade zone, is a prime example of such an initiative, designed to reduce logistics costs, improve supply chain reliability, and attract foreign direct investment (FDI) (Abagna, Matthew, 2023).

Several factors influence the effectiveness of SEZs in enhancing Ethiopia's export competitiveness. These include the quality of infrastructure, the efficiency of customs procedures, the availability of ICT services, and the regulatory environment. Inadequate infrastructure, such as poor road networks and limited warehousing facilities, poses significant challenges to the smooth flow of goods. Additionally, cumbersome customs procedures and regulatory bottlenecks can delay shipments and increase costs. The availability and reliability of ICT services are also crucial for efficient logistics operations, enabling real-time tracking and communication along the supply chain (Abagna, Matthew, 2023).

The DDFTZ serves as a case study to examine how these factors impact Ethiopia's export competitiveness. By analyzing the specific challenges and opportunities within the zone, this study

aims to provide insights into how Ethiopia can improve its logistics infrastructure and regulatory framework to enhance export competitiveness. The findings have been contributed to the broader understanding of the role of SEZs in promoting export competitiveness in developing countries.

In conclusion, addressing infrastructural, regulatory, and ICT-related challenges is essential for leveraging the full potential of SEZs like the DDFTZ. By improving these factors, Ethiopia can enhance its export competitiveness and strengthen its position in the global market.

1.2 Statement of the Problem

Despite the establishment of the Dire Dawa Free Trade Zone (DDFTZ) and other Special Economic Zones (SEZs) in Ethiopia, the country continues to face significant challenges in enhancing its export competitiveness. The effectiveness of these zones in boosting exports is influenced by multiple factors such as inadequate infrastructure, inefficient customs procedures, and regulatory bottlenecks. These issues hinder the smooth flow of goods and increase logistics costs, undermining the potential benefits of SEZs in promoting economic growth and attracting foreign direct investment (FDI) (Africa Business Networking, 2022).

The quality of transport infrastructure, including road networks, ports, and warehousing facilities, plays a critical role in determining the efficiency of logistics operations within SEZs. In Ethiopia, infrastructural limitations pose significant barriers to the effective functioning of SEZs like the DDFTZ. Additionally, the efficiency of customs procedures and the regulatory environment are crucial factors that impact the overall logistics performance. Cumbersome customs processes and regulatory bottlenecks can delay shipments, increase costs, and reduce the competitiveness of Ethiopian exports in the global market (The Ethiopian Herald, 2022).

Furthermore, the availability and reliability of Information and Communication Technology (ICT) services are essential for efficient logistics operations. ICT enables real-time tracking and communication along the supply chain, reducing delays and improving the overall efficiency of export logistics. However, in Ethiopia, the limited availability and reliability of ICT services hinder the effective functioning of SEZs. Addressing these challenges is essential for leveraging the full potential of SEZs like the DDFTZ to enhance Ethiopia's export competitiveness and strengthen its position in the global market (International Institute of Social Studies, 2022).

1.3 Research Questions

To meet the objectives of the study, the researcher developed the research questions by drawing from the background and problem statement of the study.

Specific research questions for the study are:

- What are the effects of logistics efficiency, including transportation networks and customs procedures, on the export competitiveness of businesses operating within the Dire Dawa Free Trade Zone?
- What are the roles of infrastructure development in the Dire Dawa Free Trade Zone in enhancing export competitiveness by improving transportation and logistics capabilities?
- How do the policies and regulations governing the Dire Dawa Free Trade Zone contribute to creating a conducive environment for exporters and promoting export competitiveness?
- How does trade liberalization impact the export competitiveness of companies located within the Dire Dawa Free Trade Zone?
- How do these factors (Trade Liberalization, infrastructure, logistics, and policy and regulations) collectively impact the export competitiveness of businesses operating in the Dire Dawa Free Trade Zone?

1.4 Objectives of the study

1.4.1 General objective

The aim of this study was to investigate the impact of special economic zone on Ethiopia's export competitiveness, with a focus on the Dire Dawa Free Trade Zone.

1.4.2 Specific objective

Specifically, the study aims to:

- Evaluate the effect of logistics on the export competitiveness of businesses operating within the Dire Dawa Free Trade Zone.

- Investigate the role of infrastructure development in the Dire Dawa Free Trade Zone on enhancing export competitiveness by improving transportation and logistics capabilities.
- Analyze how the policies and regulations governing the Dire Dawa Free Trade Zone contribute to creating a conducive environment for exporters and promoting export competitiveness.
- Assess the impact of trade liberalization on the export competitiveness of businesses operating within the Dire Dawa Free Trade Zone.
- Investigate how these factors (Trade Liberalization, infrastructure, logistics, and policy and regulations) collectively impact the export competitiveness of businesses operating in the Dire Dawa Free Trade Zone.

1.5 Scope/Delimitation of the study

This study focuses on Factors influencing the impact of special economic zones on Ethiopia's Export Competitiveness, with a particular emphasis on the Dire Dawa Free Trade Zone. The primary areas of investigation include the effect of logistics efficiency, infrastructure development, policies, regulations, and trade liberalization on export competitiveness. The research encompasses both quantitative and qualitative analyses to provide a comprehensive understanding of these factors.

The study is delimited to the Dire Dawa Free Trade Zone, and the findings may not be generalizable to other regions within Ethiopia or to different countries. The scope is limited to examining businesses operating within this specific free trade zone, regardless of their size. While the study provides insights into the export competitiveness of these businesses, it does not cover other economic sectors or enterprises outside the specified zone.

By narrowing the focus to the Dire Dawa Free Trade Zone, the research aims to provide detailed and context-specific findings that can guide policymakers and industry stakeholders in formulating targeted strategies to enhance export competitiveness in similar settings.

1.6 Significance of the Study

This study has provided valuable insights into the impact of special economic zone on Ethiopia's export competitiveness. The findings have provided policymakers and industry players with a better understanding of the benefits and challenges of special economic zone, guiding future strategies to promote export-led growth in Ethiopia

1.7 Limitations of the Study

While this study provides valuable insights into the impact of special economic zone on Ethiopia's export competitiveness, it is important to acknowledge certain limitations. The research is geographically focused on the Dire Dawa Free Trade Zone, which means the findings may not be applicable to other regions within Ethiopia or to different countries. Data availability and quality may have also affected the comprehensiveness of the analysis, as limited access to detailed or up-to-date data could constrain the ability to draw definitive conclusions. The study was conducted within a specific timeframe, which may limit the observation of long-term trends and changes in export competitiveness. Furthermore, while the study covers key factors such as logistics efficiency, infrastructure development, policies, regulations, and trade liberalization, other potentially influential factors, such as technological advancements, market dynamics, and international economic conditions, are not examined in detail. Methodological constraints, including potential biases in qualitative data collection and challenges in accurately measuring certain quantitative variables, may also impact the findings. By acknowledging these limitations, the study aims to provide a clear understanding of its scope and potential constraints, guiding future research and policymaking efforts to address these challenges and build upon the findings presented.

1.9 Operational Terms

Free trade zones /Special economic zones (SEZ): An area within a nation that functions under distinct economic restrictions from other regions within the same nation is known as a special economic zone (SEZ). These zones provide a range of benefits to investors and businesses in an effort to promote healthy economic growth.

Export competitiveness: refers to a nation's capacity to export a greater proportion of its value-added goods and services than it imports.

1.10 Organization of the study

The research is structured into five chapters. Chapter one serves as an introduction, covering the study's background, problem statement, objectives, research questions, significance, scope and delimitations of the study, as well as operational terms. Chapter two reviews relevant literature, including theoretical and empirical backgrounds and key findings from various sources. Chapter three discusses the methodology, outlining the research approach, design, population and sample data, data sources, data collection methods, and ethical considerations. Chapter four presents and analyzes the primary and secondary data in detail. The final chapter, chapter five, concludes the research and provides recommendations.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

This chapter delves into prior literature on how special economic zones can boost Ethiopia's export competitiveness. In this section, the researcher reviewed various literature sources focusing on the impact of special economic zone to improve Ethiopia's export competitiveness. The review addresses key topics such as the concepts and definitions of special economic zone, and export competitiveness; the impact of special economic zone on export competitiveness; policy initiatives and strategies to improve export competitiveness; and the conceptual framework for the impact of Special Economic zones on Ethiopia's export competitiveness.

2.1 Theoretical Literature Review.

The theoretical foundation for understanding the impact of Special Economic Zones (SEZs) on Ethiopia's export competitiveness is rooted in several key economic theories. These theories provide a framework for analyzing how SEZs can enhance productivity, reduce logistics costs, and attract foreign direct investment (FDI).

Alfred Marshall's theory of external economies posits that businesses can benefit from being located close to each other due to shared resources, labor markets, and knowledge spillovers. This theory is particularly relevant to SEZs, where companies can enjoy collective benefits that improve their productivity and competitiveness (Marshall, 1890).

Alfred Weber's theory of industrial location emphasizes the importance of minimizing transportation costs and maximizing agglomeration economies. This theory explains why SEZs are often strategically located near ports, transportation hubs, and key markets (Weber, 1909).

Michael Porter's theory of competitive advantage highlights the role of specialized clusters in enhancing a country's competitive position in the global market. According to Porter, competitive advantage arises from the interplay of factor conditions, demand conditions, related and supporting industries, and firm strategy, structure, and rivalry (Porter, 1998).

These theories emphasize the benefits of agglomeration, strategic location, and specialized clusters in enhancing productivity, reducing logistics costs, and fostering innovation. By applying these theoretical insights, Ethiopia can optimize the performance of its SEZs to boost exports and drive economic growth.

2.1.1 Factors Affecting Export Competitiveness

2.1.1.1 Logistics and Export competitiveness

Logistics are essential in boosting export competitiveness, especially within free trade zones. Efficient logistics can reduce transportation costs, increasing demand for domestic goods and enhancing export values. The quality of logistics services, such as shipment tracking and adherence to trade standards, significantly impacts export flows, emphasizing the need for a robust logistics network. The positive correlation between the Logistics Performance Index (LPI) and export levels highlights the direct relationship between logistics efficiency and export competitiveness (Lu et al., 2024).

The gravity model of international trade, which predicts bilateral trade flows based on economic sizes and distances, can be used to analyze the impact of logistics performance on trade flows. According to the principle of comparative advantage, nations should specialize in producing goods with a lower opportunity cost. Efficient logistics enable countries to capitalize on their comparative advantage by reducing export costs (Margaryan & Pirumyan, 2024). The World Bank's LPI helps countries identify their trade logistics challenges and opportunities by measuring performance along the logistics supply chain, both internationally and domestically.

Globally, logistics performance has become crucial for export competitiveness. Efficient logistics systems can significantly reduce business costs, enhancing a country's international market competitiveness. This includes the quality of transport infrastructure, customs procedures, shipment tracking, and timely delivery. For developing nations, improving logistics performance can help overcome challenges such as inadequate infrastructure, poor transport networks, and complex customs procedures, thereby boosting their export competitiveness. Ethiopia, for example, can enhance its export competitiveness by investing in logistics infrastructure and

services, improving transport infrastructure, simplifying customs procedures, and enhancing shipment tracking. This enabled better integration into the global economy and fostered economic growth (Ülker et al., 2024).

2.1.1.2 Infrastructure and Export Competitiveness

The quality and quantity of physical infrastructure greatly affect export performance. Key elements that enhance supply capabilities during the early stages of export sector development include infrastructure, foreign direct investment (FDI), and macroeconomic stability, all of which have a significant impact on export competitiveness at various levels (UNCTAD, 2004).

Developing infrastructure is essential for a country's ability to produce and transport goods. O'Rourke and Williamson (1999) argue that the integration of the commodity market in the Atlantic economy after the 1860s was primarily due to decreased transportation costs between markets.

In many African nations, particularly landlocked and small island countries, weak infrastructure presents a major obstacle to trade, competitiveness, and sustainable development. Recent studies emphasize the correlation between trade costs and infrastructure. The role of transportation costs and infrastructure in explaining trade and market access has been extensively examined, with historical literature highlighting the reduction in trade costs due to changes in commercial policy and transport technology (O'Rourke and Williamson, 1999).

Improvements in transportation services and infrastructure can positively influence export competitiveness. Limão and Venables (2001) show that infrastructure plays a crucial role in determining transport costs, estimating that poor infrastructure accounts for 40% of predicted transport costs for coastal countries and up to 60% for landlocked countries. Bougheas, Demetriades, and Mamuneas (1999) found that infrastructure promotes specialization and long-term growth by impacting trade through resource costs. Enhanced infrastructure necessitates diverting resources from final goods production but supports economic growth through increased specialization.

2.1.1.3 Policy and Regulation and Export competitiveness

Institutional challenges, particularly legal and political constraints, often represent economic barriers. Politics encompasses the collective actions of the government, various institutions, sectors, and special interest groups in shaping the country's future direction while considering the people's values and interests, alongside managing governmental and state affairs (Daunton, 2011). Typically, a country's government establishes daily life rules and procedures through its legal and political systems, and business, being an integral part of daily life, cannot operate outside these systems (Sethi et al., 2012).

The legal and political environment can impact the business climate in multiple ways. Each country's legal and political systems directly affect the business environment by altering existing policies, regulations, and laws, or introducing new ones. The government formulates monetary and fiscal policies that directly influence business operations. Political stability greatly affects the ease of conducting business.

Political forces can facilitate firms' internationalization by eliminating barriers to international trade or establishing export processing zones where firms can produce and trade under favorable conditions. Conversely, certain legal and political factors can hinder entry into foreign markets, such as political instability, legal procedural barriers, corruption, and insufficient legal support (Bhatti and Awais, 2012). Therefore, understanding the political and legal environment of the target country is crucial before deciding to enter international markets.

Every country has legal systems governing both organizations and individuals. To conduct life or business, individuals must navigate these legal procedures, such as filing taxes, registering property, applying for business permits, and operating legally. The ease of doing business is determined by the number, duration, and requirements of these procedures, which vary from country to country.

In the context of international business, firms may face additional legal restrictions compared to domestic firms, such as currency restrictions, quotas, or tariffs. Depending on the foreign partners' country of origin, additional formalities may be required, such as product standards, compliance procedures, health and safety requirements, and issues related to patents and trademarks (OECD, 2006).

2.1.1.4 Trade Liberalization and Export competitiveness

According to Zakaria (2014), one of the most significant developments in the global economy over the past sixty years, and particularly in the last three decades, has been the swift liberalization of trade experienced by developing nations, either autonomously or through multilateral initiatives with organizations like the World Bank, WTO, and IMF. Key reforms have included the simplification of import procedures, the reduction or elimination of quantitative restrictions, and the rationalization of tariff structures (Cherkos, 2017).

These trade liberalization changes have substantial implications for the imports, exports, and trade balance of developing countries. Since liberalization often results in a larger increase in imports compared to exports, many emerging nations remain cautious about liberalizing their economies. Theoretical literature has identified three basic methodologies to examine the impact of trade liberalization on an economy's trade balance: the elasticity approach, the absorption approach, and the monetary approach. The main objective of the elasticity approach is to assess how trade liberalization influences import and export price elasticities. The rationale for exploring the relationship between trade liberalization and exports is that export competitiveness improves when trade policy distortions are minimized or eliminated.

Scholars such as Taneja (2012) and Kongmanila & Takahashi (2009) assert that an economy's foreign exchange earnings from exports increase with its level of openness to the global market. Consequently, a nation must diversify its trading partners to effectively integrate into the global economy.

2.1.1.5 Other variables that may determine the level of export competitiveness

Critical factors such as trained human capital, information technology, inflation rate, interest rate, exchange rate, and money supply have a significant impact on a country's export competitiveness, as illustrated in the Malaysian case study. These various elements collectively shape the export environment, underscoring the multifaceted nature of export competitiveness and emphasizing the necessity of a holistic approach to strengthen a nation's export competitiveness (Anthony et al., 2022).

2.2 Empirical Review

Based on empirical evidence, several policy recommendations can be made to enhance the effectiveness of SEZs in boosting Ethiopia's export competitiveness. These include investing in

infrastructure development, streamlining customs procedures, creating a favorable regulatory environment, and improving ICT services. Additionally, policies aimed at attracting FDI, generating employment, and fostering skill development are essential for leveraging the full potential of SEZs. By implementing these recommendations, Ethiopia can enhance the performance of SEZs like the DDFTZ and strengthen its position in the global market.

Several countries have successfully leveraged SEZs to enhance their export competitiveness and drive economic growth. For instance, China's SEZs, such as Shenzhen and Shanghai, have attracted significant foreign direct investment (FDI) and promoted export-oriented industrialization. Studies show that these zones have been instrumental in transforming China into a global manufacturing powerhouse. The success of China's SEZs can be attributed to robust infrastructure, efficient customs procedures, favorable regulatory environments, and strong government support. The Shenzhen SEZ, established in 1980, is a prime example of how SEZs can transform a region's economy by boosting exports and attracting multinational corporations (Farole & Akinci, 2011).

Similarly, India's SEZs have played a crucial role in boosting export performance and creating employment opportunities. Empirical evidence suggests that SEZs in India have contributed to a substantial increase in exports, particularly in sectors such as textiles, electronics, and pharmaceuticals. The success of Indian SEZs is linked to factors such as strategic location, investment in infrastructure, and the establishment of special administrative bodies to streamline operations (Mukherjee & Pal, 2019). India's SEZs have played a crucial role in enhancing the country's export performance. A study by Aggarwal (2012) found that India's SEZs contributed to over 30% of the country's total exports, highlighting their importance in driving economic growth and creating employment opportunities.

Comparative analysis of SEZs in developing countries provides valuable insights into the factors influencing their success and impact on export competitiveness. A study by Farole (2011) on SEZs in Sub-Saharan Africa highlighted the importance of effective governance, strong institutional frameworks, and strategic location in determining the success of SEZs.

While SEZs have been successful in some countries, many developing nations face challenges in realizing their full potential. Infrastructural limitations, inefficient customs procedures, and regulatory bottlenecks are common issues that hinder the effectiveness of SEZs. For example, studies on SEZs in African countries, including Kenya and Nigeria, highlight the difficulties posed

by inadequate transport infrastructure, lack of reliable power supply, and complex regulatory frameworks. These challenges result in increased logistics costs and reduced export competitiveness (Zeng, 2015).

In Ethiopia, similar challenges have been observed. The Dire Dawa Free Trade Zone (DDFTZ) faces infrastructural constraints, such as poor road networks and limited warehousing facilities, which impede the smooth flow of goods. Additionally, cumbersome customs procedures and regulatory hurdles contribute to delays and increased costs, undermining the potential benefits of the zone. Addressing these challenges is essential for enhancing the effectiveness of SEZs in Ethiopia (International Institute of Social Studies, 2022).

2.3 Conceptual Framework and Research Hypothesis

2.3.1 Conceptual framework

The proposed model has been created based on a literature review of previous research on Special Economic zone and export competitiveness. This self-developed model illustrates the relationship between Special Economic zone and export competitiveness. In this model, export competitiveness is the dependent variable, whereas logistics, Infrastructure, Policy and Regulation and, Trade Liberalization are the independent variables. To this end, the study has been guided by a conceptual framework designed to explain the interconnections between these variables. Consequently, this conceptual framework has been formulated based on a review of related literature.

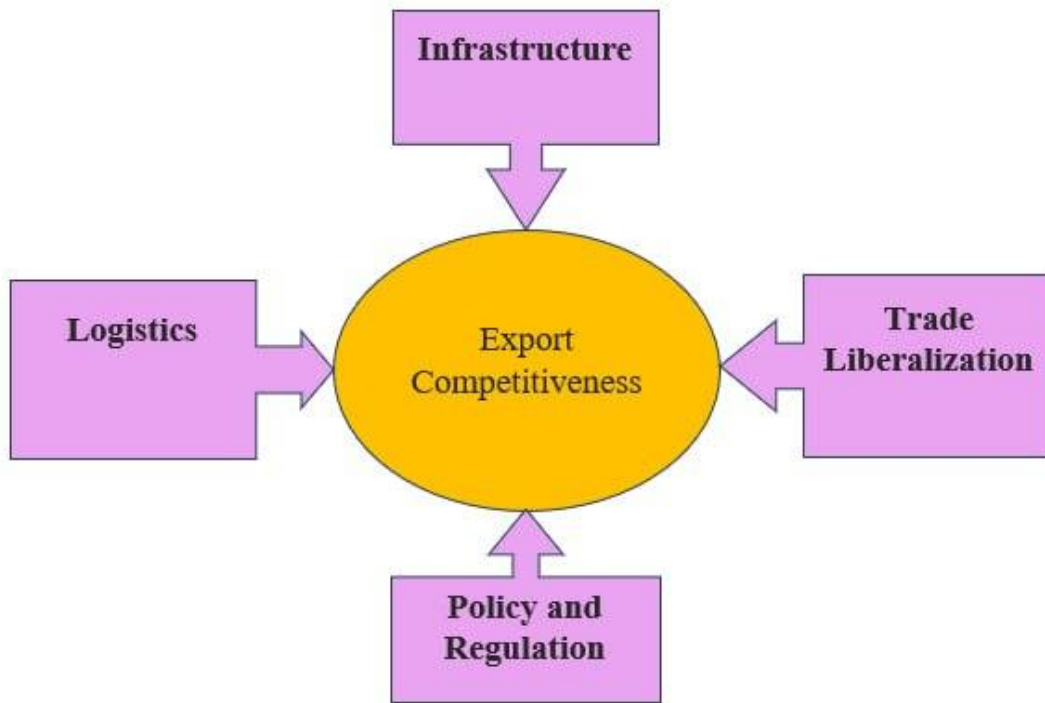


Figure 2.1: Conceptual framework of the study

2.5.2 Research Hypothesis

H₁: Logistics has a positive effect on export competitiveness.

H₂: Infrastructure has a direct and positive effect on export competitiveness.

H₃: Policy and regulation have a direct and positive effect on export competitiveness.

H₄: Trade liberalization has direct and positive effect on export competitiveness.

CHAPTER THREE

RESEARCH METHODOLOGY

In this chapter, an overview of the research approach and design was provided. Details regarding the population, sampling frame, and sampling techniques used were included. Additionally, the data sources and types, as well as the methods of data collection, were covered. Ethical considerations and data analysis methods were also discussed. The research methods employed to address the research questions and achieve the study's objectives were outlined. A comprehensive approach was adopted to ensure a robust and thorough analysis of the data.

3.1 Description of the Study Area

This research focuses on enhancing Ethiopia's export competitiveness through Special Economic zone, using the Dire Dawa Free Trade Zone as a case study. Dire Dawa Administration (DDA) which is astronomically located between 9° 27' to 9° 49' N and 41° 38' - 42° 19' E longitude and found in the eastern part of Ethiopia 515 km away from the capital Addis Ababa and 330 km to the west of the republic of Djibouti (IDP, 2006). The Dire Dawa Free Trade Zone (DDFTZ), Ethiopia's first Free Trade Zone, is strategically located 459 kilometers from Addis Ababa. Spanning 150 hectares, the zone boasts 15 factory sheds of varying sizes (3,000 m², 5,500 m², and 11,000 m²), 316 apartments within five residential buildings (G+4), and a host of commercial and auxiliary facilities such as a One-Stop Service Center, office buildings, custom offices, showrooms, a shopping mall, clinic, restaurants, and a food court. Its proximity to the Dire Dawa dry port terminal and the railway connecting Addis Ababa to Djibouti provides significant logistical advantages, lying 348 kilometers and 507 kilometers from the ports of Djibouti and Berbera, respectively. Additionally, the zone enjoys easy access to Dire Dawa International Airport, along with dedicated electric power, reliable water supply, communication facilities, sewage and drainage systems, effluent treatment and disposal facilities, and fire tender arrangements. The DDFTZ offers factory sheds and serviced land for investors in manufacturing, trading, logistics, and other service sectors, making it an attractive investment destination.

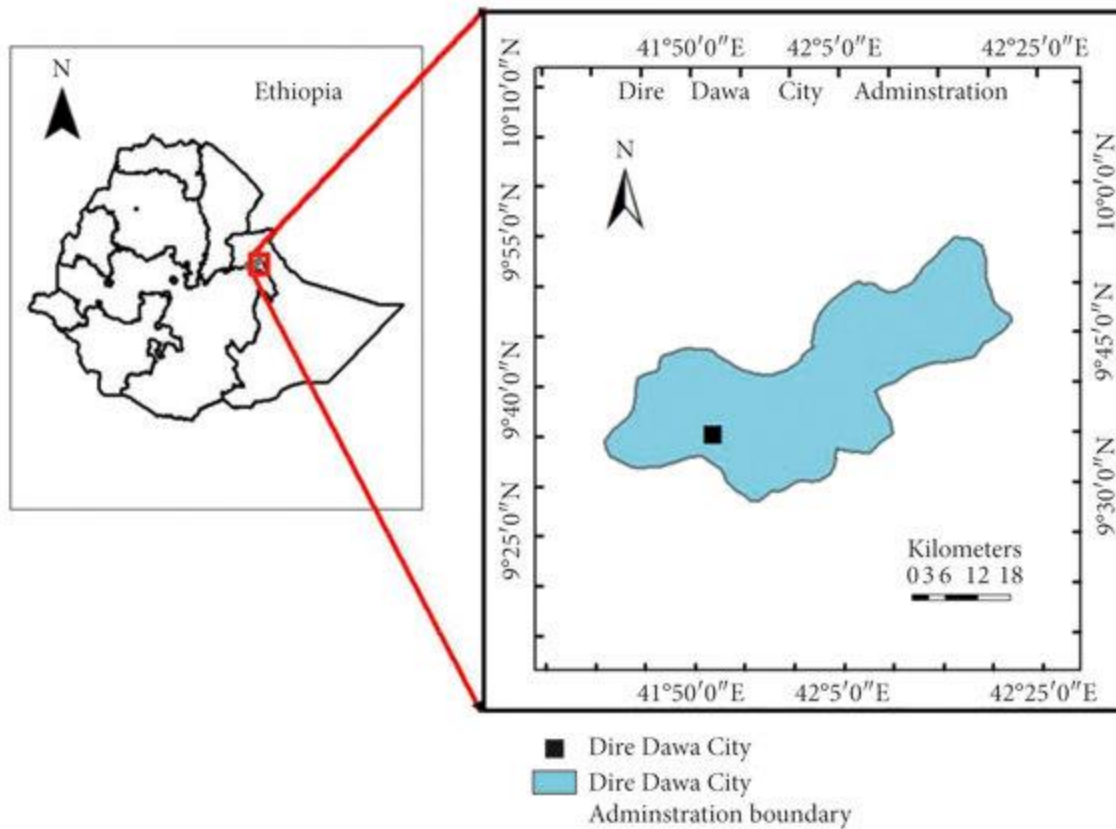


Figure 3.1. Map of the study area (source: Motbaynor, A. et al, 2021)

3.2 Research Approach

This study employed a mixed research approach. Through quantitative research, the researcher was able to gather objective and numerical data, utilize statistical tools, and determine the relationships between the variables examined in this study. Meanwhile, qualitative research allowed for the collection of diverse information from the internet and government repositories. This combined approach provided a thorough and comprehensive analysis of the data.

3.3 Research Design

This research applied both descriptive and explanatory research designs. Descriptive research, which describes existing phenomena, was used to identify and obtain information on the characteristics of a particular problem or issue. The data collected was primarily quantitative, and statistical techniques were used to summarize the information.

Explanatory research, which continues from descriptive research, was used to understand phenomena by discovering and measuring causal relationships among them (Saunders et al., 2007). An important element of explanatory research is identifying and, possibly, controlling the variables in the research activities, as this allows the critical variables or the causal links between the characteristics to be better explained.

The research design for this study utilized a cross-sectional field survey method, where independent and dependent variables were measured simultaneously using a single questionnaire (Anol, 2012). This approach aimed to describe general information about the respondents and sought to identify and explain the causal relationship between independent variables and their effect on the dependent variable, which is export competitiveness (Jill and Roger, 2003).

Additionally, a correlational design was employed to establish the relationship between the study's dependent and independent variables. Correlational research aimed to determine if there was a significant association between the two variables. This comprehensive approach ensured a robust and thorough analysis of the data (Reid, 1987).

3.4 Population, Sampling Frame and Sampling Technique

3.4.1. Target Population

The target population for this study comprised all companies within the Dire Dawa Free Trade Zone, the Industrial Park Development Corporation, and the Ethiopian Investment Commission. At present, the Free Trade Zone encompasses 15 organizations, all of which were included in the target population. The total number of employees is approximately 1621, with 12% being professionals, equating to around 195 professional employees, while the remainder are laborers. Data was gathered from these varied sources of companies and government institutions. This method provided a comprehensive perspective on the challenges and determinants of export competitiveness in Ethiopia, ensuring a robust and thorough analysis of the data.

3.4.2. Sampling Technique

Since all the companies within the Dire Dawa Free Trade Zone were included in the study, there was no need for a sampling method to select these companies. For the Ethiopian Investment Commission (EIC) and the Industrial Park Development Corporation (IPDC), purposive sampling

was employed. This approach allowed us to target the most appropriate personnel within the organizations to answer the study's questions. This sampling method was chosen because it saved time and cost while ensuring that the right individuals provided the necessary information.

According to Saunders, Lewis, and Thornhill (2009), this sample selection process was effective in reaching the most suitable sample representation within a short period. Researchers have a variety of probability and non-probability sampling methods to choose from when conducting a sampling study.

3.5 Sample size

The sample size was determined by identifying an appropriate number of respondents for the study, drawn from the total population of employees within the organization. The decision to focus on a subset of the population, rather than the entire group, was influenced by considerations such as time, cost, and accessibility. The goal was to ensure that the sample size was both manageable and representative of the entire population.

To thoroughly address the issue under investigation, the research encompassed all 15 organizations located within the Dire Dawa Free Trade Zone. Professional staff from each company engaged in the zone was identified, as well as 5 head office staff members from the IPDC and EIC.

Additionally, 1 staff member from Ethio Telecom was included. The total sample size comprised 131 based on the companies' professional staff, distributed as follows: 20 from IPDC DFTZ, 1 from EIC DFTZ, 8 from the Commercial Bank of Ethiopia, 17 each from Wuxi No. 1 Cotton, and Han Plastic, 6 each from Elauto Eng, Gulf Ingot FZC and Nileco Electric, 9 from Customs, 15 from Andre Shoes, 7 from Awash Bank, 4 from Cooperative Bank of Oromia, 1 from Ethiopian Shipping, and 3 from Ethiopian Electric Utility.

In this study, the sample size was determined using Yamane's Statistical Formula, which is illustrated in the following steps.

$$n = \frac{N}{1 + N(e)^2}$$

$131 = \frac{195}{1 + 195(0.05^2)}$

Where n = sample size

N = population of the study

e = % level of significance or margin of tolerable error.

Therefore, the sample size needed for a 95% confidence level with a population of 195 and

A margin of error of 0.05 is approximately 131 respondents. This approach ensures that the study maintains a high level of accuracy while also being efficient in terms of resources.

3.6. Data Types, Sources and Methods of Data Collection

3.6.1. Types and Sources of Data

The primary and secondary data served as the main sources for this study. The primary data was gathered from exporters within the Dire Dawa Free Trade Zone, as well as from IPDC and EIC, using structured questionnaires. These questionnaires yielded numerical figures, representing the quantitative data types utilized in the study. The respondents from the aforementioned factories and institutions provided the bulk of the primary data.

Secondary data was gathered from multiple sources, such as reports from the EIC and other relevant datasets. This method ensured the study had a comprehensive and robust data set.

3.6.2. Methods of Data Collection

Following Catherine's (2007) methodology, both primary and secondary data were collected for this research. To gather primary data, structured questionnaires were developed, using a fixed response format. These questionnaires focused on the research objectives and employed a five-point Likert scale, ranging from Strongly Disagree (1) to Strongly Agree (5). This widely-used scale, described by Albaum (1997), allowed respondents to indicate their level of agreement with various statements or questions.

For secondary data collection, a variety of written documents and internet sources were utilized. This comprehensive approach ensured the data gathered provided a robust foundation for the research.

3.7 Methods of Data Analysis

The data obtained from the questionnaires was analyzed using descriptive statistics, such as mean, standard deviation, frequency distribution, and reliability analysis. SPSS version 27 software was utilized to thoroughly analyze the statistical data, leading to the computation of percentages and the creation of tabulated presentations. This process involved grouping the data into meaningful categories and interpreting specific occurrences. Additionally, secondary data was analyzed using qualitative analysis techniques to establish a detailed relationship with the main focus of the study. This comprehensive approach ensured a robust and thorough analysis.

The aim of the regression analysis in this study was to develop an equation that could determine the impact of predictors on the dependent variable. The regression equation used follows the generic form: $\beta_0 + \beta_1x$.

The specified regression equation for this study takes the following form;

$$Y = \alpha + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \varepsilon$$

Equation;

$$Y = \alpha + \beta_1 (L) + \beta_2 (IF) + \beta_3 (PR) + \beta_4 (TL) + \varepsilon$$

Where:

Y = Export Competitiveness (EC)

L = Logistics

IF= Infrastructure

PR = Policy & Regulation

TL= Trade Liberalization

ε = Error Term

3.8 Reliability and Validity

In accordance with established research principles, an instrument is deemed valid if it measures what it is intended to measure and effectively serves its designed purpose. To ensure the instrument's validity, face and content validity were evaluated. Professionals reviewed the questionnaire to assess its judgment, appropriateness, and overall effectiveness.

Reliability, on the other hand, pertains to the consistency of the collected data. Cronbach's alpha, a reliability coefficient first introduced by Lee Cronbach in 1951, was employed for this purpose. This measure is an extension of the Kuder-Richardson Formula and was calculated using SPSS.27. This approach ensured that the data collected was both reliable and valid.

3.9. Ethical Consideration

The information shared by the respondents was kept confidential. Prior to completing the questionnaire, respondents were informed that their input would be used solely for academic purposes and that their participation was voluntary. Therefore, the data provided could not negatively impact their work or personal life. Anonymity was maintained, as the questionnaires submitted did not include names, and names were not used when analyzing the data. This approach ensured the privacy and confidentiality of the respondents.

CHAPTER FOUR

DATA ANALYSIS, INTERPRETATION AND DISCUSSION

Chapter Four presents the results and findings of the study, providing a detailed analysis of both quantitative and qualitative data. This chapter provides thorough insights into the connections between logistics, infrastructure, trade policy, trade liberalization, and export competitiveness through the use of qualitative analysis and descriptive and inferential statistics. In-depth analysis and interpretation of the quantitative and qualitative data yield significant results that serve as a foundation for the discussions and suggestions in the following chapter.

4.1 Quantitative Analysis

4.1.1 Demographic Characteristics

131 questionnaires have been sent to the target businesses in the Industrial Park Development Corporation, EIC, and Dire Dawa Free Trade Zone in order to gather quantitative data. 101 respondents—or 77.69% of the total—were complete, valid, and suitable for analysis based on the questionnaires.

Table 4.1: Demographic Characteristics: Gender, Age Range, Educational Background, Current Job Position and Marital Status.

Item	Frequency	Percent
Respondents Gender		
Male	76	75.2
Female	25	24.8
Age Range		
18-25	26	25.7
25-35	59	58.4
36-45	11	10.9

46-55	4	4.0
56-65	1	1.0
Educational Background		
Vocational	2	2.0
Diploma	16	15.8
Degree	63	62.4
Masters and above	20	19.8
Current Employment Status		
Full Time Employment	100	99.0
Part Time Employment	1	1.0
Current Job Position		
Managerial	21	20.8
Non-Managerial	80	79.2
Marital Status		
Married	45	44.6
Divorced	2	2.0
Unmarried	54	53.5

Source: Survey Result, 2024

The demographic data reveals a majority of male respondents (75.2%) compared to females (24.8%). According to the age range, the majority of responders (58.4%) are between the ages of 25 and 35, with the next most common age group being 18 to 25 (25.7%). The majority (62.4%) have a degree, with significant percentages having diplomas (15.8%) and master's degrees or above (19.8%). The majority of respondents (79.2%) occupy non-managerial roles, and nearly all (99.0%) are employed full-time. In terms of marital status, a slight majority are unmarried (53.5%), while 44.6% are married. This data suggests a young, educated, and professionally active demographic, predominantly in non-managerial roles.

4.2 Descriptive Statistics

The descriptive statistics primarily encompass the means and standard deviations derived from the study's independent and dependent variables. These statistics are utilized to examine the collected

data and describe the information. The mean value offers insight into the central tendency of a variable's values, while the standard deviation indicates how much the values of a variable deviate from its mean.

Table 4.2: Descriptive Statistics of logistics

Item	Mean	Standard deviation
The quality of transportation networks is generally good, with well-maintained roads, railways, and ports.	3.84	1.084
The level of connectivity between the zone and major markets or global supply chains is high.	3.69	0.935
Customs procedures for imports and exports in the zone are efficient.	3.66	1.032
Streamlined processes exist for documentation, inspections, and clearances within the zone.	3.54	0.911
The costs associated with transportation, warehousing, and handling goods within the zone are monitored.	3.56	0.994
Goods can move quickly through the zone, from entry to exit.	3.61	1.174
Aggregate Result	3.653	0.650

Source: Survey Result, 2024

The results indicate a generally positive evaluation of logistics and infrastructure within the zone. Respondents rated the quality of transportation networks, connectivity to major markets, customs procedures, streamlined processes, cost monitoring, and the speed of goods movement favorably, as reflected by the high mean scores ranging from 3.54 to 3.84. The aggregate mean score of 3.653 underscores an overall positive perception, despite some variability in responses. These insights highlight the strengths of the zone's logistics and infrastructure, with a consistent view of efficiency and effectiveness, though differing experiences suggest areas for targeted improvement.

Table 4.3: Descriptive Statistics of Infrastructure

Item	Mean	Standard deviation
The reliability and capacity of the power supply in the free trade zone are adequate, and there are backup systems in place.	3.92	0.880
The free trade zone has adequate water supply for industrial processes and sanitation facilities, and wastewater is properly managed.	3.08	1.238
The communication infrastructure (internet, phone lines, etc.) in the free trade zone is robust.	3.76	1.159
Customs procedures are streamlined, and there is a one-stop-shop for registration and licensing.	3.64	1.082
The free trade zone facilitates interactions among suppliers, training providers, and related businesses.	3.46	1.073
The zone is accessible to international transportation, including the Ethiopia-Djibouti railway station and nearby airport.	3.71	1.244
Aggregate Result	3.595	0.726

Source: Survey Result, 2024

The results show a generally positive evaluation of the free trade zone's infrastructure and services. The power supply is rated highest with a mean score of 3.92, while the communication infrastructure and accessibility to international transport also received favorable ratings. Customs procedures and interactions among businesses are positively viewed, though the water supply and sanitation facilities have lower scores. The aggregate mean score of 3.595 suggests overall satisfaction, with some variability in experiences.

Table 4.4: Descriptive Statistics of Policy and Regulations

Item	Mean	Standard deviation
The regulatory framework governing free trade zone differs from the rest of the Industrial parks.	4.02	1.010
Customs processes in free trade zone tend to be more efficient, facilitating trade and reducing bureaucratic hurdles for businesses operating within the zones.	3.86	0.906
Specific policies, such as tariffs, trade agreements, or product standards, can greatly influence our production costs.	3.93	0.919
Regulatory uncertainty, including changing policies and global economic conditions, plays a role in our export decisions.	3.95	0.931
The perception of these policies varies, as some are seen as supportive while others are considered restrictive for export activities.	3.64	0.878
Fiscal incentives, such as tax breaks and subsidies, are provided to investors in free trade zone, particularly anchor investors.	3.72	1.167
Policymakers should establish rigorous Monitoring and Evaluation (M&E) systems to manage free trade zones effectively and learn from their impact.	4.03	0.995
Aggregate Result	3.879	0.631

Source: Survey Result, 2024

The results show a generally positive evaluation of the regulatory framework and customs processes in the free trade zone, with high scores for efficiency and impact on production costs. Regulatory uncertainty and perceptions of policies vary, while fiscal incentives are viewed favorably. Strong support is shown for rigorous Monitoring and Evaluation (M&E) systems. The

overall positive perception is reflected in the aggregate mean score of 3.879, despite some variability in responses.

Table 4.5: Descriptive Statistics of Trade Liberalization

Item	Mean	Standard deviation
Trade liberalization has significantly impacted the volume of exports	3.99	0.755
Free Trade zones often feature trade liberalization through tariff reductions, reduced non-tariff barriers, and improved market access.	4.05	0.767
Fiscal incentives commonly offered in free trade zone’s include tax breaks, subsidies, and capital freedoms to attract and support domestic and foreign investors.	3.98	0.916
Collaborating with foreign investors in the sector positively affect domestic firms to expand their export.	3.83	0.970
Foreign Direct Investment policies can significantly influence foreign direct investment (FDI) flows, both in terms of inward and outward investment.	3.96	0.761
Modernizing free trade zone to align with sustainable development goals (SDGs) requires innovative approaches and the creation of SDG-focused model zones.	4.02	0.860
Best practices in free trade zone policy design for trade liberalization include leveraging incentives, improving infrastructure, and addressing potential pitfalls such as rent-seeking behavior.	3.98	0.969
Aggregate Result	3.973	0.550

Source: Survey Result, 2024

The results reflect a positive evaluation of trade liberalization and related policies in free trade zones. High scores for the impact on export volume (3.99), tariff reductions (4.05), and alignment with sustainable development goals (4.02) underscore their significance. Fiscal incentives (3.98)

and collaboration with foreign investors (3.83) are also viewed favorably. Policies influencing FDI flows (3.96) and best practices in policy design (3.98) received strong support. The overall positive perception is captured by the aggregate mean score of 3.973, indicating general satisfaction despite some variability in responses.

Table 4.6: Descriptive Statistics of Export Competitiveness

Item	Mean	Standard deviation
The diversification of exports is a crucial factor to consider, as it indicates the range of products and industries involved.	4.17	0.813
Exchange rate volatility impacts export competitiveness.	4.13	0.856
Trade agreements and barriers impact export activities.	4.17	0.762
Technological advancement plays a vital role in enhancing export competitiveness through the adoption of innovative technologies.	4.24	0.838
The export value-added per unit of input in the free trade zone is an important metric to assess productivity and value creation.	4.09	0.884
Aggregate Result	4.158	0.560

Source: Survey Result, 2024

The descriptive statistics for export competitiveness show very high ratings, with means ranging from 4.09 to 4.24 and low variability in responses. The overall mean of 4.158 indicates a highly positive evaluation, while the standard deviation of 0.560 suggests consistent perceptions among respondents. The results indicate a highly positive evaluation of factors affecting export competitiveness within the free trade zone. The highest mean score (4.24) underscores the critical role of technological advancement in enhancing competitiveness. Other significant factors include the diversification of exports and the impact of trade agreements and barriers (both with a mean of 4.17), and exchange rate volatility (mean 4.13). The importance of export value-added per unit of input is also recognized (mean 4.09). The aggregate mean score of 4.158 reflects overall strong agreement on the importance of these factors, with some variability in responses.

Table 4.7: Descriptive Statistics of the aggregate results of the independent and dependent variable

Variables	N	Mean	Standard deviation
Logistics	101	3.653	0.650
Infrastructure	101	3.595	0.726
Policy and Regulations	101	3.879	0.631
Trade Liberalization	101	3.973	0.550
Export Competitiveness	101	4.158	0.560

Source: Survey Result, 2024

The descriptive statistics indicate generally high mean scores across the five categories, reflecting positive evaluations. Logistics has a mean of 3.653 with a standard deviation of 0.650, suggesting a moderate level of consistency in responses. Infrastructure shows a mean of 3.595 and a standard deviation of 0.726, indicating slightly more variability in responses. Policy and Regulations have a mean of 3.879 with a standard deviation of 0.631, reflecting relatively consistent responses. Trade Liberalization has a mean of 3.973 and a standard deviation of 0.550, suggesting high and consistent ratings. Export Competitiveness has the highest mean of 4.158 and a standard deviation of 0.560, indicating strong and consistent positive evaluations. Overall, the data suggests favorable perceptions with varying levels of consistency across different categories.

4.3. Qualitative analysis

Many countries have implemented spatial-based development policies to promote industrial and urban growth. Industrial Parks (IPs) and Special Economic Zones (SEZs) have been utilized globally to attract foreign investment by offering a plug-and-play setup (Fanuel, and et al., 2022). These zones leverage foreign investment for technology and skills transfer to the domestic economy and address investment climate challenges, such as inadequate infrastructure and burdensome business requirements. Although creating IPs requires significant financial investment, it is more cost-effective and less time-consuming than attempting to simultaneously enhance the entire nation's business climate and infrastructure. By using industrial parks as pilot sites, governments can test investment climate reforms in a smaller, more controlled environment before scaling them nationally.

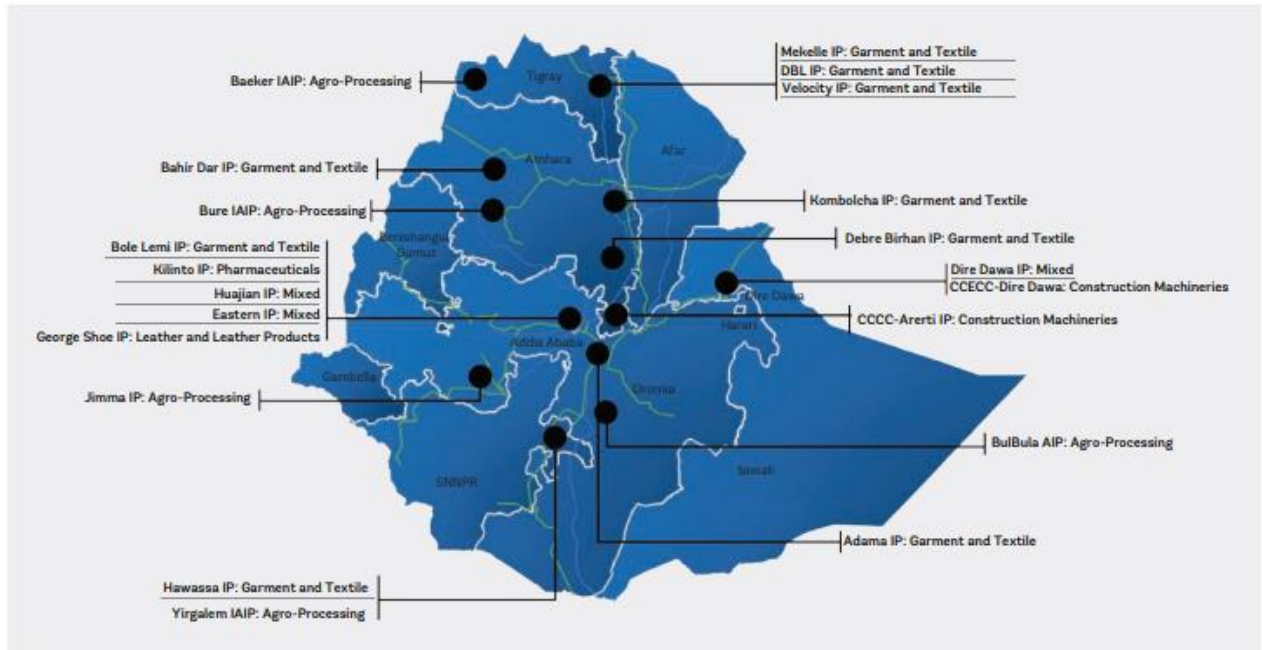


Fig 4.1: Map of Industrial Parks in Ethiopia (as of 2021)

Source: EIC website, 2021

The government has invested nearly US\$1 billion (at historical currency rates) in developing the nine Industrial Parks (IPs). Debre Berhan IP (US\$75 million), Bahir Dar IP (US\$61 million), and Jimma IP (US\$55 million) had the lowest construction costs, while Hawassa IP (US\$303 million), Dire Dawa IP (US\$137 million), and Adama IP (US\$119 million) had the highest. Despite Ethiopia's significant infrastructure deficiencies, the cost of building IPs is still considerably lower than the amount required to improve infrastructure and the investment climate nationwide. The development of the IPs was funded through profits from market-secured Eurobonds and concessional loans from the World Bank. (Fanuel, and et al., 2022).

Table 4.8: Industrial Parks: Overview of Names, Locations and Sector Specializations

Sr. No	Name of the industrial zone	Location	Main industry	Owner	Area (Ha)	Progress
1	Eastern Industry Zone	Oromia, Dukem	Mixed Sectors	Private	400	Operational
2	Bole Lemi Industrial Park I	Addis Ababa	Textile and Garment	Government	187	Operational
3	Hawassa Industrial Park	SNNPR	Textile & Garment	Government	300	Operational
4	Mekelle Industrial Park	Tigray	Garment	Government	1000	Operational
5	Kombolcha Industrial Park	Amhara	Garment	Government	800	Operational
6	Adama Industrial Park	Oromia	Textile & Garment, Machinery & Equipment	Government	2000	Operational
7	Huajian Industrial Park	Lebu, Addis Ababa	Shoes	Private	138	Operational
8	Mojo George Shoe Industrial Zone	Oromia, Mojo	Leather	Private	86	Operational
9	Velocity/Vogue	Mekelle	Textile and Garment	Private	177	Operational
10	DBL	Mekelle	Textile and Garment	Government	79	Operational
11	Debre Birhan Industrial Park	Amhara	Textile and Agro-processing	Government	1000	Inaugurated

12	Jimma Industrial Park	Oromia	Garment	Government	150	Inaugurated
13	Dire Dawa Industrial Park	Dire Dawa	Assembling, Garment and Foods	Government	4,068	Under Construction/Finalized
14	Kilinto Industrial Park	Akaki, Addis Ababa	Pharmaceutical, medical equipment	Government	279	Under Construction/Finalized
15	Bahir Dar Industrial Park	Amhara, Bahir dar	Garment	Government	1000	Under Construction/Finalized
16	Arerti Industrial Park	Amhara	Construction products, home appliance	Private	100	Under Construction/Finalized
17	Yirgalem Integrated Agro-Industrial Park	SNNPR	Agri products Processing	Government	109	Under Construction/Finalized
18	Airlines and Logistic Park	Addis Ababa	Transportation	Government	200	Planning Stage
19	Kingdom Line Industry Zone	Dire Dawa	Linen	Private	1000	Planning Stage
20	Bure Integrated Agro - Industrial Park	Amhara	Agri-products Processing	Government	155	Planning Stage
21	Bulbula Integrated Agro -Industrial Park	Oromia	Agri-products Processing	Government	263	Planning Stage
22	Beaker Integrated Agro -Industrial Park	Tigray	Agri-products Processing	Government	151	Planning Stage

Source EIC, 2020

If current trends persist, the Industrial Parks (IPs) will eventually account for a significant portion of formal private sector employment and become Ethiopia's leading exporters of goods. However, they have not yet substantially transformed the macroeconomic landscape or diversified export revenue. By extrapolating the growth rates of the past five years, it is projected that by 2027, the IPs' export revenues will surpass the combined total of the three largest agricultural exports. Job creation within the existing IPs could increase fivefold. Despite these optimistic forecasts, current national instability and the loss of AGOA trade protections pose challenges, potentially slowing growth or reversing recent gains. From 2014 to 2019, the United States' share of textile exports under AGOA grew from 10% to 69%.

So far, Ethiopia's industrial parks have had limited macroeconomic impact, even with new export markets. For instance, export earnings in 2019 would have only covered four days of the nation's \$15.6 billion annual import bill. The parks' indirect effects are less understood; business-level surveys reveal minimal connections to domestic suppliers. Nonetheless, new data suggests potential economic spillovers into local economies. Currently, less than 5% of all intermediate inputs are sourced locally, leading park investors to rely mainly on imported inputs like fabric for clothing production. Some modern fabric mills built by foreign investors could significantly increase local value-added, although quality and consistency issues are short-term barriers to fully integrating cotton production. Enhancing these connections will make Ethiopia more attractive to global value chain investors and yield substantial benefits.

The most evident example of IP spillovers is in Hawassa City, where housing development is linked to a large influx of migrant labor. There is also evidence of increased economic activity and job creation in and around the parks, as indicated by a notable rise in new business registrations and the use of evening light data. However, the technology transfer is not expected to extend beyond training the first generation of Ethiopian employees due to the current lack of integration. (Fanuel, et al., 2022).

Table 4.9 Facilities Provided in Publicly Owned Industrial Parks

List of facilities	Bole				Debre				
	Lemi I	Ha-wassa	Kombolcha	Mekelle	Adama	Berhan	Dire Dawa	Bahir Dar	Jimma
Factory sheds	√	√	√	√	√	√	√	√	√
Offices and one-stop shop (OSS) centers	√	√	√	√	√	√	√	√	√
Solid waste storage	√	√	√	√	√	√	√	√	√
Commercial buildings	√	√	(√) ^a	√			√		
Leasable serviced land			√		√		√	√	
Wastewater treatment plant	√	√	√	√	√	(√) ^b	√	(√) ^b	√
Residential buildings		√					√		
Water supply and drainage	√	√	√	√		√		√	√
Zero-liquid discharge (ZLD) facility		√			√		√		

Source: EIC/IPDC. a. A separate building is available for rent, 2021

b. Currently under construction.

Many innovations initially tested and piloted in Ethiopia's industrial parks were subsequently adopted by investors outside these parks. To address requests from investors operating in HIP, where fabric and garment production are integrated, the government allows foreign currency transactions between IP investors at various stages of the value chain. Additionally, industrial parks feature streamlined customs processes that enable cargo from an industrial park firm to move from the port of entry directly to the customs zone within the park without interruptions for inspection. Innovations such as a more flexible investment visa policy, expanded under an updated investment law, and the availability of OSS services (now accessible at the EIC headquarters), were first piloted in the IPs before being extended to other investors.

Table: 4.10 Incentives for Investors inside and outside of Industrial Parks

Incentives	Scope	Investors in IPs	Investors outside IPs	Conditions in IPs	Conditions outside IPs
Corporate income tax exemption	IP enterprises/ investors outside IP	8–12 years	6–8 years	At least 80 percent exports	At least 60 percent exports
		10–12 years		Investors in pharmaceutical IP	
	IP developers	10–15 years		10 years in Addis and around and 15 outside Addis	
Personal income tax exemption	Expatriates	5 years	5 years	5 years following issuance of business license	
Import duty exemption	Industrial inputs	100 percent	100 percent	If used in export production	
	Capital goods	100 percent	100 percent		
	Construction material	100 percent	100 percent	Bill of quantity approval	
	Raw material	100 percent	100 percent	For production of export commodities	
	Spare parts	100 percent	15 percent of capital goods value	No limit	Only 15 percent
Export duty exemption	Except semi processed hides and skins	100 percent	100 percent		
Exchange in foreign currency	Among IPs	Transaction among IPs in US dollars			
OSS services	Public and private IPs	Available inside IP			
Access to infrastructure	Offsite infrastructure	Developed by government		Up to the perimeter of the IP	
	Utilities			Dedicated power and water	
	Sheds	Availed by IPs		Concessional price in public IPs	
Delegated Central Bank services	Currency request approval	Only in HIP and BLIP		Service delivered by HIP, Central Bank of Ethiopia	
	CMT value approval	In all IPs			

Source: EIC, 2021

Note: CMT = Cut-make-trim; HIP = IP = industrial park; HIP = Hawassa Industrial Park.

Instead of creating a distinct investment regime to guide policy changes, most incentives provided in industrial parks focus on aftercare services and investment facilitation. The OSS services available in IPDC-owned industrial parks significantly reduce the administrative burden on investors. These services range from banking to license renewals. Some services, such as renewing work permits for foreign workers, are managed by an office that liaises with other government departments to expedite the necessary processes and approvals, while other services are provided immediately.

Most IPDC-owned industrial parks also offer on-site logistics services, which minimize the time and effort required to process shipments and imports. These services are generally unavailable to companies outside the parks. Consequently, investors outside of IPs, particularly local investors,

face substantial investments of time and money in handling and processing documents, paying taxes, clearing customs, and other procedures.

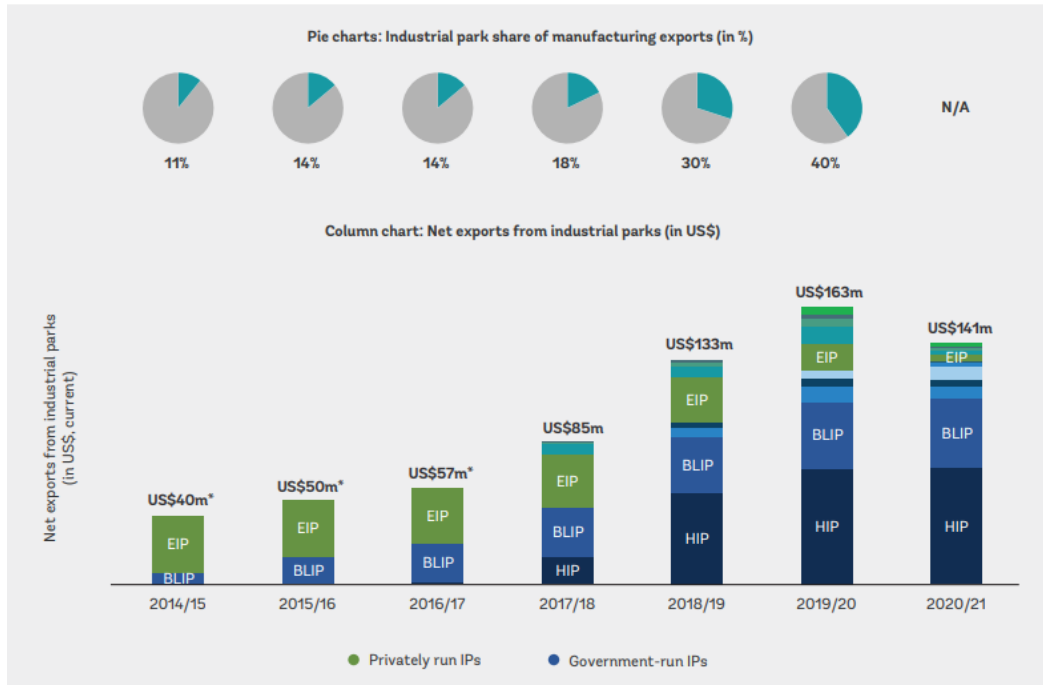


Fig 4.2: Net Exports from Ethiopia's Industrial Parks

Sources: IPDC/EIC, Ethiopian Ministry of Trade, International Trade Center (ITC) Trade Map, 2021

Notes: Manufacturing exports include textiles, garments, leather, meat and dairy products, food, beverages, pharmaceuticals, chemicals, metal, and engineering. HIP stands for Hawassa Industrial Park, and BLIP refers to Bole Lemi Industrial Park Phase I. Data from IPDC/EIC are presented as net exports, meaning gross exports minus imports, as outlined in box 1.1. * Eastern Industrial Park (EIP) began operations in 2007/08 (Ethiopian calendar year 2000). Due to insufficient data, export figures for 2014–17 are based on estimates. Note: Data does not include figures for the ICT park. m = million.

Due to the deliberate establishment of SEZ, Ethiopia's export sector has a lot of potential going forward. By addressing current problems and leveraging the collective resources of businesses, Ethiopia can increase its export competitiveness on the global stage. Both proactive corporate sector involvement and consistent government policy support will be necessary to realize these

benefits. As Ethiopia looks to increase its market share internationally and diversify its exports, Special Economic zone will be essential in fostering sustainable economic growth.

4.4 Inferential Analysis

4.4.1 Reliability Test

The reliability of the scales was examined following data coding and input into SPSS version 27. To evaluate the reliability and internal consistency of the study's tools, Cronbach's coefficient alpha was computed for every scale. Malhotra & Birks (2007) state that a coefficient value of 0.60 is regarded as falling inside the lower bound of acceptable Cronbach's alpha. Cronbach's Alpha, a measure of reliability, shows that the categories' levels of internal consistency differ.

Table 4.11: Summary of Reliability Analysis

Variables	N	Cronbach's Alpha if Item	Number of items
Logistics	101	0.703	6
Infrastructure	101	0.725	6
Policy and Regulations	101	0.768	7
Trade Liberalization	101	0.759	7
Export competitiveness	101	0.699	5

Source: Survey Result ,2024

The study's Cronbach's Alpha values indicate varying levels of internal consistency and reliability among different sets of questionnaire items. Values of 0.703 and 0.699 suggest acceptable consistency, indicating the items measure the same construct reasonably well. Values of 0.725, 0.768, and 0.759 suggest good consistency, showing the items effectively measure the same underlying construct. Overall, the questionnaire items demonstrate a range of acceptable to good internal consistency and reliability.

The components of each category are largely reliable and consistent based on these values, with Trade Liberalization and Policy and Regulations showing particularly high internal consistency.

4.4.2 Pearson Correlation Analysis

The Pearson correlation analysis between the independent variables (Logistics, Infrastructure, Policy and Regulations, Trade Liberalization) and the dependent variable (Export competitiveness) reveals several significant relationships. The null hypothesis that there is no link is strongly refuted by the fact that all correlations are significant at the 0.01 level.

Table 4.12: Correlation between the independent variables and the dependent variable

		Logistics	Infrastructure	Policy and regulation	Trade liberalization	Export competitiveness
Logistics	Pearson Correlation	1	.493**	.431**	.316**	.357**
	Sig. (2-tailed)		.000	.000	.001	.000
	N	101	101	101	101	101
Infrastructure	Pearson Correlation	.493**	1	.765**	.591**	.607**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	101	101	101	101	101
Policy and regulation	Pearson Correlation	.431**	.765**	1	.666**	.718**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	101	101	101	101	101
Trade liberalization	Pearson Correlation	.316**	.591**	.666**	1	.764**
	Sig. (2-tailed)	.001	.000	.000		.000
	N	101	101	101	101	101
Export competitiveness	Pearson Correlation	.357**	.607**	.718**	.764**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	101	101	101	101	101

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

Source: Survey Result, 2024

The Pearson correlation analysis demonstrates significant relationships among the variables, all showing positive correlations. Logistics is moderately correlated with Infrastructure (0.493), Policy and Regulations (0.431), Trade Liberalization (0.316), and Export competitiveness (0.357), indicating a consistent association. Infrastructure shows strong correlations with Policy and Regulations (0.765), Trade Liberalization (0.591), and Export competitiveness (0.607), suggesting a substantial interconnectedness. Policy and Regulations exhibit high correlations with Trade Liberalization (0.666) and Export competitiveness (0.718), reflecting a strong relationship. Trade Liberalization also has a strong correlation with Export competitiveness (0.764). These significant correlations suggest that improvements in one area are closely associated with improvements in the others, highlighting the importance of a cohesive approach to enhance export competitiveness.

4.5. Assumption Testing for Multiple Regressions

To ensure that the data collected accurately reflected the sample and that the researcher achieved the best results, it is vital to address the assumptions of regression analysis (Hair, Anderson, Tatham, and Black, 1998). Prior to starting regression analysis, three assumption tests were examined. These include linearity, multi-collinearity, univariate outliers, and the Normality Test.

4.5.1 Univariate Outliers

Univariate outliers examined by standardized z scores and need to be within ± 3.29 range.

Table 4.13: Summary of Univariate Outliers

Variable	Standard Z value	
	Maximum	Minimum
Logistics	2.04475	-2.45942
Infrastructure	1.95496	-2.18264
Policy and Regulations	1.59512	-1.62216
Trade Liberalization	1.60218	-2.54649
Export competitiveness	1.50652	-2.04819
Note: n is 101; if z value is above ± 3.29 , it is considered as an outlier.		

Source: Survey Result, 2024

The standard Z values for various variables indicate the range of deviations from the mean, with Logistics showing Z values between 2.04475 and -2.45942, reflecting moderate variability. Infrastructure has Z values ranging from 1.95496 to -2.18264, suggesting a similar level of variability. Policy and Regulations exhibit narrower variability with Z values from 1.59512 to -1.62216. Trade Liberalization displays a wider range, with Z values from 1.60218 to -2.54649, indicating greater spread. Export Competitiveness has the smallest range, with Z values between 1.50652 and -2.04819, indicating the least variability among the variables. None of the Z values exceed the outlier threshold of ± 3.29 , suggesting that the data does not contain extreme outliers and is within acceptable variability limits.

4.5.2 Normality of the Error term Distribution

According to Hair et al. (2003), normality is the form of the data distribution for a single metric variable and how well it matches the normal distribution of the variables' results. Skewness and kurtosis information values were noted, and probability plots were also created, in order to estimate normalcy. Kurtosis gives information about the distribution's peakedness, while skewness gives information about the distribution's symmetry (Pallant, 2005). According to Hair (2010), the most commonly recognized value for the (kurtosis/skewness) distribution is ± 2.58 .

Table 4.14: Skewness and Kurtosis

Variables	N	Skewness		Kurtosis	
		Statistic	Std. Error	Statistic	Std. Error
Logistics	110	-0.142	0.240	0.280	0.476
Infrastructure	110	0.040	0.240	-0.807	0.476
Policy and Regulations	110	0.022	0.240	-1.089	0.476
Trade Liberalization	110	-0.680	0.240	0.309	0.476
Export competitiveness	110	-0.389	0.240	-0.868	0.476

Source: Survey Result, 2024

The descriptive statistics provide insights into the distribution characteristics of five computed variables: Logistics, Infrastructure, Policy and Regulations, Trade Liberalization, and Export competitiveness. Each variable has 101 observations and a maximum value of 5.00. The skewness values show that Logistics (-0.142), Trade Liberalization (-0.680), and Export competitiveness (-0.389) have slight negative skewness, indicating a leftward tilt in their distributions. In contrast, Infrastructure (0.040) and Policy and Regulations (0.022) have slight positive skewness, suggesting a rightward tilt. The kurtosis values reveal that Infrastructure (-0.807), Policy and Regulations (-1.089), and Export competitiveness (-0.868) exhibit platykurtic distributions, indicating flatter than normal peaks. Conversely, Logistics (0.280) and Trade Liberalization (0.309) show slightly leptokurtic distributions, with sharper peaks. The consistent standard errors for skewness and kurtosis (0.240 and 0.476, respectively) provide confidence in these measures, highlighting the distinct distribution shapes and symmetry of these variables within the sample.

4.5.3 Linearity

Hair et al. (1998) assert that the degree to which a change in the dependent variable is linked to the independent variable is shown by the linearity of the relationship between the two variables. Simply said, linear models use a constant unit change (slope) of the dependent variable for a constant unit change of the independent variable to anticipate values falling in a straight line.

4.5.4 Multi-collinearity

Two essential conditions must be satisfied before regression analysis can be performed: the sample size must be enough, and the independent variables in the study must not be related to one another (Ho, 2006). The sample size has a direct effect on the statistical power of the significance tests in multiple regressions to identify a regression coefficient or statistically significant R-square at a particular significance level. Ho (2006) also suggested that the sample size be at least 20 times greater than the number of independent variables in order to attain the necessary level of statistical power. The study's sample size of 101 respondents surpasses the required level when using this general recommendation. According to HO (2006), multi-collinearity can be detected by looking at the "Tolerance" and "Variance Inflation Factor (VIF)" values for each predictor. The tolerance value indicates the proportion of variance in one predictor that cannot be accounted for by the other predictors. Multi-collinearity is present when the tolerance value is less than 0.10, whereas it should be more than 0.10. Conversely, VIF is calculated as "1/tolerance," and multi-collinearity

is present if the VIF number is more than 10 (Saunders, Lewis, & Thornhill, 2009). The table below demonstrates that, for this specific study, the tolerance and VIF values for each independent variable on both regression analyses meet the previously mentioned requirements and demonstrate the absence of multi-collinearity.

Table 4.15: Multi-collinearity problem test of VIF and Tolerance

Variables	N	VIF	Collinearity Statistics
Logistics	101	1.334	0.750
Infrastructure	101	2.689	0.372
Policy and Regulations	101	2.928	0.342
Trade Liberalization	101	1.852	0.540

Dependent Variable: Export competitiveness

Source: Survey Result, 2024

The data presents the Variance Inflation Factor (VIF) and Collinearity Statistics for four variables, each with 101 observations. The VIF values indicate the degree of multicollinearity among the independent variables. Logistics has a VIF of 1.334, suggesting low multicollinearity. Infrastructure, with a VIF of 2.689, and Policy and Regulations, with the highest VIF of 2.928, indicate moderate multicollinearity. Trade Liberalization has a VIF of 1.852, suggesting low to moderate multicollinearity. The collinearity tolerance statistics (the reciprocal of VIF) are also provided, where values close to 1 indicate low collinearity, and values close to 0 indicate high collinearity. Infrastructure and Policy and Regulations have tolerance values of 0.372 and 0.342, respectively, indicating moderate collinearity. Logistics (0.750) and Trade Liberalization (0.540) show low collinearity. According to the statistics, multicollinearity is not overly high, even though it does exist among the variables, especially for Infrastructure and Policy and Regulations. Given that every VIF value is less than 10 and every tolerance value is greater than 0.1, we can say that multicollinearity is not a major issue in this dataset. This indicates that the regression model's independent variables can be utilized consistently without skewing the findings.

4.5.5 Homoscedasticity

The residual's variance remains constant. Plotting the standardized residual against the standardized predicted values in this investigation revealed no evidence of funneling, indicating that the homoscedasticity assumption was satisfied. Furthermore, Tabachnick and Fidell (2007) state that homoscedasticity is associated with normality, and that a relationship between variables is considered homoscedastic when the normality condition is met.

4.6 Multiple Regression Analysis

The process of estimating or forecasting a value on certain dependent variables based on the values of independent variables is known as linear regression, according to Marczyk and Festinger (2005). Statistical regression looks at the relationship or association between variables, just like correlations do. Regression's main goal is prediction, as opposed to correlations'. Multiple regression models predict the value of Y, and multiple R is the correlation between the observed values of Y. As a result, high multiple R values indicate a strong correlation between the outcome's observed and anticipated values. The percentage of the dependent variable's variance that can be accounted for by the independent variables was calculated using adjusted R square. To examine the impact of each independent variable on the variability of the overall export competitiveness, the standard regression coefficient (beta weight) was calculated from the multiple regression equation.

Table 4.16: Model Summary for Adjusted R square

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.815 ^a	.664	.650	.33161
a. Predictors: (Constant), logistics, infrastructure, trade liberalization, policy and regulation				

Source: Survey Result, 2024

The model summary indicates a strong relationship between the predictors (trade liberalization, logistics, infrastructure, and policy and regulation) and the dependent variable. The R value of 0.815 shows a strong positive correlation, while the R Square value of 0.664 implies that 66.4% of the variance in the dependent variable (likely export competitiveness) is explained by these predictors. The Adjusted R Square value of 0.650, which adjusts for the number of predictors in

the model, confirms the robustness of this fit. The standard error of the estimate at 0.33161 indicates the average distance that the observed values fall from the regression line, suggesting a reasonably good fit of the model. This summary highlights that the combined effect of trade liberalization, logistics, infrastructure, and policy and regulation significantly explains the variance in the dependent variable.

4.6.1 Analysis of Autocorrelation

Durbin-Watson

Table 4.17: Model Summary for Durbin-Watson

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.815 ^a	.664	.650	.33161	1.141
a. Predictors: (Constant), trade liberalization, logistics, infrastructure, policy and regulation b. Dependent Variable: export competitiveness					

Source: Survey Result ,2024

The Durbin-Watson statistic of 1.141 indicates some positive autocorrelation in the residuals, but it's within an acceptable range, suggesting that the model is reliable and the predictors significantly contribute to explaining the export competitiveness.

4.6.2 Analysis of Variance

The ANOVA results for the regression model indicate that the model is statistically significant. The total sum of squares is 31.385, partitioned into regression and residual sums of squares. The regression sum of squares is 20.829 with 4 degrees of freedom (df), yielding a mean square of 5.207. The residual sum of squares is 10.557 with 96 degrees of freedom, resulting in a mean square of 0.110. The F-value is 47.354, and the associated significance level (p-value) is less than 0.001, indicating that the overall regression model significantly predicts the dependent variable, export competitiveness. This means that the predictors (trade liberalization, logistics, infrastructure, and policy and regulation) collectively have a strong and statistically significant effect on export competitiveness.

Table 4.18: Model Summary for ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	20.829	4	5.207	47.354	.000 ^b
	Residual	10.557	96	.110		
	Total	31.385	100			

a. Dependent Variable: export competitiveness

b. Predictors: (Constant), trade liberalization, logistics, infrastructure, policy and regulation

Source: Survey Result, 2024

4.6.3 Analysis of Regression

The regression analysis results show the effects of Logistics, Infrastructure, Policy and Regulation, and Trade Liberalization on the dependent variable Export Competitiveness. The constant term is 0.738 and is significant ($p = 0.008$). Logistics has a small positive effect ($B = 0.030$) and is not significant ($p = 0.608$). Infrastructure also has a minimal impact ($B = 0.019$) and is not significant ($p = 0.797$). Policy and Regulation has a substantial positive effect ($B = 0.307$) and is significant ($p = 0.001$). Trade Liberalization exhibits the strongest positive effect ($B = 0.516$) and is highly significant ($p < 0.001$). The standardized coefficients indicate that Trade Liberalization (Beta = 0.507) and Policy and Regulation (Beta = 0.346) are the most influential factors, highlighting their critical role in enhancing the dependent variable's competitiveness.

Table 4.19: Regression Analysis of Independent and Dependent Variable

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.738	.272		2.711	.008
	Logistics	.030	.059	.035	.514	.608
	Infrastructure	.019	.075	.025	.258	.797
	Policy and regulation	.307	.090	.346	3.416	.001
	Trade liberalization	.516	.082	.507	6.297	.000

a. Dependent Variable: Export Competitiveness

Source: Survey Result, 2024

The goal of the regression analysis in this study is to develop an equation that determines the impact of predictors on the dependent variable.

The general form of the regression equation is: $\beta_0 + \beta_1x$.

The specified regression equation for this study takes the following form;

Equation; $Y = \alpha + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \varepsilon$

$Y = \alpha + \beta_3 (PR) + \beta_4 (TL) + \varepsilon$

Where: Y = Export Competitiveness (EC)

PR = Policy & Regulation

TL = Trade Liberalization

ε = Error Term

Export competitiveness = $0.738 + 0.307(\text{Policy and Regulation}) + 0.516(\text{Trade Liberalization})$

This equation shows how each variable contributes to Export Competitiveness, with the constant term representing the baseline level when all predictors are zero. Trade Liberalization and Policy and Regulation have the most significant positive impacts on Export competitiveness according to this model.

4.7 Discussion of Findings

With an emphasis on the effects of infrastructure, trade policy and regulations, logistics, and trade liberalization on Ethiopian export competitiveness, this study sought to answer the four primary research questions presented in the first chapter.

Table 4.20: Summary of the overall outcome of the research hypothesis

Hypothesis	Result	Reason
Logistics has direct and positive effect on export Competitiveness	Rejected	$\beta = 0.030$ $P > 0.05$
Infrastructure has direct and positive effect on export Competitiveness	Rejected	$\beta = 0.019$ $P > 0.05$
Policy and Regulation has direct and positive effect on export competitiveness	Accepted	$\beta = 0.307$ $P < 0.05$
Trade Liberalization has direct and positive effect on export competitiveness	Accepted	$\beta = 0.516$ $P < 0.05$

H₁: Logistics has direct and positive effect on export competitiveness.

The first hypothesis suggests that logistics has a direct and positive effect on export competitiveness. Nevertheless, the statistical findings do not align with this hypothesis. This implies that, in this specific situation, logistics may not have a significant impact on export competitiveness. This is supported by research by Ashenafi (2020), which indicates that while effective customs clearance and transportation infrastructure can boost export trade competitiveness, the effect of logistics performance may depend on other supply chain supporting factors. Olyanga et al. (2022) also discovered that while shipment arrangements and customs quality might not have a major influence, certain logistics elements, such tracking and on-time delivery, are essential for export competitiveness. The significance of logistics in trade competitiveness is further highlighted by the World Bank's Logistics Performance Index (LPI), which shows that more competitive export industries are associated with higher LPI scores (World Bank, 2023). As a result, logistics' overall effect on export competitiveness may be complex and dependent on a number of interconnected variables.

H₂: Infrastructure has direct and positive effect on export competitiveness

The second hypothesis posits that infrastructure has a direct and positive effect on export competitiveness. The regression analysis showed that the impact of infrastructure is minimal and

not statistically significant. This implies that boosting export competitiveness might require more than just infrastructural upgrades. This result is consistent with research by Olyanga et al. (2022), who pointed out that while infrastructure elements like tracking and on-time delivery are critical for preserving competitiveness in international trade, other elements like shipment plans and customs quality might not have a direct effect on export competitiveness. Furthermore, infrastructure—which includes the energy, financial, transportation, and telecommunications sectors helps boost exports and lower trade deficits, according to Rehman, Noman, and Ding (2020). However, the extent of this effect varies depending on how well these systems are integrated and run overall. Therefore, even while infrastructure is an essential component, without supplementary improvements in other areas, its isolated impact on export competitiveness may be minimal.

H3: Policy and Regulation has direct and positive effect on export competitiveness

The hypothesis that Policy and Regulation has a direct and positive effect on export competitiveness is strongly supported by the statistical findings. The regression analysis revealed a substantial positive effect ($B = 0.307$) that is statistically significant ($p = 0.001$). This emphasizes how important sound trade policies and regulations are to raising export competitiveness. Trade policies have a major impact on trade volumes, company performance, and overall economic outcomes, according to Goldberg and Pavcnik (2016). Their study shows that by lowering obstacles and promoting competition, well-crafted regulations can produce an environment that is favorable to exporters. Furthermore, Gebreeyesus (2018) showed how Ethiopia's export promotion initiatives, such as policy changes, have significantly increased the size of export-oriented businesses. These results provide empirical support for the idea that strong policy frameworks are necessary to promote export competitiveness.

H4: Trade Liberalization has direct and positive effect on export competitiveness

The hypothesis that Trade Liberalization has a direct and positive effect on export competitiveness is also strongly validated by the statistical findings. The regression analysis showed that Trade Liberalization has the strongest positive effect on export competitiveness ($B = 0.516$) and is highly significant ($p < 0.001$). This suggests that improving export competitiveness requires lowering trade barriers and expanding market access. Ponnusamy (2021) demonstrates that trade liberalization has a favorable impact on export specialization and economic growth, particularly

in economies that are focused on manufacturing. Furthermore, the World Bank highlights that by reducing tariffs and non-tariff barriers, trade liberalization can serve as a potent growth engine by enabling businesses to access cheaper imported supplies and improve their ability to compete in global markets. These studies support the premise and the statistical results by demonstrating that trade liberalization is a significant factor in export competitiveness.

CHAPTER FIVE

SUMMARY OF FINDING, CONCLUSION AND RECOMMENDATION

In Chapter Five, the results from Chapter Four are interpreted and their implications for theory, practice, and policy are thoroughly discussed. It discusses the limitations of the study, offers helpful suggestions for stakeholders and policymakers, and makes recommendations for future research areas. This chapter adds significant insights to the body of existing knowledge by offering a comprehensive overview of the factors impacting Ethiopia's export competitiveness.

5.1. Summary of Findings

The study explored the impact of various factors on export competitiveness in Ethiopia, specifically focusing on logistics, infrastructure, trade policies and regulations, and trade liberalization. The findings present a mixed picture, highlighting the complex interplay between these elements and their impact on export competitiveness.

The findings demonstrated that logistics and infrastructure, despite they've been proven as positive contributors to export competitiveness, had not substantial influence in the study setting. This implies that while these elements are essential for distributing commodities and reducing transportation expenses, they could not be the primary drivers of export competitiveness on their own. Instead, their efficacy may depend on additional support systems, supply chain circumstances, and the general business environment.

Trade policies and regulations were found to play a crucial role in enhancing export competitiveness. According to the study, export competitiveness benefits greatly and statistically significantly from well-designed trade policies and regulatory frameworks. This emphasizes how crucial it is to implement strategic policy changes that facilitate exporters, reduce barriers, and streamline processes in order to promote competitiveness.

The findings highlighted trade liberalization as the most influential factor in enhancing export competitiveness. Reducing trade barriers and increasing market access showed a strong and significant positive impact on export competitiveness. This illustrates how important trade policy liberalization is for empowering businesses to take advantage of global trade possibilities and compete more successfully in global marketplaces.

The study's overall implications emphasize the need for a comprehensive approach to enhance export competitiveness. Infrastructure and logistics by themselves might not result in major advancements, but it is crucial that they be combined with sensible trade policies, regulatory reforms, and liberalized trade measures is essential. These coordinated strategies can create a conducive environment for export growth, supporting sustainable economic development and enhancing Ethiopia's position in global markets.

The findings provide valuable insights for policymakers and stakeholders, guiding them in prioritizing efforts and designing interventions to boost export competitiveness. By addressing the multifaceted nature of export competitiveness and implementing strategic measures, Ethiopia can achieve meaningful progress in its export sector.

5.2. Conclusion

This study set out to understand the impact of logistics, infrastructure, trade policies and regulations, and trade liberalization on the export competitiveness of Ethiopia. The findings offer a comprehensive insight into the complex nature of these factors and their individual contributions to enhancing export competitiveness. While some hypotheses were supported by the data, others were not, highlighting the multifaceted nature of export competitiveness.

The analysis showed that logistics and infrastructure, although essential components for efficient trade, do not have a statistically significant impact on export competitiveness in the context studied. This suggests that while these elements are necessary for the smooth functioning of export activities, they may not be sufficient on their own to drive significant improvements in export competitiveness. This points to the need for a more holistic approach that combines logistics and infrastructure enhancements with other supportive measures.

On the other hand, the study found that trade policies and regulations, as well as trade liberalization, play a crucial role in boosting export competitiveness. Effective trade policies and

a liberalized trade environment create a conducive atmosphere for exporters, reducing barriers and providing better market access. These findings underscore the importance of strategic policy interventions and regulatory frameworks in fostering an enabling environment for export growth.

In conclusion, enhancing export competitiveness in Ethiopia requires a comprehensive and integrated approach. While logistics and infrastructure improvements are important, they need to be complemented by robust trade policies and liberalized trade measures. Policymakers and stakeholders should prioritize creating a supportive environment through strategic interventions to drive sustainable export growth and ensure that Ethiopia can compete effectively in the global market. These insights provide a roadmap for future efforts to boost the export sector and contribute to the country's economic development.

5.3 Theoretical contribution and policy Implication

This work adds a number of important theoretical insights to the corpus of knowledge already available on export competitiveness. First of all, it contradicts the widely held belief that infrastructure and logistics are the main factors influencing export competitiveness. Although infrastructure and logistics have historically been seen as crucial elements for raising export competitiveness, this analysis shows that, in the case of Ethiopia, their influence is not statistically significant despite having a positive correlation. This implies that in order to take into consideration the intricate interactions of other crucial components in the supply chain and business environment, the theoretical models that highlight these issues may need to be updated.

Secondly, the study underscores the pivotal role of trade policies and regulations in enhancing export competitiveness. Theoretical frameworks that support the significance of policy interventions in fostering an environment that is favorable to exporters are empirically supported by the robust, statistically significant effects of well-designed trade policies and regulatory frameworks. This finding reinforces the need for theories of export competitiveness to incorporate the impact of effective governance and policy-making as fundamental components.

Thirdly, the study emphasizes how trade liberalization has a significant effect on export competitiveness. The results demonstrate a strong, positive impact of trade liberalization on export competitiveness, validating theoretical frameworks that highlight the advantages of lowering trade barriers and expanding market access. By highlighting the interdependence of the domestic and

international trade environments, this work highlights the need for theories to incorporate the dynamic effects of global trade policy and market access prospects.

Furthermore, the study's findings imply that improving export competitiveness requires a thorough strategy that incorporates infrastructure, logistics, policy, and trade liberalization. By supporting an integrated model that takes into account several interconnected elements rather than discrete components, this holistic viewpoint advances the theoretical understanding of export competitiveness. Therefore, theoretical models must to change to take into account the complex aspects of export competitiveness and recognize the necessity of multi-domain, coordinated initiatives.

In conclusion, this work contributes to theoretical knowledge by offering empirical data that casts doubt on established models, emphasizes the significance of trade liberalization and policy, and promotes a more comprehensive understanding of export competitiveness. These contributions are essential for creating more thorough and solid ideas that will better direct future studies and policy decisions in the area of export competitiveness and international trade.

5.4. Recommendation

In analyzing the factors that impact export competitiveness in Ethiopia, this study has identified key areas that require strategic focus. While some aspects such as logistics and infrastructure showed limited direct impact, the importance of trade policies, regulations, and liberalization emerged strongly. These insights are pivotal for informing future strategies aimed at enhancing Ethiopia's export competitiveness. The following recommendations are designed to address the identified gaps and leverage opportunities for improvement.

1. Enhance Trade Policies and Regulations

Given the significant impact of trade policies and regulations on export competitiveness, it is essential to further develop and refine these frameworks. The government should prioritize creating a more favorable business environment by reducing trade barriers, simplifying regulatory processes, and providing incentives for exporters. Establishing clear, transparent, and consistent policies will foster a predictable environment that encourages investment and export activities.

2. Promote Trade Liberalization

To maximize the benefits of trade liberalization, Ethiopia should continue to engage in regional and international trade agreements that facilitate market access and reduce tariffs and non-tariff barriers. These agreements should be designed to provide Ethiopian exporters with competitive advantages and opportunities to access new markets. Additionally, the government should support businesses in complying with international trade standards and practices to enhance their competitiveness.

3. Strengthen Logistics and Infrastructure

Although the study found that logistics and infrastructure alone are not sufficient to significantly boost export competitiveness, their role remains crucial. Investments in transportation networks, ports, and customs infrastructure should be prioritized to improve the efficiency and reliability of supply chains. Enhancing logistics capabilities, such as tracking and tracing systems, can also contribute to better export competitiveness. These improvements should be integrated with broader strategies to ensure their effectiveness.

4. Facilitate Public-Private Partnerships

Encouraging collaboration between the public and private sectors can lead to more effective solutions for enhancing export competitiveness. Public-private partnerships can help leverage resources, expertise, and innovation to address logistical and infrastructural challenges. These partnerships can also facilitate the development of Special Economic zone, enabling businesses to pool resources and access international markets more effectively.

5. Support the Special Economic Zones

The development of SEZ should be actively promoted to enable enterprises to compete in the global market. The government can provide support through funding, technical assistance, and training programs that help businesses collaborate and improve their export capabilities. Specifically, training programs should focus on international trade regulations and compliance, financial management for exporting, and digital marketing and e-commerce. Additionally, creating industrial parks and special economic zones with shared infrastructure and services can further enhance the competitiveness of clustered firms.

By implementing these recommendations, Ethiopia can create a more conducive environment for export, address existing challenges, and enhance its competitiveness in global markets. These strategic measures will contribute to sustainable economic development and help the country achieve its export objectives.

5.5 Directions for Future Research

In exploring the factors that impact export competitiveness in Ethiopia, this study has provided valuable insights and highlighted several areas that require further investigation. While the findings have shed light on the roles of logistics, infrastructure, trade policies, and trade liberalization, there remains a need to delve deeper into the nuances of these factors. Future research directions are essential to build on this study's findings and address the complexities of enhancing export competitiveness. The following recommendations outline potential areas for future research.

1. Investigate the Interplay Between Logistics and Other Factors

While this study found that logistics alone does not significantly impact export competitiveness, future research could explore how logistics interacts with other factors such as trade policies, infrastructure, and market access. Investigating these interdependencies may reveal more nuanced insights into how logistics can contribute to export competitiveness when combined with other supportive elements.

2. Evaluate Sector-Specific Impacts

Future studies could focus on specific sectors within Ethiopia's economy to understand the unique challenges and opportunities faced by different industries. For instance, examining how trade policies and logistics infrastructure affect the textile, coffee, or manufacturing sectors could provide targeted recommendations for enhancing export competitiveness in these areas. Sector-specific studies can help tailor strategies to the needs of particular industries.

3. Longitudinal Studies on Trade Liberalization Effects

Conducting longitudinal studies to assess the long-term impacts of trade liberalization on export competitiveness can provide deeper insights into its benefits and potential drawbacks. By tracking changes over an extended period, researchers can better understand the sustainability of trade liberalization measures and their impact on different aspects of the economy, including export diversification and resilience to external shocks.

4. Explore the Role of Technology and Innovation

Future studies ought to look into how innovation and technology might boost export competitiveness. It will be essential to look into how digitalization, creative thinking, and technology developments may enhance logistics, save expenses, and open up new markets. Furthermore, examining the uptake and effects of new technologies in Ethiopian industries can provide insightful information for companies and governments.

5. Assess the Impact of Regional and International Trade Agreements

Further research could evaluate the specific effects of regional and international trade agreements on Ethiopia's export competitiveness. Strategies to optimize the advantages of trade agreements can be developed by having a thorough understanding of how membership in trade blocs and agreements affects market access, trade volumes, and economic growth. Benchmarks can also be obtained through comparative research with other nations that have comparable agreements.

By addressing these areas, future research can provide a more comprehensive understanding of the factors influencing export competitiveness and help design more effective strategies for promoting sustainable economic growth in Ethiopia.

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APPENDIX

Master's Thesis Research Questionnaire

Addis Ababa University

School of Business and Economics

International Business Management

Name: Feben Bogale

Email: febenfebi@gmail.com

Dear Executives and Managers,

I am currently pursuing my Masters degree at Addis Ababa University College of Business and Economics, major in International Business Management. The aim of this thesis is to investigate the factors influencing the impact of special economic zones on Ethiopia's Export Competitiveness: In the case of the Dire Dawa Free Trade Zone. I believe the results will not only be value to individual firms but will also help the Ethiopian foreign trade and companies better identify the kind of information, incentives, and assistance essential to exports. The company and you are part of a representative sample that target the export market. Your attitudes and opinions and the export behavior of the company are critical to the success of my study. I recognize the value of your time, and sincerely appreciate your efforts. Individual responses are anonymous and all company level data will be held in confidence. Please take your precious time to complete this questionnaire and submit it at your earliest convenience. If you would like further clarification and information about the study, or have any problem in completing the questionnaire please contact me via; Mobile No: 0943185450

Thank you for your time!

Sincerely

QUESTIONNAIRES

Section-1 Demography of the respondents

1. Gender	Male	<input type="text"/>	Female	<input type="text"/>
2. Age	18-25	<input type="text"/>	25-35	<input type="text"/>
	36-45	<input type="text"/>	46-55	<input type="text"/>
	56-65	<input type="text"/>	Above 65	<input type="text"/>
3. Educational Qualification	Vocational	<input type="text"/>		
	Diploma	<input type="text"/>		
	Degree	<input type="text"/>		
	Master's degree	<input type="text"/>		
	Other	_____		
4. Current Employment Status	Full-time employment	<input type="text"/>		
	Part-time employment	<input type="text"/>		
5. Current Position	Managerial	<input type="text"/>		
	Non- managerial	<input type="text"/>		
6. Marital Status	Married	<input type="text"/>	Widowed	<input type="text"/>
	Divorced	<input type="text"/>	Unmarried	<input type="text"/>

For the following questions, please put \surd mark as your opinion for each item below on a 1 to 5 scale with 5 being strongly agree, 4 agree, 3 neutral, 2 disagree and 1 strongly disagree

Section 2: Logistics

No	Item: Logistics	Scale

		5	4	3	2	1
1	The quality of transportation networks is generally good, with well-maintained roads, railways, and ports.					
2	The level of connectivity between the zone and major markets or global supply chains is high.					
3	Customs procedures for imports and exports in the zone are efficient.					
4	Streamlined processes exist for documentation, inspections, and clearances within the zone.					
5	. The costs associated with transportation, warehousing, and handling goods within the zone are monitored.					
6	Goods can move quickly through the zone, from entry to exit.					

Section 3: Infrastructure

No	Item: Infrastructure	Scale				
		5	4	3	2	1
1	The reliability and capacity of the power supply in the FTZ are adequate, and there are backup systems in place.					
2	The FTZ has adequate water supply for industrial processes and sanitation facilities, and wastewater is properly managed.					

3	The communication infrastructure (internet, phone lines, etc.) in the FTZ is robust.					
4	Customs procedures are streamlined, and there is a one-stop-shop for registration and licensing.					
5	The SEZ facilitates interactions among suppliers, training providers, and related businesses.					
6	The zone is accessible to international transportation, including the Ethiopia-Djibouti railway station and nearby airport.					

Section 4: Policies and Regulations

No	Item: Policies and Regulations	Scale				
		5	4	3	2	1
1	The regulatory framework governing FTZ differs from the rest of the Industrial parks.					
2	Customs processes in FTZ tend to be more efficient, facilitating trade and reducing bureaucratic hurdles for businesses operating within the zones.					
3	Specific policies, such as tariffs, trade agreements, or product standards, can greatly influence our production costs.					
4	Regulatory uncertainty, including changing policies and global economic conditions, plays a role in our export decisions.					

5	The perception of these policies varies, as some are seen as supportive while others are considered restrictive for export activities.					
6	Fiscal incentives, such as tax breaks and subsidies, are provided to investors in FTZ, particularly anchor investors.					
7	Labor laws within FTZ impact investment and employment.					

Section 5: Trade Liberalization

No	Item: Trade Liberalization	Scale				
		5	4	3	2	1
1	Trade liberalization has significantly impacted the volume of exports					
2	Free Trade zones (FTZs) often feature trade liberalization through tariff reductions, reduced non-tariff barriers, and improved market access.					
3	Fiscal incentives commonly offered in FTZs include tax breaks, subsidies, and capital freedoms to attract and support domestic and foreign investors.					
4	Collaborating with foreign investors in the sector positively affect domestic firms to expand their export.					
5	FDI policies can significantly influence foreign direct investment (FDI) flows, both in terms of inward and outward investment.					

6	Modernizing FTZ to align with sustainable development goals (SDGs) requires innovative approaches and the creation of SDG-focused model zones.					
7	Best practices in FTZ policy design for trade liberalization include leveraging incentives, improving infrastructure, and addressing potential pitfalls such as rent-seeking behavior.					

Section 6: Export Competitiveness

No	Item : Export Competitiveness	Scale				
		5	4	3	2	1
1	The diversification of exports is a crucial factor to consider, as it indicates the range of products and industries involved.					
2	Exchange rate volatility impacts export competitiveness.					
3	Trade agreements and barriers impact export activities.					
4	Technological advancement plays a vital role in enhancing export competitiveness through the adoption of innovative technologies.					
5	The export value-added per unit of input in the FTZ is an important metric to assess productivity and value creation.					

INTERVIEW QUESTIONS

Ministry of Trade:

1. How does the Ministry of Trade currently support the establishment and development of export Special Economic zone in Ethiopia, particularly in the Dire Dawa Free Trade Zone?
2. What strategies and policies does the Ministry of Trade have in place to promote collaboration and cooperation among exporters in the Dire Dawa Free Trade Zone?
3. Can you discuss any successful initiatives or projects that the Ministry of Trade has implemented to enhance export competitiveness through Special Economic zone in Ethiopia?
4. How does the Ministry of Trade collaborate with other government agencies and stakeholders to facilitate the growth of Special Economic zone in the Dire Dawa Free Trade Zone?
5. What challenges or barriers has the Ministry of Trade encountered in supporting Special Economic zone, and what measures are being taken to address them?

Ethiopian Investment Commission:

1. How does the Investment Commission attract and encourage foreign and domestic investments in Special Economic zone / Dire Dawa Free Trade Zone?
2. What incentives and support programs do the Investment Commission offer to companies interested in joining or establishing Special Economic zone / Free Trade Zone?
3. How does the Investment Commission assess the potential impact of Special Economic zone on Ethiopian export competitiveness and economic growth?
4. Can you provide examples of successful investments and partnerships facilitated by the Investment Commission to promote Special Economic zone /Dire Dawa and their outcomes?
5. How does the Investment Commission collaborate with other institutions and stakeholders to create a conducive environment for Special Economic zone /Free Trade Zone?

Industrial Park Administrator:

1. How does the Industrial Park Administrator facilitate the establishment and operation of Special Economic zone / Dire Dawa Free Trade Zone?

2. What infrastructure and services does the Industrial Park provide to support the activities of Special Economic zone /Free Trade Zone?
3. Can you discuss any key partnerships or collaborations that the Industrial Park has formed to promote Special Economic zone /Dire Dawa Free Trade Zone?
4. How does the Industrial Park Administrator ensure that Special Economic zone / Free Trade Zone adhere to standards and regulations to maintain competitiveness and quality in their exports?
5. What future plans or initiatives does the Industrial Park Administrator have in place to further enhance export competitiveness through Special Economic zone / Dire Dawa Free Trade Zone?

Figure 4.3: Histogram plot for regression standardized residual

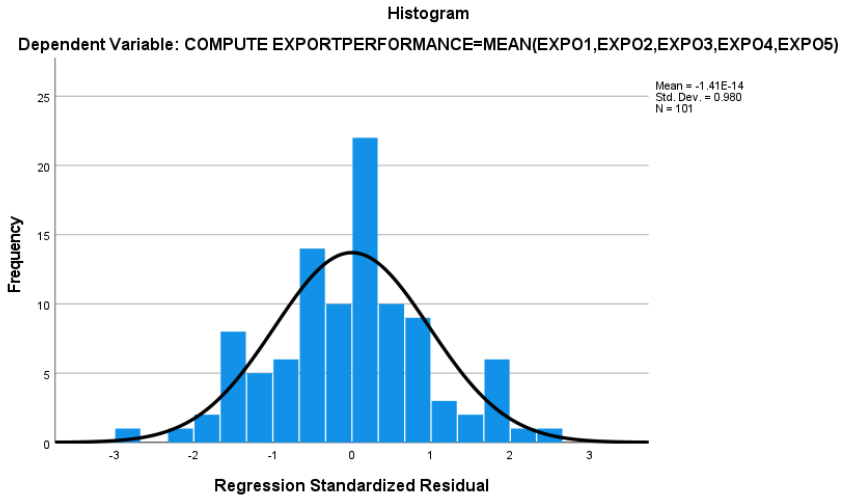


Fig 4.4: Linearity

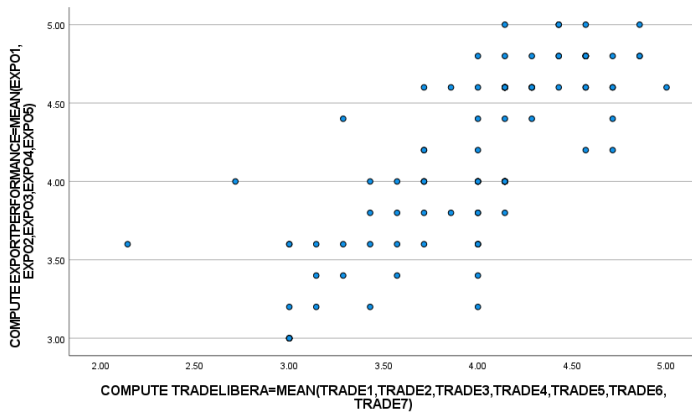
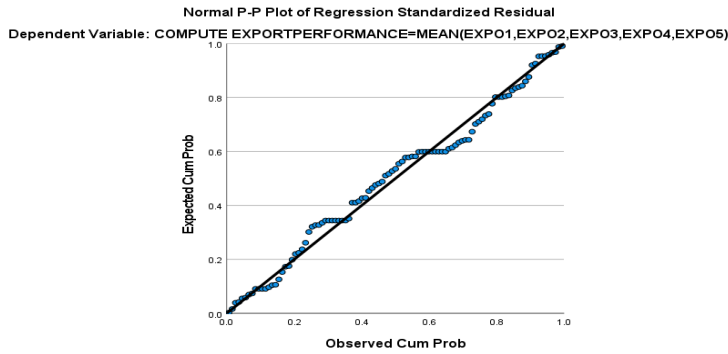


Fig 4.5: Linearity scatter plot of regression standardized residual



Source: Survey Result, 2024



Date 29/11/16
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ላይኛው ሰነድ የሚያሰጥበት የገበያ ለኮንሰርት አገልግሎት

ላይኛው ሰነድ

ጉዳይ የመመረቂያ ጽሁፍ ላይ መሰብሰብን ይመለከታል

ካላይ በርዕሱ እንደተጠቀሰው በላይኛው ሰነድ የሚያሰጥበት የገበያ ለኮንሰርት አገልግሎት ተግባር የሆኑት ወ/ር/ወ/ሪት ፊሽን ቦጋላ የሁለተኛ ትምህርት መመረቂያ ጽሁፍ በድሬደዋ ነጻ ንግድ ቀጠና exporting the opportunity of Export consortia and cluster enhancing Ethiopians Export competitiveness: A case study of the Dire Dawa free trade zone በሚል ርዕስ ትብብር እንዲያደርግላቸው ከዋና መ/ቤት በደብዳቤ ቁጥር ሊፓልድ /005/414/040 በቀን ሐምሌ 19/2016 ዓ.ም በተጻፈለን መሰረት ከላይ የተጠቀሱት ተግባር የተለያዩ ቃለ መጠይቅ እና መጠይቅ በማድረግ የሚፈልጉትን ደታ የሰበሰቡ መሆናቸውን እናሰጠዋለን።



ከላይኛው ሰነድ
[Signature]
 አዲስ አበባ የኮንሰርት አገልግሎት ኮርፖሬሽን
 አዲስ አበባ



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