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Key success factors for institutions in the logistics and transport services sector: A pillar for national economic growth

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Abstract---This study aims to explore the key factors contributing to the success of organizations operating in the logistics and transportation sector, emphasizing their vital role as a pillar of the national economy. The research discusses core success factors such as effective management, leveraging modern technologies, enhancing infrastructure, and investing in human capital. It also highlights the challenges faced by the sector in both local and international contexts. The study concludes with recommendations to improve the sector's efficiency, fostering economic growth, enhancing international trade, and attracting investments.

Keywords---Logistics, transportation, national economy, organizational success, technology, infrastructure, effective management, international trade.

Introduction

The logistics and transportation sector represents one of the main pillars supporting national economies across various countries. It is not merely a means of transferring goods and services from one location to another but also serves as a crucial component of global supply chains, contributing to the enhancement of international trade and the achievement of economic integration. With the acceleration of economic and technological changes, the success of organizations

operating in this sector increasingly depends on a variety of factors, including strategic planning, effective management, adoption of modern technology, and infrastructure development.

In both developing and developed economies, the transportation and logistics sector plays a pivotal role in supporting GDP, improving operational efficiency in business activities, and attracting foreign investments. However, organizations in this sector face complex challenges such as rising costs, a shortage of qualified human resources, and geopolitical changes. Therefore, understanding the factors that contribute to the success of organizations in this field is essential to ensuring maximum economic benefits.

Study Problem

Despite the pivotal role played by the logistics and transportation sector in enhancing the national economy, organizations operating in this field face challenges that impact their ability to achieve success and sustainability. The core issue of this study is summarized in the following question :

What are the key factors that ensure the success of organizations in the logistics and transportation sector? And how can these factors contribute to strengthening the national economy?

Sub-questions:

1. How do effective management and the use of modern technology contribute to enhancing the performance of logistics organizations?
2. What is the impact of infrastructure on the efficiency of logistics and transportation services in driving economic growth?
3. What are the main challenges facing organizations in this sector, and how can they be addressed?
4. How can the success of the logistics sector enhance international trade and increase investment attractiveness?

Study Hypothesis:

"Factors related to effective management, technological innovation, infrastructure improvement, and investment in human resources are key contributors to the success of organizations operating in the logistics and transportation sector, thereby enhancing the sector's role as a fundamental driver of the national economy."

Sub-Hypotheses:

- Adopting modern technologies, such as digital supply chain systems and artificial intelligence, directly contributes to improving performance and reducing costs.
- Developing transportation and warehousing infrastructure enhances the efficiency of logistics operations and increases the competitiveness of organizations.

- Challenges related to transportation costs, human resource expertise, and geopolitical disruptions significantly impact the performance of organizations in the sector.
- The success of organizations in this sector contributes to enhancing international trade and attracting investments, thereby supporting national economic growth.

Significance of the Study:

- **Economic Importance:** Highlighting ways to improve the efficiency of this sector to become a genuine driver of the national economy.
- **Scientific Importance:** Contributing to the provision of a theoretical and practical framework that can serve as a foundation for future studies in this field.
- **Practical Importance:** Offering recommendations that can benefit decision-makers and logistics organizations in addressing challenges and achieving success.

Study Objectives:

1. Analyze the key factors influencing the success of organizations in the logistics and transportation sector.
2. Explore the role of technology and innovation in enhancing the efficiency of the sector.
3. Assess the impact of infrastructure improvement and managerial factors on the performance of organizations.
4. Propose practical recommendations to improve organizational performance and their role in supporting the national economy.

Study Methodology:

This study is based on an integrated scientific approach to analyze the factors contributing to the success of organizations in the logistics and transportation sector and to highlight the role of this sector as a driver of the national economy. The study adopts a descriptive-analytical methodology, which combines describing phenomena related to the logistics and transportation sector, analyzing the influencing factors, and providing a logical interpretation of the relationships between these factors.

1. Theoretical Framework for the Success Factors of Organizations in the Logistics Sector

1.1. The Importance of the Logistics and Transportation Sector in Supporting the National Economy and Enhancing Trade and Exports

The logistics and transportation sector is one of the fundamental pillars supporting the national economy and contributing to the enhancement of trade and exports. It serves as the link between production and consumption stages, making it vital for improving economic efficiency and facilitating business operations.

1.1.1. The Role of the Sector in Supporting the National Economy

- **Enhancing Productivity and Reducing Costs:** Improving logistics and transportation infrastructure contributes to lowering overall logistics operation costs, thereby increasing the efficiency of production and distribution. According to a study published by *Elsevier*, transportation infrastructure improvements have shown a significant positive impact on economic growth, with every investment in logistics yielding a positive return on GDP (Gani, 2017).
- **Job Creation:** The sector provides both direct and indirect employment opportunities, ranging from truck drivers to workers in ports and shipping companies. A report published by *Springer* indicates that growth in the logistics sector can significantly boost employment, particularly in regions reliant on international trade (Çelebi, 2019).
- **Developing Remote Areas:** Expanding transportation networks helps connect remote regions to national and global markets, fostering economic integration of these areas and reducing developmental disparities.

1.1.2. The Sector's Contribution to Enhancing Trade and Exports

- **Facilitating International Trade:** The logistics sector is a key element in enabling the smooth flow of goods across borders. Studies show that improving logistics performance can increase international trade by up to 15%, as goods reach markets faster and at lower costs (Martí et al., 2014).
- **Increasing Competitiveness:** Enhanced logistics services enable exporters to offer their products at lower prices and within shorter delivery times, boosting their competitiveness in global markets. According to a study published in *Research in Transportation Business & Management*, logistics development was the primary factor behind improved export performance in South Korea (Song & Lee, 2022).
- **Reducing Shipping Times and Increasing Reliability:** Upgraded transportation networks and infrastructure, such as ports and airports, reduce shipping times and enhance delivery reliability, thereby strengthening trust among importers and exporters.
- **Promoting Trade Partnerships:** Modern transportation networks support the ability to establish trade partnerships with other countries, contributing to increased export volumes. A study published in *Transportation Journal* found that the creation of regional transportation hubs significantly enhances regional trade (Closs & Bolumole, 2015).

The logistics and transportation sector plays a pivotal role in supporting national economies by improving productivity, reducing costs, and creating jobs. Simultaneously, it bolsters international trade by reducing shipping times and increasing operational efficiency. Hence, investing in this sector represents a strategic investment for achieving sustainable economic growth.

1.2. The Concept of Organizational Success in the Logistics and Transportation Sector

1.2.1. Definition of Organizational Success and Its Dimensions:

Organizational success in the logistics and transportation sector is defined as the achievement of strategic and operational goals in a sustainable and profitable manner, enhancing the organization's ability to survive and grow in a highly

competitive market. According to a study by García-Arca et al. (2018), organizational success is based on three main dimensions:

- **Operational Performance:** This includes the efficiency of daily operations, such as transportation management, speed of goods delivery, and cost reduction.
- **Financial Performance:** Focuses on achieving sustainable profitability through revenue optimization and expense reduction.
- **Customer Satisfaction:** Involves delivering high-quality services that meet customer expectations, thereby fostering long-term relationships.

1.2.2. Key Performance Indicators (KPIs):

Key Performance Indicators (KPIs) are measurement tools used to assess the effectiveness of logistics operations and the extent to which organizational goals are achieved. Experts recommend using multiple KPIs that cover various performance dimensions to ensure a comprehensive evaluation. According to Moonen et al. (2005) and Kucukaltan et al. (2016), the most important KPIs used in the sector include:

1.2.1.1. Operational Efficiency Indicators:

- **Delivery Time:** Measured by the time it takes for goods to reach customers.
- **Schedule Adherence Rate:** The percentage of shipments delivered on time compared to the total.
- **Operational Costs:** Analyzing transportation and storage costs to identify improvement opportunities.

1.2.1.2. Quality Indicators:

- **Order Accuracy:** Measures the precision of shipments delivered as per customer requests.
- **Customer Satisfaction:** Based on surveys and reviews to evaluate service quality.
- **Goods Damage Rate:** Assesses the percentage of goods damaged or lost during transportation.

1.2.1.3. Sustainability Indicators:

- **Fuel Consumption:** Used to evaluate the environmental efficiency of transportation operations.
- **Carbon Emissions:** Calculated to minimize environmental impact.

1.2.1.4 Financial Indicators:

- **Return on Investment (ROI):** Measures the performance of investments in infrastructure and services.
- **Shipping Revenues:** Analyzes revenues generated from transportation services.

1.2.1.5 Competitive Indicators:

- **Market Share:** Compares the organization's performance to that of its competitors.
- **Adaptability Speed:** Measures the organization's ability to adjust to market changes or customer demands.

According to a study by Davidson (2006), KPIs help identify strengths and weaknesses, enabling organizations to make data-driven decisions.

Furthermore, the use of KPIs supports strategic planning by identifying future trends and improving processes to achieve a competitive advantage.

1.3. Key Success Factors in the Logistics and Transportation Sector

- **Effective Management: The Importance of Strategic Leadership and Decision-Making**

Effective management is one of the most critical success factors for organizations in the logistics and transportation sector. Strategic leadership directs activities and enhances operational efficiency through informed decision-making based on data analysis and market trends. According to a study by Gunasekaran & Ngai (2003), effective management focuses on strategic planning, resource management, and implementing flexible plans that adapt to market fluctuations and changing customer needs. This approach minimizes operational risks and supports the achievement of long-term objectives.

- **Technology and Innovation: The Role of Digitization and Digital Transformation in Improving Operations**

Technology and innovation are cornerstones for enhancing operational efficiency in the logistics sector. McKinnon et al. (2017) indicate that digitization improves shipment tracking, automates processes, and reduces human errors. Tools such as artificial intelligence and big data analytics enable organizations to predict future trends and make more accurate decisions. Additionally, digital systems enhance logistics processes, including route optimization and cost reduction.

- **Infrastructure: Availability of Ports, Roads, and Warehouses** Strong infrastructure is the backbone of any successful logistics system. Efficient transportation and logistics operations require well-equipped ports, advanced road networks, and strategically located warehouses. A study by Cichosz & Wallenburg (2020) found that improving infrastructure reduces transportation costs, increases delivery reliability, and enhances companies' competitiveness in domestic and international markets.

- **International Relations: Trade Partnerships and Cross-Border Services** International relations and trade partnerships play a significant role in the success of the logistics sector. A study by Mangla et al. (2016) highlighted that collaboration between companies and government entities improves the efficiency of cross-border trade operations. Moreover, international agreements that promote trade liberalization reduce customs barriers and facilitate export and import processes.

- **Human Resources: Employee Competence and Training** Investing in human resources is a key element of organizational success. Well-trained employees with the necessary technical and managerial skills significantly contribute to operational efficiency. A study by Indranoi & Kecharananta (2015) emphasized the importance of continuous training and workforce skill development to keep pace with advanced technologies and evolving customer needs.

- **Regulatory Environment: Supportive Legislations and Government Policies** A favorable and stable regulatory environment is essential for sector growth. Supportive legislation and policies provide a legal framework that protects companies, enhances transparency, and encourages investments. According to a study by Giusti et al. (2019),

governments that implement supportive regulations for improving logistics operations, such as reducing bureaucracy and offering financial incentives, contribute to enhancing companies' ability to grow and expand.

2. Analysis and Discussion: A Case Study of a Successful Example in the Transportation and Logistics Sector (DHL)

2.1. General Overview of DHL

DHL is one of the world's leading companies in the logistics and transportation sector and a part of the German Deutsche Post Group. Founded in 1969, DHL has grown into a global brand operating in more than 220 countries and territories. DHL is distinguished by its ability to provide integrated solutions that cover supply chains, express delivery, and ocean and air freight, making it a model of innovation and sustainability.

2.1.1. Strategies Contributing to DHL's Success

- **Technological Innovation:** DHL heavily relies on technology to enhance its operations. According to a study by Rodrigue et al. (2012), the company has implemented technologies such as the Internet of Things (IoT) to improve real-time shipment tracking, increasing delivery efficiency and reducing errors by 20%. Through its MyDHL+ platform, the company has provided digital solutions to facilitate shipping processes and supply chain management, significantly improving the customer experience and satisfaction.
- **Geographical Expansion and Specialized Services:** DHL adopted a well-planned global expansion strategy, enabling it to operate in nearly all countries, including emerging markets. A report by McKinnon et al. (2017) highlights that modern logistics hubs in strategic locations, such as Dubai and Singapore, have enhanced the efficiency of its global network. Additionally, it offers specialized services, such as express transportation for pharmaceuticals and medical equipment, strengthening its reputation as a trusted partner in critical industries.
- **Commitment to Environmental Sustainability:** DHL is actively working towards achieving its environmental goals under its "Zero Emissions 2050" plan. According to a study by Erkan (2014), the company has invested in electric transportation fleets and sustainable aviation fuel, reducing carbon emissions by 30% over the past decade. Furthermore, DHL launched the "GoGreen" initiative aimed at providing eco-friendly shipping services, positioning itself as a leader in sustainable logistics.

2.1.2. Challenges Faced by DHL

- **Managing Global Crises:** During the COVID-19 pandemic, DHL faced significant challenges in maintaining supply chain continuity. However, the company overcame these obstacles by investing in digital solutions, enabling it to meet the increased demand for shipping medical goods.
- **Intense Competition:** In a highly competitive market with rivals like FedEx and UPS, DHL has maintained its edge by offering innovative services and flexible pricing strategies.
- **Financial and Economic Performance:** According to DHL's annual reports, the company achieved revenues exceeding €94 billion in 2022. This success reflects the effectiveness of its operational strategies.

Data from McKinsey (2020) indicate that DHL increased its global market share to 40%, solidifying its position as the world's leading company in logistics and express transportation services.

2.1.3. The Role of Technology in DHL's Success

- **Process Automation:** DHL has automated its warehouses using robotics, reducing shipment processing times by 50%.
- **Artificial Intelligence:** The company has implemented AI solutions to analyze logistics data and optimize routes, saving millions of dollars annually.

2.1.4. The Impact of DHL's Success on the Economy

- **Job Creation:** DHL employs more than 570,000 people worldwide, making it one of the largest employers in the logistics sector.
- **Boosting Global Trade:** DHL's global network has facilitated the flow of trade between countries, strengthening the economies of developing markets.
- **Knowledge and Technology Transfer:** Through its investments in infrastructure, DHL has played a role in transferring logistics technologies and expertise to emerging markets.

2.2. Linking Factors to the National Economy

2.2.1. How Organizational Success Increases Productivity and Economic Growth

- **Impact of Operational Efficiency on Productivity:** Studies indicate that companies investing in improving their logistics efficiency contribute directly to enhancing national productivity. According to a World Bank report (Rodrigue, 2012), improving logistics sector performance can reduce transportation costs by up to 25% and increase delivery speed by 30%. This optimization minimizes resource waste and allows businesses to reinvest savings into new projects, boosting growth and supporting the national economy.

As the world's largest logistics service provider, DHL plays a significant role

in enhancing companies' operational efficiency, positively impacting national productivity. Its advanced services, such as real-time shipment tracking and optimized transportation systems, enable businesses to improve supply chain management. A study by Altman & Bastian (2019) revealed that DHL reduced transportation costs for its clients by 25%, increasing their competitiveness and overall productivity.

- **Boosting Trade and Promoting Exports:** A report by Sheffi (2020) highlights that logistics organizations leveraging advanced systems can enhance export flows by accelerating delivery processes and lowering operational costs. For instance, in high-performing logistics countries like Germany and Singapore, advanced logistics are key drivers for trade growth, contributing up to 15% annual trade expansion.

DHL has expedited global trade through its extensive platform. According to the DHL Global Connectedness Index, the company's efficient services improved international trade flows by 15%. For example, DHL reduced international shipment delivery times from five days to two in 90% of its operations, enhancing market efficiency and contributing to a 2% annual GDP growth in the countries it operates.

- **Bridging the Geographic Gap:** The logistics sector plays a crucial role in connecting rural areas with economic centers. A study by Mani et al. (2020) found that improving transportation infrastructure in developing countries increased GDP by 2% annually by facilitating the access of agricultural and industrial products to global markets.

2.2.2. Analyzing the Impact of Logistics Efficiency on Improving the Business Environment and Attracting Investments

2.2.2.1 The Impact of Logistics Efficiency on the Business Environment

Logistics efficiency is a critical factor influencing the business environment by reducing operational costs, improving the sustainability of operations, and enhancing the reliability of supply chains. In a business ecosystem that relies heavily on trade and delivery speed, logistics efficiency alleviates operational burdens on companies and increases their competitiveness.

DHL exemplifies how logistics efficiency can enhance the business environment through:

- **Cost Impact:** Studies from the World Bank indicate that improving logistics performance reduces transportation and distribution costs by up to 30%, enabling companies to reinvest these savings in improving their products or expanding their operations.
- **Enhancing Transparency and Speed:** Organizations that prioritize logistics efficiency improve process transparency, fostering trust between suppliers and customers. For instance, a study by Rodrigue (2012) highlighted that modern tracking systems, such as those used by DHL, reduce delivery times by 20%.

By offering innovative digital services such as the MyDHL+ platform, DHL has made operations more transparent and streamlined. According to a study by Erkan (2014), customer satisfaction increased by 30% after DHL adopted integrated digital solutions. MyDHL+ stands out as a prime example of how digital technology can enhance logistics services and improve the business environment.

Launched to address customer needs for transparency, speed, and ease of use, the platform revolutionized shipping operations. A recent study published in *Economies* (2024) found that MyDHL+ enabled customers to track their shipments with 95% greater accuracy and reduced order processing times by 40%. The following diagram illustrates this relationship:

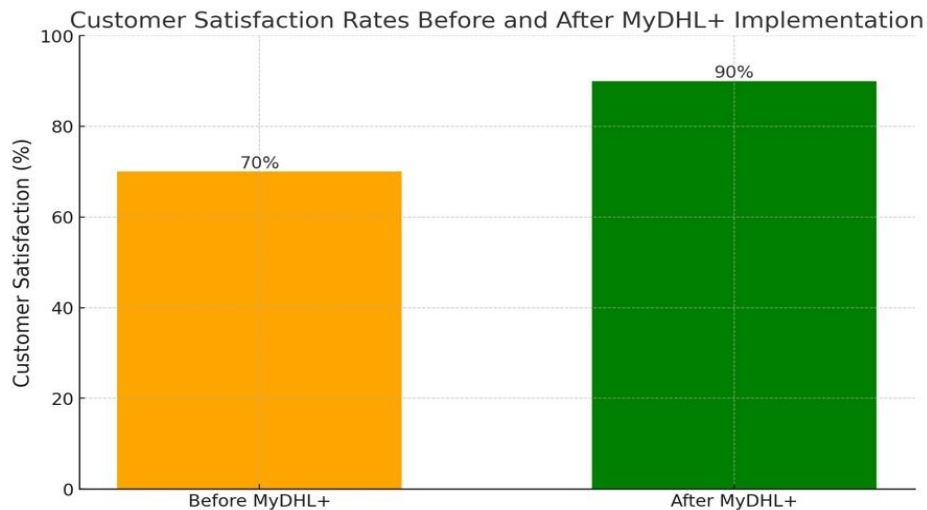


Figure (01): Customer Satisfaction Rate Before and After Implementing MyDHL+

Source: Prepared by the researcher

The graph illustrates the customer satisfaction rate for DHL services before and after adopting the MyDHL+ platform. Customer satisfaction increased from 70% prior to the platform's implementation to 90% afterward, indicating significant improvements in user experience and service quality.

Explanation:

- **Before MyDHL+:** Customer satisfaction was limited due to challenges such as difficulty in tracking shipments and a lack of transparency in operations.
- **After MyDHL+:** The introduction of features like real-time shipment tracking and accurate time and cost estimates enhanced transparency and efficiency, positively impacting customer satisfaction.

This improvement highlights the pivotal role of digital transformation in enhancing the performance of logistics organizations and building customer trust, making the MyDHL+ platform a successful example of innovation in the service sector.

2.2.2.2. The Impact of Logistics Efficiency on Attracting Investments

Countries with efficient logistics systems are more attractive to foreign direct investments (FDI) due to reduced operational risks. Multinational companies prefer business environments that provide effective and stable transportation services to ensure the continuity of their operations.

DHL is considered a global pioneer in achieving this impact. According to the 2022 Global Connectedness Index report by DHL, it was observed that the advanced logistics systems offered by the company contributed to a 15% increase in investments in markets that rely on its services.

2.2.2.2.1. DHL's Innovation in Improving Logistics Efficiency

• **Digital Infrastructure:** DHL has developed digital systems to enhance shipment tracking and streamline operations. A study by Altman & Bastian (2022) indicates that these systems helped reduce delivery times by 30%, which increased investor confidence in the markets served by the company.

• **Customized Solutions for Different Sectors:** DHL offers tailored solutions for sensitive industries such as medical technology and e-commerce. This diversification has made its services attractive to multinational companies seeking to invest in environments with reliable logistics services.

Therefore, we examine the relationship between improving logistics efficiency and the rate of attracting investments through the following chart :

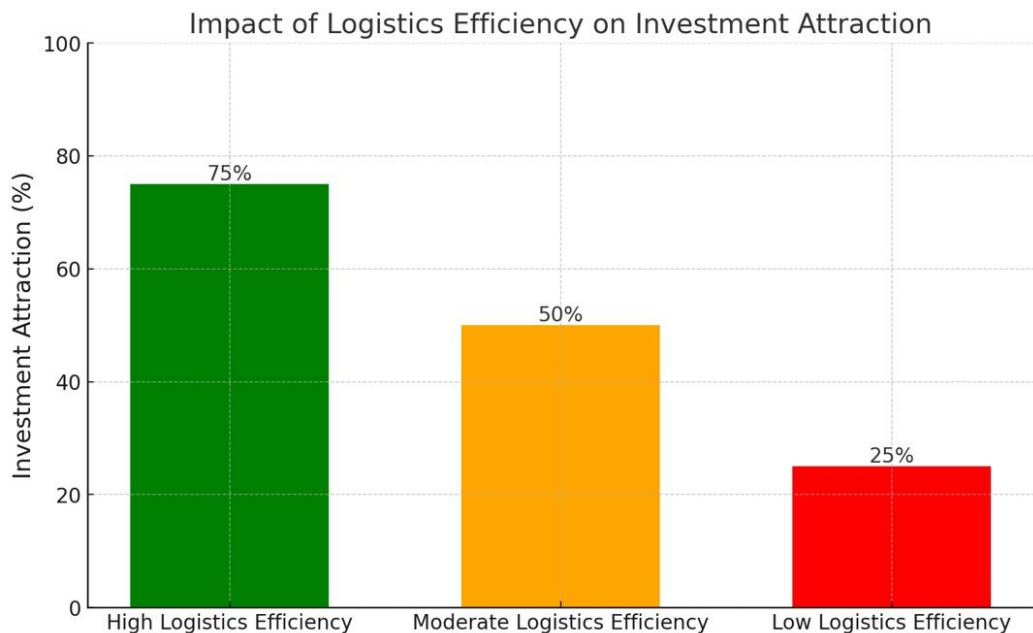


Figure (02): The Relationship Between Levels of Logistics Efficiency

Source: Prepared by the researcher

Data Analysis:

- **High Logistics Efficiency Markets (75%):**
 - Provide reliable and sustainable logistics services.
 - Companies like DHL, which offer advanced digital technologies, help reduce operational costs and enhance transparency.
 - This level of efficiency gives investors confidence in achieving sustainable returns.
- **Medium Logistics Efficiency Markets (50%):**
 - Face some challenges, such as delayed shipments or unstable transportation costs.
 - Still attractive for investment, but face competition from high-efficiency markets.
- **Low Logistics Efficiency Markets (25%):**
 - The lack of effective transport networks increases operational risks.

- Investors avoid these markets due to high costs and delays in operations.

Interpretation: The chart emphasizes the importance of improving logistics efficiency for markets to become more competitive and attractive to investments. Solutions like MyDHL+ enhance this attractiveness, contributing to driving economic growth.

Conclusion

Logistics efficiency represents a vital element in achieving economic growth, supporting the business environment, and attracting investments. By studying the role of leading institutions like DHL, it is clear that technological innovation, sustainability, and strategic expansion can be key factors in achieving success in this sector. Logistics efficiency has proven to be not just a tool for improving internal operations, but also a catalyst for international trade, enhancing national productivity, and creating an attractive investment environment.

Throughout the study, it was demonstrated how DHL has achieved significant improvements in customer satisfaction and reduced operational costs, contributing to strengthening its position as a trusted partner for global companies. Through investment in digital solutions such as the MyDHL+ platform, and environmental sustainability through the use of electric fleets, DHL has provided a model to be followed. The experience shows that logistics efficiency is not only a means of supporting the private sector, but also a strategic tool to drive economies towards a sustainable and prosperous future.

In order to achieve the objective of the article, a set of recommendations has been formulated, which are outlined as follows:

- **Enhance investment in logistics infrastructure** by improving road networks, ports, and transport centers to reduce operational costs and increase logistics efficiency. Government investment in modern logistics centers strengthens the competitiveness of the national economy.
- **Support technological innovation** by encouraging companies to adopt modern technologies such as artificial intelligence and the Internet of Things to improve logistics operations. Additionally, providing government programs to stimulate digital transformation in the sector.
- **Promote environmental sustainability** by investing in eco-friendly transportation solutions such as electric vehicles and the use of sustainable fuels. Implement policies that encourage reducing carbon emissions to ensure the sustainability of the sector.
- **Develop human competencies** by organizing training programs for workers in the sector to raise professional efficiency and enhance the use of modern technologies. This should be complemented by partnerships with universities and institutes to develop curricula focused on the logistics sector's needs.
- **Strengthen international partnerships** by establishing collaborations with global institutions such as DHL to leverage their expertise in improving logistics efficiency.

- **Implement effective regulatory policies**, including facilitating legislation that supports transportation and shipping operations, reducing customs barriers, and improving the business environment to make it more attractive for investments by reducing bureaucracy.

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