

Factors Influencing Sustainable Logistics

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Article History

Received: 15 January 2023

Revised: 05 May 2023

Accepted: 25 May 2023

Published: 30 June 2023

JEL Classification

C21

Q53

J20

ABSTRACT

The aim of this study is to investigate how the sustainable green logistics system is impacted by sustainable green logistics activities utilizing a theoretical framework. In the beginning of this research, the elements of green logistics are outlined, along with current changes to this concept. Following an examination of earlier work on green logistics, this idea is examined. The green logistics' independent variables are financial economics, company environmental & social performance, logistics networking & transport, and information sharing are applied to clarify the influence of sustainable green logistics, which are significant indicators for assessing a company's performance. This study used data from earlier studies and SPSS to authenticate the data. Ensuring the dependability, independence, and reliability of each of a variable utilized in research. Value of Cronbach's alpha which should be above 0.7 then the construct is reliable. Few limitations in our study, including limited observations of 199 responses, so in our study the revalidation of variables has not been conducted Furthermore the green logistics concept is so wide that it is impossible to study the entire domain in a single study. A company would implement green logistics operations to maintain its place in the market if the management compared the study's findings to those of its rivals in the market. The principle of green logistics also helps organizations to create an intellectual framework that increases added value. The study's results strengthen the continuity of green logistics inside the company.

Keywords: Green logistics, Financial economics, Sustainable development, Environmental factors, Sustainability, Supply chain management

Citation of this article:

Alam, S. (2023). Factors influencing sustainable logistics. *South Asian Journal of Operations and Logistics*, 2(1), 48-62. <https://doi.org/10.57044/SAJOL.2023.2.1.2304>

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1. Introduction

Since the economy is growing and logistics is as well, there is an increasing demand for the movement of goods, which is why the two are closely correlated. The economy slows down and there are fewer requests for logistics carriers after natural disasters. However, the economy of the arena could entirely freeze in the absence of logistics. Manufacturers would be unable to obtain raw materials, consumers' products, food, gasoline, or energy. In terms of business, practically every organization's daily operations now place a significant emphasis on the logistics process. We are living in a quickly impacting world. As the world economy develops, the strategic area is likewise developing and getting more confounded. Now companies are not only focused on economic factors for their business results but in the market, organizations are also paying attention to environmental sustainability through reverse and green logistics in response to this demand a new field in logistics initiated as; green logistics (Hashmi et al., 2020a). With the developing worldwide dependence on corporations, their duty to environmental, social, and human rights is associated with their development. In this context, an increasing number of corporations are chargeable for the social and environmental issues that their suppliers and subcontractors within the logistical chain are responsible for. Public management and government policy must support both entrepreneurship and innovation, as such support is essential for businesses in developing strategies for growth and sustainability. Not simplest groups however additionally clients are aware of the significance of the environment (Richnák & Gubová, 2021).

Organizations ought to appreciate stricter environmental policies that have an effect on the complete delivery chain. Constantly developing globalization and industrialization region big needs for ecological logistics. Currently, the focal point is specifically on decreasing terrible externalities within the operations and enhancing the overall delivery chain performance. For the sake of evaluation and help, sustainable logistics can be defined by sustainable procurement, sustainable transport, sustainable packaging, sustainable distribution, opposite logistics, and layout and management of a sustainable delivery chain. Have faith that logistics capabilities are interrelated and that sacrifices are necessary across the board in terms of sustainability. Reusable packaging is an example of dependency since it improves resource efficiency, primarily for cost savings, but it also results in longer logistical back-up routes and higher transportation emissions. The goal of sustainable logistics is to present strong justifications to persuade decision-makers to approve logistical tasks that are considerate of the environment. Corporations desire to establish an environmentally sustainable logistics overall performance control method to ensure environmentally sustainable logistics. The carbon emissions that result from the purchase of raw materials to the distribution of finished goods are of interest to in the context of sustainable logistics (Rasheed & Rashid, 2023). The desire to establish an environmentally sustainable supply chain is emphasized by the writers.

The factors affecting greener logistics are examined in this article. We may assess the impact of the growing logistics sector on the global warming system and the development of greener technology by first evaluating how it affects the arena economy. We can examine factors that are affecting the logistics system and may lead to increased productivity and greener logistics; in addition, we can assess which factors are economically efficient while also having a positive impact on productivity and which factors have the greatest potential to slow down the logistics system. Since no actual investigations can be conducted, this article is mostly based on theoretical conclusions found in the literature. In green logistics, there are some problems that organizations faced while adopting this logistic system. In Pakistan, there are organizations working on green logistics but they failed to provide sustainable growth through this system these problems are Lack of technology awareness, lack of calculated risk management, poor quality of supply chain with no implementation of green management, market competition, unpredictability, a lack of government backing, insufficient logistical management, a lack of commitment from top management, operating costs, unawareness of customers and consumers (Xiaolong et al., 2021). The paper's research focuses on green logistics in businesses.

The application and use of modern logistics while taking the environment's influence into consideration is the research problem. These data were used to generate and then evaluate statistical hypotheses. The research findings were interpreted using descriptive statistics as well as inference statistics. The examined businesses in Pakistan use voluntary environmental policy tools, with corporate social responsibility serving as the primary environmental tool. The logistics of warehousing and storage heavily use elements of environmental policy. The main obstacle to implementing environmental logistics components that businesses have studied is a lack of funding (Richnák & Gubová, 2021).

Capabilities are complicated bundles of man or woman skills, assets, and accumulated Capabilities that are associated with “doing” and come to be obvious while corporations learn how to do something very well, e.g. manufacturing, advertising/promotion, and distribution. Firms’ abilities have to be dynamic; they have to enlarge and alternate over the years to deal with the wishes of customers. Thus, to stay competitive, a corporation needs to always improve its abilities. Such improvements regularly end result in the form of software of revolutionary techniques for doing business. Previous studies have offered that innovation (or the capacity to innovate) itself is necessary for advanced collaboration and overall performance when corporation sources are dedicated to a project. the combined use of capital, technology, and manpower can make a remarkable change in the logistics system (Li & Weimin, 2022).

The most environmentally friendly and stable way to integrate sustainability-related variables into supply chain management is through logistics. They discuss the green supply chain in general. Sustainable supply chain management is developed by including sustainability concerns in SCM. This improves performance and, over time, will play a role in ensuring the profitability of logistics companies. The authors discovered a beneficial synergy between method innovations, and green, and lean practices that significantly improve the overall effectiveness of the green delivery chain. The research carried out by the authors shows that eco-design, life cycle analysis, ecological production, alternative logistics, and waste management all influence the logistics chain's overall effectiveness (Alshubiri, 2017).

The concept of eco-performance in the supply chain connected to more serious environmental issues at some point in the manufacturing chain has been added with the rise of green supply chain management. When green logistics and digitization are combined, sustainability will result in some benefits include a lower carbon footprint, green shipping route optimization, reduced delivery times and costs, waste minimization, discounts, and higher logistics network optimization (Richnák & Gubová, 2021). Due to customer stress, the decision to sell the brand of the business, and the necessity to be competitive throughout the green market, many organizations have specific reasons for integrating the idea of sustainable development into the term of green logistics. In this situation, green logistics establishes the financial terms, enhances customer conversion and the family members of said customers, and provides an excellent impression of a good or service. Additionally, it influences the optimal planning and distribution of goods, which encourages workers to deliver extreme amounts of production, which lowers taxes and other obligations while enhancing the investment strategy and escalating performance hazards (Alshubiri, 2017).

The manufacturing area of Pakistan is crucial for its economy because it contributes to a lot of social and financial desires and employs a huge range of workers. In 2019, the producing area introduced as much as 13.3% of Pakistan’s overall gross home product (GDP) (Ong et al., 2019). Even though Pakistan’s production enterprise performs a vital function in financial development, it additionally substantially impacts the environment. The government additionally imposed more taxes on machinery imports and they made new policies by asking about the concern of the manufacturing industry (Khan et al., 2022). Top management involvement is an important driver for the adaptation of a green supply chain system. In Pakistan top-level management usually, avoid taking the risk they don’t pay attention to adopting new technology that can save nature. They preferred to follow the odd practices (Khan et al., 2022). In order to apply green logistics inside the organization, we have to overcome these odds and make strategies to provide better products/services in a healthy and green environment. it also plays a vital role in decreasing the earth’s temperature which is globally increasing

day by day by implanting green logistics we can undo the climatic change gradually.

1.1 Research Questions

Q1: What are the effects of implementing green logistics on organizational performance?

Q2: Should we adopt these sorts of strategies to keep our organization green?

Q3: Does green logistics have a positive impact on the environment?

2. Literature Review

In response to the rising demand for logistics services, Within the corporate sector, the ecological supply chain has grown recently. The end consequences are supply chain green logistics control and sustainable development. We can see the hat green supply chain has a focus on the design and production of products that abide by rigid standards for quality, satisfaction, and other factors. In order to manage the supply chain, green logistics thus supports the management of internal and external aid, risk, and provider collaboration a payment to the supplier during the duration of the goods and the business through the consistency of high-quality raw resources and successfully guaranteeing that goods are manufactured and successfully delivered to clients. It was also claimed that opposing logistics covers the costs of transporting and storing a lot of stuff. Logistics operations are thought of as the executive merger of all supply chain processes that provide the offered goods while also attempting to reduce costs and, as a result, appeal to the cash market (Li & Weimin, 2022; Rashid, 2016).

2.1 Differences Between Logistics and Green Logistics

Different authors provide equivalent explanations of logistics (Yaw et al., 2020). Among the most important duties carried out by enterprises, supply chain operations, particularly logistics activities, pose a threat to the sustainability of the planet and the existence of humanity. Energy use, waste production, and dangerous gas emissions are all rising as a result of these activities. Global carbon emissions have increased by 90% during the 1970s, with industrialization and the burning of fossil fuels accounting for about 78% of those emissions (Rashid & Rasheed, 2023; Baloch & Rashid, 2022). Inefficient administration of the logistics may result in increased energy and waste use as well as greenhouse gas emissions, it would produce too much pollution. states that logistics entail delivering the right goods in the right way, in the right quantity, in the right quality, at the right time, for the right client, at the right cost. In the supply chain control glossary logistics is described as “the technique of planning, implementing, and controlling approaches for the green and powerful transportation and garage of products inclusive of services, and associated records from the factor of foundation to the factor of intake for the cause of conforming to patron requirements. This definition consists of inbound, outbound, internal, and outside movements. It may be visible that the kind author stresses that logistics consists of the switch of products and records, which need to be planned, applied, and managed in the maximum green manner with the intention to meet the wishes of the patron. The term “inexperienced logistics” is described as supply chain control practices and techniques that lessen the environmental and electricity footprint of freight distribution, which makes a speciality of cloth handling, waste control, packaging, and transport note that All activities related to eco-friendly management of the top and opposing flows of goods, as well as records between the factor of foundation and the factor of intake, are considered to be part of green logistics. The goal is to meet or surpass customer demand (Rodrigue et al., 2017). Green Supply Chain Management, which is a company's interest in taking environmental issues into account and integrating them into supply chain management with the goal of changing the environmental performance of suppliers and consumers, can be used to describe inexperienced logistics.

2.2. The Factors Influencing Green Logistics

Demand for environmental practices has increased recently due to the sharp rise in the use of

resources and energy, as well as the emission of waste and dangerous gases into the environment, as a result of the sharp rise in demand for products and services, as well as transportation. Primary and secondary stakeholders have expressed interest in the environmental issues sparked by business operations, and they have urged businesses to develop policies and plans to lessen the harm that their actions will cause to the environment and public safety. This demand has encountered resistance since some practitioners and researchers contend that firms should focus on maximizing shareholder profit while governments should take care of social and environmental challenges (Wang, 2018). Pagell and Wu (2009) stressed that the goals of the green logistics concept would be fulfilled by sustainable improvement continuing within the businesses, leading to administrative exam practices that result in the coolest control of the supply chain, which is a mixture of financial-financial and social sports. Rashid et al. (2023) stated that green logistics entails activities linked to strong control that serve as the flow of goods and records from the source of beginning to customers. When it comes to creating and building the infrastructure of the economic system in any nation, the shipping sector offers the greatest difficulty. As a result of this fluctuating nature of the market, developing relationships with the environment is a key hobby when developing internal plans for green logistics.

2.3 Theoretical Background

After examining earlier research on green logistics, the theory is examined. The independent variable is green logistics and the dependent variables are: financial economic, social and environmental, and are applied to clarify the impact on social and environmental conditions within Pakistan, to implement green logistics in place of conventional logistics, financial economics is a crucial indicator of a country's economic health. The philosophy of our research is “Positivism” because our research is scientifically verified and has logical proof. We used the “Deductive Approach” because we are testing the theory (Rashid et al., 2021; Khan et al., 2022a). The strategy we are using is the “Survey Research” strategy in our research. We are using Data analysis and Regression analysis through SPSS software. In this study, we investigated the influence of financial, economic, social, and environmental factors and employed two primary theories—Logistic Theory and New Trade Theory—to clarify the impact on social and environmental situations within Pakistan. Please review the research approach for the study model. Theory of logistics (Avotra et al., 202; Khan et al., 2023a) defined logistics as everything that can be used for both primary and secondary tasks. Nevertheless, Khan et al. (2019) relate business performance to logistics. As a part of supply chain management, logistics is in charge of planning, controlling, and storing goods, services, and information from their origin to their final destination in order to meet consumer demands. In contrast, logistics involves processing, storage, and movement of products during manufacturing processes, such as the changeover from raw materials to finished goods. According to Gunasekaran et al. (2003), researchers have shown that logistics is essential for corporate expansion and cost control. The new trade theory is used to explore the effects of green logistic performance and infrastructure on service trade and the environment through the mediating roles of service quality and firm performance (Rezaei et al., 2018). a collection of international trade economic models that employ imperfect competition and rising returns to scale to analyze trade, laying the foundation for a new theory of trade. The new trade theory has led to an increase in cross-national interdependence. An increase in the cost of trade, mobility, and transportation is what leads to cross-interdependence. Based on the previous literature and theoretical support, the below hypothesis were developed and figure 1 represents the same along with the variables:

H1: Company finances have a significant effect on green logistics.

H2: Company environmental & social performance has a significant effect on green logistics.

H3: Logistics networking & transport has a significant effect on green logistics.

H4: Information sharing has a significant relationship with green logistics.

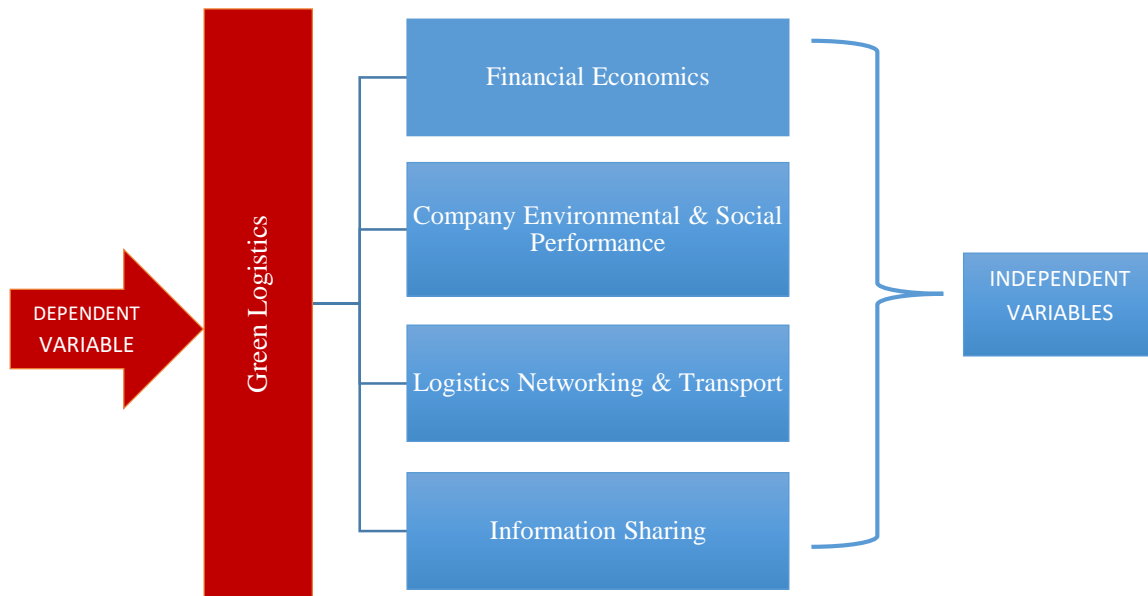


Figure 1: Theoretical framework
Source: Literature

3. Research Methodology

The paper's objective was to investigate how green logistics are used in organizations to promote sustainable growth. Providing a theoretical overview of green logistics in the workplace was the paper's main goal based on the development of scientific information. Practical recommendations and conclusions for businesses functioning in organizations are based on the statistical validation of the research findings and subsequent practical application of the questionnaire research. Maintaining a high standard of environmental quality, safeguarding natural resources, making optimal use of natural resources, and reducing environmental restraints are given top importance in sustainable development. In order to prevent environmental harm, corporations must manage the environment properly. Since we are confirming a theory in this study, explanatory research is the methodology used (Richnák & Gubová, 2021; Rasheed et al., 2023; Khan et al., 2022b). We used a quantitative research design. As our study is based on confirming a theory so we used correlation design to analyze and assess the relationship between the constructs of our study.

This sample's student population has an average lifespan of 23 years and an average age of 23.8 years. The bulk of pupils falls into the "20 to 25 years old" age group. This can be explained by the fact that the majority of students either pursue undergraduate (Bachelor's) or graduate-level studies (Master's). In terms of gender, the poll had, on average, more men than women (58% men). The fact that more men are interested in working in supply chain management may account for the increased involvement rate among men (Verheul et al., 2012). For our study, we will collect data from professionals/students serving in the field of the supply chain. Our goal is to gather 200 or more sample replies from supply chain specialists working for textile companies in Karachi, Pakistan, for our study. Our goal is to gather 200 or more sample replies from supply chain specialists working for textile companies in Karachi, Pakistan, for our study (Rashid et al., 2022a). Nonprobability sampling is the method we employ. The convenience sampling technique has also been used to obtain data from the sample population. Because Cronbach's alpha is greater than 0.70, the scale's dependability is validated (Rashid et al., 2021; Khan et al., 2021).

The questionnaire served as the research tool. 20 questions made up the test, with open-ended, closed-ended, semi-closed-ended, and rating scale questions all present. The questions for the rating scale were created using the Likert scale. The survey was created using an electronic format. For the reliability of measurements in our survey has been tested through Cronbach's alpha (α). For data

collection in our study. We have variables Green Logistics, Financial Economics, Company Environmental & Social Performance, Logistics Networking & Transport, and Information Sharing. Our aim is to collect 200 sample responses for our study from the supply chain specialists working with Pakistani textile companies in Karachi. Primary (first-hand responses) data were gathered from supply chain managers of Karachi-based textile companies (Hashmi & Mohd, 2020; Haque et al., 2021; Das et al., 2021).

3.3 Statistical Technique

The study used (Chronbach's alpha) from reliability analysis and multiple regression analysis for data analysis. Multiple linear regression analysis is mostly used to assess the relationship between one dependent variable and two or more independent variables. That is why we used the method of multiple regression analyses used for the analysis of primary data for inferential statistics (Ostertagová, 2012). Multiple linear regression analysis has been used that enables us to test hypotheses between one dependent variable and two or multiple independent variables. That is why we used the method of multiple regression analyses used for the analysis of primary data for the inferential statistics.

4. Analysis and Findings

Verifying the independence or dependence of each variable's component is a reliable way to maintain consistency. So, in the given research reliability analysis is important. The value of Cronbach's alpha should be above 0.7 then the construct is reliable (Hashmi et al., 2020). The independent variables used in the study are Financial Economics, Company Environmental & Social Performance, Logistics Networking & Transport, and Information Sharing while the dependent variable is Green Logistics. table 1 illustrates that the value of Cronbach's alpha is 0.889 which is above the minimum acceptable value of 0.70 (Rashid et al., 2020). The link between the independent and dependent variables was examined using various tests.

Table 1: Reliability statistics

Cronbach's Alpha	N of Items
.889	25

Source: SPSS output

A Pearson Correlation Matrix in table 2 shows the moderate to high correlations between each variable. Values range from -0.98 to 0.699, with significant p values. Values demonstrate each variable's correlation with the others and support the validity of the hypothesis we developed (Hashmi et al., 2021a, b).

Table 2: Correlations

		Green	Financial	Social	Transport	Information
Green	Pearson Correlation	1	.699**	.648**	.366**	-.098*
	Sig. (2-tailed)		.000	.000	.000	.171
	N	199	199	199	199	199
Financial	Pearson Correlation	.699**	1	.614**	.515**	-.062
	Sig. (2-tailed)	.000		.000	.000	.383
	N	199	199	199	199	199
Social	Pearson Correlation	.648**	.614**	1	.217**	-.065
	Sig. (2-tailed)	.000	.000		.002	.359
	N	199	199	199	199	199
Transport	Pearson Correlation	.366**	.515**	.217**	1	-.256**
	Sig. (2-tailed)	.000	.000	.002		.000
	N	199	199	199	199	199
Information	Pearson Correlation	-.098	-.062	-.065	-.256**	1
	Sig. (2-tailed)	.171	.383	.359	.000	
	N	199	199	199	199	199

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

Source: SPSS Output

The three elements are shown in the model summary table 3 to demonstrate the model's applicability to the independent and dependent variables: R, R-square, and Standard Error of Estimates. The value of the R-square in the regression model determines the proportion of the variance among dependent variables which can be explained by the independent variable. While adjusted R² indicates the variance or impacts in accordance with the modification of the error and external factors. Now model summary shows that independent variables (Financial Economics, Company Environmental & Social Performance, Logistics Networking & Transport, and Information Sharing) predict the dependent variable (Green Logistics) by 56%. The values of adjusted R² values are adequate and fulfill the test assumptions (Hashmi et al., 2020b).

Table 3: Model summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.754 ^a	.568	.559	.41131

a. Predictors: (Constant), Financial, Social, Transport, Information
b. Dependent Variable: Green-Logistics

Source: SPSS Output

Table 4 presents the ANOVA findings, which are used to confirm the validity of the association between the independent and dependent variables for which we look at the value of F. While the sig value is used to indicate whether there is a significant association between the independent and dependent variables. The findings indicate that the value of F is 63.828, indicating a reliable relationship between the independent variables of (financial economics, company environmental and social performance, logistics networking and transport, and information sharing) and a significant relationship as indicated by the p-value of $0.00 < 0.001$ for the dependent variable of green logistics (Rashid et al., 2022b).

Table 4: ANOVA^a

Model		Sum of Squares	F	Sig.
1	Regression	43.192	63.828	.000 ^b
	Residual	32.820		
	Total	76.012		

a. Predictors: (Constant), Financial, Social, Transport, Information

b. Dependent Variable: Green-Logistics

Source: SPSS Output

The table 5 shows the coefficient values of p values conveying that Financial Economics, Company Environmental & Social Performance, and Green Logistics have a significant effect (p-value 0.05) while Logistics Networking & Transport, Information Sharing, and OP have an insignificant effect (p-value > 0.05) (Green Logistics).

Table 5: Coefficients^c

Model	Unstandardized Coefficients		Standardized Coefficients	Sig.
	B	Std. Error	Beta	
(Constant)	0.620	.436		0.156
1 Financial	0.486	.074	0.453	0.000
2 Social	0.367	0.62	0.357	.000
3 Transport	.050	.062	0.046	0.422
4 Information	.074	0.106	-0.034	.488

Source: SPSS Output

5. Conclusion

This paper examines financial economic analyses of green logistics activities, company environmental and social performance, logistics networking transport, and information sharing. In our

study, we are confirming a theory so the approach applied here as research type is explanatory research. We are using a quantitative research design. As our study is based on confirming a theory so we used correlation design to analyze and assess the relationship between the constructs of our study. We collected 199 sample responses for our study from Karachi, Pakistan-based textile companies' supply chain specialists. We used nonprobability sampling. Further to collect data from the sample population, the convenience sampling technique has been used. In this study, simple and multiple regressions were run to assess the four hypotheses. The outcome revealed two variables, (financial economics, company environmental, and social economics) are significant for green logistics in Pakistan. However, the other two variables (logistics networking and transport & information sharing) got rejected. In the end, multiple regression was done using all the variables in green logistics activities, and two variables were found statistically significant relationship. These results highlight the importance of integrating green logistics practices in order to build a green logistics system that improves organizational support and effectiveness. According to these findings, social and environmental activities have a greater impact on green logistics than financial-economic ones on the expansion of company policies. Numerous previous studies have discussed and focused on green logistical elements. For instance, studies such as Rashid and Rasheed (2022) and Shaheen (2023) suggested that improving administrative procedures would have a favorable impact on the expansion of the green economy. Additional research, like those Pagell and Wu (2009) and Thiell and Hernandez (2010), also suggested that improving administrative procedures would have a favorable impact on the expansion of the green economy. Some studies have concentrated on green logistics with the aim of boosting customer satisfaction with the service or product offered by emphasizing product quality (Presley, 2007).

According to Voigt (2004) When creating a pricing strategy that would please clients, the cost of raw materials is a key consideration. For the purposes of green logistics, concentrated on integrating industrial activity (Carter & Rogers, 2018). It has been noted in recent study of Yildiz and Yercan (2011) modern technology is significantly boosting the competitive advantage of the logistics sector. Rashid and Rasheed (2022) and Anwar (2022) explained how the level of development and green growth is determined by the relationship between the government and businesses in the country and with other countries. Green logistics currently emphasizes factors like great service quality, safety, and the environment. According to Wang et al. (2017), Amjad (2022), and Rasheed (2022), specific industrial sectors can implement the green logistics concept. Environmental and social factors, which have an impact on economic expansion, are particularly pertinent. Despite the fact that the results of this study showed the necessity to address and include all green logistical factors. By identifying the objectives and the current financial and economic system that support a system of climate-resilient expansion in terms of the nation's economy, the study advises that attention be paid to investment operations as a quantitative protocol that contributes significantly to the adoption of green logistics. Indicators of the use of green logistics include the management of supply chains and a strong focus on reviving the market's manufacturing industries by cutting costs and improving customer service. Increased business understanding of environmental factors and consumer behavior is another component in creating an economic and financial system based on the idea of green supply chain management. Future research might analyze the idea of green logistics using various approaches and additional variables.

5.1 Discussion

Using resources efficiently, implementing new technology, and conducting business in both the domestic and global markets all depend on sustainability in the industrial sectors. The next generation of competitive, sustainable production enterprises will be driven by innovations. Innovations and technical development are seen as crucial in the search for long-term solutions to challenges in the economy and environment, such as better use of resources and energy (Ortas et al., 2014). The state of the environmental condition is influenced by the technologies, industrial infrastructure, Low devaluation of materials, raw materials, and energies, high primary, and secondary material usage, and continual fleet maintenance. The foundation for the advancement of sustainability is the implementation of environmental politics in a country based on achieving resolutions and objectives linked with environmental protection and damage repair (Muhammad, 2022a; Ahmed 2022).

Businesses encounter challenges, such as a lack of funding to integrate environmental logistics. 63.82 percent, in today's business world, sustainable development is becoming a top priority. Green logistics make the most significant contribution to global sustainability on a business level. The green infrastructure supports environmentally friendly techniques of production, distribution, and logistics, which helps to safeguard the environment. The results of connecting logistics activities with the ecosystem goals of the business which form the basis of green logistics are the synchronization and improvement of material and information flow aimed at the satisfaction of customers with consideration for the validity of expenses and minimizing negative environmental effects. In terms of the use of renewable energy sources, green packaging materials, eco-friendly transportation techniques, and reverse treatment and recycling of used goods, we can see improvements in the progress of Sustainability 2021 in logistics. Businesses are switching to more sustainable forms of transportation. In an effort to boost their degree of competitiveness and preserve their excellent reputation in both domestic and international markets, companies are taking various steps, such as moving from flying to utilizing trucks or trains, employing electric and hybrid vehicles, and so on (Richnák & Gubová, 2021; Hashmi, 2023; Hyder et al., 2023).

Logistics is a crucial part of green logistics because it primarily focuses on recycling and handling goods and packaging after they have completed their useful lives. It entails actions like making a claim, recycling, utilizing a product frequently, and disposing of it in an environmentally friendly manner (Yaw et al., 2020; Khan et al., 2023b). The steady decline in global growth has slowed the development of sustainability (Wahab, 2022; Muhammad, 2022b; Hashmi, 2022). The COVID-19 virus, which has transformed the business climate and dramatically damaged production sectors, has broken worldwide supply chains, and product supplies are currently regarded as one of the main causes. Innovation implementation's strengths and weaknesses, as well as critical infrastructure and supply chain management points, have been revealed by the coronavirus pandemic. The current pandemic case creates new opportunities for logistics research, especially in relation to the development and introduction of changes and innovations helped bring about through pandemic crises, which exhibited themselves in the supply chain in the unique acquisition, generation, and distribution transportation methods.

5.2 Implications, Limitations, and Recommendations

The management of the company can contrast the study's findings with those of its rivals in the market, and they can employ green logistics practices to preserve their place there. The term of green logistics also helps organizations create an intellectual framework that increases added value. The results of the study strengthen the continuity of green logistics within the company. With regards to environmental indicators in particular, green logistics has a behavioral impact on the success of the business, and the country, as well as the trends and attitudes that will direct businesses' future growth.

Few limitations in our study, the limited observations of 199 responses, so in our study, the revalidation of variables has not been conducted. Second, the green logistics concept is so wide that the overall domain is not possible to be studied in one research. Responses have been taken from responses from multiple organizations. Analysis based on results has been interpreted focusing on limitations. Furthermore, the geographical location is limited to Karachi, Pakistan. Because of this limitation, this study might contribute findings weakly supporting the theory due to technological advancement, priorities of the government, economic conditions, political uncertainty, and environmental taxes.

This research is not only for the subject purpose but also it is useful in future studies or future research if someone has a similar topic of the supply chain so it will be useful for them also to study it and not only for study it is also helpful and useful for the future research regarding Influence of Green logistics and helps to predict not only the significant influence but also the correlation of the independent variable against the dependent variable.

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Appendix: Questionnaire

Questionnaire development on factors influencing sustainable green logistics systems inside the organization
 Part 1 – Demographic Profile

a) Gender	
Male	Female
b) Age	
20-30 Years	31-40 Years
41-50 Years	51-60 Years
c) Level of Education	
Matric	Intermediate
Graduate	Postgraduate
d) Experience in Dairy Sector	
0-5 Years	6-10 Years
11-15 years	16 Years and above

Part 2 –Please rate on the basis of the options mentioned below:

- 1) Strongly disagree
- 2) Disagree
- 3) Neutral
- 4) Agree
- 5) Strongly agree

Items

Green Logistics

Our company integrates environmental responsibility into our business strategy.
 Our company establishes its business strategy based on the balance between commercial and environmental goals.
 Our company establishes a unified environmental and business strategy.
 Our company uses an environmental management system that integrates environmental responsibility into employee codes of conduct.
 Green logistics is favorable for environmental protection.

Financial Economics

Our company engages our external stakeholders in dialogue to coordinate environmental initiatives.
 Our company communicates to external stakeholders about the cost they have to bear for environmental strategies.
 Our company involves external stakeholders in environmental initiatives as part of our voluntary environmental agreements. Our company establishes good lines of communication with external stakeholders.
 Cost reduction on energy savings.
 Cost reduction on waste disposal.

Company Environmental & Social Performance

Reduction in total fuel consumption used in the transportation of products/services.
 Reduction in total paper used
 Reduction in total packaging materials used
 Reduction in air emissions
 Reduction in the solid waste disposal

Logistics Networking & Transport

Our company integrates environmental, quality, and other standards into one management system.
 Our company utilizes cleaner transportation modes.
 Our company improves vehicle fill.
 Our company carefully schedule transportation routes to reduce emission.
 Reduction in total fuel consumption used in the transportation of products/services

Information Sharing

Our company exchanges information about cleaner production and technologies with suppliers.
 Our company exchanges information about environmental practices with suppliers
 Our company uses electronic information mode.
 Our company helps suppliers share environmental best practice information with each other.
 Our company prefers to use fewer papers.
