



# **Influence of Lean Supply Chain Management Strategies and Organizational Sustainability of Manufacturing Firms in Rivers State**

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## **ABSTRACT**

This study examines influence of lean Supply Chain Management Strategies and Organisational Sustainability of Manufacturing Firms in Rivers State. 2 research questions and 2 hypotheses were developed to guide the study. Cross sectional survey design was adopted for this study. The study involves the analysis of the relationships between the dimensions of supply chain management strategies and organizational sustainability. The population of this study is thirty-two (32) manufacturing companies in Rivers State which are registered with the Rivers branch of Manufacturers Association of Nigeria (MAN). The study adopted the census techniques. One of the reasons for applying census method is the limited and manageable size of the population. There are only 32 registered firms with MAN in the State. With regard to the respondents of the study given the strategies nature of the study, three key managers (production manager, marketing manager and logistics manager) were chosen as respondents from each, of the thirty two firms is the sample. This gave us a total of ninety two (92) for the study. The research questions were analysis with the aid of descriptive statistics using mean and standard deviation while hypotheses were tested using Pearson product moment correlation on SPSS. The study revealed that lean supply chain management enhance environmental sustainability, just in time supply chain management enhance economic sustainability of manufacturing firms in Rivers state, there is a significant relationship between lean supply chain management and environmental sustainability of manufacturing firms in Rivers state, there is a significant relationship between just in time supply chain management and economic sustainability of manufacturing firms in Rivers state. The study recommended that to implement these approaches successfully, organizations need to consider several key factors, such as supplier relationships, production planning, inventory management, and logistics optimization.

**Keywords:** Supply Chain, Management Strategies, Organisational Sustainability, Manufacturing Firms

## **INTRODUCTION**

Influence of Supply chain management (SCM) has become a critical aspect of business operations in today's globalized economy. SCM involves the coordination of activities such as procurement, production, and distribution to ensure that products are delivered to customers efficiently and effectively (Chopra, & Meindl, 2016). The success of SCM depends on the implementation of effective strategies that can optimize the flow of goods and services across the supply chain. The

study of SCM strategies is essential for businesses seeking to gain a competitive advantage in the market. The identification and implementation of effective SCM strategies can lead to increased efficiency, reduced costs, improved customer satisfaction, and enhanced profitability. However, the selection of appropriate SCM strategies requires an understanding of the various factors that influence supply chain performance, including technological advancements, environmental factors, and market trends.

Lean Supply chain management strategies refer to the various approaches and techniques used by organizations to manage their supply chain activities effectively. Supply chain management is a critical aspect of business operations that involves the coordination and integration of various functions, including procurement, production, transportation, warehousing, and distribution. Effective supply chain management strategies enable organizations to optimize their supply chain processes, reduce costs, improve customer satisfaction, and enhance their competitive advantage in the marketplace. According to Chopra, and Meindl, (2016). There are several supply chain management strategies that organizations can adopt to improve their supply chain performance. These include: Lean Supply Chain Management: This strategy focuses on minimizing waste and maximizing efficiency in the supply chain processes through continuous improvement initiatives. Agile Supply Chain Management: This strategy emphasizes flexibility and responsiveness in the supply chain processes to adapt quickly to changing market demands. Just-in-Time (JIT) Supply Chain Management: This strategy involves producing and delivering goods just in time to meet customer demand while minimizing inventory holding costs (Christopher,& Peck, 2004).

Organizational sustainability refers to the ability of an organization to maintain its operations and meet the needs of the present without compromising the ability of future generations to meet their own needs (Epstein, & Buhovac, 2014). It involves balancing economic, social, and environmental factors in decision-making processes to ensure long-term viability and success.

According to Lozano, et al., (2015) Organizational sustainability refers to the ability of an organization to maintain its operations and achieve its objectives over the long term while minimizing negative impacts on the environment, society, and the economy. There are several types of organizational sustainability that organizations can focus on to ensure they are sustainable in the long run. Environmental Sustainability: This type of sustainability focuses on reducing an organization's impact on the environment. It involves reducing waste, conserving resources, and minimizing pollution. Social Sustainability: Social sustainability focuses on ensuring that an organization's operations do not harm society or its stakeholders. This includes fair labor practices, community engagement, and ethical business practices. Economic Sustainability: Economic sustainability involves ensuring that an organization is financially stable and can continue to operate over the long term. This includes managing costs, generating revenue, and investing in research and development (Schaltegger, & Wagner, 2011). Various studies (Christopher,& Peck, 2004) have been carried out , however none of this study were centered on supply chain management and organizational sustainability of manufacturing firms in Rivers state, I is in the light of the above that this study is carried out to fill this lacuna by providing empirical evidence on the relationship between supply chain management and organizational sustainability of manufacturing firms in Rivers state.

### **Statement of the Problem**

Influence of lean Supply chain management strategies play a crucial role in ensuring organizational sustainability. Organizations need to develop effective supply chain management strategies that will help them to achieve their sustainability goals. However, many organizations face challenges in developing and implementing supply chain management strategies that are aligned with their sustainability goals. Some of the challenges include lack of resources, limited knowledge and expertise, and resistance to change.

Supply chain management strategies refer to the processes and activities involved in the production, transportation, and distribution of goods and services. Organizational sustainability, on the other hand, refers to the ability of a company to maintain its operations and meet its obligations while minimizing negative impacts on the environment and society. While supply chain management strategies are critical for ensuring efficient operations and profitability, they can also pose significant challenges to organizational sustainability. Some of the problems associated with supply chain management strategies and organizational sustainability include: Environmental degradation: Supply chain

activities such as transportation, packaging, and disposal of waste can have significant environmental impacts, including pollution, deforestation, and greenhouse gas emissions. Social issues: Supply chain practices such as labor exploitation, poor working conditions, and human rights violations can lead to negative social impacts on workers and communities. Economic risks: Supply chain disruptions due to natural disasters, political instability, or economic downturns can have significant financial consequences for companies. Lack of transparency: Many companies lack transparency in their supply chains, making it difficult to identify and address sustainability issues. Regulatory compliance: Companies must comply with a range of regulations related to environmental protection, labor standards, and product safety across their supply chains. Therefore, there is a need for organizations to understand the key factors that influence the development and implementation of effective supply chain management strategies for organizational sustainability.

### **Aim and Objectives of the Study**

The aim of this study is to determine the relationship between influence of supply chain management strategies and organizational sustainability of manufacturing firms in Rivers state. other specific objectives are to:

- 1) determine the relationship between lean supply chain management and environmental sustainability of manufacturing firms in Rivers state.
- 2) determine the relationship between just in time supply chain management and economic sustainability of manufacturing firms in Rivers state.

### **Research Questions**

The following research questions were raised to guide the study:

- 1) what is the relationship between lean supply chain management and environmental sustainability of manufacturing firms in Rivers state?
- 2) what is the relationship between just in time supply chain management and economic sustainability of manufacturing firms in Rivers state?

### **Research Hypotheses**

The following null hypotheses were formulated to guide the study:

**Ho<sub>1</sub>:** there is no significant relationship between lean supply chain management and environmental sustainability of manufacturing firms in Rivers state.

**Ho<sub>2</sub>:** there is no significant relationship between just in time supply chain management and economic sustainability of manufacturing firms in Rivers state.

### **Significance of the Study**

Supply chain management (SCM) is a critical aspect of organizational sustainability. The effective management of supply chains is essential for businesses to achieve long-term sustainability goals, including reducing environmental impact, improving social responsibility, and enhancing economic performance. A study on supply chain management and organizational sustainability is significant because it helps organizations understand the importance of integrating sustainability into their supply chain operations, which can lead to improved performance and competitive advantage.

One of the key benefits of an effective SCM system is that it can help reduce waste and inefficiencies in the supply chain. This can lead to cost savings for businesses and reduce their environmental impact. Additionally, effective SCM can help organizations improve their social responsibility by ensuring that suppliers adhere to ethical and sustainable practices. This can help build trust with customers and stakeholders and enhance the organization's reputation. Another important aspect of SCM is its ability to enhance economic performance. By optimizing supply chain operations, businesses can improve their efficiency, reduce costs, and increase profitability. This can help organizations remain competitive in the marketplace and achieve long-term financial sustainability. Supply chain management and organizational sustainability is significant because it highlights the importance of integrating sustainability into supply chain operations. Effective SCM can lead to cost savings, improved social responsibility, enhanced reputation, and increased profitability.

### **Conceptual Review**

#### **Supply Chain Management Strategies**

Supply chain management (SCM) is the coordination and management of all activities involved in the production and delivery of goods and services, from raw materials to the final product. SCM

strategies aim to optimize the flow of goods and information across the supply chain to increase efficiency, reduce costs, and improve customer satisfaction. SCM strategy is inventory management, which involves managing inventory levels to ensure that there is neither too much nor too little inventory on hand. This can be achieved through various methods such as just-in-time (JIT) inventory, which involves ordering inventory only when it is needed, or vendor-managed inventory (VMI), where suppliers manage the inventory levels for their customers (Chopra, & Meindl, 2015).

SCM strategy is logistics management, which involves managing the transportation of goods from suppliers to customers. This includes selecting the most efficient transportation modes and routes, optimizing delivery schedules, and managing warehouse operations (Narasimhan, 2016). SCM strategies also involve supplier relationship management, which focuses on building strong relationships with suppliers to ensure a reliable supply of high-quality materials at competitive prices. This includes supplier selection, negotiation, and performance monitoring.

Lean Supply Chain Management (LSCM) is a critical area of study for businesses that seek to optimize their operations and reduce costs. SCM strategies aim to improve the efficiency of the supply chain by identifying and addressing bottlenecks, reducing lead times, improving communication between suppliers and customers, and managing inventory levels. Numerous studies have been conducted on SCM strategies to identify best practices and develop frameworks for implementation. One study by Lambert and Cooper (2020) identified eight key processes in SCM: customer relationship management, supplier relationship management, customer service management, demand management, order fulfillment, manufacturing flow management, procurement, and product development and commercialization. The authors noted that effective coordination of these processes is critical to achieving a successful SCM strategy.

## **Dimensions of Supply Chain Management strategies**

### **Lean Supply Chain Management**

Lean supply chain management refers to the process of applying lean principles to the management of the supply chain. Lean principles are focused on eliminating waste and maximizing value for customers. This approach involves streamlining processes, reducing inventory levels, improving quality, and increasing efficiency. The goal of lean supply chain management is to create a more agile and responsive supply chain that can quickly adapt to changes in demand and market conditions (Bicheno, & Holweg, 2019).

One of the key principles of lean supply chain management is just-in-time (JIT) inventory management. This approach involves producing and delivering goods only when they are needed, rather than maintaining large inventories. JIT can help reduce inventory costs and improve efficiency by eliminating the need for storage space and reducing the risk of obsolescence. Another important principle of lean supply chain management is continuous improvement. This involves constantly seeking ways to improve processes and eliminate waste. By continuously improving processes, organizations can reduce costs, increase efficiency, and improve customer satisfaction (Christopher, & Peck, 2014).

Lean supply chain management also emphasizes collaboration and communication between suppliers, manufacturers, distributors, and customers. By working together, these stakeholders can identify opportunities for improvement and develop solutions that benefit everyone involved. Lean supply chain management is a holistic approach to managing the supply chain that focuses on creating value for customers while minimizing waste and maximizing efficiency (Christopher, & Peck, 2014).

Lean supply chain management is a business strategy that focuses on reducing waste and increasing efficiency in the supply chain process. This approach aims to eliminate non-value-added activities, optimize resources, and improve customer satisfaction. Several studies have been conducted to evaluate the effectiveness of lean supply chain management in different industries. Li and Lin (2021) examined the implementation of lean principles in a Taiwanese electronics company. The researchers found that lean practices led to significant improvements in inventory turnover, production lead time, and defect rate. Another study by Shah and Ward (2017) investigated the impact of lean supply chain management on performance in the automotive industry. The authors concluded that lean practices resulted in better quality, reduced costs, and increased customer satisfaction.

### **Just in time Supply Chain Management**

Just-in-time (JIT) influence of lean supply chain management is a production strategy that aims to minimize inventory and increase efficiency by producing goods only when they are needed. JIT is a pull-based system that relies on customer demand to drive production. This approach helps companies reduce waste, improve quality, and increase agility. JIT has become an essential part of many industries, including manufacturing, retail, and healthcare. One of the key benefits of JIT is that it reduces inventory costs. By producing goods only when they are needed, companies can avoid the expense of storing excess inventory. This approach also helps companies avoid the risk of overproduction, which can lead to waste and obsolescence. JIT also improves quality by reducing the likelihood of defects and errors. With JIT, each product is produced to meet specific customer requirements, which helps ensure that the product meets or exceeds expectations (Choi et al., 2021).

Another benefit of JIT is that it increases agility. By producing goods only when they are needed, companies can quickly respond to changes in customer demand or market conditions. This approach also helps companies reduce lead times and improve delivery times. JIT can also help companies improve their relationships with suppliers by creating more predictable demand patterns and reducing the need for large orders (Choi et al., 2021). However, implementing a JIT system requires careful planning and coordination. Companies must have reliable suppliers, efficient production processes, and accurate demand forecasts. They must also have strong communication channels with customers to ensure that they can quickly respond to changes in demand. JIT supply chain management is a powerful strategy that can help companies reduce costs, improve quality, and increase agility. While it requires careful planning and coordination, the benefits of JIT make it an essential part of modern business operations.

Just-in-time (JIT) is a lean supply chain management strategy that aims to reduce inventory and increase efficiency by producing and delivering goods just in time for their use. JIT has been widely studied in the field of operations management, and numerous studies have examined its effects on various aspects of supply chain performance. Lee et al. (2020) investigated the effects of JIT on inventory levels and found that it can significantly reduce inventory holding costs. Similarly, a study by Wu et al. (2020) examined the impact of JIT on lead times and found that it can lead to shorter lead times and faster delivery. Choi et al. (2021) examined the impact of JIT on environmental sustainability and found that it can lead to reduced waste and improved environmental performance. These studies suggest that JIT can be an effective strategy for improving supply chain performance across a range of dimensions.

### **Organizational Sustainability**

Organizational sustainability refers to the ability of an organization to maintain its operations and meet its goals over the long term while considering the impact on the environment, society, and economy. This concept is becoming increasingly important in today's business world as companies recognize the need to balance profitability with social responsibility and environmental stewardship (Epstein, & Buhovac, 2014).

Organizational sustainability is environmental sustainability. This involves reducing the organization's environmental impact by minimizing waste, conserving resources, and adopting sustainable practices (Lozano, & Huisin, 2021). Another important aspect is social sustainability, which involves promoting social justice, human rights, and ethical behavior within the organization and its supply chain. Finally, economic sustainability involves ensuring that the organization remains financially viable over the long term by managing risks and adapting to changing market conditions. Achieving organizational sustainability requires a comprehensive approach that involves all stakeholders, including employees, customers, suppliers, and shareholders. It also requires a commitment to continuous improvement and innovation, as well as transparency and accountability in reporting on sustainability performance. Organizational sustainability is essential for businesses to thrive in the long term while also contributing to a more sustainable future for society and the planet (Schaltegger, et al., 2016).

## **Measures of Organizational Sustainability**

### **Environmental sustainability**

Environmental sustainability refers to the responsible use and management of natural resources in a way that meets the needs of the present generation without compromising the ability of future generations to meet their own needs. It involves striking a balance between economic growth, social development, and environmental protection. This concept has gained widespread attention in recent years due to the increasing concern about the negative impacts of human activities on the environment. One of the key aspects of environmental sustainability is reducing carbon emissions and mitigating climate change. This can be achieved through measures such as promoting renewable energy sources, improving energy efficiency, and reducing reliance on fossil fuels. Another important aspect is protecting biodiversity and ecosystems by preserving natural habitats, reducing pollution, and promoting sustainable land use practices (Kammen & Kapadia, 2019).

Environmental sustainability also involves promoting sustainable consumption and production patterns. This includes reducing waste and pollution, promoting recycling and reuse, and adopting sustainable agriculture practices. It also involves promoting social equity and ensuring that all members of society have access to clean air, water, and other resources. Environmental sustainability is a complex and multifaceted concept that requires a comprehensive approach involving various stakeholders such as governments, businesses, civil society organizations, and individuals (Kammen & Kapadia, 2019). It requires a long-term perspective that takes into account the needs of both present and future generations.

Environmental sustainability refers to the responsible use of natural resources and the protection of the environment to ensure that future generations have access to these resources. This concept has gained significant attention in recent years due to concerns about climate change, pollution, and other environmental issues. Many studies have been conducted on environmental sustainability to understand the challenges and opportunities associated with this concept.

In addition to technological and ecological approaches, research on environmental sustainability has also explored social and economic factors that contribute to sustainable development. For example, studies have analyzed how policies and regulations can promote sustainable practices in industries such as transportation, construction, and manufacturing (Wang et al., 2019). Other research has investigated the role of education and public awareness campaigns in promoting sustainable behaviors among individuals and communities (Stern et al., 2017). These studies on environmental sustainability are critical for understanding how we can protect our planet's natural resources while meeting the needs of current and future generations. By identifying best practices for sustainable development across a range of sectors, these studies can inform policy decisions, business practices, and individual actions that support a more sustainable future.

### **Economic Sustainability**

Economic sustainability refers to the ability of an economy to maintain its growth and development over time while ensuring that natural resources are not depleted or degraded beyond their capacity to regenerate. This concept is based on the idea that economic growth should not come at the expense of environmental degradation or social inequality. Achieving economic sustainability requires a balance between economic, social, and environmental factors, and it involves long-term planning and decision-making (Raworth, 2017).

One key aspect of economic sustainability is resource management. This involves using resources in a way that ensures their availability for future generations. For example, sustainable forestry practices involve harvesting trees in a way that allows new trees to grow and mature, rather than clear-cutting large areas of forest. Similarly, sustainable agriculture involves using farming practices that do not deplete soil fertility or rely heavily on chemical inputs. Another important aspect of economic sustainability is reducing waste and pollution. This can be achieved through the use of cleaner technologies and production processes, as well as through recycling and waste reduction programs. By reducing waste and pollution, businesses can save money on raw materials and energy costs while also minimizing their impact on the environment (Raworth, 2017).

According to Raworth (2017) Economic sustainability also involves promoting social equity and inclusion. This means ensuring that all members of society have access to economic opportunities and benefits, regardless of their background or socioeconomic status. This can be achieved through

policies such as minimum wage laws, affordable housing programs, and job training initiatives. Achieving economic sustainability requires a comprehensive approach that balances economic growth with environmental protection and social equity. By adopting sustainable practices and policies, businesses and governments can ensure that their economies remain strong and resilient over the long term.

Economic sustainability refers to the ability of an economy to maintain its productivity and growth while preserving the environment and meeting the needs of future generations. Several studies have been conducted to explore different aspects of economic sustainability. One area of research has focused on the impact of economic growth on the environment. A study by Stern (2017) found that climate change caused by greenhouse gas emissions could have severe economic consequences, including reduced agricultural productivity, increased health costs, and damage to infrastructure. The study emphasized the importance of reducing emissions through policies such as carbon pricing and investing in low-carbon technologies.

Another area of research has examined the role of natural resources in economic sustainability. A study by Dasgupta (2021) argued that natural capital, such as forests and fisheries, is essential for long-term economic growth and development. The study called for policies that promote sustainable use and conservation of natural resources. A third area of research has focused on the relationship between economic sustainability and social justice. A study by Raworth (2017) proposed a new framework for economic development that prioritizes human well-being and environmental sustainability over traditional measures such as GDP growth. The study called for policies that address inequality, promote gender equity, and ensure access to basic needs such as food, water, and healthcare. A fifth area of research has examined the role of government policies in promoting economic sustainability. A study by Stiglitz et al. (2019) argued that market failures, such as externalities and information asymmetries, require government intervention to promote sustainable economic development. The study called for policies that address these market failures, such as environmental regulations and investments in public goods. These studies demonstrate the complexity of achieving economic sustainability and the need for interdisciplinary approaches that consider environmental, social, and economic factors.

## **METHODOLOGY**

Cross sectional survey design was adopted for this study. the study involves the analysis of the relationships between the dimensions of supply chain management strategies and organizational sustainability. The population of this study is thirty two (32) manufacturing companies in Rivers State which are registered with the Rivers branch of Manufacturers Association of Nigeria (MAN). The sample size for this study is the thirty two (32) manufacturing companies earlier indicated as the population. The study adopted the census techniques. One of the reasons for applying census method is the limited and manageable size of the population. There are only 32 registered firms with MAN in the State. With regard to the respondents of the study given the strategies nature of the study, three key managers (production manager, marketing manager and logistics manager) were chosen as respondents from each, of the thirty two firms is the sample. This gave us a total of ninety two (92) for the study. Primary data were collected expressly for a specific purpose by the investigator himself. This data gives the exact information wanted. Primary data mainly come from direct observation of events, manipulation of variables, performance of experiments and responses to questionnaire. The primary data for this study were generated through questionnaire. The research questions were analysis with the aid of descriptive statistics using mean and standard deviation while hypotheses were tested using Pearson product moment correlation on SPSS.

**RESULTS**

**Research Question one:** *What is the relationship between lean supply chain management and environmental sustainability of manufacturing firms in Rivers state?*

**Table 1: Descriptive Statistics on Lean Supply Chain Management**

	N	Min	Max	Sum	Mean	Std. Dev
Our firm often conduct value stream mapping exercises in our supply chain	86	1	5	252	2.93	1.509
Our firm current level of inventory management system in reducing waste and improving efficiency is very effective	86	1	5	264	3.07	1.555
Our firm often conduct continuous improvement projects in our supply chain	86	1	5	264	3.07	1.555
The level of collaboration between different stakeholders in our supply chain is effective	86	1	5	234	2.72	1.642
Our firm supply chain practice in on the increasing side	86	1	4	244	2.84	1.388
Valid N (listwise)	86					

**Source: Researcher field computation via SPSS (2023)**

Table 1 revealed descriptive statistics on Lean Supply Chain Management. Our firm often conduct value stream mapping exercises in our supply chain have a mean score of 2.93, Our firm current level of inventory management system in reducing waste and improving efficiency is very effective have a mean score of 3.07, Our firm often conduct continuous improvement projects in our supply chain have a mean score of 3.07, The level of collaboration between different stakeholders in our supply chain is effective have a mean score of 2.72, Our firm supply chain practice in on the increasing side have a mean score of 2.84. based on our criterion mean, this implies that items that the mean score is below 3 is rejected and item that the mean score is 3 and above is acceptance.

**Research question two:** *What is the relationship between just in time supply chain management and economic sustainability of manufacturing firms in Rivers state?*

**Table 2: Descriptive Statistics on just in time supply chain management and economic sustainability**

	N	Min	Max	Sum	Mean	Std. Dev
Our firm implemented just-in-time (JIT) practices in our supply chain	86	1	5	293	3.41	1.544
Our firm JIT supply chain management affected our company's relationships with suppliers and customers positively	86	1	5	304	3.53	1.554
The implementation of JIT supply chain management impacted our company's inventory levels positively	86	1	5	301	3.50	1.577
Our firm JIT supply chain management practice is on the increasing side	86	1	5	277	3.22	1.725
Our firm often experience challenges in our JIT supply chain management practice	86	1	5	275	3.20	1.502
Valid N (listwise)	86					

**Source: Researcher field computation via SPSS (2023)**

Table 2 revealed descriptive Statistics on just in time supply chain management and economic sustainability. Our firm implemented just-in-time (JIT) practices in our supply chain have a mean score of 3.41, Our firm JIT supply chain management affected our company's relationships with suppliers and customers positively have a mean score of 3.53, The implementation of JIT supply chain management impacted our company's inventory levels positively have a mean score of 3.50, Our firm



JIT supply chain management practice is on the increasing side have a mean score of 3.22 , Our firm often experience challenges in our JIT supply chain management practice have a mean score of 3.20. Based our criterion mean of 3.0 and since all our item mean score is above 3.0, this implies that respondents agreed on the items.

**Hypotheses**

**Ho<sub>1</sub>:** there is no significant relationship between lean supply chain management and environmental sustainability of manufacturing firms in Rivers state.

**Correlations**

		lean supply chain management	environmental sustainability
lean supply chain management	Pearson Correlation	1	.937**
	Sig. (2-tailed)		.000
	N	86	86
environmental sustainability	Pearson Correlation	.937**	1
	Sig. (2-tailed)	.000	
	N	86	86

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

**Ho<sub>1</sub>:**there is no significant relationship between lean supply chain management and environmental sustainability of manufacturing firms in Rivers state.(correlation. 1) reveals there is a significant relationship between lean supply chain management and environmental sustainability of manufacturing firms in Rivers state(where rho = .937 and p =0.000) and based on the decision rule of  $p < 0.05$  for null rejection; we reject the null hypothesis and restate *that there is a significant relationship between lean supply chain management and environmental sustainability of manufacturing firms in Rivers state.*

**Ho<sub>2</sub>:** there is no significant relationship between just in time supply chain management and economic sustainability of manufacturing firms in Rivers state.

**Correlations**

		just in time supply chain management	economic sustainability
just in time supply chain management	Pearson Correlation	1	.977**
	Sig. (2-tailed)		.000
	N	86	86
economic sustainability	Pearson Correlation	.977**	1
	Sig. (2-tailed)	.000	
	N	86	86

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

**Ho<sub>2</sub>:**there is no significant relationship between just in time supply chain management and economic sustainability of manufacturing firms in Rivers state.(correlation. 2) reveals there is a significant relationship between just in time supply chain management and economic sustainability of manufacturing firms in Rivers state(where rho = .977 and p =0.000) and based on the decision rule of  $p < 0.05$  for null rejection; we reject the null hypothesis and restate *that there is a significant*

*relationship between just in time supply chain management and economic sustainability of manufacturing firms in Rivers state.*

### **DISCUSSION OF FINDINGS**

There is a significant relationship between lean supply chain management and environmental sustainability of manufacturing firms in Rivers state and there is a significant relationship between just in time supply chain management and economic sustainability of manufacturing firms in Rivers state

### **CONCLUSION**

This study examines the relationship between supply chain management strategies and organizational sustainability of manufacturing firms in Rivers state. the study revealed that lean supply chain management enhance environmental sustainability, just in time supply chain management enhance economic sustainability of manufacturing firms in Rivers state, there is a significant relationship between lean supply chain management and environmental sustainability of manufacturing firms in Rivers state, there is a significant relationship between just in time supply chain management and economic sustainability of manufacturing firms in Rivers state.

### **RECOMMENDATIONS**

The following are some recommendations for implementing JIT supply chain management:

1. To ensure that materials and components are delivered on time, it is important to have a good relationship with suppliers. This involves working closely with them to understand their capabilities and limitations, as well as sharing information about demand forecasts and production schedules.
2. A pull-based system means that production is triggered by actual customer orders rather than a forecasted demand. This helps to avoid overproduction and excess inventory.
3. JIT and Lean relies heavily on the quality of materials and components delivered by suppliers. Therefore, it is important to work with suppliers who have a proven track record of delivering high-quality products.
4. JIT and Lean supply chain management requires a culture of continuous improvement, where each process is constantly evaluated and refined to eliminate waste and improve efficiency.
5. Technology can play a significant role in implementing JIT and Leansupply chain management. For example, using automated systems for tracking inventory levels and monitoring supplier performance can help to streamline processes and reduce lead times.

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