

THE RELATIONSHIP AMONG OPERATIONAL EFFICIENCY, ESG IMPLEMENTATION, GREEN SUPPLY CHAIN MANAGEMENT, AND SUSTAINABLE SUPPLY CHAIN PERFORMANCE

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ABSTRACT

At present, the development of operational efficiency (OPE) has been achieved in the long term. Industry operations must be taken into account along with changes in the global environment that are deteriorating. For this reason, increasing sustainable supply chain performance (SSCP) requires Therefore it is the main factor. To solve problems for organizations to be able to operate their industries according to their objectives and in tandem with the ever-changing environment. This article therefore presents a research framework based on the research objectives as follows: 1) to study the relationship between operations by ESG implementation, green supply chain management and SSCP that affect OPE. 2) to analyze factors both direct and indirect influences on operations by ESG implementation, green supply chain management and SSCP that affect OPE, and 3) to suggest guidelines for developing OPE achieve the goal and increase SSCP, as the global environment changes. The research results according to the aforementioned conceptual framework and objectives can be used as guidelines for increasing SSCP. This leads to the development of the organization's OPE.

Keywords: ESG implementation, Green supply chain management, Sustainable supply chain performance, Operational efficiency

INTRODUCTION

This is because industry competition in each country continues to occur in the present era. and the need to increase investment in various industrial sectors of national organizations, both public and private, around the world Combined with the current environment that is not conducive to certain types of industries, the operating results have stalled. Not achieving investment goals There has been a decline in the development of organizational efficiency in the long run. Must be used in every industry or industrial operator. Therefore, industrial operations must be taken into account along with changes in the global environment. Many organizations, including global organizations such as HSBC Bank (HSBC), a leading financial institution, or the United Nations (UN) and other important organizations in the world Including Thailand itself, there is an emphasis on With this problem, many agencies such as the Bank of Thailand Ministry of Industry Department of Pollution and Environmental Promotion And entrepreneurs need to adjust proactively and reactively flexibly to the current situation and environment. To operate in tandem with the environment towards a sustainable future according to the organization's goals. Or according to the policy that the country has determined or planned. Therefore, importance must be given to developing sustainable supply chain competency development. This is a core principle that can directly support and have a positive impact on the environment. Come help drive the business into the future. The development of supply chain competencies in each organization has occurred. Along with managing policies or strategies to help make the supply chain sustainable. And it is positive for the environment as well.

The first important and necessary factor is how to develop sustainable supply chain competencies in each organization. The executives should be ready to cope with the dynamic changes in society that lead to problems. Obstacles and business opportunities With logistics being an important driving factor that causes globalization (Globalization), trade and investment can occur all over the world. As a result, society has developed and changed the world. Both in terms of prosperity, conflict, and complexity, businesses must seize opportunities or find ways to avoid them to keep up with the changes that occur (Mangan, Lalwani, & Calatayud, 2020). How do executives need to adjust plans or strategies for operations? So that the organization's results remain at a good level. And along with not destroying the environment According to the policies of every country For greater sustainability in the appropriate supply chain, it will quickly lead the organization to the set goals. Over the past decade, organizations have increasingly focused on the environmental, social, and governance (ESG) dimensions of their businesses. The most important problem in our society Businesses and investors are trying to make sense of it. The potential impacts and risks of ESG issues on an organization's operating model. However, linking global issues such as climate change water shortage and human rights implications for an organization's business operations, strategies, and risk profile can be challenging for executives and investors (Arindam Das, 2023). For this reason, ESG ratings provided by external agencies are considered valuable. Evaluating decisions and results achieved by companies involved in The problems mentioned above It indicates the risks and opportunities facing businesses and the broader economy (Daugaard and Ding, 2022). Therefore, the application of ESG policies, which includes environment, society and governance, has occurred. (Environment, Social, Governance (ESG)) in every leading industry around the world, causing the supply chain to change to a regional to global supply chain.

which from past research found that To create a sustainable supply chain performance in an industry that sees the importance of operating in tandem with protecting the environment. It can also enable organizations to improve their operational efficiency. Studies suggest that rankings or measuring ESG and environmental performance of an organization can help reduce a company's cost of capital. and adjusting the organization's supply chain Meanwhile The cost of improving company valuation and the measurement of intangible assets has been projected. as well as politics and the legitimacy market (Liu et al., 2021; Wong et al., 2021). ESG policies are applied in every industry. To build trust and flexibility, technological innovation creates new forms of regulation. in operations in the supply chain and logistics services as well as creating an environment that is conducive to operating in the industry to achieve its goals (Browne, Behrends, Woxenius, Giuliano & HolguinVeras, 2018; Taniguchi & Thompson, 2018)

Therefore, the researcher presents a research framework based on the research objectives as follows: 1) To study the relationship between operations by ESG policy and green supply chain management. Sustainable supply chain performance that affect the operational efficiency of the organization 2) to analyze factors both direct and indirect influences on operations by ESG policy, green supply chain management Sustainable supply chain performance that affect the operational efficiency of the organization 3) to suggest guidelines for developing the operational efficiency of the organization to achieve its goals and increase the efficiency of a sustainable supply chain. As the global environment changes The research results according to the aforementioned conceptual framework and objectives can be used as guidelines for increasing sustainable supply chain performance. This leads to the development of the organization's operational efficiency.

RESEARCH OBJECTIVE

This research is research that aims to increase or develop operational efficiency in the organization for long-term success. The operation of the industry must be taken into account along with changes in the rapidly changing global environment. Can refer to the basic concept framework. With the following important objectives:

1. To study ESG implementation, Sustainable supply chain performance and Green supply chain management have an effect on increasing the operational efficiency of the organization.

2. To study the variables that affect the success of the operational efficiency in organization for the long term. Based on the relationship among ESG implementation , Green supply chain management and Sustainable supply chain performance .

3. To study and compare Operational Efficiency, ESG Implementation, Green Supply Chain Management, and Sustainable Supply Chain Performance.

4. To study the guidelines about the relationship among Operational Efficiency, ESG Implementation, Green Supply Chain Management, and Sustainable Supply Chain Performance for organization.

LITERATURE REVIEWS

1.Operational Efficiency

Operational Efficiency (OPE) refers to the quality, cost, productivity, and delivery outcomes of an organization (Nawaniret al., 2013), or the ability of an organization to reduce costs or expenses in managing operations according to the time of the order cycle, improve the efficiency of raw material utilization, and meet customer delivery requirements (Ataseven et al., 2014). Assessment of OPE is very important to manufacturers because it will lead to the effectiveness of producing high quality products. This results in greater customer satisfaction and increased revenues and profits. OPE indicators, moreover, are indirectly measured by the turnover rate or the rate of absenteeism which is an effect of the efficiency of human resource management (Wisedsin et al., 2020).

Rajaguru and Matanda (2019) portray that resource integration between supply chain partners help organizations in operation to achieve supply chain capabilities and competitive corporate efficiency, while Zhai and Tian (2019) found that an efficient operating system had a greater effect of business on operational efficiency in developing countries than developed countries. Iqbal and Shams (2020), moreover, depict that the adoption of customer-centered operational management had a significant positive impact on operational efficiency with higher customer satisfaction.

From the data, it can be seen that the organization of operations efficiency (OPE) has improved.Involving many dimensions is an outcome measure of success, comprising productivity, profit, service quality, and customer/employee satisfaction. OPE indicators, in addition, include employee safety, suitable rewarding, fair compensation, appropriate working environment, and quality of work life to build employee's company engagement (Al Issa, 2020; Ilmudeen et al., 2019). Kurniawan et al. (2020) has divided ORP into two dimensions: Financial and non-financial performances, while this study divides OPE into 4 dimensions based on the concepts of Kurniawan et al. (2020) and Ilmudeen et al. (2019), consisting of financial achievement (FA), customer intimacy (CI), Product Leadership (PL)and Operational Excellence (OE).

2. Sustainable Supply Chain Performance

SSCP refers to the profitability of a business entity arisen from the flow of a product or service from the supplier to the end of the customer through all the moderate-level entities. SSCP can be measured by economic, social and environmental performances (Aunyawong et al., 2021; Aunyawong et al., 2018), while stakeholders are individuals, communities or organizations that are interested in the performance of the firm, comprising regulatory, internal and marketing stakeholders (Soewarno & Tjahjadi, 2020; Pakornpongwathana & Aunyawong, 2022). From a sustainable supply chain perspective, the main barriers to adopting a sustainable approach in supply chains are government stakeholders who set regulations. Fair pricing is a key issue in moving towards sustainable supply chain management (Waiyawuththanapoom et al., 2023; Sooksai et al., 2021; Sooksai et al. 2022). In addition, reducing bureaucracy through simple and efficient processes will encourage more sustainable practices in the supply chain. Stakeholders such as NGOs, local governments, retailers and regulators play a key role in supporting the company's movement towards sustainability in the supply chain (Elias et al., 2021).

3. ESG Implementation

Environment, Society and Governance (Environment, Social, Governance (ESG)) is an issue that society still continues to Always giving importance As urban society grows spread to rural society everywhere, giving importance to noise pollution Safety is becoming more important (Browne et al., 2019). Organizations must accelerate standards and progress. About these matters according Priorities (Environment, Social, Governance (ESG)) To make a difference in the market for capital and talent, executives and employees must adapt to the transformations happening around them. The strategy set by management must accommodate fluctuations in demand and supply.

You can also emphasize Let employees participate sincerely until it creates Committed to the organization, employees themselves must not be afraid of change. The results of business adjustment need to be measured in numbers in order to see clear and concrete development trends, challenges in various areas. It is as if the organization is undergoing change and adjustment. To be flexible throughout business adjustments. Changes in the environment related to the organization's operations affect management's decisions on how and when to adjust the operating strategy so that the organization's results remain at the same level. That's good. Executives who are enthusiastic and make correct and appropriate decisions will make the organization Achieve more Asia Pacific's Time (2022) presents the conclusions drawn from conversations with business leaders and experts.

There are five key success factors in the region that are believed to be aligned and mutually reinforcing to help drive successful differentiation and competitiveness for businesses and governments: supply chain Growth of regional organizations, digital economy, workforce and environment, society and governance. (Environment, Social, Governance (ESG)) as follows: 1) Supply chain transforms regional supply chains to create trust and flexibility. Technological innovation creates new forms of regulation. in supply chain operations and logistics services (Browne et al., 2019; Taniguchi & Thompson, 2018) A capability-driven approach to acquiring businesses to create value must consider the international nature of the law. Economic, political, and product consumption risks cultural differences and market potential, etc.

The challenge lies in the nature of the data required for objective firm evaluation. Principle 3 of the Principles of Responsible Investing (UN Principles for Responsible Investment [UNPRI] ,2022) calls for appropriate disclosure of ESG issues and the results of the ranking of the index of emerging market countries in logistics in 2022 (The Agility Emerging Markets Logistics Index, 2022)) number of 50 countries, measured by efficiency

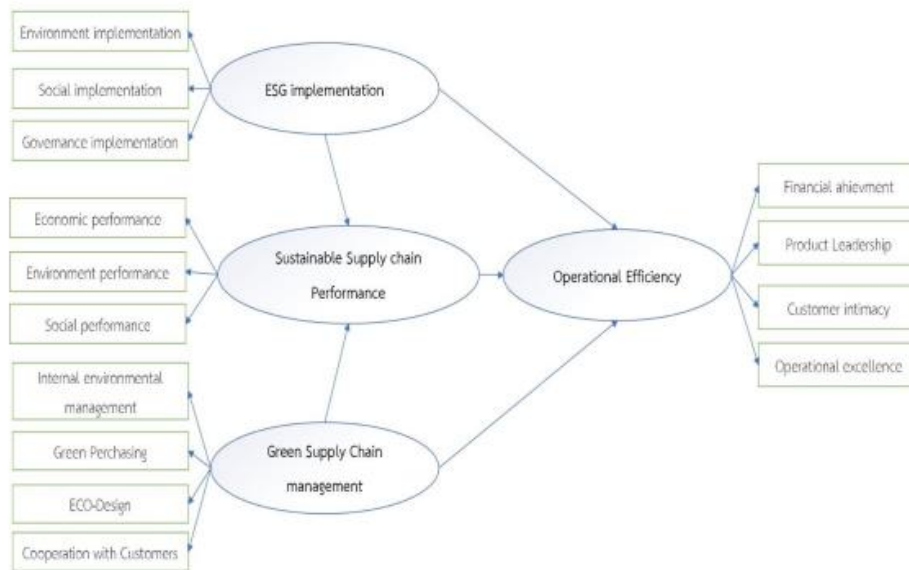
that facilitates the growth of the logistics sector. 3) The digital economy embraces digitalization to drive insights, reduce risk, and secure important data. 4) People or workers must Think again about increasing your skills and developing your abilities in many ways. Accepting flexibility and Delivering work according to objectives builds trust. Therefore, employees in the organization must have good coordination skills. Making decisions and always being ready for self-improvement (Kern & Sullivan, 2021). Conversely, Ademi and Klungseth (2022) provide convincing empirical evidence that delivering superior ESG performance pays off financially and contributes to the market valuation of S&P 500 companies.

4. Green Supply Chain Management

Companies implementing GSCM in the processes of design, production, distribution and logistics management will result in higher improvements in supply chain performance than companies that do not adhere to GSCM. This GSCM will help build a good corporate image for society, increase the company's financial efficiency, and maximize social, economic and environmental benefits (Martínez and Mathiyazhagan, 2020). GSCM, moreover, will improve overall performance throughout the supply chain, especially the environmental performance. Internal environmental management according to ISO 14001 (Environmental Management System Standard) and green purchasing from suppliers with such standard are essential to SSCP. Today, environmentally conscious supply chain management is a strategic imperative based on customer needs (Zhang et al., 2020). In addition, businesses' focus on GSCM will cause performance improvements in operational, marketing, financial, social, economic and environmental aspects. These performances are dimensions of SSCP and business performance. GSCM are the mediating variable between the influence of green human resource management practices on operational, marketing, financial, social, economic and environmental performances (Acquah et al., 2020).

From reviewing the concept Theory and related research of many logistics academics based on the above assumptions. The researcher then wrote it as a research concept. To find a model of causal factors that influence the development of organizational performance. By following ESG policies and managing green supply chains. which will show the cause variable Transmission variables and outcome variables that influence each other. The researcher has therefore established a conceptual framework as shown in Figure 1.

From the conceptual framework that shows an overview of the causal variables Transmission variables and outcome variables that influence Operational efficiency, with the cause variable being ESG implementation. that has determined the elements from a combined study between Kurniawan et al. (2020) and Ilmudeen et al. (2019) and Browne, Behrends, Woxenius, Giuliano & Holguin-Veras, (2018) and Green Supply chain management that has determined the elements From a combined study of Zhang et al., (2020) , the transmission variable is Sustainable Supply chain performance that has been determined as a component from a combined study of past literature by Aunyawong et al., (2021) , Soewarno & Tjahjadi, (2020) ; Pakornpongwathana & Aunyawong, (2022) and Kern & Sullivan, (2021) and the last variable is the outcome variable of the research, namely Operational efficiency. As mentioned above, the elements can be determined from the study. These variables will have different components. Varies according to reason which are detailed in the composition of variables used in the research.



The hypothesis of this research is :

1. Casual variables) : ESG implementation and Green Supply chain management
2. Mediating variables : Sustainable Supply chain performance
3. Effect variables : Operational Efficiency

H1 : ESG implementation have a positive direct effect on Operational Efficiency

H2 : ESG implementation have a positive direct effect on Sustainable Supply chain performance

H3 : Green Supply chain management have a positive direct effect on Sustainable Supply chain performance

H4 : Green Supply chain management have a positive direct effect on Operational Efficiency

H5 : Sustainable Supply chain performance have a positive direct effect on Operational Efficiency

H6: Sustainable supply chain performance positively mediates the effect of ESG implementation on operational efficiency.

H7: Sustainable supply chain performance positively mediates the effect of green supply chain management on operational efficiency.

CONCLUSION

From a review of past literature The research concept presents cause variables, transmission variables, and result variables, each of which has different variable components. The first variable consists of ESG implementation. The components include Environment implementation, Social implementation and Governance implementation. The second cause variable consists of Green Supply chain management, with elements including Internal environmental management, Green Purchasing, ECO-Design and Cooperation with Customers, while the transmission variable is Sustainable Supply chain performance, with elements including Economic performance, Environment performance and Social. performance and result variables include Operational efficiency, which has components including Financial achievement, Product Leadership, Customer intimacy and Operational excellence.

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