

## **8. Environmentally Friendly Supply Chain Management and Green Transformation**

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### **Abstract:**

*Nowadays, businesses are turning to environmentally friendly practices by adopting sustainability principles. In this context, the concepts of environmentally friendly supply chain management and green transformation are becoming increasingly important. This approach requires businesses to take responsibility for reducing their environmental impact and using resources more efficiently, rather than solely seeking profit. Environmentally friendly supply chain management aims to minimize the environmental impacts of businesses at every stage of the supply chain. This approach includes the adoption of environmentally friendly practices in the processes from the procurement of raw materials to the delivery of the product to the end consumer. This includes strategies such as reducing greenhouse gas emissions throughout the supply chain, minimizing waste, increasing energy efficiency and shifting to renewable sources. Additionally, businesses can create a more sustainable supply chain by taking their environmental performance into account when choosing their suppliers. Green transformation refers to businesses replacing their current business models and processes with environmentally friendly and sustainable ones. This transformation requires businesses to take steps in areas such as the use of renewable energy, waste management, recycling and reducing environmental impact. Green transformation also encourages innovation and allows businesses to gain a competitive advantage. Environmentally friendly supply chain management and green transformation not only reduce the environmental impact of businesses, but also reduce costs, increase operational efficiency and strengthen brand reputation. These approaches also fulfill the responsibility of leaving a more livable world to future generations. Additionally, adopting environmentally friendly practices ensures compliance with regulatory requirements and enables businesses to take a leading position in sustainability.*

### **Keywords:**

*Environment, Supply chain, green transformation.*

### **8.1 Introduction:**

Nowadays, global concerns such as environmental problems and climate change are increasing. These concerns cause businesses and society to focus more on sustainability principles. Businesses now not only make profits, but also take responsibility for reducing their environmental impact and using resources more efficiently. In this context, the concepts of environmentally friendly supply chain management and green transformation

become important. Environmentally friendly supply chain management aims to minimize the environmental impacts of businesses at every stage of the supply chain. This approach includes the adoption of environmentally friendly practices in the processes from the procurement of raw materials to the delivery of the product to the end consumer. Environmentally friendly supply chain management covers a wide range from the selection of suppliers to production processes, distribution and recycling (Saini et al., 2023).

This approach allows businesses to gain competitive advantage while reducing their environmental impact. Green transformation refers to businesses replacing their current business models and processes with environmentally friendly and sustainable ones. This transformation requires businesses to take steps in areas such as the use of renewable energy, waste management, recycling and reducing environmental impact. Green transformation also encourages innovation and allows businesses to gain a competitive advantage (Bofinger et al., 2011). Environmentally friendly supply chain management and green transformation not only reduce the environmental impact of businesses, but also reduce costs, increase operational efficiency and strengthen brand reputation. These approaches also fulfill the responsibility of leaving a more livable world to future generations. Additionally, adopting environmentally friendly practices ensures compliance with regulatory requirements and enables businesses to take a leading position in sustainability. In this article, the concepts of environmentally friendly supply chain management and green transformation will be discussed, and the importance and benefits of these approaches for businesses will be examined in detail. Additionally, it will be emphasized why reducing environmental impacts and adopting sustainability principles are important for businesses (Lerman et al., 2022).

## **8.2 Environmentally Friendly Supply Chain:**

Today, environmental problems such as increasing forest fires and air and water pollution around the world threaten our living spaces and disrupt natural balances. Global warming and climate change stand out as the main reasons for these negative developments. Increasing greenhouse gas emissions led to imbalances in ecosystems, pollution of water resources and significant changes in climate events.

As a result of all these effects, many animal and plant species are in danger of extinction, while people also have problems accessing clean water. However, despite this negative picture, a hopeful development is also observed (Lerman et al., 2022).

In recent years, many people and institutions, from individuals to institutions, have begun to take steps to combat environmental problems and for a sustainable future. Concepts such as sustainability, green design, renewable energy and recycling are becoming increasingly important. Particularly the interest and sensitivity of the young population on these issues plays a major role in increasing environmental awareness. With the increasing awareness of states on this issue, companies have begun to take more responsibility for environmental issues (McKinnon, 2010). In this context, the concept of green supply chain has come to the fore. Green supply chain is a concept that started to gain popularity in the early 2000s and aims to reduce environmental impacts in the processes from the production of products to their delivery to the consumer.

Consumers now take into consideration the environmental compatibility of the products they purchase, their environmental impact throughout the product's life cycle, and their recyclability. Therefore, it is predicted that sustainability-oriented businesses will rise in the future and the green supply chain will play an important role in this process (AlKhidir & Zailani, 2009).

Green supply chain aims to reduce the environmental impact of products through the operational management and optimization approach of businesses. Practices such as green purchasing, green distribution and storage, biofuel use, green transportation, production processes and end-of-life management of products are included within the green supply chain to improve environmental sustainability (Chain, 2015).

### **8.3 Green Transformation:**

The concept of green refers to a basic idea that aims to increase environmental sustainability. However, this model not only reduces environmental impacts but also has the potential to stimulate economic growth for businesses.

While this model supports economic growth by reducing environmental pollution and production costs, it also increases customer satisfaction, creates a positive image and reputation, and provides competitive advantage to businesses. It also allows products to be exported to environmentally friendly countries (Schmitz, 2015).

The green supply chain model enables businesses to integrate environmental thinking into supply chain management. This integration includes processes such as ecological design of products, purchasing of green materials and components, restructuring of environmentally friendly production steps, reverse logistics management after the useful life of the product. In this way, the harmful effects of the supply chain on the environment are reduced and controlled (Shahzad et al., 2022).

Nowadays, environmental and sustainability issues are becoming increasingly important nationally and internationally. Therefore, businesses should take these developments into consideration and integrate the green supply chain into their existing systems. Thanks to the green supply chain, businesses can reduce their costs, increase customer satisfaction and capture new market opportunities. In this way, businesses can both increase their profits and take an important step towards a more livable world (Gallopín, 1996).

Green transformation is the name given to the transformation required to create an environmentally friendly economic model. In this transformation process, energy sources, production processes and products are designed and implemented to minimize impacts on the environment. The main goal is to protect natural resources and reduce the effects of climate change (Du et al., 2021).

As the world population increases, our natural resources are rapidly depleting and problems such as climate change arise. Green transformation is vital to tackle these challenges. Protecting natural resources and minimizing negative impacts on the environment are necessary for a sustainable future (Bofinger et al., 2011).

In the green transformation process, directing energy resources to renewable sources is of great importance. In addition, it is aimed to minimize waste generation, increase energy efficiency, produce environmentally friendly products and increase environmental awareness in society. Many companies and governments around the world are taking steps towards green transformation. For example, companies that produce electric vehicles aim to reduce the use of fossil fuels. Similarly, some countries have taken important steps in eliminating fossil fuels in energy production by investing in renewable energy sources (Li et al., 2019).

Green transformation has many advantages. Among these, sustainability, economic gain, employment increase and environmental health stand out. Green transformation is an indispensable necessity for a better world in which future generations can live (Mallet & Pal, 2022).

#### **8.4 Conclusion:**

Today, increasing environmental problems around the world, especially threats such as forest fires and air and water pollution, seriously affect our living spaces by disrupting natural balances. Global warming and climate change stand out as the main reasons for these negative developments. Increasing greenhouse gas emissions led to imbalances in ecosystems, pollution of water resources and significant changes in climate events. As a result of all these effects, many animal and plant species are in danger of extinction, while people also have problems accessing clean water. However, despite this negative picture, a hopeful development is also observed. In recent years, many people and institutions, from individuals to institutions, have started to take steps to combat environmental problems and for a sustainable future. Concepts such as sustainability, green design, renewable energy and recycling are becoming increasingly important. Particularly the interest and sensitivity of the young population on these issues plays a major role in increasing environmental awareness. With the increasing awareness of states on this issue, companies have begun to take more responsibility for environmental issues.

In this context, the concept of green supply chain has come to the fore. Green supply chain is a concept that aims to reduce environmental impacts in the processes from the production of products to their delivery to the consumer. Consumers now take into consideration the environmental compatibility of the products they purchase, their environmental impact throughout the product's life cycle, and their recyclability. Therefore, it is predicted that sustainability-oriented businesses will rise in the future and the green supply chain will play an important role in this process.

The green supply chain model aims to reduce the environmental impact of products through the operational management and optimization approach of businesses. Practices such as green purchasing, green distribution and storage, biofuel use, green transportation, production processes and end-of-life management of products are included in the green supply chain to improve environmental sustainability. Nowadays, environmental and sustainability issues are becoming increasingly important nationally and internationally. is winning. Therefore, businesses should take these developments into account and integrate the green supply chain into their existing systems.

Thanks to the green supply chain, businesses can reduce their costs, increase customer satisfaction and capture new market opportunities. In this way, businesses can both increase their profits and take an important step towards a more livable world.

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