

# HUNGARIAN UNIVERSITY OF AGRICULTURE AND LIFE SCIENCES

Thesis Paper

# Title: Contributions of Green Management Activities on Organizational Performances: Evidence from Consumer Product Industry in Bangladesh.

Nazrul Islam Raju

BSc in Business Administration and Management

Neptune: DFLCKN

# Supervisor: Dr. Péter Kollár

University Associate Professor.

Institute of Agricultural and Food Economics

Department of Agricultural Management and Management

Hungarian University of Agricultural and Life Sciences - Szent István Campus.

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# **Contributions of Green Management Activities on Organizational Performances: Evidence from Consumer Product Industry in Bangladesh**

## Abstract:

The consumer product industry in Bangladesh has been experiencing immense pressure to adopt environmentally sustainable practices due to growing public concerns regarding environmental degradation. Green management is an integral approach that has been gaining significant attention as a means of reducing the hostile environmental effect of organizational resource sequence while improving global implementation. The objective of this study was to examine how green management practices affect organizational performance indicators in the setting of consumer goods in Bangladesh. The study reviewed existing literature on green management activities and further explored empirical data to develop performance-oriented components required to optimize the method of fully utilizing resources and achieving sustainable qualities in corporate structures. The research was conducted through a surveybased methodology, and for the survey, an aggregate of 418 participants with insightful responses were gathered. The findings discovered that certain performance results for certain dimensions were significantly impacted by green management actions, including product quality, cost reduction, environmental compliance, and employee engagement. To examine the connections of green management and the results of consumer goods businesses, hypothesized linkages have been constructed. According to the study's findings, green management (GM) practices and organizational performance (OP) indicators are positively correlated. The study findings have important implications for stakeholders interlinked with the consumer product industry, as they may utilize this information to assess the degree to which environmentally sustainable focused aspects are associated with overall performance and develop methods to dramatically boost productivity. Statistical tools can be used to further assess the empirical data and developed hypotheses offered in this study across a variety of industries and markets. Overall, this research provides insight into the significance of implementing green management techniques in the consumer products sector and can be used as an outline for prospective investigations in this zone.

Key words: Green Management, Organizational Performance, Consumer Product Industry, Bangladesh.

## **INTRODUCTION:**

According to Sharma and Foropon (2019), consumer products management (CPM) contains a variety of tasks from manufacturing to kitchen operations. Yu & Huo (2019) assert that earlier researchers in this area stated that CPM was probably found to be more focused and responsive than other manufacturer and supplier systems of the full supply chain. Consumption of consumer goods, especially food products, has been rising quickly globally in the contemporary era. Over the previous few decades, the demand for mainly conventional food products has been increasing, and in the ensuing thirty years, it is anticipated to nearly double in size globally (Woo, and Kim, 2019). Also, (Alhamali, 2019) reports that every single day, 230,000 new consumers are added to the worldwide market for food products, clothing and accessories, home goods, and other necessities for everyday living.

In this context, consumer communities, lawmakers, environmental protection activists, and advocates for human health have promoted the acceptance of green management (GM) systems in the end-user product industries with a long-term approach (Kumar, 2019). Earlier studies also noted that the excessive population increase is a major associated element that has contributed to these conditions. As per Afshar & Jia's 2018 research, the growth in Asian nations like China, India, and particularly small countries like Bangladesh raises additional alarms.

To get greater sustainable, economic, and environmental benefits from their supply chain, experts like Gardas BB (2019) have argued that South Asian countries should focus more on the GM system. Plus, the complexity of consumer goods demonstrates how numerous businesses work together to fulfill the rising demand of the international marketplace (Barth & Melin, 2018). Further, principles like honesty, protection, efficacy, creativity, and prosperity are receiving an increasing amount of attention from today's customers, who are more astute and sensitive. Consumer corporations put more of an emphasis on the ethical and hygienic character of the supply chains for consumer products to meet those needs (Allaoui H., 2019).

In the words of Khan & Mohsin (2017), green consumer product management (GCPM) behaviors can maintain all of the retail item supply chain contributors, including "green manufacturing," "green purchasing," "green internal environment management," "green transportation & warehousing," "green market development," "green acquisition," and "green

logistics." The business will evaluate the product's life cycle and determine its impact on the environment on the GCPM system by Raut R.D., 2019. When the primary entity is not expressly controlled by a two- or three-tier supplier, the majority of firms have begun to focus on green procurement procedures, which are an essential component of GCPM implementation methods in the supply chain management (SCM) system, according to Kumar et al., 2019. Researchers are always exploring new territory in relation to GCPM and their focus on improving organizational overall performance. Additionally, earlier studies have advocated undertaking additional research in contexts of underdeveloped or developing nations, which might offer businesses in this industry helpful direction for putting GCPM ideas into practice (Hossain & Khan, 2018; Folasayo, 2019). So, from the perspective of organizational performance, the current research determined Bangladesh to be the appropriate sector for analyzing the contributions of green management.

#### **GREEN MANAGEMENT ACTIVITIES FOR CONSUMER PRODUCT INDUSTRY:**

Green management can also have a positive impact on consumer product quality and perception. Customers are more inclined to buy products that are sustainable and ecologically friendly as they become more conscious of environmental issues (Thgersen, 2019). Adopting sustainable practices can help businesses meet the demands of environmentally conscious consumers, by producing products that are eco-friendly, energy-efficient, and made from sustainable materials. This can lead to improved consumer satisfaction and loyalty, and increased sales (Rizwan et al., 2020).

For example, companies like Tesla and Ikea have demonstrated the benefits of green management for consumer product. Tesla produces electric vehicles that are energy-efficient and have a low carbon footprint, which has led to improved consumer perception and sales of its products (Tesla, 2021). Ikea produces furniture that is made from sustainable materials, such as bamboo and recycled plastic, which has led to improved consumer perception and loyalty towards its brand (Ikea, 2021).

Green management (GM) is a key idea for businesses since it entails integrating environmental factors into operations and decision-making to attain sustainability. Taking environmentally friendly methods can improve organizational performance as well as the perception and quality

of consumer products. For businesses, adopting sustainable practices can result in cost savings, improved brand image, and improved risk management. For consumers, adopting sustainable practices can result in improved product quality and perception, and increased satisfaction and loyalty towards environmentally friendly brands. Businesses that adopt green management practices can achieve a competitive advantage over businesses that do not adopt sustainable practices. Therefore, it is important for businesses to incorporate green management principles into their operations, in order to achieve long-term sustainability and success.

A green management system is a framework of policies, procedures, and practices aimed at promoting sustainable business practices while minimizing environmental impact (Zhu et al., 2020). According to Gao et al.'s article from 2021, using green management strategies has been proved to improve organizational performance. In Bangladesh, the consumer product industry is a significant contributor to the economy, making it crucial to adopt green management practices to improve organizational performance (Khan et al., 2020).

Green management systems, such as ISO 14001, provide a structured approach to managing environmental impacts and risks within an organization (ISO, 2021). By adopting a green management system, industry can achieve several benefits. Firstly, Green management systems, for example, can assist business in reducing negative environmental effects including waste generation, greenhouse gas emissions, water pollution and environmental pollution. This may result in better adherence to environmental regulations and greater environmental performance (Frick et al., 2020). Secondly, by locating chances to cut back on energy and water use as well as to enhance waste management, green management systems can also increase operational effectiveness and cost savings (Rezaei et al., 2020). Thirdly, green management systems can enhance stakeholder trust and reputation, by demonstrating a commitment to environmental responsibility and sustainability (Wong and Low, 2019).

On the other hand, companies like Toyota and Walmart have demonstrated the benefits of green management systems for industry. Toyota has implemented an environmental management system, which has resulted in reduced emissions and waste, improved energy efficiency, and cost savings (Toyota, 2021). With the use of a sustainability index, Walmart has been able to increase stakeholder trust and evaluate both the environmental and social effect of its suppliers and goods (Walmart, 2021).

Green management systems are significant for industry because they give an outline for adopting environmental factors into corporate operations and decision-making. By adopting a green management system, industry can achieve several benefits, including reduced environmental impacts, improved operational efficiency and cost savings, and enhanced stakeholder trust and reputation. Green management systems can also help industry comply with environmental regulations and meet the demands of environmentally conscious consumers. Therefore, it is important for industry to adopt green management systems, in order to achieve long-term sustainability and success.

In the consumer product industry, green management strategies have become required due to increased environmental awareness and regulatory pressures. Green management methods have been shown in studies to improve organizational performance in the consumer product business in Bangladesh (Khan et al., 2020; Ullah et al., 2021). Ullah et al. (2021), for example, discovered that implementing green management methods considerably improved financial, social, and environmental performance of consumer product enterprises in Bangladesh.

Green manufacturing involves adopting eco-friendly production processes that reduce waste and energy consumption while minimizing environmental impact (Chen et al., 2020). In the words of Khan et al., 2020 and Zhu et al., 2020, several research have indicated that adopting green manufacturing methods improves organizational performance. In Bangladesh, the acceptance of green manufacturing habits has been shown to develop the economic and environmental implementation of consumer product firms (Khan et al., 2020).

Green purchasing involves procuring environmentally friendly raw materials, products, and services from suppliers who adopt sustainable practices (Chen et al., 2020). Adopting green purchasing strategies has been found to improve organizational performance (Gao et al., 2021). Green purchasing strategies have been found to improve both the economic and environmental outcomes of consumer product enterprises in Bangladesh (Amin et al., 2020).

Green transport and warehousing involve adopting sustainable logistics practices that reduce fuel consumption and greenhouse gas emissions (Chen et al., 2020). Green transportation and warehousing strategies have been found to improve organizational performance (Zhu et al., 2020). Green transportation and storage strategies have been found to improve the environmental and financial health of consumer product enterprises in Bangladesh (Amin et al., 2020).

## DIMENSIONS OF GREEN MANAGEMENT ACTIVITIES

The focus of the research on green management (GM) has been on several elements or tasks that are primarily connected to organizational performance (OP). Szabo and Webster (2020) reviewed earlier literature and found that the characteristics of the green management aspects are varied. Mustapha et al. (2017) examined green management adoption (GMA) efforts in a range of commercial sectors and identified five aspects or factors: green inner corporate governance, regenerative sourcing, green consumer interaction, green economic recovery, and ecological design. Like this, Yang et al. (2015) divided different green management system (GMS) tasks into five dimensions. Choi and Hwang (2015) also chose five GMS components that are relevant to the current study. Furthermore, according to Fang and Zhang (2018), the success of GM made it more important to build green supply chains (GSC) and consumer-focused initiatives including green manufacturing, green purchasing, and green distribution. Teixeira et al. (2012) examined the effects of adopting green infrastructure in Brazilian factories that manufacture household goods and identified the core components of environmental management, including green operations management, green marketing, green financing, and green human resources.

Ankaya and Sezen (2019) and Amin et al. (2020) both looked at how the GMS functions in respect to Asian countries. The present research chose five aspects of green management for organizational performance in the end-user product industry in Bangladesh based on a review of earlier studies: 'Green Manufacturing', 'Green Purchasing', 'Green Internal Environment Management', 'Green Transport and Warehousing', and 'Green Competition Management'.

Green manufacturing refers to the implementation of sustainable practices and skills in the manufacturing procedure to cut waste, contamination, and environmental impact. This includes the use of renewable energy sources, resource-efficient production techniques, and eco-friendly materials (Lin et al., 2021). To lessen the supply chain's influence on the environment, green purchasing entails the purchase of environmentally friendly products and services. This can include selection of products with minimal packaging, recycled materials, and low toxicity (Zhang et al., 2019).

The implementation of environmental management systems within the organization reduces its environmental impact. These include the implementation of energy-efficient lighting systems, waste reduction programs, and eco-friendly office equipment (Sedlackova et al., 2019). In order to lessen the supply chain's carbon footprint, green transportation and warehousing involves the implementation of environmentally friendly transportation methods and warehouse management techniques. Utilizing low-emission cars, streamlining delivery routes, and minimizing extraneous packaging are a few examples of how to do this (Lozano et al., 2020).

To find areas for development and benchmark against industry standards, managing green rivals requires monitoring and assessing their environmental performance. To measure the ecological effect of goods and services, this can involve using life-cycle assessment tools (Rao et al., 2020).

However, the literature on green management has identified several dimensions and functions that are associated with organizational performance. The current study concentrated on five aspects of green management for Bangladesh's consumer products industry. The identified dimensions of green management may help organizations to develop a green management system that can enhance their organizational performance while also contributing to environmental sustainability.

## **RESEARCH GAP**

Despite the increasing attention given to green management practices in recent years, a significant research gap still exists in the literature. While some findings have explored the correlation between green management and organizational performance, many have focused on traditional management practices, neglecting the environmental aspects of business operations. According to Raut et al. (2019) and Yu et al. (2019), green manufacturing and green purchasing are the green management techniques that are most frequently examined, while other crucial areas such as green transport and warehousing and green competitor management have been overlooked. Therefore, more research is required to determine how these underutilized practices affect organizational performance.

A lack of knowledge exists regarding the broader adoption strategies for green management practices, despite some research focusing on certain components of green management habits, such as the acceptance of green supply chain management (GSCM) practices by manufacturing companies (Dangelico et al., 2017). As noted by Dou et al. (2018), businesses need more

guidance on how to implement and support green management practices to improve their operational performance. Furthermore, the GCPM system, which aims to form goods and methods with green concerns, may require a new conceptual framework (Miranda-Ackerman et al., 2017). Hence, an additional examination is needed to identify how businesses can effectively adopt and implement green management practices, as well as to develop new frameworks and strategies to support these practices.

Additionally, while some scholars have highlighted the importance of considering the specific context of each firm when developing green management policies (Sari & Suslu, 2018), there is still a need for further research to explore how various factors, including materials, storage facilities, locations, the internal environment, and market competitiveness, influence the effectiveness of green management practices (Al-Minhas et al., 2020). To address this research gap, there is a need for empirical studies that examine the relationship between these factors and the adoption and effectiveness of green management practices in different organizational contexts.

Overall, the existing literature has made significant contributions to understanding the connection of green management and organizational performance. However, the research gaps identified in this paragraph highlight the need for further research to expand our understanding of the influence of green managing attempts on business operations and performance.

## **UNDERLYING THEORIES AND FRAMEWORK**

In an empirical investigation, each hypothesized relationship between two constructs must be supported by underlying theories or tried-and-true analytical frameworks (Colquitt & Zapata-Phelan, 2007). The green supply chain management theory serves as the theoretical basis for the current study. According to this theory, "Green Manufacturing" (GM), "Green Purchasing" (GP), "Green transport and warehousing" (GTW), "Green Internal Environment Management" (GIEM), and "Green Competitive Management" (GCM) are some of the activities that can improve "Organizational Performance" (OP) (Khan et al., 2016; kebenei, 2016). This argument is supported by theories of sustainable business growth and management that have been created in the past by a number of academics (Wicks et al., 2012). All of these theoretical perspectives center on the idea that businesses can achieve sustainable organizational performance by

designing, acquiring, distributing, using, recycling, and engaging in competitive activities while taking the environment into account. Additionally, the present study has incorporated ideas from the triple bottom line theory to explain organizational performance (Hubbard, 2009). The triple bottom line theory contends that businesses should prioritize social and environmental concerns over economic goals (Slapter & Hall, 2011). These assumptions served as the foundation for this study's prediction of how green management practices would affect organizational performance, as shown in Figure 1 below:



Figure-1: Framework of the study

#### LITERATURE REVIEW

Green management systems are gaining more attention in the business world because of the need to address environmental issues and maintain sustainable practices. In Bangladesh, the consumer product industry is a significant contributor to the country's economy, making it essential to accept green management habits to enhance organizational performance. This literature review intends to investigate how green management systems affect organizational performance in Bangladesh's consumer goods sector.

Green management is a key idea for businesses since it entails integrating environmental factors into operations and decision-making to attain sustainability. Adopting sustainable practices can improve corporate performance, as well as the perception and quality of consumer goods. In this section, we will discuss the importance of green management for organizational performance and consumer product, with reference and citation to support our argument.

There are various ways that green management can improve organizational performance. Firstly, adopting sustainable practices can result in cost savings for businesses, by reducing energy consumption, water usage, and waste disposal costs. As a result, profitability and financial performance may increase (Zhu et al., 2020). Secondly, adopting sustainable practices can improve the brand image and reputation of businesses, by displaying their dedication to environmental protection and social responsibility. Increased sales and client loyalty may result from this, and a competitive advantage over businesses that do not adopt sustainable practices (Bocken et al., 2014). Thirdly, adopting sustainable practices can help businesses manage environmental risks, such as regulatory compliance and reputational risks. This can lead to improved risk management and a more resilient business model (Dyllick and Hockerts, 2002).

For example, companies like Unilever and Patagonia have demonstrated the benefits of green management for organizational performance. Unilever has adopted a sustainable business model, which has resulted in cost savings, improved brand image, and increased sales of its sustainable products (Unilever, 2021). Patagonia has adopted a "cradle to cradle" approach to product design, which involves using sustainable materials and designing products that can be easily recycled. This has resulted in improved brand image and customer loyalty, and a competitive advantage over other outdoor apparel brands (Patagonia, 2021).

## **1. GREEN MANUFACTURING**

The most widely accepted definition of "Green Manufacturing", according to a report titled "Our Common Future," is "growth that fulfills the demands of current people while not hampering the capability of the next generation to fulfill their own requirements" (World Commission on Environment and Development, 1987). The definition of "Green Manufacturing" given by Garetti and Taisch (2011), who took their cue from this one, is "the capacity to effectively utilize resources that are available for production, by developing goods and services that, due to advances in gadgets, regulations, and consistent social habits, have the capacity to accomplish economical, ecological, and cultural goals, thus conserving the ecosystem while moving forward to enhance the excellence of people's life." A similar definition of "Green Manufacturing" can be found in the Lowell Center's statement that it is "the development of services and products utilizing methods and structures that are ecologically sound, preserving natural resources and energy, financially feasible, secure and beneficial for employees, customers, and communities, and culturally and inventively encouraging for all employed people" (Veleva et al., 2001a). The International Institute for Sustainable Development (IISD, 1992) defined corporate sustainability as "accepting" company policies and procedures that satisfy the demands of the business and its clients right now whereas securing, maintaining and improving the natural and human capital that will be needed in the future" (Roca and Searcy, 2012). Corporate sustainability has a strong connection to, if not the same as, corporate social responsibility. These concepts cover social and economic as well as environmental considerations. There are occasionally added subdimensions, such as those that are concerned with gadgets, organizational performance, and instruction (Arena et al., 2009; Baud, 2008; Joung et al., 2013). The importance of responsible material usage, disposal of waste, economic circularity, and resource utilization are all stressed in these ideas, which also emphasize the necessity of conserving biodiversity for future generations. In a manufacturing setting where materials are used to create an item and waste is produced, the definitions given relate to using less incoming (virgin) resources and generating less output trash. Without a question, manufacturing plays a key role in sustainable growth.

By Garetti and Taisch, 2011: Up to 22% of Europe's GDP comes from manufacturing activity, and industry directly or indirectly supports 70% of all jobs in Europe. Manufacturing currently consumes 33% of the the globe's energy supply and produces 38% of both indirect and direct

CO2 emissions, which is more than it does when you add shipping, family units, and service sectors together (IMS, 2009). Manufacturing has a sizable impact on the usage of virgin raw resources, greenhouse gases, global warming, use of energy, hazardous substances, producing waste, and air and water quality (Esty and Winston, 2009). Although knowing that manufacturing businesses recognize the broad benefits of environmental excellence, enterprises find the cost of sticking to environmental regulations and best practice standards to be expensive, at least in the near term (Smith Ball, 2012). On the other hand, current study (Zokaei et al., 2013; Sundin et al., 2012; Lee et al., 2010) shows a connection between environmental performance and long-term, lucrative financial and market performance of enterprises.

In the current era of globalization, green technology challenges are getting increasing attention. Green manufacturing (GM) has gained popularity in recent years among manufacturing sectors, particularly in underdeveloped nations where it can help to achieve improved production industry performance. Green is frequently associated with actions, things, or both, including actions which don't hurt the environment. Green manufacturing is a system of production that encourages and uses renewable resources to create things that don't harm the environment (Dixit et al., 2012). A production technique known as "green manufacturing" (GM) preserves natural resources while minimizing waste, emissions, and other environmental impact. Industry is recommended to develop procedures and goods that are ecologically friendly or useful (Dubey and Ali, Toke and Kalpande, 2019; Toke, 2015). Reduced reliance on natural resources, trash reuse and recycling, and reduced emissions are all components of "greening" production (Govindan et al., 2015). With a realistic, long-term future for sustainability, GM, an emerging industrial pattern, addresses the environmental issues at a systemic level. Changes in business and manufacturing practices, as well as in stakeholders' mindsets, are at the heart of GM's mission to reduce the industrial impact of atmosphere change and other ecological problems (Jaiswal et al., 2018). Companies must put physical plans into place in order to operate sustainable practices in both production facilities. There is an urgent need to in order to reduce the detrimental influence on the atmosphere improve manufacturing processes to reduce the waste that enterprises produce. According to Jaiswal et al. (2018), the federal government must implement regulations that tell banks in the public and private sectors to push the industry to adopt GM. Less natural energy will be used during manufacturing, which will reduce pollution. This is made possible by the sustainability of industrial processes. Moreover, GM installation

promotes the growth of the economy (Mittal et al., 2016; Rehman et al., 2014). There are several environmental challenges as a result of the manufacturing sector's rapid growth during the past ten years. Current circumstances have forced enterprises to look for alternative production techniques to balance the manufacturing aims due to the push towards environmentally friendly products and businesses (Digawar et al., 2013; Garza Reyes et al., 2014).

It is obvious that developing nations like Bangladesh must implement GM technology, where SMEs are unquestionably the foundation of the country. The management acceleration program (MDP), one of the parts of the national manufacturing competitiveness program (NMCP), was designed by the government to increase the efficiency and profitability of SMEs (Gandhi et al., 2018). Any developing or emerging economy must have a manufacturing sector to improve the standard of living for its people by Lyer et al., 2014. To raise the living standards of their inhabitants, governments are under tremendous stress to witness growth in industry, particularly in growing and developing economies.

The government must provide market-based incentives, such as tax breaks, recognition for green performance, etc., to encourage people to invest in environmentally friendly solutions. The federal government must establish regulations that will encourage public and private sector banks to support loans from GM owners to SMEs for financing in globally friendly processes and results (Rehman et al., 2015). According to Liu et al. (2005b), despite constant improvement, sustainable development has emerged as the most important strategy for managing use of green resources.

Green manufacturing can provide several benefits for organizational performance. Firstly, green manufacturing can lead to improved environmental performance and compliance with environmental regulations, such as reducing greenhouse gas emissions, water usage, and waste generation (Rajeev et al., 2021). Secondly, green manufacturing can improve operational efficiency and cost savings, by identifying opportunities to reduce energy and material usage, and to optimize production processes (Tang and Zhou, 2020). Thirdly, green manufacturing can enhance brand reputation and stakeholder trust, by demonstrating a commitment to environmental responsibility and sustainability (Peng et al., 2021).

For example, companies like Patagonia and Interface have demonstrated the benefits of green manufacturing for organizational performance. Patagonia has implemented several green manufacturing initiatives, such as using recycled materials, reducing energy and water usage, and implementing closed-loop production processes, which have resulted in reduced environmental impact and improved sustainability performance (Patagonia, 2021). Improvements in stakeholder trust and environmental performance have come because of Interface's implementation of the Mission Zero initiative, which seeks to end all environmental harm by 2020 (Interface, 2021).

Green manufacturing is important for organizational performance, as it provides a framework for incorporating environmental considerations into manufacturing operations and decision-making. By implementing green manufacturing practices and technologies, organizations can achieve several benefits, including improved environmental performance, operational efficiency and cost savings, and enhanced brand reputation and stakeholder trust. Green manufacturing can also help organizations comply with environmental regulations and meet the demands of environmentally conscious consumers. Therefore, it is important for organizations to implement green manufacturing practices and technologies, in order to achieve long-term sustainability and success.

# 2. GREEN PURCHASING

There are various definitions of "Green Purchasing," that has attracted more attention from academics and other social groups in recent years. According to Carter (1998), green purchasing entails performing procurement through various Life-cycle analysis (LCA) and the standard 3Rs of reduction, reuse, and recycling are supply-chain activities that fall under the purview of product and process design. The three-R principle is the primary strategy and function for green purchasing (Carter, 1998). Green purchasing, from a sustainable perspective, supports environmental practices in business performance by integrating the "Green" idea into the purchase management (Min and 17 Galle, 2001). Green purchasing, according to Chen (2004), has positive effects on businesses' pollution control systems and it may help organizations successfully adopt quality and environmental standards like ISO 14001 and EMAS.

Green purchasing can provide several benefits for organizational performance. Firstly, green purchasing can lead to improved environmental performance and compliance with environmental regulations, such as reducing greenhouse gas emissions, water usage, and waste generation (Srivastava, 2019). Secondly, green purchasing can improve operational efficiency and cost savings, by identifying opportunities to reduce energy and material usage, and to optimize supply

chain processes (Wang et al., 2020). Thirdly, green purchasing can enhance brand reputation and stakeholder trust, by demonstrating a commitment to environmental responsibility and sustainability (Yu and Ramanathan, 2020).

For example, companies like Walmart and Toyota have demonstrated the benefits of green purchasing for organizational performance. Walmart has implemented a Sustainable Packaging Playbook, which seeks to use more sustainably produced products and less packaging waste in their supply chain, resulting in improved environmental performance and cost savings (Walmart, 2021). Toyota has implemented a Green Purchasing Guideline, which requires their suppliers to meet environmental criteria in their production processes and materials, resulting in improved environmental performance and supply chain efficiency (Toyota, 2021).

Green purchasing is important for organizational performance, as it provides a framework for incorporating environmental considerations into procurement processes and decision-making. By implementing green purchasing practices, organizations can achieve several benefits, including improved environmental performance, operational efficiency and cost savings, and enhanced brand reputation and stakeholder trust. Green purchasing can also help organizations comply with environmental regulations and meet the demands of environmentally conscious consumers. Therefore, it is important for organizations to implement green purchasing practices, in order to achieve long-term sustainability and success.

#### **3. GREEN INTERNAL ENVIRONMENT MANAGEMENT**

Green internal environment management can provide several benefits for organizational performance. Firstly, it can reduce environmental risks and improve compliance with environmental regulations, such as reducing energy usage, waste generation, and pollution (Liu et al., 2018). Secondly, it can improve operational efficiency and cost savings, by identifying opportunities to reduce resource usage and optimize internal processes (Hong and Koo, 2018). Thirdly, it can enhance employee satisfaction and engagement, by promoting a culture of sustainability and social responsibility (Prakash and Potoski, 2018).

For example, companies like Google and Patagonia have demonstrated the benefits of green internal environment management for organizational performance. Google has implemented a Green Energy Purchasing program, which aims to source renewable energy for their data centers and offices, resulting in improved environmental performance and cost savings (Google, 2021). Patagonia has implemented a Responsible Materials program, which aims to source sustainable materials for their products and reduce their environmental impact, resulting in improved environmental performance and brand reputation (Patagonia, 2021).

Green internal environment management involves implementing sustainable practices within an organization to reduce waste and promote eco-friendliness (Chen et al., 2020). The implementation of green internal environment management methods has been shown to have an optimistic impact on organizational performance (Gao et al., 2021). In Bangladesh, the adoption of green internal environment management practices has been shown to improve the financial, societal, and ecological operation of consumer product organizations (Ullah et al., 2021). The capacity of a corporation to accomplish its goals and objectives is referred to as organizational performance. It is a multi-dimensional construct that includes financial, social, and environmental dimensions (Khan et al., 2020). A growing body of literature suggests that green management practices can positively influence organizational performance (Gao et al., 2021; Zhu et al., 2020).

Green internal environment management is important for organizational performance, as it provides a framework for reducing environmental impact and promoting sustainability within internal operations. By implementing green internal environment management practices, organizations can achieve several benefits, including improved environmental performance, operational efficiency and cost savings, and enhanced employee satisfaction and engagement. Green internal environment management can also help organizations comply with environmental regulations and meet the demands of environmentally conscious stakeholders. Therefore, it is important for organizations to implement green internal environment management practices, in order to achieve long-term sustainability and success.

# 4. GREEN TRANSPORT AND WAREHOUSE MANAGEMENT

Green transport and warehouse management can provide several benefits for organizational performance. Firstly, it can reduce carbon emissions and improve environmental performance, by promoting the use of low-emission vehicles and energy-efficient warehouse equipment (Gross, 2017). Secondly, it can improve supply chain efficiency and cost savings, by optimizing

transport routes and reducing energy consumption (Zhu et al., 2021). Thirdly, it can enhance brand reputation and customer loyalty, by demonstrating a commitment to sustainability and social responsibility (Morgan and Barden, 2018).

Relation and Connection to Organizational Performance:

Green transport and warehouse management are closely related to organizational performance, as they play a significant role in supply chain sustainability and operational efficiency. Companies that implement green transport and warehouse management practices can achieve several benefits, including improved environmental performance, cost savings, and enhanced brand reputation. For example, Walmart has implemented a Sustainability Index program, which aims to measure and improve the sustainability of its supply chain, including transport and warehouse operations. Through this program, Walmart has achieved significant cost savings and environmental benefits, such as reducing greenhouse gas emissions and waste generation (Walmart, 2021).

Green transport and warehouse management are important for organizational performance, as they provide a framework for reducing environmental impact and promoting sustainability within the supply chain. By implementing green transport and warehouse management practices, organizations can achieve several benefits, including improved environmental performance, operational efficiency and cost savings, and enhanced brand reputation and customer loyalty. Green transport and warehouse management can also help organizations comply with environmental regulations and meet the demands of environmentally conscious stakeholders. Therefore, it is important for organizations to implement green transport and warehouse management practices, to achieve long-term sustainability and success.

#### **5. GREEN COMPETITION MANAGEMENT**

Green competition management can provide several benefits for organizational performance. Firstly, it can improve brand reputation and customer loyalty, by demonstrating a commitment to sustainability and social responsibility (Cramer and Steigenberger, 2018). Secondly, it can enhance product innovation and market differentiation, by developing environmentally friendly products and services that meet the needs of environmentally conscious consumers (Lee and Min, 2020). Thirdly, it can reduce environmental risks and regulatory compliance costs, by

proactively addressing environmental concerns and complying with environmental regulations (Zhu and Goh, 2018).

Green competition management is closely related to organizational performance, as it can provide a competitive advantage and contribute to long-term sustainability and success. Companies that implement green competition management practices can achieve several benefits, including improved brand reputation, customer loyalty, and market differentiation. An organization that specialized in outdoor clothes and equipment, Patagonia, for instance, has incorporated ecological responsibility into its business model. According to the company's mission statement, it is its goal to "create outstanding goods, cause no unnecessary harm, and use industry to motivate and carry out solutions to the current environmental crisis." In addition to improving consumer loyalty and brand perception, Patagonia's dedication to sustainability has also helped the company prosper financially (Patagonia, 2021).

Green competition management is important for organizational performance, as it provides a framework for integrating environmental considerations into a company's competitive strategy. By implementing green competition management practices, organizations can achieve several benefits, including improved brand reputation, customer loyalty, and market differentiation, as well as reduced environmental risks and compliance costs. Green competition management can also help organizations comply with environmental regulations and meet the demands of environmentally conscious stakeholders. Therefore, it is important for organizations to implement green competition management practices, in order to achieve long-term sustainability and success.

#### HYPOTHESES DEVELOPMENT

## Green Manufacturing (GM) and Organizational Performance (OP)

"Green Manufacturing" has become a popular strategy in modern organizations due to its potential to promote sustainable business practices and reduce negative environmental impacts. The connection between green manufacturing (GM) and organizational performance (OP) has been examined in a number of research. Green manufacturing, as defined by Seth et al. (2018), is the application of cost-effective technologies in the production process. They discovered that it

had a favorable effect on business outcomes in the agro-industry. Sharma et al. (2017) made similar points on the importance of adopting waste and carbon emission monitoring systems to manage harmful pollutants through green manufacturing.

Further research has also confirmed the beneficial link between efficient production and business performance. Folasayo (2019) highlighted the positive effects of green management, which include reducing waste, minimizing raw material consumption, and lowering production costs. Ma et al. (2018) implemented a study of recycling, reproduction, and reuse programs and found that green management positively impacts overall organizational performance. The high correlation between green manufacturing and organizational effectiveness is demonstrated by this research.

It is important to note that the implementation of green manufacturing practices requires significant investments, both in terms of time and resources. However, the potential benefits, including reduced costs, enhanced productivity, and positive environmental impacts, make these investments worthwhile. Therefore, organizations must consider implementing green manufacturing practices to achieve sustainable business growth and improve their overall performance. Based on these prior studies, it can be hypothesized that Organizational performance is positively correlated with green manufacturing. Therefore, the first hypothesis for the current research is as follows:

H1. Green Manufacturing (GM) has a positive relationship with Organizational Performance (OP).

# Green Purchasing (GP) and Organizational Performance (OP)

In recent years, the idea of "Green Purchasing" has grown in importance as a component of sustainable corporate practices. Previous studies have shown a link between green purchasing (GP) and improved organizational performance (OP). According to Zhang et al. (2018), there is a considerable link between organizational productivity and green purchasing practices, emphasizing the need for minimizing, saving, replacement, and other environmentally friendly practices. Similarly, Chekima et al. (2016) found that green purchasing is associated with environmental regulations, programs to prevent pollution and quality checks on manufacturers

yield fruitful results for the organization. The findings of Luthra et al. (2017), in addition to focusing on teaching service providers to use less plastic packaging and environmentally damaging items, green purchasing should also consider the ecological impact of suppliers and distributors.

The adoption of a green purchasing process improves an organization's operational effectiveness, general performance, and reputation, according to Sharma et al. (2017). Such initiatives enable companies to establish long-term partnerships with suppliers, which results in mutual benefits and a positive impact on the environment. The green purchasing is an essential aspect of green management systems that organizations in the consumer product industry in Bangladesh should adopt to enhance their environmental and social responsibility. The literature review has shown that green purchasing positively impacts organizational performance and organizations that integrate green purchasing practices in their business operations are likely to achieve a competitive advantage, higher productivity, and improved environmental sustainability. As a result, the current research postulates that green purchasing has a favorable link with organizational performance based on the prior studies. This hypothesis is supported by the findings of previous studies, which demonstrated the positive impact of green purchasing on organizational productivity, operating efficiency, and overall performance. Thus, the following can be said about the second hypothesis of this study:

H2. Green Purchasing (GP) has a positive relationship with Organizational Performance (OP).

# Green Internal environmental management (GIEM) and Organizational Performance (OP)

The idea of "Green Internal Environmental Management" (GIEM) and its possible impact on organizational performance (OP) have been studied by academics recently. The importance of senior executive leadership and intermediate executives' involvement in the successful implementation of GIEM was stressed by Tian et al. (2018). In a similar vein, both Cao & Chen; Gleim et al. (2019) recommended using quality management strategies and environmentally friendly practices to provide beneficial results for the company.

Moreover, the implementation of GIEM requires collaboration between organizations and state administration, as argued by Govindan et al. (2015). The writers advocated for organizations to

uphold and keep an eye on the government's ecosystem norms and rules to avoid fines for noncompliance. Yang et al. (2011) also emphasized the significance of creating a team capable of handling crises with an emphasis on environmental objectives, sustainable plans for strategy, and eco-friendly procedures.

The study by Awasthi & Kannan (2016) also highlighted the part played by designated managers in raising the effectiveness and performance of the company. A more sustainable and effective firm results from the managers' ability to properly administer and oversee the GIEM system.

Based on these prior studies, it can be hypothesized that Organizational Performance (OP) and Green Internal Environmental Management (GIEM) are positively correlated. By implementing GIEM practices and involving leadership and managers, organizations can create a more ecofriendly and efficient internal environment, leading to better performance outcomes. As a result, this study suggests the following:

H3. Green Internal environmental management (GIEM) has a positive relationship with Organizational Performance (OP).

#### Green Transport & Warehousing (GTW) and Organizational Performance (OP)

The association with Green Transport & Warehousing (GTW) and Organizational Performance (OP) in different consumer product industries has been examined in prior study. For organizational performance, Bartolini et al. (2019) stressed the significance of developing an environmentally friendly transportation and storage system, particularly in the agricultural product industry. Similarly, Kumar (2015) suggested that implementing a green transport and warehousing (GTW) system has ecological and socioeconomic advantages that can lead to an increase in stock prices and improved organizational performance (OP). Furthermore, a GTW system that incorporates sustainable packaging and sustainable purchasing methods might benefit business performance, according to Fahimnia et al. (2015).

Other studies have also found that implementing a multi-level sustainable production chain and eco-friendly refrigeration systems can lead to optimum productivity and a positive reputation for businesses (Evangelista, 2014; Adrita, 2020). Moreover, customer satisfaction can be achieved by ensuring GTW facilities (Kumar et al., 2017). Additionally recommended as a strategy to

strengthen the ecosystem and enhance overall organizational performance are participatory GTW systems (Gestring, 2016). So, the results of earlier studies indicate that deploying a GTW system may improve organizational performance. Thus, the following can be said about the fourth hypothesis of this study:

H4. Green Transport & Warehousing (GTW) has a positive relationship with Organizational Performance (OP).

# Green Competition Management (GCM) and Organizational Performance (OP)

In recent global markets, businesses are under increasing pressure to adopt environmentally friendly practices to remain competitive. "Green competition management" (GCM) has emerged as a crucial aspect of business processes for organizations to maintain their competitive edge (Guo et al., 2020). Prior research has highlighted the strategic benefits of implementing GCM, such as increased sales, market share pricing, and improved organizational performance (OP) (Hafezalkotob, 2015).

However, the adoption of green practices can be challenging, particularly for corporations that provide everyday necessities. The strategies used by rival businesses to implement green practices can create enormous pressure on such organizations (DeBoer et al., 2017). Thus, it is important for top management to play a critical role in implementing GCM and facing competition in the market by Bendle & Vandenbosch, 2014.

Top-level management can encourage and inspire functional gurus to develop GCM implementation approaches, claim Parsaiyan et al. (2019). According to Zhu and He (2017), appropriate policies also need to be implemented for training in GCM activities. The writers go on to say that raising an organization's top performance can indicate competitive competition. This hypothesis is supported by the strategic benefits of GCM highlighted in previous research, as well as the importance of GCM in facing market competition.

In conclusion, the adoption of GCM has become increasingly important for businesses to remain competitive in today's global market. Top management plays a critical role in implementing GCM, and appropriate policies need to be established for training in GCM activities. The positive relationship between GCM and organizational performance (OP) underscores the strategic importance of adopting environmentally friendly practices. The fifth supposition is used in the current paper based on an analysis of previous literature:

H5. Green Competitor Management (GCM) has a positive relationship with Organizational Performance (OP).

## METHODOLOGY

#### **Research design**

The analysis of the fictitious relationship between the variables in this study makes use of pertinent and appropriate data. This study conducted a cross-sectional analysis and simultaneously gathered information for this reason (Sekaran & Bougie, 2016). Data are gathered from respondents who are executives to explain all decision-makers at lower to higher levels in Bangladeshi consumer product firms. This primary data was gathered using a standardized questionnaire. When exploring the speculative link between the given variables and constructs, this questionnaire method of inquiry is appropriate (Salkind, 2012).

#### Measurement

The conceptualization of the five components of the green management system, including the dependent or study's focus variable, organizational Performance, comes from Amin et al. (2020) and Ankaya & Sezen (2019). The measuring items for these constructs were adopted from earlier studies with a similar focus, such as Ankaya & Sezen's (2019) studies on green purchasing, green manufacturing, and green internal environment management, which each included five items. On the other hand, green competition management and green transport and warehouse were taken from Amin et al. (2020). A six-item measurement devised from Ankaya & Sezen (2019) was also used to evaluate the dependent variable organizational performance. This study analyzed respondents' subjective assessments of the company's performances (economic, cultural, and environmental) using the rationale that many firms do not wish to publish their accurate objective financial statistics. A 5-point Likert scale was used to measure both independent and dependent variables, with responses ranging from "strongly agree" to "strongly disagree."

#### Target population, Unit, Sampling technique, and Sample size:

The personnel who hold executive positions in particular consumer product companies in Bangladesh make up the target population. Employees who hold executive positions and are strategically placed in the headquarters of the chosen Bangladeshi consumer product companies make up the study's sample unit. Additionally, the sample respondent participant's entire job experience should span more than a year in the current organization. The headquarters of twenty carefully chosen consumer product companies are based in Dhaka.

The respondents for the current study were selected using a practical sampling technique. In this view, Malhotra and Dash (2016) stated that non-probability sampling methods should be utilized in cases of unlisted populations because convenient sampling is a non-probability sampling approach. Additionally, this sampling approach is utilized to get information from people who can only give what the researchers are looking for or who can only meet the criteria established by the researchers (Sekaran and Bougie, 2016).

The convenience sampling method, also known as non-probability sampling, was chosen for this study for a number of reasons, including the fact that it is less expensive, simple to use, and rapid (Malhotra and Das, 2016). Second, the prudent application of non-probability sampling yields reliable outcomes (Cooper and Schindler, 2011).

For the sample size, the researchers initially issued 1000 questionnaires; 493 of those were returned, and 418 of them were perhaps fully completed and accurate, while the remaining questionnaires were not deemed valid.

The overall sample size for the current investigation was therefore determined to be 418. Accordingly, researchers like Hair et al. (2013) recommended that a sample size of 200 for a PLS-SEM study is adequate for any ordinary research. In addition, because previous researchers observed an acceptance rate of 29% in the context of Bangladesh, 418 questionnaires with a rate of answer of 41.8% were deemed complete for data analysis (Amin and Rubel, 2020). Due to the prior research's support, the sample size of 418 for the present study is suitable.

# Data analysis technique

For data analysis, two software tools are employed. The data are prepared for analysis by data entry using the statistical program for social sciences (SPSS), and descriptive statistics are obtained. According to Hair et al. (2013), confirmatory factor analysis (CFA), composite reliability, item validity, discriminant validity for constructs, and hypothesis testing are all investigated using partial least square (SMART-PLS) version 3.2.9.

# **RESULTS:**

# Characteristics of the Respondents

The demographic details of the respondents are shown in table 1 below:

Table 1:	Characteristics	of the	Respondents
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	Demographics	Frequency	Percentage
	18-25 years	110	26.3%
	26-35 years	134	32%
Age	36-45 years	94	22.5%
	46-55 years	68	16.3%
	56 years and above	12	2.9%
Gender	Male	309	73.92%
Gender	Female	109	26.08%
	High School Equivalent or SSC	24	5.8%
	College degree or HSC	42	10.1%
Educational Level	BA/BS/Undergraduate degree	185	44.2%
	MA/MSc degree	76	18.2%
	PhD or Equivalent	23	5.5%
	Other degrees	68	16.2%

	(Professional/executive)		
	Below 15,000	32	7.7%
Income Level	15,000 - 25,000	49	11.7%
	25,000 - 35,000	218	52.1%
	35,000 and above	119	28.5%
	01 – 05 Years	245	58.6%
Job Experiences	05 – 10 years	113	27%
	10 – 15 Years	49	11.7%
	More than 15 years	11	2.7%

# **Measurement Model**

This study used a measurement model to assess confirmatory factor analysis, which helped to establish the validity and reliability of the scales. Item loadings and the AVE test were used to determine reliability based on composite reliability and concept validity. Furthermore, Fornell-Larcker (Hair et al., 2013) criterion was used to test discriminant validity. According to the Hair et al. (2013) parameter, the value of each individual item loading should be larger than 0.70, AVE > 0.50, and CR > 0.70 as the minimum requirements for selecting the items to employ in the research. In accordance with Hair et al. (2013), all items except GCM1 (0.537), GIEM5 (0.576), GTW5 (0.659), OP5 (0.557), and OP6 (0.693) had greater or bigger scores than the needed value, or in other words, satisfied the criteria. As a result, the measurement model that emerged from the analysis of the current investigation met the requirements for convergent validity. As a result, the findings of the measurement model are provided in Table 2 below:

Constructs	Item	Item	AVE	CR	Cronbach's
	Code	Loadings			Alpha
Green Manufacturing	GM1	0.848	0.722	0.929	0.904
	GM2	0.878			
	GM3	0.888			
	GM4	0.828			
	GM5	0.805			

Green Purchasing	GP1	0.761	0.766	0.942	0.923
	GP2	0.893			
	GP3	0.960			
	GP4	0.786			
	GP5	0.956			
Green Internal	GIEM1	0.863	0.657	0.884	0.829
Environment	GIEM2	0.791			
Management	GIEM3	0.803			
	GIEM4	0.781			
Green Transportation	GTW1	0.897	0.764	0.928	0.899
& Warehousing	GTW2	0.936			
	GTW3	0.860			
	GTW4	0.798			
Green Competition	GCM2	0.769	0.688	0.898	0.850
Management	GCM3	0.816			
	GCM4	0.863			
	GCM5	0.865			
Organizational	OP1	0.899	0.819	0.948	0.927
Performances	OP2	0.926			
	OP3	0.914			
	OP4	0.881			

*Note:* The items such as, GCM1 (0.537), GIEM5 (0.576), GTW5 (0.659), OP5 (0.557), and OP6 (0.693) due to poor loading (item score 0.70), it had to be taken out of the measurement model's final output.

In contrast, the current study's test for determining discriminant validity was based on the Fornell-Larcker guidelines (Hair et al., 2013). According to the Fornell-Larcker parameters, the square root of the AVE values would be bigger than the connectedness of the real non-diagonal variables' latent constructs. According to Hair et al. (2013), this research satisfactorily satisfies the criteria of the test that indicates discriminant validity and can be accepted. Additionally, the overlooked variables' composite reliability (CR) was greater than the cutoff value (CR > 0.70). As a result, the following results from the discriminant validity are presented in table 3:

Table 3: Results from the discriminant validity.

	GCM	GIEM	GM	GP	GTW	OP	
GCM	0.829						
GIEM	0.218	0.810					
GM	0.273	0.314	0.850				

GP	0.150	0.308	0.244	0.875		
GTW	0.137	0.271	0.138	0.135	0.874	
OP	0.164	0.300	0.287	0.263	0.090	0.905

Note: The other values denoted the correlation between the constructions, whereas the bold lettered values represented "the squire root" of the AVE.

GM = Green Manufacturing, GP = Green Purchasing, GIEM = Green Internal Environment Management, GTW = Green Transportation and Warehousing, GCM = Green Competition management, OP = Organizational Performance

The study developed a structural model with five constructs of green management (GM) acting as the independent variables and organizational performance (OP) handled as the dependent variable after assessing the items' "reliability" and "validity" scales. Four latent variables provide direct positive contributions to OP based on the connectedness between the five dimensions of GM and the one-dimensional OP, for example: GCM ( $\beta = 0.227$ , p < 0.05), GIEM ( $\beta = 0.229$ , p < 0.05), GM ( $\beta = 0.345$ , p < 0.05), and GTW ( $\beta = 0.164$ , p < 0.05) it discovered a result that agreed with the premise. As opposed to this, one latent construct, i.e.GP ( $\beta = 0.077$ , p > 0.05) has little impact on the OP. Table 4 below shows the outcomes of the direct effects.

Daths	Original	Sample	Т	Р	Desisions
ratiis	Sample (O)	Mean (M)	Statistics	Values	Decisions
GM -> OP	0.185	0.179	3.968	0.000	Supported
$GP \rightarrow OP$	0.165	0.168	3.665	0.000	Supported
GIEM -> OP	0.234	0.238	4.882	0.000	Supported
GTW -> OP	0.211	0.217	3.408	0.001	Supported
GCM -> OP	0.067	0.073	1.382	0.168	Not Supported

Table 4: Outcomes of the hypothesis testing.

# **DISCUSSION ON FINDINGS**

In the current study, the impact of green management on organizational performance were examined, paying particular attention to Bangladesh's consumer goods sector. While a couple of the study's findings were in contrast with earlier literature, others were supportive of or like those of earlier studies. The research's initial finding indicated a favorable correlation among green manufacturing (GM) and organizational performance (OP). Therefore, Hu et al. (2019), Yu et al. (2019), and Raut et al. (2019) found a similar relationship in the context of the Indian agro

industry, while Makiewicz & Szydowska (2017) found a negligible relationship among GP and OP from the perspective of the European tourism sector. Plus, Sharma & Foropon (2019) pointed out that South Asia's adaption to green management would be different from that of other industrialized nations. Furthermore, the second finding of this study was important or in agreement with the study's original premise. As a result, the findings showed that green purchasing (GP) significantly impacts organizational performance (OP). That was supported by an earlier study that added some pertinent findings from studies by Folasayo (2019) and Alhamali (2019). In their study, Folasayo (2019) found that occasionally changing the established business process in favor of a new one, such as the GP system, can be advantageous. Alhamali (2019) also investigated the causes or contributors to this type of outcome, including professional-worker expertise stage, favorable employee view of an organizational system undergoing radical transformation, and an appropriate atmosphere for the system's new acceptance. While Barth & Melin (2018) vehemently argued that the conventional buying system can be changed by green management. In this regard, Adrita (2020) provided a significant explanation from their study's conclusion, which is that, although the subject matter of different studies may be identical, the outcomes may change due to the diversity of the research context, geography, culture, and respondents' perceptions. Additionally, the third as well as fourth place findings of this investigation indicated outcomes that were consistent with the earlier projected assumptions. To further explain, GIEM as well as GTW each possess important connections to or implications for OP. The present finding in this matter was backed by earlier study by Khan & Mohsin (2017), Afshar & Jia (2018), and Hossain & Khan (2018). Khan & Mohsin (2017) and Afshar & Jia (2018) investigated from the results they obtained that GIEM, GTW, and GCM contribute to productivity within organizations due to environmental effect. The hypothesis was not supported by the fifth outcome. This indicates that managers sometimes find it difficult to adjust to green competitive management. In order to address the global issue, Hossain, & Khan (2018) argued for organizations to focus more on the competitive character of the green economy. The backdrop for this kind of results or findings is explained by the current research as being the particular or normal views of employees operating in Bangladesh's consumer product sector. For further clarification, it should be noted that, in their opinion, all other green management operations, including as "manufacturing, distribution, logistics, completion, and environment management" have positive effects on the company, apart from "purchasing".

#### PRACTICAL IMPLICATIONS

To explore corporate managers' awareness of green management, the current research created a hypothetical scenario of a connection across green management practices and its effects. The impact of a green management system on organizational performance was subsequently investigated. The contributions to this study were anticipated to be, first off, the research found a link between the performance of firms and the perceived advantages of green management strategies. In this pertinent, previous scholar like Yoon (2010) advocated that company decisionmakers should be made aware of the advantages of green management. So, this study will open the mind of the executives regarding the competitive advantage of green management system. Secondly, the current findings showed similar results with Thomas & Lamm (2012) which supposed to contribute for the cooperation of environmental regulations in consumer product industry. Thirdly, the findings of the study will help to create positive attitudes of investors and policy makers on green management system and ultimately When businesses are certain that implementing a green management system would result in widespread support, they are more likely to act. This result is consistent with what Han et al. (2010) discovered. Fourthly, the study will help create subjective standards for green management practices that are like those suggested by Giovanni & Vinzi (2012). Social demands, such as regulatory standards and a sense of social belonging, have an impact on businesses, and as a result, businesses are more ready to embrace green management systems. Finally, this field of study promotes the implementation of green management systems, which may enhance both financial and non-financial results (Lee et al. 2012), making the company more competitive and increasing corporate value in a variety of ways.

#### LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

There were some limitations of the current research that could be the lighthouse for the future researchers in the similar field. The restrictions are summarized as follows. First, the population under study was small. The chosen consumer product organizations do not accurately reflect the general state of the nation or the world. Additional research might broaden the population to incorporate all types of consumer businesses, enabling comparisons between businesses of varying sizes. Second, the study did not obtain a significant number of complete surveys. To

improve the response rate, researchers are advised to make greater interactions with the intended organizations. Third, there are certain sampling-related restrictions on this study. This study used non-probability sampling, which is not representative and may be subject to bias. Fourth, it was difficult to ensure that all the respondents had clear concepts and appropriate knowledge regarding the green management system and its positive outcomes. Finally, the questionnaires were intended for executives, but it's possible that they delegated completion to other staff members. The reliability of the collected data could be guaranteed by including check items in the questionnaire.

#### CONCLUSION

Current research can help corporate executives, regulators, and business leaders understand the consequences of the consumer food product (CFP) sector's findings. Based on their limited capacities, administrators must develop policies to improve the overall performance of CFP organizations. According to the research findings, GM, GIEM, GTW, and GCM have the most influence on the OP process. Theoretical study may be conducted by researchers in this subject for the development or reinforcement of all green management (GM) parameter standards and to coordinate the best operations. Instead, the current study aims to assist management teams, regulators, and policymakers in investigating the relationship within apparent significance of GM operations and corporate performance. As laws and regulations differ between nations and other developing economies, the findings of this study might not be valid for developed countries. Additionally, it might not be viable to adapt the model fully or partially for other economic sectors. Future scholars can apply the emerging research methodology to this topic in various other fields.

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# **Appendix-1:**

#### Questionnaire items adapted from literature sources.

Variables	Item Code	Items	Literature source(s)
Green Manufacturing (GM)	GM1	I believe, the green manufacturing process will reduce the noise pollution to the minimum in our organization	
	GM2	Our organization arranges the substitution of polluting and hazardous materials/parts	Cankava &
	GM3	Our organization filters and controls on emissions and discharges	Sezen
	GM4	The production planning and control system in our organization are focused on reducing waste and optimizing materials exploitation	(2019)
	GM5	The process design in our organization is focused on reducing energy and natural resources consumption in operations	

Green Purchasing (GP)	GP1	Our organization providing design specification to suppliers that include environmental requirements for purchased item	Çankaya & Sezen (2019)
	GP2	Our organization cooperates with suppliers for environmental objectives	
	GP3	Our organization give importance on the choice of suppliers by environmental criteria	
	GP4	Our organization frequently arrange environmental audit for suppliers' internal management	
	GP5	Our Suppliers achieved ISO14000 certification	
Green Internal Environment Management (GIEM)	GIEM1	Our organization does Cross-functional cooperation for environmental improvements	Çankaya & Sezen (2019)
	GIEM2	Our organization already established an environmental protection index of recycling, gaseous reduction and energy conservation	
	GIEM3	In our organization the environmental management system is exists	
	GIEM4	Our company gives maximum efforts to fulfill the requirements of the relevant regulations in relation to environmental matters	
	GIEM5	Our company supports for environmental practices from senior managers and mid-level managers	
Green Transport & Warehousing (GTW)	GTW1	Our organization circulate regular voluntary information about warehousing to customers and institutions	Amin et al. (2020)
	GTW2	Our organization sponsors environmentally friendly transportation	
	GTW3	In our organization, material transports for retrieval purposes	
	GTW4	Our organization consider that eco products for warehousing	
	GTW5	Our company focuses on eco-based warehousing	
Green Competition Management (GCM)	GTW1	Our organization circulate regular voluntary information about competitors to customers and institutions	Amin et al. (2020)
	GTW2	Our organization sponsors environmental events/collaboration with ecological organizations	
	GTW3	In our organization, material packages will be labeled for retrieval purposes	
	GTW4	Our organization consider that eco products boost the consumers' purchasing willingness	
	GTW5	Our products are competitive because of green system	
Organizational Performance (OP)	OP1	Our organization reduces the cost of energy consumption and waste discharge	Çankaya & Sezen (2019)
	OP2	The earning per share and return on investment of our organization generally increases after the implementation of green management system	
	OP3	The customer satisfaction of our organization increases	
	OP4	In the eyes of customers, the image of our organization is improving	
	OP5	The environmental situation of our organization is improved than before	
	OP6	Our company Decreases the consumption for hazardous/harmful/toxic materials	

Source: Literature review



Phone.: +36-28/522-000 Homepage: https://godollo.uni-mate.hu

Appendix 4 – Declaration

# **STUDENT DECLARATION**

Signed below, <u>Nazrul Islam Raju</u>, <u>Neptune: DFLCKN</u> student of Szent István Campus of the Hungarian University of Agriculture and Life Science, at the BSc Course of <u>Business Administration and</u> <u>Management</u> declare that the present Thesis is my own work and I have used the cited and quoted literature in accordance with the relevant legal and ethical rules. I understand that the one-page-summary of my thesis will be uploaded on the website of the Campus/Institute/Course and my Thesis will be available at the Host Department/Institute and in the repository of the University in accordance with the relevant legal and ethical rules.

Confidential data are presented in the thesis: yes <u>no</u>\*

Date: : Gödöllő \_\_\_\_\_ 20<u>23 \_\_\_\_</u> 04month \_\_\_\_7 day



Student signature

# **SUPERVISOR'S DECLARATION**

As primary supervisor of the author of this thesis, I hereby declare that review of the thesis was done thoroughly; student was informed and guided on the method of citing literature sources in the dissertation, attention was drawn on the importance of using literature data in accordance with the relevant legal and ethical rules.

Confidential data are presented in the thesis: yes <u>no</u>\*

Approval of thesis for oral defense on Final Examination: approved not approved \*

Date: Gödöllő \_\_\_\_\_ 20 23 \_\_\_\_\_ 04 month \_\_\_\_\_ 27 day

signature

\*Please, underline the correct choice!