

**GREEN SUPPLY CHAIN MANAGEMENT PRACTICES IN THE
TURKISH TEXTILE INDUSTRY**

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**IŞIK UNIVERSITY
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TEXTILE INDUSTRY

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ABSTRACT

Green supply chain management practices have been one of the most intriguing focal point for of scholars over the last decade. Previous studies have presented the cases of green supply chain applications of companies from different sectors in different countries. They suggest that green supply chain management practices might impact environmental performance as part of organizational performance. However, it has not yet been determined whether the green supply chain management practices will impact the environmental performance as a part of the organizational performance of the SMEs in the textile sector of Turkey. This thesis aims to explore the gaps in the literature and recognize the influence of environmental performance as a part of organizational performance and consequently addressing green supply chain management practices (GSCMP) specifically in the Turkish textile industry. The data is collected from Turkish textile firms through a survey and the Statistical Package of the SPSS is used to analyze the collected data. The proposed hypothesis are tested. The proposed variables in the hypothesis are green supply chain management practices, green process and product design, and the internal awareness of green supply chain management practice approaches used to determine whether they improve a company's overall environmental performance as a part of organizational performance. The findings of this research were observed that implementing GSCM practices has a positive impact on environmental performance within a textile sector organizations. The thesis concludes that textile relevant SMEs still have room for improvement. This study will help SMEs in the Turkish textile industry make better decisions to identify green supply chain management practices that can improve environmental as a part of an organizational performance.

Keywords: Green Supply Chain Management Practices, Textile Industry, Turkish Manufactory Industry

TÜRK TEKSTİL SEKTÖRÜNDE YEŞİL TEDARİK ZİNCİRİ YÖNETİMİ UYGULAMALARI

ÖZET

Yeşil tedarik zinciri yönetimi uygulamaları, son on yılda akademisyenler için en ilgi çekici odak noktalarından biri olmuştur. Daha önce yapılan çalışmalar yeşil tedarik zinciri yönetiminin gelişimi ve kapsamı hakkında bilgi vermenin yanı sıra farklı sektörlerden şirketlerin yeşil tedarik zinciri uygulama örneklerini sunmuştur. Yeşil tedarik zinciri yönetimi uygulamalarının, örgütsel performansın bir parçası olarak çevresel performansı etkileyebileceğini öne sürüyorlar. Ancak yeşil tedarik zinciri yönetimi uygulamalarının Türkiye tekstil sektöründeki KOBİ'lerin örgütsel performanslarının bir parçası olarak çevresel performansını etkileyip etkilemeyeceği henüz belirlenmemiştir. Bu tez, literatürdeki boşlukları keşfetmeyi ve örgütsel performansın bir parçası olarak çevresel performansın etkisini tanımayı ve sonuç olarak özellikle Türk tekstil endüstrisindeki yeşil tedarik zinciri yönetimi uygulamalarını (GSCMP) ele almayı amaçlamaktadır. Veriler, Türk tekstil firmalarından anket yoluyla toplanmıştır ve toplanan verilerin analizinde SPSS'nin İstatistiksel Paketi kullanılmıştır. Önerilen hipotez test edilir. Hipotezde önerilen değişkenler, yeşil tedarik zinciri yönetimi uygulamaları, yeşil süreç ve ürün tasarımı ve örgütsel performansın bir parçası olarak bir şirketin genel çevresel performansını iyileştirip iyileştirmediğini belirlemek için kullanılan yeşil tedarik zinciri yönetimi uygulama yaklaşımlarının içsel farkındalığıdır. Bu araştırmanın bulguları, bir tekstil sektörü organizasyonunda GSCM uygulamalarının uygulanmasının çevresel performans üzerinde olumlu bir etkiye sahip olduğu gözlemlenmiştir. Bu çalışma, tekstil endüstrisindeki KOBİ'lerin, kurumsal performansın bir parçası olarak çevreyi iyileştirebilecek yeşil tedarik zinciri yönetimi uygulamalarını belirlemek için daha iyi kararlar almalarına yardımcı olacaktır.

Anahtar Kelimeler: Yeşil Tedarik Zinciri Yönetimi Uygulamaları, Tekstil Endüstrisi, Türk İmalat Sanayii

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Abdul Sammad CHOHAN

DEDICATION

I would like to dedicate this work to my parents, family members, friends, and my supervisor who have been supportive throughout my academic research journey. I thank all of them for their guidance and support at all times.

TABLE OF CONTENTS

APPROVAL PAGE	i
ABSTRACT	ii
ÖZET	iii
ACKNOWLEDGMENT	iv
DEDICATION	v
TABLE OF CONTENTS	vi
LIST OF TABLES	ix
LIST OF FIGURES	x
LIST OF ABBREVIATIONS	xi
CHAPTER	1
1. INTRODUCTION.....	1
CHAPTER	6
2. LITERATURE REVIEW.....	6
2.1 Environmental Performance (EP) as an Organizational Performance (OP)	8
2.2 Green Supply Chain Management Practices (GSCMP).....	9
2.3 Internal Awareness of GSCMP (IAGSCMP).....	11
2.4 Green Product and Process Design (GPPD).....	12
CHAPTER 3	14
3. RESEARCH METHODOLOGY.....	14
3.1 Research Methodology.....	14
3.2 Theoretical Framework.....	15
3.3 Hypothesis.....	15
3.4 Research Design.....	16
3.5 Population Frame and Sample Size.....	16
3.6 Data collection.....	16

3.7 Measurement scale.....	17
3.8 Data Analysis.....	17
3.8.1 Validity Analysis.....	18
3.8.2 Reliability Analysis.....	18
3.8.3 Demographic Analysis.....	19
3.8.3.1 Gender.....	19
3.8.3.2 Age.....	20
3.8.3.3 Educational level.....	20
3.8.3.4 Total work experience.....	21
3.8.3.5 Department of work.....	21
3.8.4 Descriptive Statistics of companies.....	22
3.8.4.1 Employee size.....	22
3.8.4.2 Number of suppliers.....	23
3.8.4.3 Type of business.....	23
3.8.4.4 Revenue of the firms.....	24
3.8.5 Descriptive Statistics of Research Questions.....	24
3.8.6 Analysis of firm details.....	31
3.8.6.1 Relation between GSCMP and Number of suppliers.....	31
3.8.6.2 Relation between GPPD and Number of suppliers.....	32
3.8.6.3 Relation between IAGSCMP and Number of suppliers.....	33
3.8.6.4 Relation between GSCMP and size of the company.....	34
3.8.6.5 Relation between GPPD and size of the company.....	35
3.8.6.6 Relation between IAGSCMP and size of the company.....	36
3.8.6.7 Relation between GSCMP and firm's revenue.....	37
3.8.6.8 Relation between GPPD and firm's Revenue.....	38
3.8.6.9 Relation between IAGSCMP and firm's revenue.....	39
3.8.6.10 Relation between GSCMP and Business type.....	40
3.8.6.11 Relation between GPPD and Business type.....	41
3.8.6.12 Relation between IAGSCMP and Business type.....	42
3.8.6.13 Relation between GSCMP and EP.....	43
3.8.6.14 Relation between GPPD and EP.....	44
3.8.6.15 Relation between IAGSCMP and EP.....	44

3.8.7 Correlation Analysis.....	45
3.8.8 Multiple Regression Analysis.....	46
CHAPTER 4	51
4. RESULTS AND CONCLUSIONS.....	51
4.1 Results and Conclusion.....	51
4.2 Limitations.....	53
4.3 Conclusion.....	53
4.4 Future Research.....	56
REFERANCES.....	58
APPENDIX.....	61
CURRICULUM VITAE.....	68

LIST OF TABLES

Table 1.1: Operationalized Definitions.....	4
Table 3.1: Response Rate of Questionnaires	18
Table 3.2: Summary of Reliability Analysis.....	19
Table 3.3: No. of Respondents as Gender.....	19
Table 3.4: No. of Respondents as Age.....	20
Table 3.5: No. of Respondents as Education Level	20
Table 3.6.1: Descriptive Analysis of GSCMP questions.....	25
Table 3.6.2: Descriptive Analysis of GPPD questions	26
Table 3.6.3: Descriptive Analysis of IAGSCMP questions.....	28
Table 3.6.4: Descriptive Analysis of EP questions.....	29
Table 3.7.1: Pearson Correlation between GSCMP and Number of Supplier.....	32
Table 3.7.2: Pearson Correlation between GPPD and Number of Supplier	33
Table 3.7.3: Pearson Correlation between IAGSCMP and Number of Supplier.....	34
Table 3.7.4: Pearson Correlation between GSCMP and Company Size	35
Table 3.7.5: Pearson Correlation between GPPD and Company Size.....	36
Table 3.7.6: Pearson Correlation between IAGSCMP and Company Size	37
Table 3.7.7: Pearson Correlation between GSCMP and Company Revenue	38
Table 3.7.8: Pearson Correlation between GPPD and Company Revenue.....	39
Table 3.7.9: Pearson Correlation between IAGSCMP and Company Revenue	40
Table 3.7.10: Pearson Correlation between GSCMP and Business Type	41
Table 3.7.11: Pearson Correlation between GPPD and Business Type.....	42
Table 3.7.12: Pearson Correlation between IAGSCMP and Business Type	43
Table 3.8: Pearson Correlation between variables.....	45

LIST OF FIGURES

Figure 3.1: Theoretical Framework	15
Figure 3.2: No. of Respondents as Work Experience	21
Figure 3.3: No. of Respondents as Department of Work.....	22
Figure 3.4: Employee Size of the Firms	22
Figure 3.5: Total number of Suppliers	23
Figure 3.6: Type of business	24
Figure 3.7: Revenue of the Firms	24
Figure 3.8.1: Pie chart of Q1-4 of GSCMP (Sample Size=84).....	26
Figure 3.8.2: Pie chart of Q5-9 of GPPD (Sample Size=84).....	27
Figure 3.8.3: Pie chart of Q11-15 of IAGSCMP (Sample Size=84)	29
Figure 3.8.4: Pie Chart of EP questions	30
Figure 3.9.1: Distributions of GSCMP and Number of Suppliers	31
Figure 3.9.2: Distributions of GPPD and Number of Suppliers	32
Figure 3.9.3: Distributions of IAGSCMP and Number of Suppliers.....	33
Figure 3.9.4: Distributions of GSCMP and Company Size	34
Figure 3.9.5: Distributions of GPPD and Company Size	35
Figure 3.9.6: Distributions of IAGSCMP and Company Size.....	36
Figure 3.9.7: Distribution of GSCMP and Revenue	37
Figure 3.9.8: Distribution of GPPD and Revenue	38
Figure 3.9.9: Distribution of IAGSCMP and Revenue.....	39
Figure 3.9.10: Distribution of GSCMP and Business type	40
Figure 3.9.11: Distribution of GPPD and Business type	41
Figure 3.9.12: Distribution of IAGSCMP and Business type.....	42
Figure 3.9.13: Distribution of GSCMP and EP	43
Figure 3.9.14: Distribution of GPPD and EP.....	44
Figure 3.9.15: Distribution of IAGSCMP and EP	45
Figure 3.10: Multiple regression results	49

LIST OF ABBREVIATIONS

GSCMP:	Green Supply Chain Management Practices
IAGSCMP:	Internal Awareness of Green Supply Chain Management Practices
GPPD:	Green Product and Process Design
EP:	Environmental Performance
SCM:	Supply Chain Management
OP:	Organizational Performance

CHAPTER 1

1. INTRODUCTION

Green Supply Chain Management Practices (GSCMP) is a concept that became popular in the early 1990s (Khan et al. 2022). Considering carbon emissions, global environmental trade-offs, etc., such challenges for organizations to practice green supply chain management have been recognized as important players; therefore, companies are increasingly relying on their supply chain system to achieve more complex knowledge and higher client prospects. Zhu and Sarkis (2004) found that business managers, academics, and consultants emphasize green supply chain management practices. Since then, organizations have had a balance between sustainable economic growth and ecological destruction (Burki, 2018).

Increasing efficiency and maintaining profitability in today's competitive market is one of the ways to deal with a company's supply chain. As such, organizations are more competitive and market-oriented due to a higher demand than before. In the 1990s, Green Supply Chain Management practices (GSCMP) were considered a purchasing function in reducing, recycling, and exchanging materials (Narasimhan & Carter, 1998). In addition, Zhu and Sarkis (2004) described GSCMP as a mixture of a sustainable environmental and logistics society and emphasized the reputation of environmentally friendly reverse logistics. Jain and Sharma (2014) showed in their research that GSCMP is a secure supply chain that is inexpensive and environmentally friendly. Do et al. (2020) state that the process of green supply chain management is at a stage where we need to integrate the “green/sustainable” elements with general supply chain management. Integration of recyclable resources is necessary for GSCMP implementation. This new concept of GSCMP will improve organizational performance in terms of cost-effective benefits and environmental benefits, rather than consumers not only thinking what they buy is value for money and a guarantee of

quality, but also social and environmental protection and sustainability (Do et al. 2020).

Standard supply chain management includes culture, vision, strategy, and processes to manage the best possible flow of value, quality, innovation, and other factors to consumers. However, this standard approach is utilized in the textile industry; therefore, there is currently a way to improve the standard approach. This requires buying environmentally friendly raw materials first, then manufacturing and providing consumers with the finest, reused, and recycled quality textile products at a very competitive price. Green supply chain management practices have become an important tool and driver for textile organizations to achieve high competitiveness.

According to Mathiyazhagan et al. (2014), previous studies from researchers found more than 519 definitions of GSCMP between 1995 and 2010. One of the study from Luthra, Garg, and Haleem (2014) explained that green supply is the way in which environmental approaches are at the forefront of SC creation management. As global environmental problems have become more pronounced for consumers, textile companies and governments have seen increasing levels of textile waste production and energy consumption. Organizations are strengthened to develop knowledge of green practices that constrain them to act morally and socially capable in their supply chain processes.

Chin et al. (2015) explained that the idea of GSCMP is to lessen or eliminate useless materials, including unsafe synthetic substances, release useless energy, and produce waste throughout the production setup. In addition, the GSCMP was a green initiative to improve production processes and efficiency through the necessary environmental regulations. Therefore, Green and Sustainable Supply Chain Management (SSCM) links environmental and economic goals to a manageable strategy for supply chain operations. Such a mix would help to reduce the carbon footprint.

Environmental consequences of improper disposal of toxic waste should be discussed in SCM and should be considered an essential element in the production process for textile sector development. In fact, companies are under great interconnected pressure from various parties, such as shareholders, society, government, consumers, markets, and trade organizations, to deal with environmental issues such as protection, materials, and reducing water and energy consumption (Turker & Altuntas, 2014). Environmental and social issues are becoming

progressively valued in the management of any company, especially in times of rapid change in textile production (Turker & Altuntas, 2014).

Turkey's textile industry, the world's 5th largest textile exporter, is set to reach an all-time high, with an export value of \$12.9 billion in 2021, up to 33.2 percent. The industry saw almost an 85% increase in exports to more than 200 countries and territories. Turkish textile companies and brands produce high-quality work (for foreign brands). Turkey's textile industry is the second-largest supplier to EU countries and aims to set a new record with exports of \$15 billion in 2022, which has strengthened its position in the supply chain through new investments. Accelerated especially in 2021 moreover, in 2022, Turkey will not only be a champion in exports but also in investments, and 10 billion liras of investment will be implemented in a short period of time (Şimşek, 2022). The Turkish textile industry is rapidly approaching its goal of becoming one of the top three textile exporting countries in the medium term. Furthermore, firms are increasingly choosing suppliers that provide environmentally friendly materials and are willing to partner with them to develop inter-organizational collaboration in their supply chain process. Thus, it depends on how it affects customer satisfaction, as it remains unknown how the collaboration of partner suppliers and companies with different marketers affects organizational performance and the supply chain process.

GSCMP research on environmental performance as a part of the organizational performance of textile companies is lacking in Turkey (Serkan & Erden, 2022). As a result, the studies are necessary to empirically compare the proper impact of GSCMP on environmental performances as a part of the organizational performance of textile companies. No recent studies have determined the impact of GSCMP on environmental performance as a part of the organizational performance of textile companies in Turkey.

This report explores the gap in knowledge about GSCMP and organizational performance in terms of environmental performance. During past studies, Ikram and Siddiqui (2019) discussed that GSCMPs enhance the overall performance of the textile industry in other countries such as Pakistan. As previous studies were carried out on the population of other countries, Pakistan, samples were taken from textile industrial segments. During this research, data from 84 Textile SMEs were gathered, all of which were Turkey-based. The main key points are green supply chain management practices, internal awareness of green supply chain management practices, and green

process and product design practices. All parameters were assessed individually to determine the organizational performance in the context of the environmental performance of textile SMEs in Turkey.

The main aim of this thesis is to monitor the factors that might impact the implementation of GSCM practices for textile companies. The objectives of this research are as follows.

- To familiarize with GSCMP and the feasibility of their practical implementation.
- To help in understanding the impact of green supply chain management practices on organizational performance as environmental performance.

The operationalized definitions of the variables that have been used in this study are shown in table 1.1.

Table 1.1: Operationalized Definitions

Variables	Definitions	Reference
Green Supply Chain Management Practices	In organizations enhancing the efficiency & performance of the management of the supply chain by implementing different environmental friendly activities together is known as green supply chain management.	(Wang et al. 2021)
Internal Awareness of Green Supply Chain Process (IAGSCP)	Collaboration in strategic planning allows partners involved in the green supply chain to work together towards common goals, which results in greater opportunities for all partners involved.	(Mehdikhani & Valmohammadi, 2019)
Green Product and Process Design (GPPD)	Companies that focus on the environmental aspects of their operations attempt to reduce resource consumption, find alternative materials, and eliminate waste. This approach helps to solve environmental problems.	(Narasimhan & Carter, 1998)

Table 1.1: Operationalized Definitions (Continue)

Variables	Definitions	Reference
Organizational Performance	Organizational performance (OP) refers to how well the organization achieves the set goals. Some use non-financial performance to evaluate the performance of other entities.	(Yamin, Gunasekaran, & Mavondo, 1999)
Environmental Performance	Environmental performance is defined as the measurable outcome of the organization’s capability to attain the environmental objectives and set forth the company plan by being environmentally responsible to the society and environment	(Carneioro, 2012)

Previous scholars provided information about the development and scope of the concept of green supply chain management and presented cases from green supply chain applications of companies in different sectors(Karabacak and Saygili, 2022). They have not explored how Green Supply Chain Management Practices (GSCMP) improves environmental performance (EP) as an organizational performance (OP) in the textile industry. The research questions for this study were as follows:

- Do green supply chain management practices have an effect on environmental performance as a part of organizational performance?
- How does organizational performance improve with the incorporation of green supply chain management practices?

CHAPTER 2

2. LITERATURE REVIEW

This chapter provides an overview of the previous research on organizational performance. The literature on this thesis is organized into four groups. First, detailed research was conducted on the dependent variable environmental performance as a part of organizational performance (OP). Then, detailed research on the three independent variables was conducted. The first independent variable was GSCMP, then the second part on GPPD, then the 3rd independent variable was IAGSCMP.

Green supply chain management began with the involvement of the purchaser and producer in reduction, recycling, reuse, and alternative activities in the 1990s (Srivastava, 2007). Since then, the role of consumers in the textile industry for sustainability has increased; therefore, the growth of supply chain management processes enables consumers and manufacturing communities in the textile industry to take an active role and contribute to sustainable practices. Such developments support and promote the growth of sustainable and environmental supply chain management, which integrates the role of consumers and supports the entire supply chain process (Winter & Knemeyer, 2013). The research from Ikram and Siddiqui (2019) found that the textile sector faces many problems with standard supply chain management. Therefore, the impact of supply chain management issues in accordance with the environment is studied. They showed that the results are significant for manufacturing organizations in improving the practices of green supply chain management and achieving a competitive position in the textile industry.

In the textile sector of Turkey, it has become a hurdle for all textile firms to fulfill the laws and demands of the government regulatory authorities to support the country (Nazam, Hashim, Baig, Abrar, & Shabbir, 2020). The ongoing movement toward sustainable supply chain management refers to understanding the environmental and

social links of supply partners in the supply chain, which would require developing strategies to improve the process. Textile sector companies tend to adopt and apply their own evaluation criteria related to sustainability during the process and production. Therefore, consumers and government authorities are increasingly becoming environmentally conscious. Thus, it became important for textile manufacturers to consider green practices to extend the entire supply chain process of textile products. The success of an organization depends on the sustainable work that the organization does. Therefore, Turkish textile companies are required to improve their environmental performance to meet the needs of consumers and social services.

Considering the problems associated with the supply of textile products, production, and delivery, advanced countries have taken several measures, along with publishing some legal guidelines and requirements to control environmental impacts (Turker & Altuntas, 2014). Several elements of the GSCMP are making an impact on the textile industry. The following are the definitions of the elements of green supply chain management practices used in the study by (Lai, Hsu, & Chen, 2012) would be:

- Green Design:

Green design is the practice of using natural, organic, and recyclable materials in order to create new outputs. (Lai, Hsu, & Chen, 2012)

- Green Purchasing:

A green purchasing program incorporates environmental criteria into the selection process to reduce the use of hazardous substances in/on acquired materials, components, or products. This helps minimize the generation of harmful chemicals. (Lai, Hsu, & Chen, 2012)

- Green Production:

Green production is a business strategy designed to minimize the negative impact of purchasing and producing products with environmentally harmful chemicals. By conserving resources, reducing consumption, and restricting usage of toxic substances, green producers aim to protect both the environment and their businesses environment (Lai, Hsu, & Chen, 2012)

- Reuse and Recycling:

After an item's lifespan is complete, firms should recycle it to reduce waste and pollution. (Lai, Hsu, & Chen, 2012)

Overall organizational performance can be assessed both “financially and non-financially.” To manipulate environmental expenses, agencies boomed their

productivity by adopting green innovative practices. Similarly, businesses can expand their market share by implementing environmental practices that support them. This includes the use of sustainable materials, engaging in recycling and waste management, and minimizing the company's impact on the environment. Wang et al., (2021) proposed that innovators in GSCMP will get the benefit of a “first mover advantage”, which shows a better company image, better product expenses, competitive benefits, and new marketplace possibilities.

2.1 Environmental Performance (EP) as an Organizational Performance (OP)

Environmental performance is considered one of the key concepts, and it is defined as the measurable outcome of the organization's capability to attain environmental objectives and set forth the company plan by being environmentally responsible to society and the environment (Carneiro, 2012). Zhu and Sarkis (2004) considered environmental performance as a part of organizational performance, and it refers to how effectively an employer achieves its environmental goals in achieving organizational performance.

In an organization, sustainable green supply chain management practices need to improve the overall environmental performance as a part of organizational performance in the long run. Nawaz (2020) has measured organizational overall performance through the usage of environmental performance criteria, which includes reuse, recycling, and healing of materials and designing of products for inexperienced supply chain management practices.

The role of environmental performance as part of organizational performance (OP) is gaining much interest, as textile organizations are trying to find ways to bring innovation abilities. Therefore, the new model for becoming a successful organization is to adopt talents that can procure and produce products by selecting raw materials at minimum financial cost and keeping in mind their eco-friendly aspects for environmental performance (Olayeni et al. 2021).

To be competitive within the textile market, actions to control, observe, and maintain environmental performance must be implemented more often than not in the internal operations of an organization (Henri & Journeault, 2008). In regards to this, product quality, fine process, effectiveness, productiveness, and operational efficiency

are regularly characterized as hard and fast variables that constitute the internal workings of a corporation.

This study takes into consideration that environmental performance as a part of organizational overall performance. A direct and effective relationship between GSCM practices and environmental performance as part of organizational performance has been demonstrated. To reduce environmental costs, organizations adopt innovative green practices that increase productivity. Corporations can establish new goods that are eco-friendly and increase their marketplace ratio by engaging in and implementing environmental activities and practices. In this review, we considered environmental performance to quantify organizational performance.

2.2 Green Supply Chain Management Practices (GSCMP)

The GSCMP is a system that includes 'green' elements to the present supply chain and creates a reused supply chain. Zhu and Sarkis (2004) developed a green supply chain management model to study and evaluate the role of organizations in achieving sustainability in all supply chain management activities and processes and managing the environmental impact of the supply chain. Ikram and Siddiqui (2019) have studied the model of environmental sustainability as a process of green supply chain management related to the allocation of responsibility between organizations for different aspects of environmental performance (EP). Green supply chain management practices (GSCMP) need to support shared and self-sustaining environmental services to reduce the environmental effect caused by companies.

In recent years, the development of Green Supply Chain Management Practices (GSCMP) has allowed for an improvement in environmental impact by controlling both upstream and downstream parts of the supply chain (John, 2018). Strategically positioning a company within the green supply chain management practices, would allow it to be innovative and take steps towards confirming outcomes from environmental performance through better design and integration of production processes (Testa & Iraldo, 2010).

There are several GSCM practices, including internal environmental management, green purchasing, eco-friendly design, investment recovery, and cooperation with customers (Chin et al. 2015). A green supply chain should have no side effects or lessen its impact on the environment. Shafique, Asghar, and Rahman

(2017) vouch for the fact that there is extensive literature focusing on the limitations of GSCMP in the textile business. Furthermore, those limitations do exist, but are more apparent on a particular textile association type or region.

Nowadays, environmental issues are gradually being coordinated with global exchanges and markets. Natural environmental worries, for example, harmful materials ought to be tended to along with SCM and are considered a significant component of underway cycles for modern textile development. Buyers from textile firms are turning out to be increasingly cautious and requesting harmless products for themselves and the ecosystem. Organizations in the textile sector have begun to give more significance to deciding on various procedures.

GSCMP studies have different characterizations potentially because of contrasts in industry type, organization size, and country (Mojumder & Singh, 2021). This includes the flow of ongoing processes, vendor engagement, cycle times, shared technology information, and outsourcing. GSCMP includes all elements of traditional SC and adds environmental elements (Suki et al. 2022). The fundamental objective of the green supply chain network is obviously to decrease air and water-based waste contamination (Ahi & Searcy, 2015).

Ikram and Siddiqui (2019) show that a positive relationship exists between the GSCMP of the textile industry and environmental performance. They propose that if a textile enterprise follows a green supply chain, it will reduce its harmful waste and improve its financial performance in terms of profits. It is also beneficial for the environment, as less waste will result in less harm to the environment.

This literature presents the GSCMP from various perspectives, but ultimately, the universal goal is to improve OP. Textile businesses are supported in executing GSCM practices in their tasks to achieve monetary, natural, and social sustainability without scarifying the climate. Accordingly, the motivation behind this study examines the relationship between green supply chain practices and supportable environmental performance as a part of organizational performance in Turkish textile manufacturing companies. Thus, the following hypothesis was considered in the current study.

H1: GSCMP has a significant effect on improving environmental performance as a part of an organizational performance (OP).

2.3 Internal Awareness of GSCMP (IAGSCMP)

The internal Awareness of GSCMP (IAGSCMP) refers to the level of knowledge and understanding of an organization's employees regarding the company's Green Supply Chain Management Practices (GSCMP). Mehdikhani and Valmohammadi, (2019) that information contribution and collaborative hard work are key concerns that companies are facing. As data repeatedly differs in the communication of upstream and downstream partners in the supply chain process, information and knowledge will result in more precision and a greater possibility for decision-makers to make balanced conclusions.

Within the company, the upper administrations must be responsible and completely dedicated to the GSCMP to guarantee environmental excellence (Al Khattab & As'ad, 2015). Upper management needs to identify a way in which people are aware that the material they are using is not making their environment unhealthy, which will help them achieve their organizational goals better. Awareness and education regarding the manufacturing of textile products are important factors to consider. This includes not only the most effective tracking process, but also delivers supply chain innovations associated with profitability and the environment in the organization (Rao & Holt, 2005).

Suppliers provide high-quality control, and audits inspire and ensure that manufacturers are aware of the following green supply chain processes and procedures (Hsu, Kuo, Chen, & Hu, 2013). In addition, the understanding of suppliers ensures that manufacturers are providing compliance statements of their production method, quality process, engineering change process, and invoicing system to the cargo method. Similarly, manufacturers and suppliers should be aware of environmental monitoring via gathering and processing facts from publicly disclosed environmental information.

To understand internally the information and awareness of green supply chain management processes and their impact on organizational performance, we proposed the following hypothesis for the current study. With context to this, the following hypotheses were considered in the current study.

H2: IAGSCMP has a significant effect on improving environmental performance as a part of an organizational performance (OP).

2.4 Green Product and Process Design (GPPD)

Green product and process design (GDPP), also known as design for the environment, and is becoming an important factor in new product development. Decisions made at the production stage can have environmental impacts throughout its product life cycle.

Chin et al. (2015) showed that green supply chain management practices (GSCMP) include green purchasing, eco-design, and customer support. Industries are focusing on the “ecologically responsible design of new products”, and organizations are aware of the sources and levels of any pollution or hazardous chemicals present in the raw material. Allowing organizations to work with providers to procure green materials and products will help achieve this goal. Accordingly, environmental aspects would emphasize production resource depletion, material substitution, and waste reduction, whereby companies become more ecologically efficient and pay to solve eco-friendly problems.

By integrating new issues into new textile product development, fresh designs of solutions can be a scientific way for corporations (Perks, 2005). It will be a new way of reducing expenses for the environmental impact of their products and strategies and concurrently increasing product marketability. The study for green product and process design techniques consists of:

- (i) Use of environmentally friendly materials.
- (ii) Designing products for much less cloth and electricity use.
- (iii) Reuse of materials and additives, recycling, and designing merchandise for restoration.
- (iv) Warding off or lowering the usage of hazardous merchandise.
- (v) Optimizing approaches to lessen solid/liquid waste and emissions.
- (vi) Using reverse logistics for product and/or production procedures.

Supply chains have a major impact on the environment through their development, production processes, and logistics management. It is not sufficient for textile companies to follow GSCMP strategies simply to try to minimize the environmental impact. It is recommended that ecologically designated process audits and achievement questions be brought into the product advancement process in the textile industry. The advantage of designing organizations is that companies have more

time to adapt to the needs of eco-friendly production. So according to the literature, we proposed the following hypothesis for the study:

H3: GPPD has a significant effect on improving environmental performance as a part of an organizational performance (OP).

The summary of this chapter is that there is much research on organizational performance focusing on different factors. Scholars have discussed various factors in their research according to geographical differences, industry differences, size of the research population, etc.

In the next chapter, the methodology of this thesis is explained. The researcher explained all the information related to this study in detail in the next chapter like the techniques, and procedures used to collect data, and analysis of the gathered and their results are described.

CHAPTER 3

3. RESEARCH METHODOLOGY

The guidelines or instructions for gathering data using the survey method to explore which aspects of green supply chain management practices affect the textile industry's performance in Turkey are explained in this chapter. Participants will be those involved in working within the textile industry. In this chapter, the techniques and procedures used to collect data, record participants' data, and analyze the results are discussed.

3.1 Research Methodology

The study involves three independent variables and these variables will be measured by adopting the questionnaires from the previous studies as their validity and reliability have been determined. But this study also proposes to check the validity and reliability of the questionnaires adopted (Ikram & Siddiqui, 2019). They identified sampling techniques, sample sizes, statistical techniques, questionnaires, and measurement tools. An adopted questionnaire attempts to solve the problem effectively. SPSS tools were used for analysis and data was gathered through a questionnaire-based survey method.

There are two primary types of scientific studies: exploratory and explanatory. The exploratory study type is especially important because it helps to validate or invalidate the hypothesis that was reviewed (Kothari, 2004). The explanatory type assists in locating and understanding the detailed results of the study. It evaluates factors that influence individual behavior, as well as examines the conditions under which individuals are impacted (Snyder, 2019). In this report, the adopted type is an exploratory research type because it affirms a hypothesis of the research.

3.2 Theoretical Framework

There are three independent factors in this study: GSCMP, IAGSCMP, and GPPD. Environmental Performance (EP) as a part of organizational performance is the dependent variable and can be described as how an organization uses standards to measure its performance. Accordingly, Figure 3.1 shows a model for how OP works using these three factors.

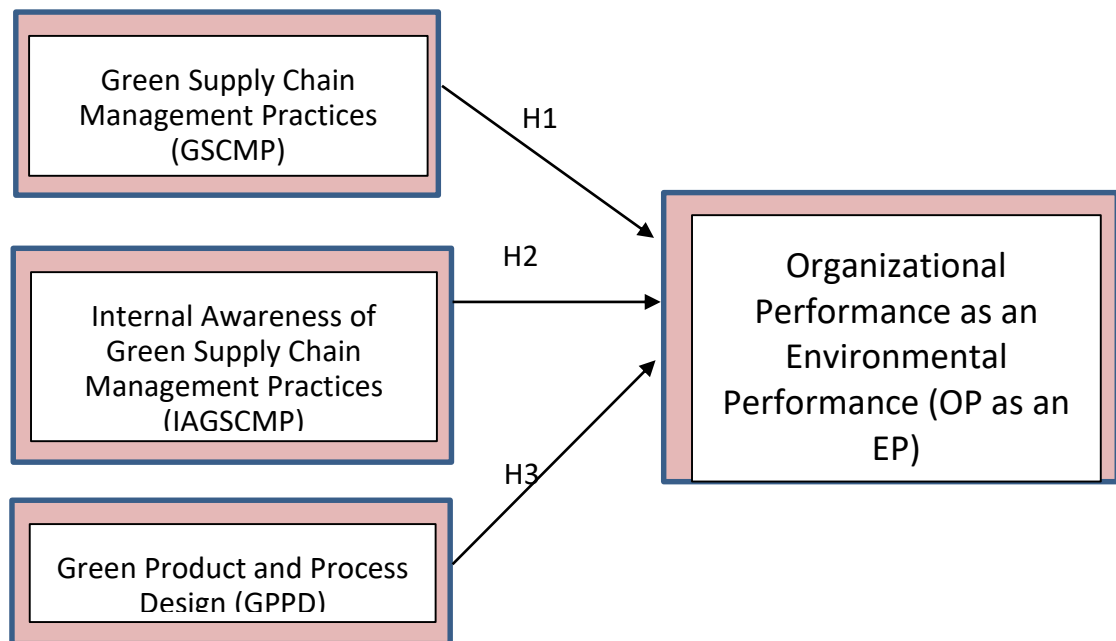


Figure 3.1: Theoretical Framework

3.3 Hypothesis

Following are the hypothesis proposed for the study:

H1: GSCMP has a significant effect on improving environmental performance as a part of an organizational performance (OP).

H2: IAGSCMP has a significant effect on improving environmental performance as a part of an organizational performance (OP).

H3: GPPD has a significant effect on improving environmental performance as a part of an organizational performance (OP).

3.4 Research Design

According to the research studies by Cooper and Schindler (2008), there are two main types of research designs: correlational investigations which assess the relationship between factors within a study, and causal examinations look at how different factors impact one another (Kumar & Phrommathed, 2005). In order to affirm the hypothesis of this review, the correlational examination configuration will be used (Koul, 2009). Furthermore, because this review explores relationships between factors within the study, the correlational exploration configuration should be applied.

3.5 Population Frame and Sample Size

This thesis explores the effects of GSCMP methods and the technological revolution of GSCMP on operational attributes in Turkish Textile manufacturing & processing firms. Because of the country's population, climate, and economical change, GSCMP rules have become a critical section of the textile sector of Turkey. In this research, environmental performance as a part of an organizational performance of textile SMEs in Turkey is our main variable of research. In this research study, a convenience sampling technique was used to select participants for the sample. A total of 84 participants were included in the study. Our sample size is 84 which is all SMEs based in Turkey. The list was filtered for manufacturing and processing, import-export, trade, and retail/wholesale textiles organizations only, with small- to medium companies employing less than 50 employees and medium-sized companies employing more than 51-250 employees. If a company employs more than 250 employees, it is considered a large-scale company.

This thesis report represents the population of 84 SMEs from Turkey. The participants' contact details were collected from online sources, finding companies in the MUSIAD expo'22, and the company's contacts via email to collect data from various textile organizations.

3.6 Data collection

The main tool used for data gathering for the thesis is a questionnaire. A group of ISIK university academics and professionals has validated the questionnaire on whether the items are appropriate for evaluating organizational performance (OP) in

terms of environmental performance. This approach includes the investigation and handling of charts or factual reaction polls and information assortment. Quantitative displaying utilizes basic and direct techniques to measure enormous example sizes in the SPSS program. Subsequently, this finding of the study seems to have a level of trust in the outcomes. The detailed outcome is explained in the results and findings section.

The quantitative questionnaire that was used in the study can be found in the Appendix. The questionnaire was translated into the official language (i.e., Turkish & English) for easy understanding and simplicity.

This study questionnaire was approved by Işık University Ethics Committee during the meeting dated 13.12.2022 and the decision numbered E-32760440-050.01.04-21910.

3.7 Measurement scale

A five-point scale is used to measure respondents' agreement or disagreement with the given assertions. The responses can range from 1 (strongly Disagree) to 5 (strongly agree).

3.8 Data Analysis

For the analysis of data, the statistical package of SPSS was used to testify to the results. By using SPSS descriptive statistics, demographic analysis, reliability analysis, and regression analysis were performed to analyze the data and accept or reject the hypothesis. A sum of 84 responses (n) were obtained, of which 84 were legitimate for review. In this research, an extensive search for academic studies, databases, and bibliographies were conducted. First and foremost, the main task was to conduct a literature search survey of real-world case studies on GSCM practices and their implementation in the textile industry. For data research purposes, we did the following analysis of our gathered data: descriptive statistics analysis, validity analysis, reliability analysis, and regression analysis. The purpose of doing these analyses is to support the hypothesis testing between three independent variables (green supply chain management practices, internal awareness of green supply chain management practices & green process & production design) and one dependent variable, environmental performance as a part of an organization performance.

3.8.1 Validity Analysis

The survey questions were adopted from Ikram and Siddiqui (2019). The survey was examined and shown to help estimate the factors considered. However, for this exploration, it was spread to textile manufacturing SMEs in Turkey, and 84 answers were acquired.

The number of questions according to variables that I have taken from Muhammad Naveed Ikram's (Ikram & Siddiqui, 2019) papers and used to proceed with my study. Table 3.1: Shows the response rate of questionnaires.

Table 3.1: Response Rate of Questionnaires

Statements	No. Questions
No. of Questionnaire distributed	130
No. of questionnaire received	84
Response Rate	64%

The researcher distributed more than 130 questionnaires, and out of 130, only 84 were fully answered and the remaining were incomplete, and the response rate is 64%.

3.8.2 Reliability Analysis

Reliability analysis is a statistical test run to measure the consistency of the research survey tool (questionnaire). If the results are highly consistent under the same circumstances, then the data collection tool is reliable (Middleton, 2019). Cronbach's Alpha shows the constituent consistency that is measuring variables of the research. In this research, the internal approach to consistency is used which validates the reliability of our data collection tool (questionnaire). Table 3.2 illustrates that Cronbach's alpha value is $0.827 > 0.80$, therefore the questionnaire is reliable at 0.05.

Table 3.2 shows the number of questions, and the value of Cronbach's Alpha and their meaning.

Table 3.2: Summary of Reliability Analysis

Variables	No. of items	Cronbach's Alpha	Mean
Green Supply Chain Management	15	0.827	3.763

Organizational consistency is evaluated using values such as Cronbach's alpha, which measures the internal consistency of a dataset. These values range from Excellent ($0.9 \leq \alpha$) to Objectionable ($\alpha < 0.5$).

Cronbach's alpha range indicates the level of trustworthiness of a survey or questionnaire. A score greater than 0.8 indicates that the instrument is more trustworthy, while scores below 0.5 indicate less confidence in its accuracy.

3.8.3 Demographic Analysis

3.8.3.1 Gender

In Table 3.3 the gender distribution of data to the respondents has been amazing to see, and there has been a good balance of responses received both from male and females working in textile organizations. It puts thoughts of both genders. 36.9% of the female respondents, as studies prove females are more emotional and can give feedback on how green supply chain practices help them contribute to the environment and their work environment positively. James J. Gross (2008), while this does not generalize the idea for men, but interestingly, both genders will enrich the data collected and their awareness about green supply chain management practices.

Table 3.3: No. of Respondents as Gender

Gender	No. of respondents	Percentage
Female	31	36.90%
Male	53	63.10%
Total	84	100%

3.8.3.2 Age:

In the age range, we can see from Table 3.4, most of the defendants come under the phase of 40 years of age. This designates the data collected through our surveys is the opinion of the young generation and the middle age population. About 41.7% of respondents come under the age bracket 18-29, slightly higher 44% of respondents are in the age bracket 30-39 while the senior age respondents of age above 40 are in minority with 14% who filled out the questionnaire. We can conclude this research will give results based on the feedback from the younger lot and middle-aged employees.

Table 3.4: No. of Respondents as Age

Age Range	No. of respondents	Percentage
18-29	35	41.70%
30-39	37	44%
40 and above	12	14.30%
Total	84	100%

3.8.3.3 Educational level:

As observed in Table 3.5 the majority of the defendants, which is 63.1% of the respondents have master's degrees, followed by 21.4% of the respondents having bachelors. There were 14.3% of respondents who had a PhD degree and only 1.2% of the response was from a high school graduate. This proves that all our respondents were educated and understood the questionnaire well, which indicates that the survey questionnaire method is effective.

Table 3.5: No. of Respondents as Education Level

Education Level	No. of respondents	Percentage
High School-(Lise)	1	1.20%
Bachelor –Undergraduate (Lisans)	18	21.40%
Master- Postgraduate (Yüksek Lisans)	53	63.10%
Ph.D.- Postgraduate (Doktora)	12	14.30%
Total	84	100%

3.8.3.4 Total work experience

Figure 3.2 shows how many years of experience the respondents have. About 67% of the respondents have 10 and below 10 years of experience, however, this still helps us know most of the informants are filling responses in accordance with the new green supply chain policies and what current organizations have contributed to green supply chain management practices to improve organizational performance. Whereas the remaining responses of 34% of informants who have 10+ years of experience can share their ideas on how the organizational performance have transformed with the contribution of a green supply chain today compared to former organizational structures and practices.



Figure 3.2: No. of Respondents as Work Experience

3.8.3.5 Department of work

The results for this demographic question are as shown in Figure 3.3 the respondent’s department. And this proves that most of the respondents who filled out the main marketing and sales 35% followed by supply chain and logistics 20%, who are the most relevant audience to the study, can understand and answer with their experiences. Therefore, we can assume a significant number of respondents answered from their experiences and knowledge of their organization.

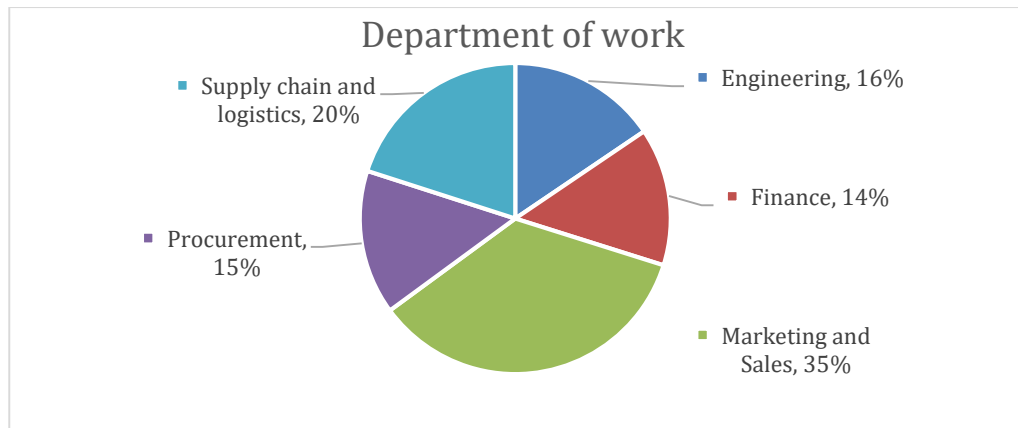


Figure 3.3: No. of Respondents as Department of Work

There are more participants from the sales and marketing departments who take part in research as compared to other departments. This is why we get more responses from sales and marketing department people.

3.8.4 Descriptive Statistics of companies

3.8.4.1 Employee size

As shown in Figure 3.4 significant number of 33% of the companies that took part in the survey contribute to micro-medium size organizations with employees less than 150 and 25% of the respondents belonged to organizations having less than 250 employees which is a macro-medium size organization.

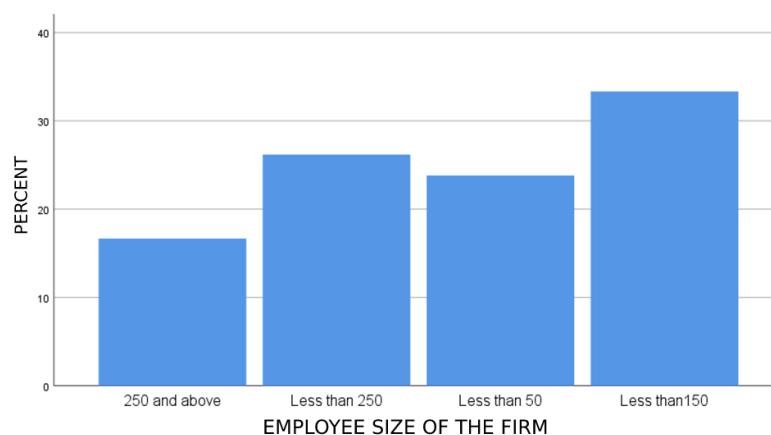


Figure 3.4: Employee Size of the Firms

Followed by 23% of the respondents were from small-scale organizations with employee numbers less than 50. On contrary, 16% of the respondents belonged to

large-size organizations with more than 250 employees. Therefore, we can conclude that the majority of the respondents were from medium-sized organizations.

3.8.4.2 Number of suppliers

As in Figure 3.5, we can see on average the number of suppliers working for most of the textile industry of Turkey have in the range of 11-20 suppliers which indicates 40% in our study. The second most dominating range we can see is 20-30 with a percentile of 30%. This shows the majority of the processes in the textile rely on suppliers such as to get raw materials for their products, packaging materials, and so on. We can also observe about 20% of the organizations had only up to 10 suppliers. These are small-scale organizations and are in their growing faces. On the contrary, only 9% of those organizations had about 30+ suppliers. These are textile organizations working on a massive scale and rely greatly on different suppliers to fulfill their needs.

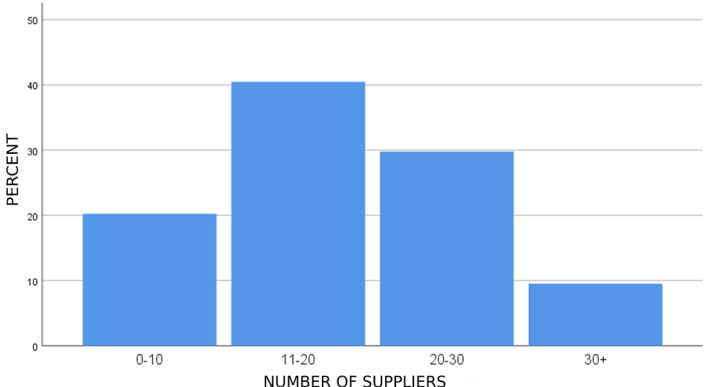


Figure 3.5: Total number of Suppliers

3.8.4.3 Type of business

Figure 3.6 shows that the organizations we surveyed were mainly prime manufacturers (33%) followed by export and traders (28%), the retailers/wholesale contribute to 20%, while the least number of organizations who we surveyed were into import and trade business, which is 17%. So, we can say the major responses we received were from the manufacturing and export companies' experiences in green supply chain practices.

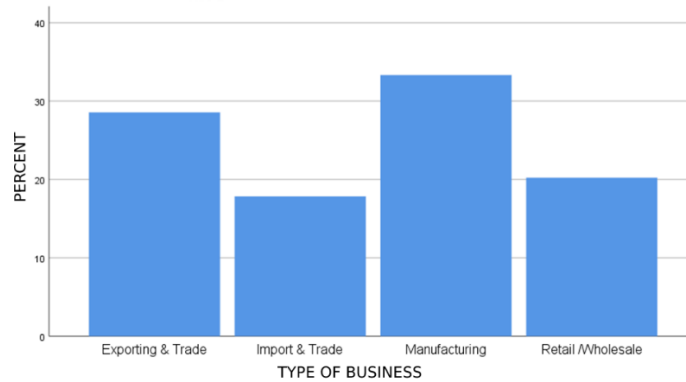


Figure 3.6: Type of business

3.8.4.4 Revenue of the firms

The annual revenue was also questioned by the informants, and as we can see in the Figure 3.7 the organizations show significant results of USD 200,001- USD 500,000 which generated this amount annually which is about 34% of our respondent companies, followed by 27% of organizations earned USD 100,001- USD 200,000. There were even 24% of organizations who participated had less than USD 100,000 in revenue.

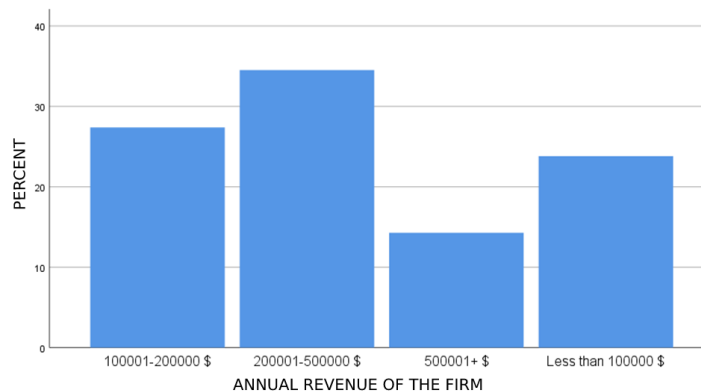


Figure 3.7: Revenue of the Firms

3.8.5 Descriptive Statistics of Research Questions

I proposed three independent factors, i.e., GSCMP, IAGSCMP, and GPPD that have a significant influence on environmental performance (EP) as these environmental practices are said to improve organizational performance. I used a 5-point scale to rate how strongly agree or disagree with the statement." 1 represents disagreement and 5 represents agreement. The following questions are attached below.

Table 3.6.1: Descriptive Analysis of GSCMP questions

Questions	Item	Mean	SD
Green Supply Chain Management Practice			
Our firm cooperates with suppliers to meet environmental objectives. Türkçe (Firmamız çevresel hedeflere ulaşmak için tedarikçilerle iş birliği yapmaktadır.)	GSCMP1	3.88	.782
Our firm emphasizes purchasing eco-friendly materials. Türkçe Firmamız çevre dostu malzeme satın almaya önem vermektedir.	GSCMP2	3.76	.770
Our firm cooperates with suppliers who have environmental certifications. Türkçe Firmamız çevre ile ilgili sertifikalara sahip tedarikçilerle iş birliği yapmaktadır.	GSCMP3	3.70	.967
Our firm has partnerships with suppliers that aim to provide environmental solutions and/or development of environmentally friendly products. Türkçe Firmamızın çevreci çözümler ve/veya çevre dostu ürünler geliştirmeyi amaçlayan tedarikçilerle ortaklıkları bulunmaktadır.	GSCMP4	3.90	.816

The first independent variable which was green supply chain management practices (GSCMP) has 4 questions in this research. So, by comparing the means of these questions, we observe the maximum of 3.90; that explains to us that the participants of these organization are putting effort into the partnerships with suppliers that aim to design and develop environmentally friendly products that can be reused, recycled, and recovered. Above is Table 3.6.1 which shows the mean and standard deviation of all the questions of this variable.

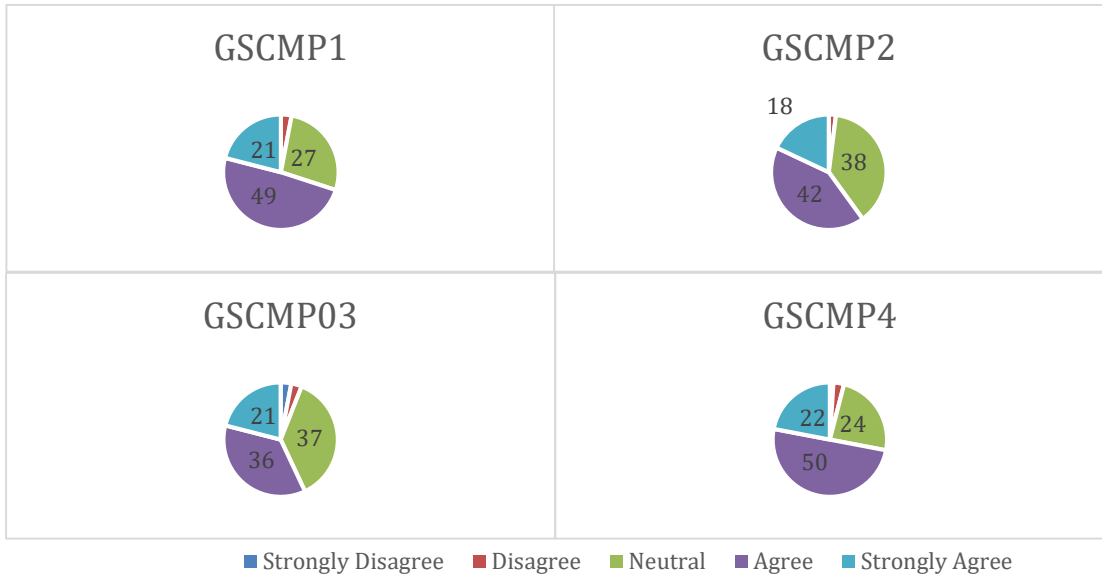


Figure 3.8.1: Pie chart of Q1-4 of GSCMP (Sample Size=84)

By doing descriptive analysis, we compared the means of our study with the study of (Ikram & Siddiqui, 2019). We observed that the maximum mean in our study of the GSCMP hypothesis is of GSCMP4 i.e., 3.90 while comparing with (Ikram & Siddiqui, 2019) studies the highest mean in their study is of GSCMP1 i.e., 4.00.

Table 3.6.2: Descriptive Analysis of GPPD questions

Questions	Item	Mean	SD
Green product and process design			
Our firm cooperates with customers for using less energy during products Transportation. Türkçe Firmamız ürün taşımacılığında daha az enerji kullanılması için müşterileri ile iş birliği yapmaktadır.	GPPD1	3.70	1.106
Our firm emphasizes the design of products that can be reused, recycled, and recovered component parts. Türkçe Firmamız, yeniden kullanılabilen, geri dönüştürülebilir ve geri kazanılabilir bileşen parçalarının tasarımına önem vermektedir.	GPPD2	3.63	.902
Our firm emphasizes the design of products to reduce the use of harmful/toxic materials. Türkçe Firmamız zararlı/toksik malzeme kullanımını azaltmak için ürün tasarımına önem vermektedir	GPPD3	3.61	.970

<p>Our firm emphasizes the optimization of the design process to reduce solid and liquid waste.</p> <p>Türkçe Firmamız katı ve sıvı atıkları azaltmak için tasarım sürecinin optimizasyonuna önem vermektedir.</p>	GPPD4	3.86	.866
<p>Our firm has reduced energy consumption during the last three years.</p> <p>Türkçe Firmamız son üç yılda enerji tüketimini azaltmıştır.</p>	GPPD5	3.70	.902

The second independent variable is Green Product and Process Design. I have 5 questions on this questionnaire from the research. So, by comparing the means of these five questions, we observe the maximum of 3.86 means that explain to us the firms of the participants reduced the waste during the last three years compared to their competitors. Above is Table 3.6.2 shows the mean and standard deviation of all the questions of this variable.

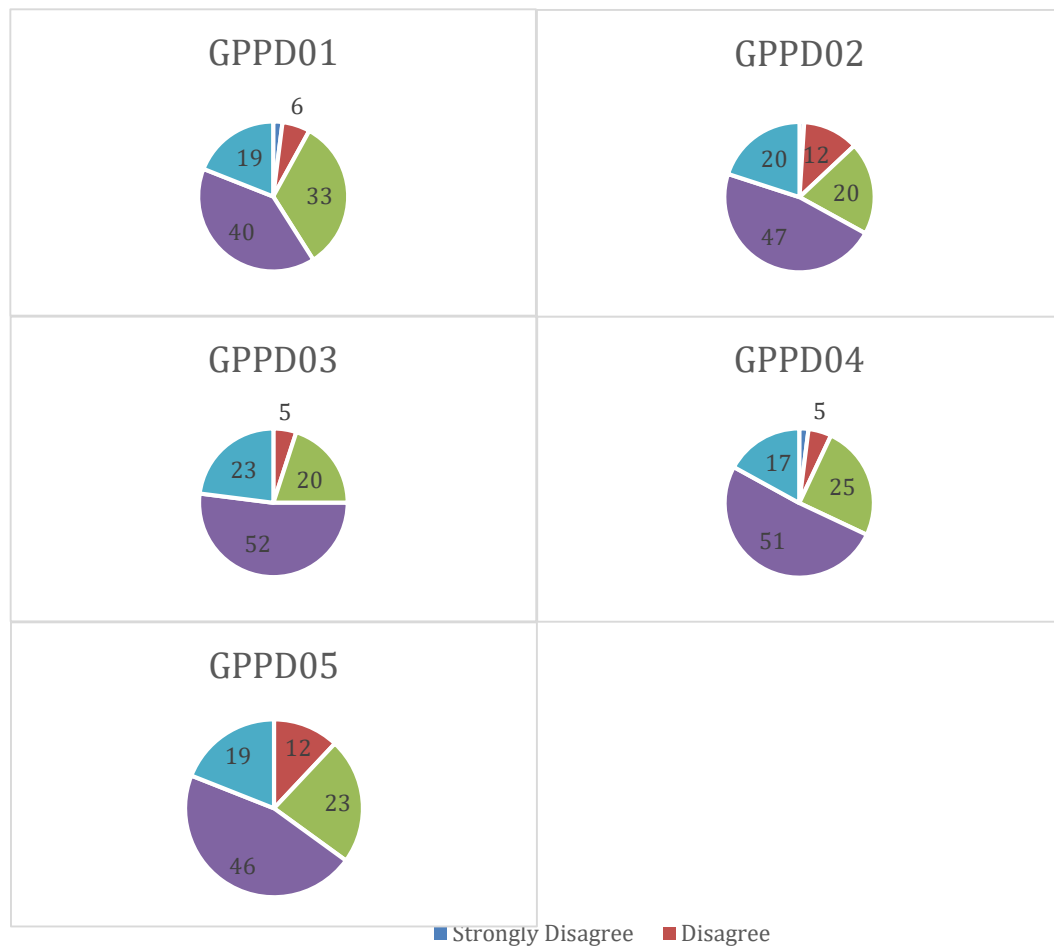


Figure 3.8.2: Pie chart of Q5-9 of GPPD (Sample Size=84)

By doing descriptive analysis, we compared the means of our study with the study of (Ikram & Siddiqui, 2019). We observed that the maximum mean in our study of the GPPD hypothesis is of GPPD4 i.e., 3.86 while comparing with (Ikram & Siddiqui, 2019) studies the highest mean in their study is of GPPD1 i.e., 3.97.

Table 3.6.3: Descriptive Analysis of IAGSCMP questions

Questions	Item	Mean	SD
Internal Awareness of GSCMP			
Our firm has reduced consumption of hazardous/toxic material during the last three years. Türkçe Firmamız son üç yılda tehlikeli/toksik malzeme tüketimini azaltmıştır	IAGSCMP1	3.70	.979
Our firm has reduced effluent waste during the last three years compared to competitors. Türkçe Firmamız son üç yılda atık su atıklarını rakiplerine göre azaltmıştır.	IAGSCMP2	3.90	.816
Our firm has reduced air emissions during the last three years. Türkçe Firmamız son üç yılda hava emisyonu değerini azaltmıştır	IAGSCMP3	3.75	.876
Our firm has an information -sharing structure with customers. Türkçe Firmamız müşterilerle bilgi paylaşımı yapan bir yapıya sahiptir.	IAGSCMP4	4.01	.829
Our firm has reduced solid wastes during the materials three years. Türkçe Firmamız üç yıl boyunca malzemelerde katı atıkları azaltmıştır.	IAGSCMP5	3.70	.866

By doing descriptive analysis, we compared the means of our study with the study of (Ikram & Siddiqui, 2019). We observed that the maximum mean in our study of IAGSCMP hypothesis is of IAGSCMP4 i.e., 4.01 while comparing with (Ikram & Siddiqui, 2019) studies the highest mean in their study is of IAGSCMP3 i.e., 4.00.

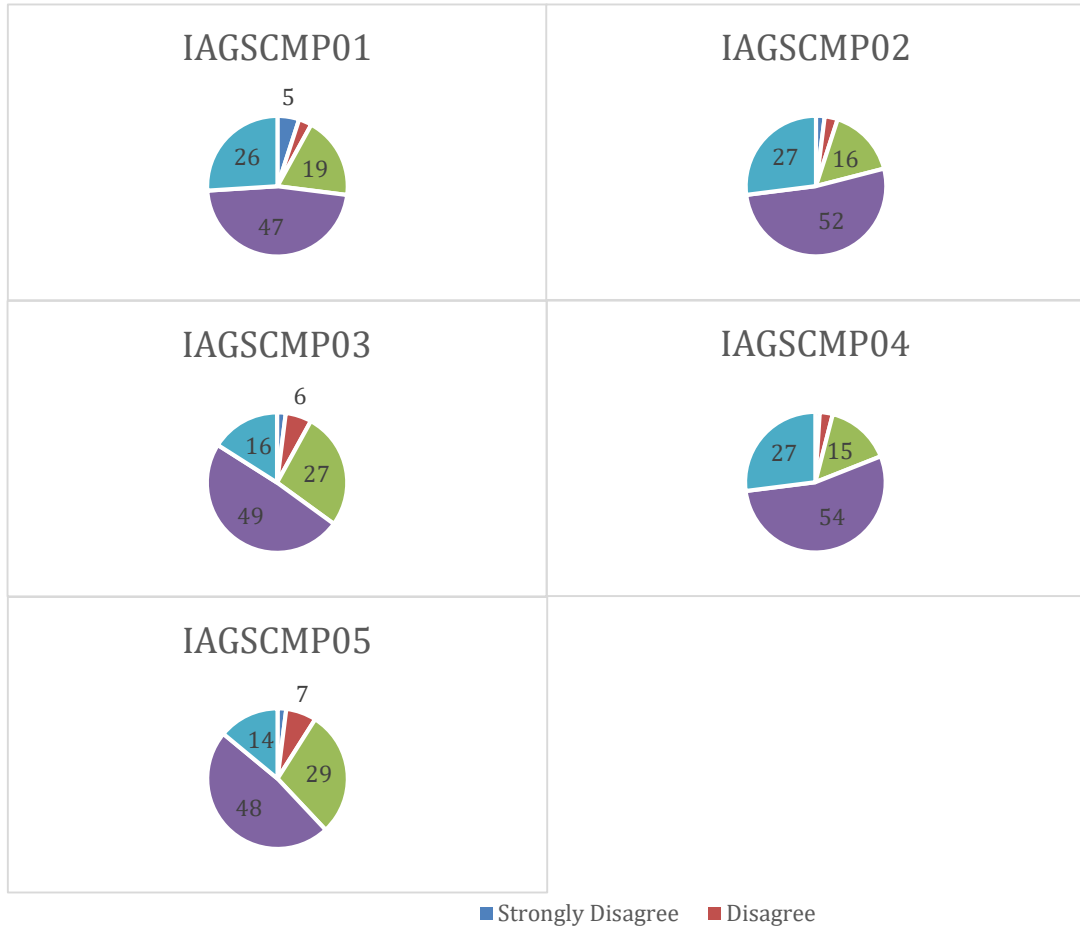


Figure 3.8.3: Pie chart of Q11-15 of IAGSCMP (Sample Size=84)

The third and last independent variable was internal awareness of green supply chain management practices (IAGSCMP). I have 5 questions about this research. So, by comparing the means of these questions, we observe the maximum of 4.01 means that explain to us, that the firms of the participants have an information-sharing structure with customers. Above is Table 3.6.3 shows the mean and standard deviation of all the questions of this variable.

Table 3.6.4: Descriptive Analysis of EP questions

Questions	Item	Mean	SD
Environmental Performance			
Our firm has sought to improve its environmental image /position during the last three years. Türkçe Firmamız son üç yılda çevresel imajını/konumunu iyileştirmeye çalışmıştır.	EP1	3.63	.915

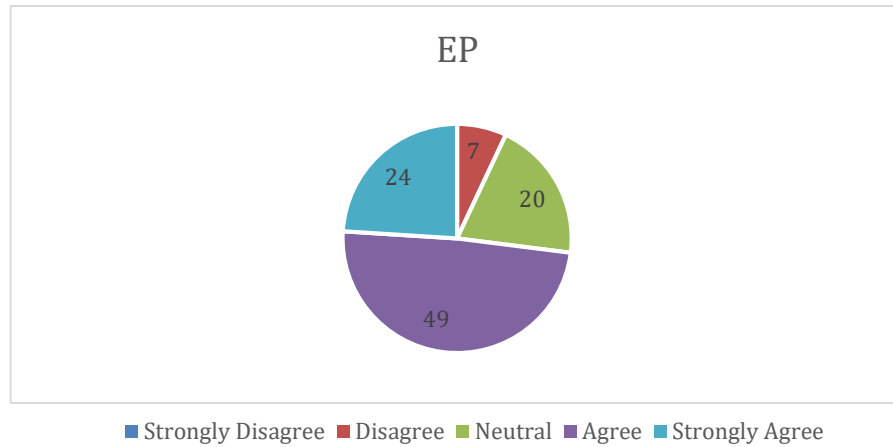


Figure 3.8.4: Pie Chart of EP questions

The dependent variable is environmental performance (EP) as a part of an organizational performance (OP). Above is Table 3.6.4 shows the mean (3.63) and standard deviation (.915) of the question of this variable.

By doing descriptive analysis, we compared the means of our study with the study of (Ikram & Siddiqui, 2019). We observed that the mean in our study of EP hypothesis of EP1 is 3.63 while comparing with (Ikram & Siddiqui, 2019) studies the mean in their study of EP1 is 3.98.

Table 3.6 (1, 2, 3, 4) explain the standard deviations and mean values of the results from the informants. The overall values from the informants' responses show positive responses toward green supply chain management in their organization. As we can see, the highest positive response rate that was observed was the information sharing structure with customers (IAGSCMP4) with the highest mean value of 4.01 having a standard deviation of 0.829. This means that organizations keep sharing their data within the organization and keeping their employees aware of the knowledge of green supply chain management practices (GSCMP).

By doing descriptive analysis, the researcher observed that there is a difference in the results as compared to the means of our study with the study of (Ikram & Siddiqui, 2019). We observed that the mean in our study of EP hypothesis of EP1 is 3.63 while comparing with (Ikram & Siddiqui, 2019) studies the mean in their study of EP1 is 3.98.

The difference is because of different sample sizes and geographical locations. Our sample size was 84 SME's based in Turkey, while in (Ikram & Siddiqui, 2019) studies the sample size was 350 SMEs based in Pakistan.

3.8.6 Analysis of firm details.

3.8.6.1 Relation between GSCMP and Number of suppliers

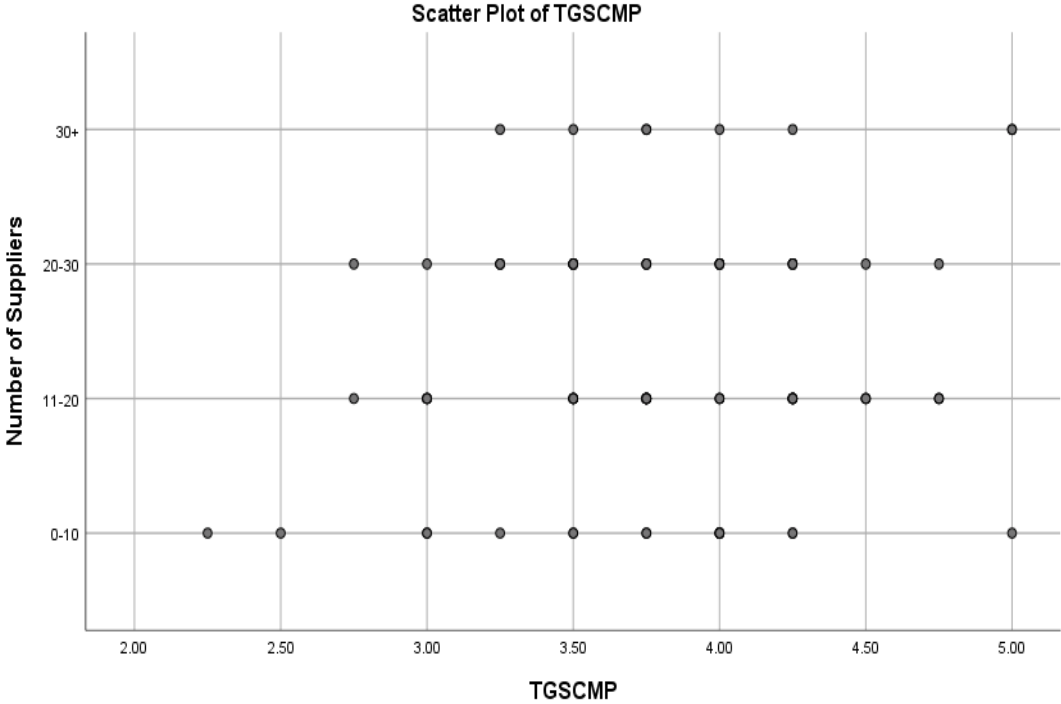


Figure 3.9.1: Distributions of GSCMP and Number of Suppliers

Figure 3.9.1 shows that the organizations we surveyed were mainly working with 20-30 suppliers, moreover the other companies are working with 0 – 20 suppliers on average. The average of all companies for the GSCMP factor is 3.81. The average factor for 0-10 suppliers are 3.64, 11-20 suppliers are 3.76, 20-30 suppliers are 3.86 and more than 30 suppliers are 3.95. The highest average according to number of suppliers is 3.95 for the factor i.e. number of suppliers 30+. The correlation factor between number of supplier and GSCMP is .366 as shown in Table 3.7.1. So, I analyzed the results that the companies which have more suppliers are following the GSCMP practices as in the form of environmental precautions. They showed a positive but weak relationship between GSCMP and number of suppliers.

Table 3.7.1: Pearson Correlation between GSCMP and Number of Supplier

Pearson Correlation	Number of Suppliers	GSCMP
Number of Suppliers	1	
GSCMP	.366**	1

3.8.6.2 Relation between GPPD and Number of suppliers

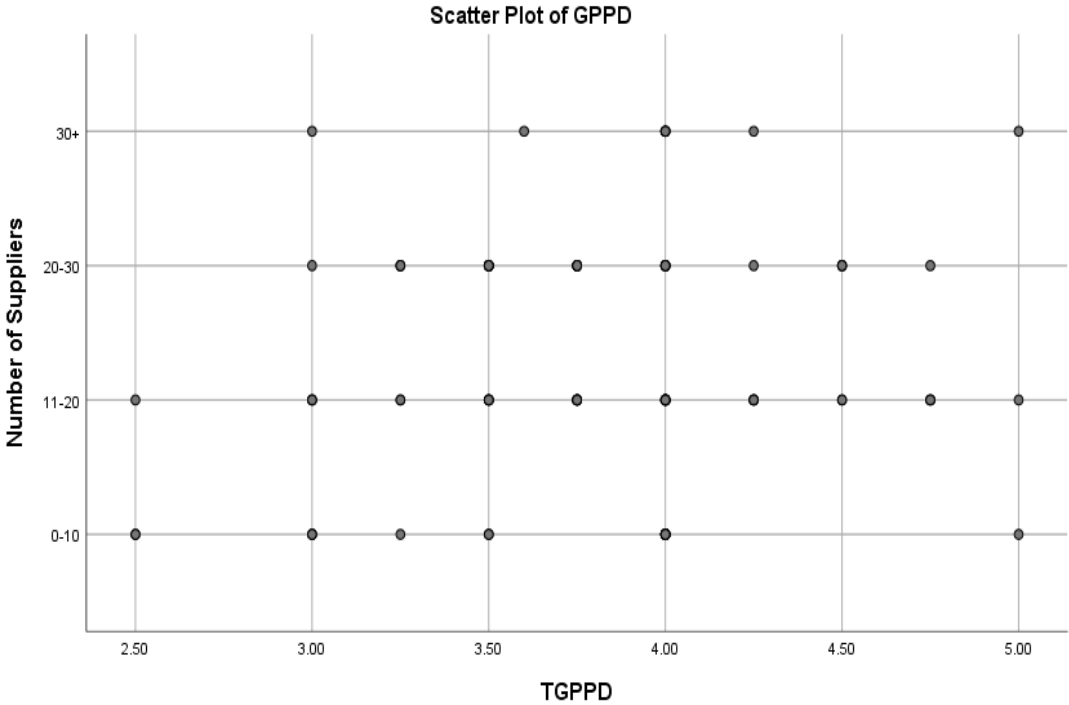


Figure 3.9.2: Distributions of GPPD and Number of Suppliers

Figure 3.9.2 shows that the organizations I surveyed were mainly working with 10-20 suppliers, moreover the other companies are working with 0 – 20 suppliers on average. The average of all companies for the GPPD factor is 3.80. The average factor for 0-10 suppliers are 3.57, 11-20 suppliers are 3.80, 20-30 suppliers are 3.87 and more than 30 suppliers are 3.93. The highest average according to number of suppliers is 3.93 for the factor i.e. number of suppliers 30+. The correlation factor between number of supplier and GPPD is .583 as shown in Table 3.7.2. So, I analyzed the results that the companies have more suppliers are more correlated to GPPD practices as they are following safe environmental process and products. They showed a positive and moderate relationship between GPPD and number of suppliers.

Table 3.7.2: Pearson Correlation between GPPD and Number of Supplier

Pearson Correlation	Number of Suppliers	GPPD
Number of Suppliers	1	
GPPD	.583**	1

3.8.6.3 Relation between IAGSCMP and Number of suppliers

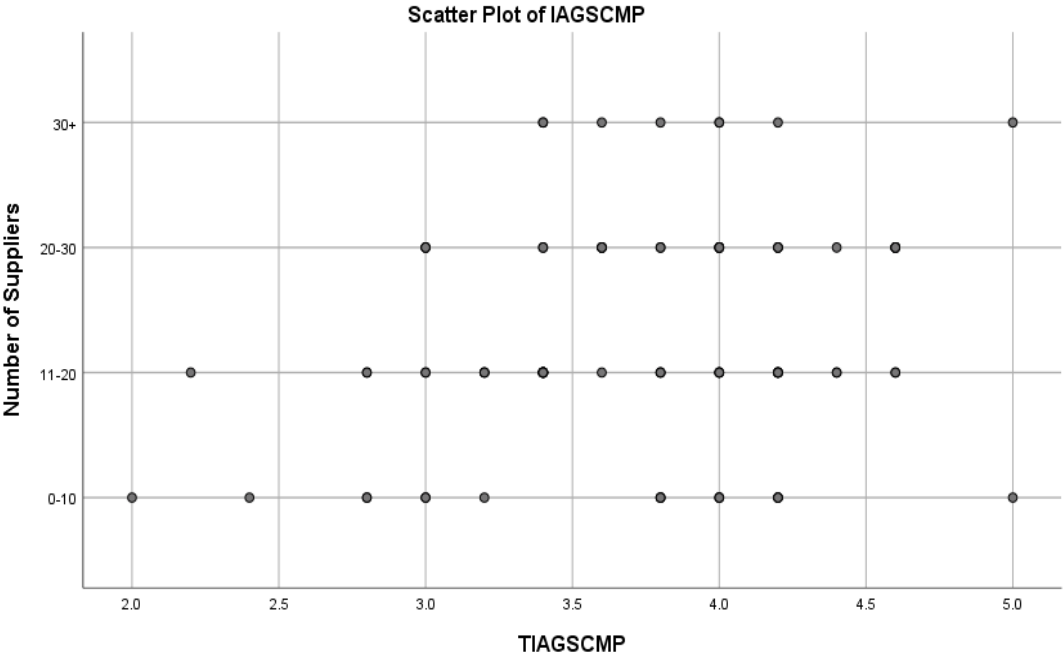


Figure 3.9.3: Distributions of IAGSCMP and Number of Suppliers

Figure 3.9.3 shows that the organizations we surveyed were mainly working with 10-20 suppliers, moreover the other companies are working with 0 – 20 suppliers on average. The average of all companies for the IAGSCMP factor is 3.80. The average factor for 0-10 supplier is 3.59, 11-20 suppliers are 3.72, 20-30 suppliers are 3.90 and more than 30 suppliers are 3.95. The highest average according to number of suppliers is 3.95 for the factor i.e. number of suppliers 30+. The correlation factor between number of supplier and IAGSCMP is .431 as shown in Table 3.7.3. So, I analyzed the results that the companies have more suppliers are correlated to IAGSCMP practices as they are making their employees aware of environmental issues. They showed a positive but moderate relationship between IAGSCMP and number of suppliers.

Table 3.7.3: Pearson Correlation between IAGSCMP and Number of Supplier

Pearson Correlation	Number of Suppliers	IAGSCMP
Number of Suppliers	1	
IAGSCMP	.431**	1

3.8.6.4 Relation between GSCMP and size of the company

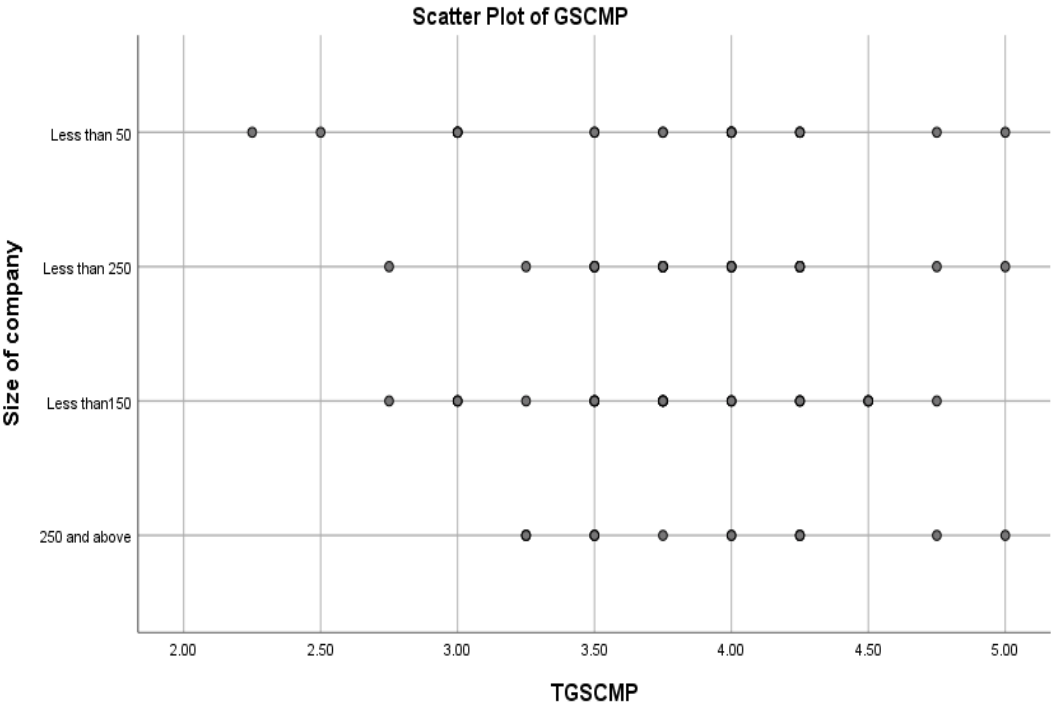


Figure 3.9.4: Distributions of GSCMP and Company Size

Figure 3.9.4 shows that the organizations we surveyed were mainly company size between 51 - 250. The average of all companies for the GSCMP factor is 3.81. The average factor of company size less than 50 is 3.68, company size more than 250 are 3.70, less than 150 company size are 3.82 and greater than 150 but less than 250 are 3.88. The highest average value is 3.88 for the factor i.e. company size greater than 150 but less than 250. The correlation factor between company size and GSCMP is .269 as shown in Table 3.7.4. So, I analyze the results that small to medium size companies are correlated to GSCMP practices as they are following environmental activities and environmental regulations. They showed a positive but weak relationship between GSCMP and company size.

Table 3.7.4: Pearson Correlation between GSCMP and Company Size

Pearson Correlation	Company Size	GSCMP
Company Size	1	
GSCMP	.269**	1

3.8.6.5 Relation between GPPD and size of the company

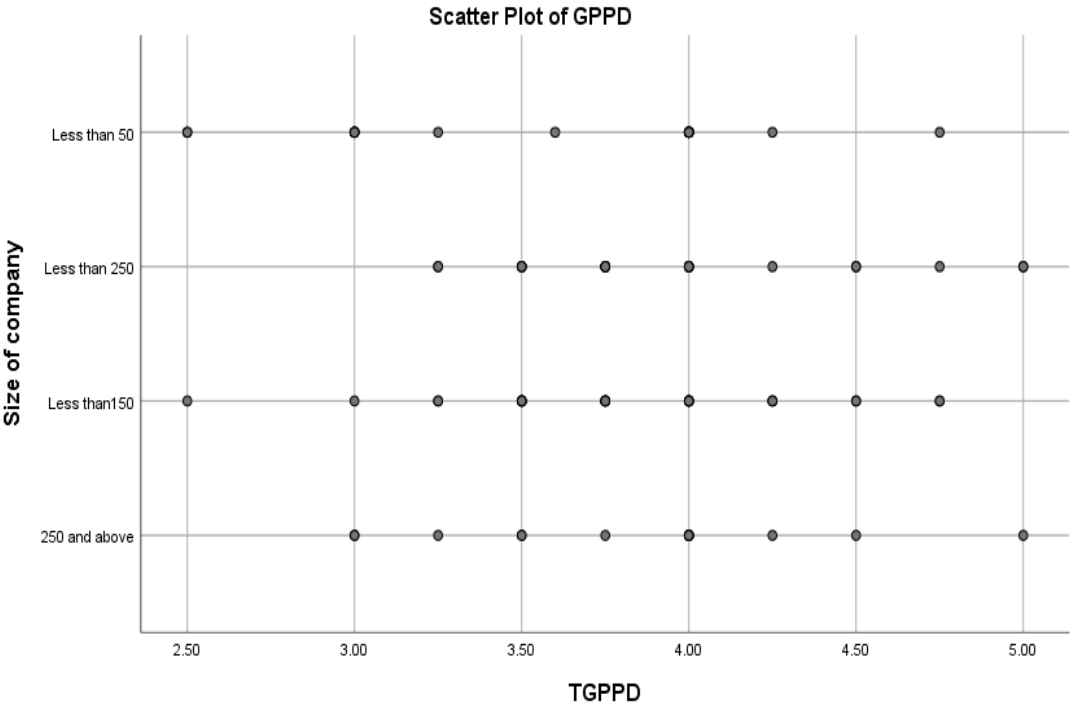


Figure 3.9.5: Distributions of GPPD and Company Size

Figure 3.9.5 shows that the organizations we surveyed were mainly company size between 51 - 250. The average of all companies for the GPPD factor is 3.80. The average for the factor of company size less than 50 is 3.60, greater than 150 but less than 250 are 3.80, and less than 150 company size are 3.82 and company size more than 250 are 3.83. The highest average value is 3.83 for the factor i.e. company size greater than 250. The correlation factor between company size and GPPD is .201 as shown in Table 3.7.5. So, I analyzed the results that the companies have bigger size are correlated to GPPD practices as they are following safe environmental process and products. They showed a positive but weak relationship between GPPD and company size.

Table 3.7.5: Pearson Correlation between GPPD and Company Size

Pearson Correlation	Company Size	GPPD
Company Size	1	
GPPD	.201**	1

3.8.6.6 Relation between IAGSCMP and size of the company

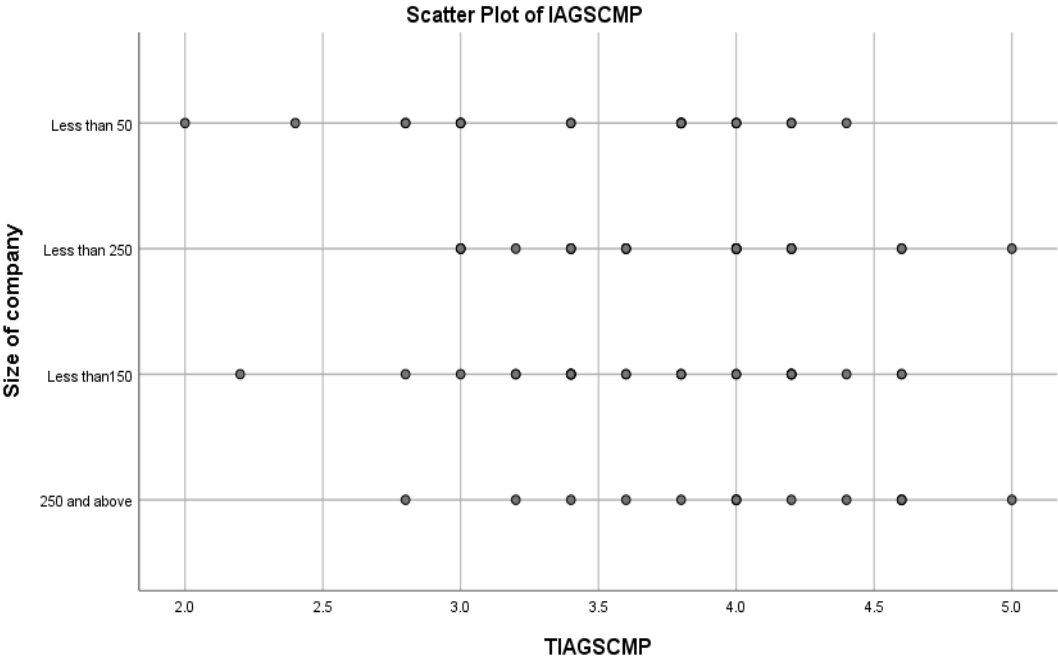


Figure 3.9.6: Distributions of IAGSCMP and Company Size

Figure 3.9.6 shows that the organizations we surveyed were mainly company size between 51 - 250. The average of all companies for the IAGSCMP factor is 3.81. The average for the factor of company size less than 50 is 3.62, less than 150 company size are 3.75, greater than 150 but less than 250 are 3.80 and company size more than 250 are 4.07. The highest average value is 4.07 for the factor i.e. company size greater than 250. The correlation factor between company size and IAGSCMP is .409 as shown in Table 3.7.6. So, I analyzed the results that the companies have bigger size are correlated to IAGSCMP practices as they are making their employees aware of environmental issues. They showed a positive but moderate relationship between IAGSCMP and company size.

Table 3.7.6: Pearson Correlation between IAGSCMP and Company Size

Pearson Correlation	Company Size	IAGSCMP
Company Size	1	
IAGSCMP	.409**	1

3.8.6.7 Relation between GSCMP and firm’s revenue

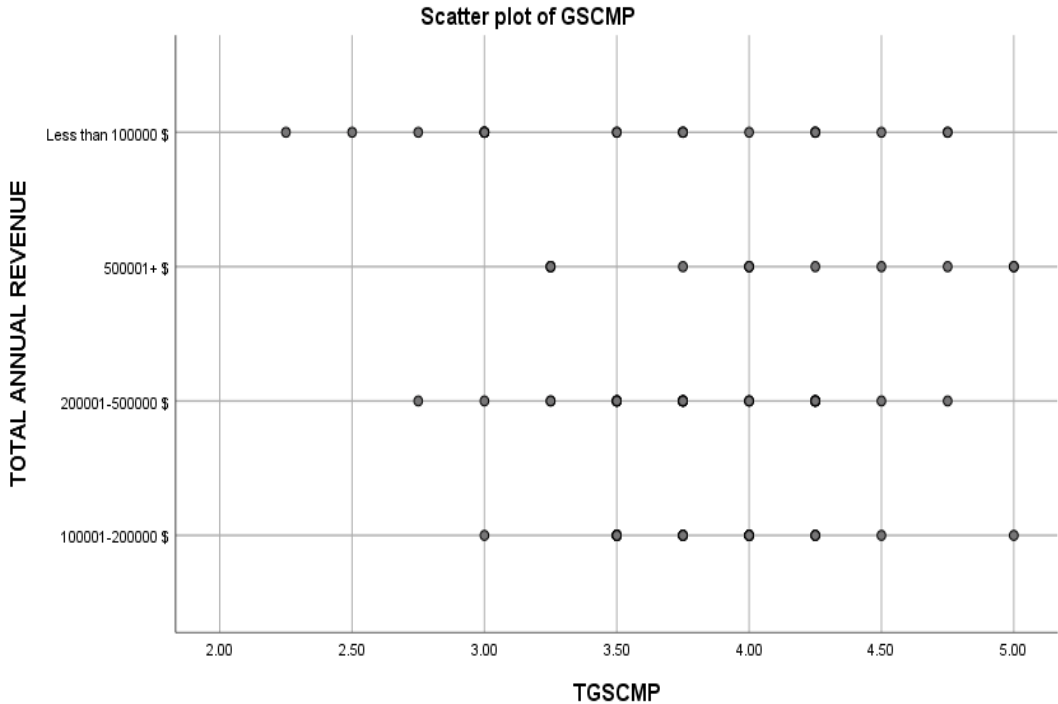


Figure 3.9.7: Distribution of GSCMP and Revenue

Figure 3.9.7 shows that more organizations we surveyed have total revenue less 10000+. The average of all companies for the GSCMP factor is 3.81. The average for the factor in term of revenue for less than 100000\$ is 3.57, revenue between 100001-200000 \$ are 3.81, for revenue between 200001-500000 \$ are 3.85 and revenue more than 500001+ \$ are 4.07. The highest average value is 4.07 for the factor i.e. annual revenue 500000+ and their responses are greater than the average. The correlation factor between company revenue and GSCMP is .438 as shown in Table 3.7.7. So, I analyzed the results that the companies who have greater revenue are following the GSCMP practices in terms of environmental standards and certifications process. They showed a positive but moderate relationship between GSCMP and company revenue.

Table 3.7.7: Pearson Correlation between GSCMP and Company Revenue

Pearson Correlation	Company Revenue	GSCMP
Company Revenue	1	
GSCMP	.438**	1

3.8.6.8 Relation between GPPD and firm’s Revenue

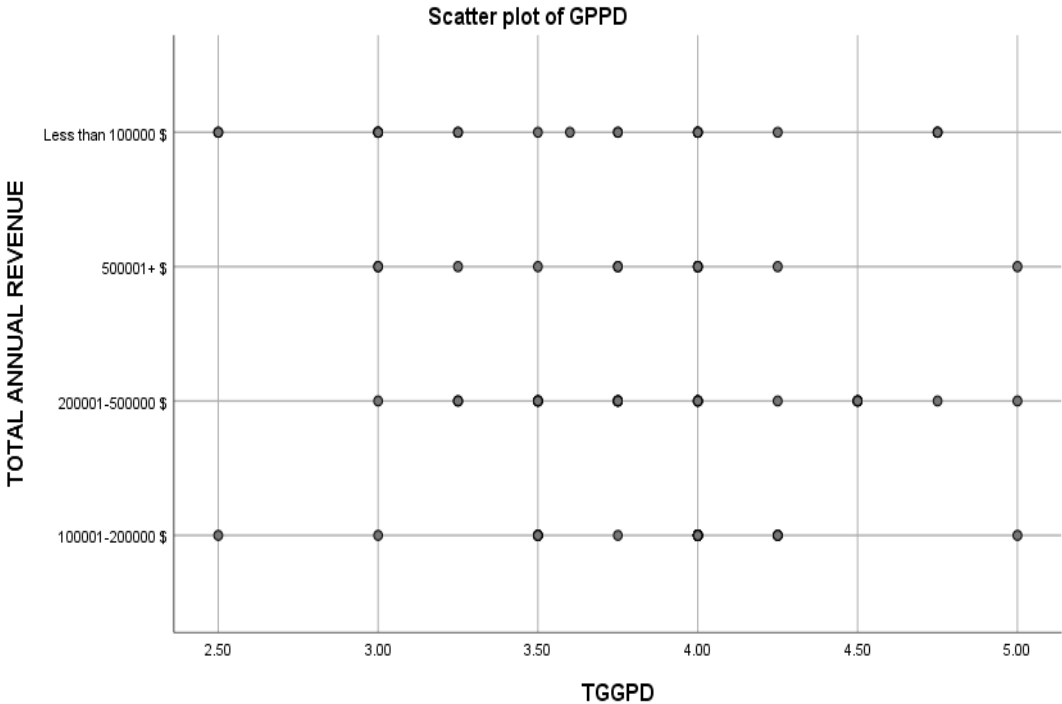


Figure 3.9.8: Distribution of GPPD and Revenue

Figure 3.9.8 shows that more organizations we surveyed have total revenue less 10000+. The average of all companies for the GPPD factor is 3.80. The average for the factor of in term of revenue for less than 100000\$ is 3.55, for revenue between 200001-500000 \$ are 3.79, revenue between 100001-200000 \$ are 3.90 and revenue more than 500001+ \$ are 4.10. The highest average value is 4.10 for the factor i.e. annual revenue 500000+. The correlation factor between company revenue and GPPD is .552 as shown in Table 3.8.8. So, I analyzed the results that the companies who have greater revenue are following the GPPD practices in their production process. They showed a positive but moderate relationship between GPPD and company revenue.

Table 3.7.8: Pearson Correlation between GPPD and Company Revenue

Pearson Correlation	Company Revenue	GPPD
Company Revenue	1	
GPPD	.552**	1

3.8.6.9 Relation between IAGSCMP and firm’s revenue

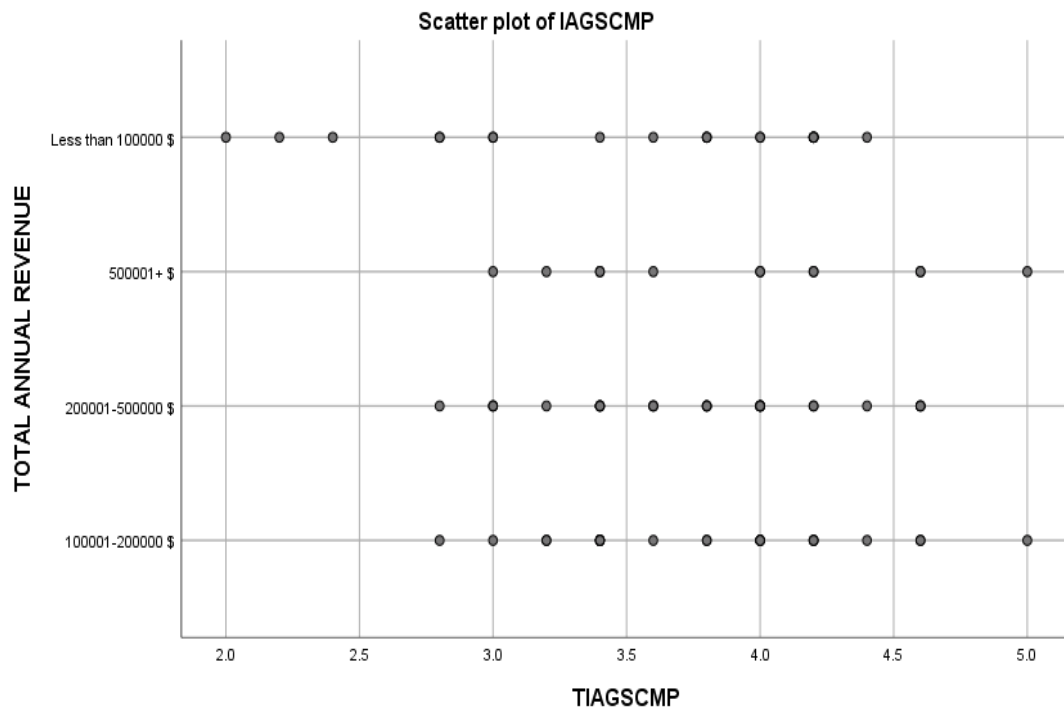


Figure 3.9.9: Distribution of IAGSCMP and Revenue

Figure 3.8.9 shows that more organizations we surveyed have total revenue less 10000+. The average of all companies for the IAGSCMP factor is 3.80. The average for the factor in term of revenue for less than 100000\$ is 3.65, revenue between 100001-200000 \$ are 3.77, for revenue between 200001-500000 \$ are 3.87 and revenue more than 500001+ \$ are 4.00. The highest average value is 4.00 for the factor i.e. annual revenue 500000+. The correlation factor between company revenue and IAGSCMP is .357 as shown in Table 3.7.9. So, I analyzed the results that the companies have revenue more than 500001+\$ are correlated to IAGSCMP practices as they are making their employees aware of environmental issues. They showed a positive but weak relationship between IAGSCMP and company revenue.

Table 3.7.9: Pearson Correlation between IAGSCMP and Company Revenue

Pearson Correlation	Company Revenue	IAGSCMP
Company Revenue	1	
IAGSCMP	.357**	1

3.8.6.10 Relation between GSCMP and Business type

Figure 3.9.10 shows that more organizations we surveyed manufacturing type of business. The average of all companies for the GSCMP factor is 3.81.

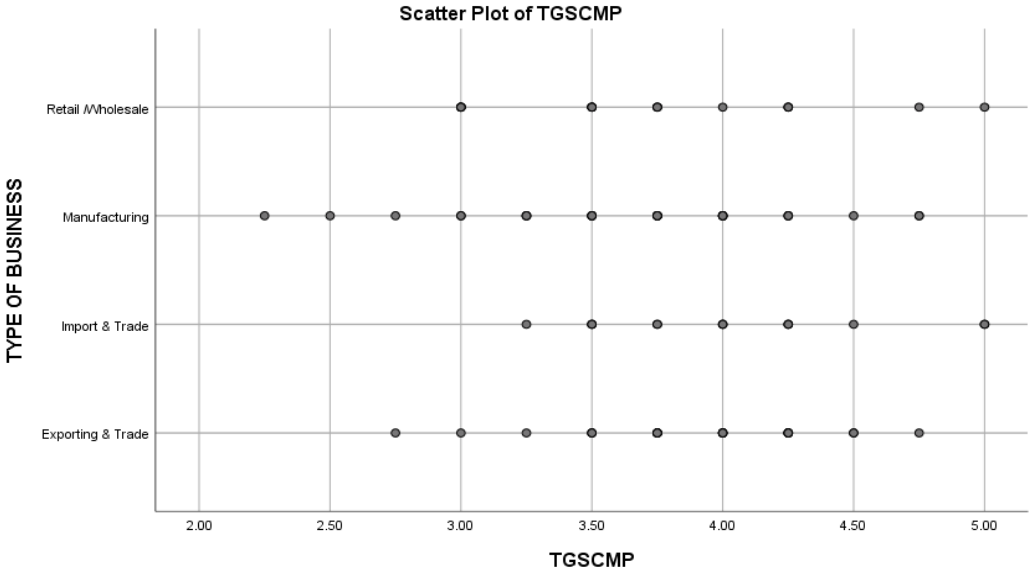


Figure 3.9.10: Distribution of GSCMP and Business type

The average for the factor of GSCMP in term of manufacturing business is 3.66, retail and wholesale business type are 3.75, export and trade business type are 3.89 and import trade business type are 4.03. The highest average value is 4.03 for the factor i.e. Import and trade business type. The correlation factor between business type and GSCMP is .352 as shown in Table 3.7.10. So, I analyzed the results that the import trade companies are following GSCMP practices in their import trade process. They showed a positive but weak relationship between GSCMP and business type.

Table 3.7.10: Pearson Correlation between GSCMP and Business Type

Pearson Correlation	Business Type	GSCMP
Business Type	1	
GSCMP	.352**	1

3.8.6.11 Relation between GPPD and Business type

Figure 3.9.11 shows that more organizations we surveyed manufacturing type of business. The average of all companies for the GPPD factor is 3.80.

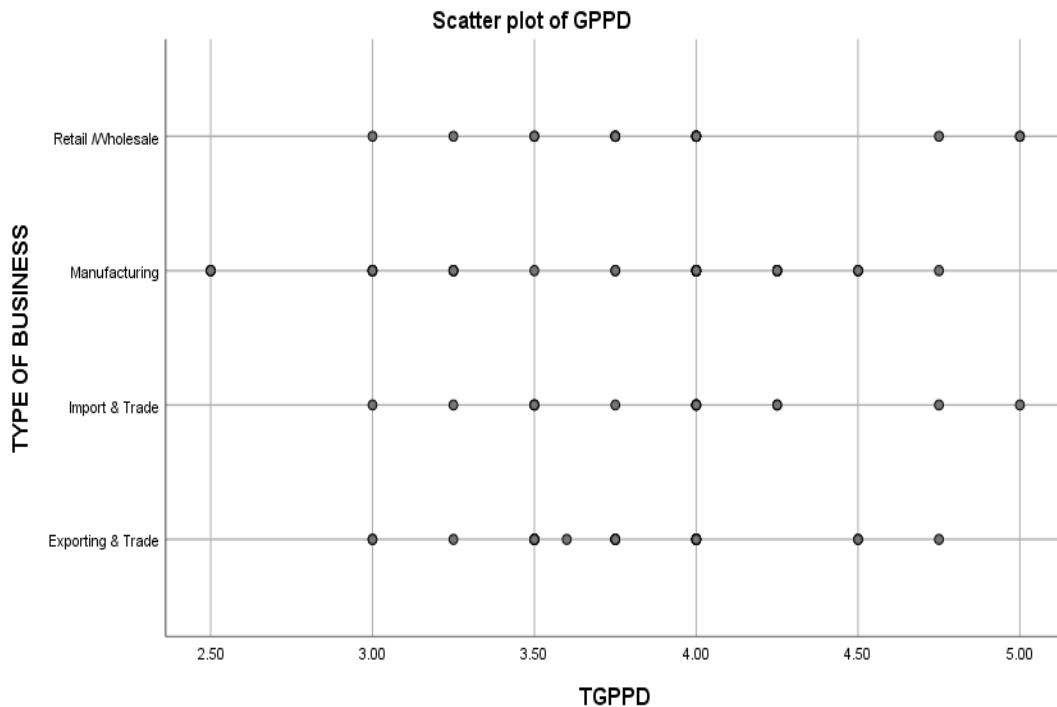


Figure 3.9.11: Distribution of GPPD and Business type

The average for the factor of GPPD in term of manufacturing business is 3.69, export and trade business type are 3.77, import trade business type are 3.91 and retail and wholesale business type are 3.95. The highest average value is 3.94 for the factor i.e. retails and wholesale business type. The correlation factor between business type and GPPD is .219 as shown in Table 3.7.11. So, I analyzed the results that retail and wholesale business type companies are following GPPD practices in their product design and process. They showed a positive but weak relationship between GPPD and business type.

Table 3.7.11: Pearson Correlation between GPPD and Business Type

Pearson Correlation	Business Type	GPPD
Business Type	1	
GPPD	.219**	1

3.8.6.12 Relation between IAGSCMP and Business type

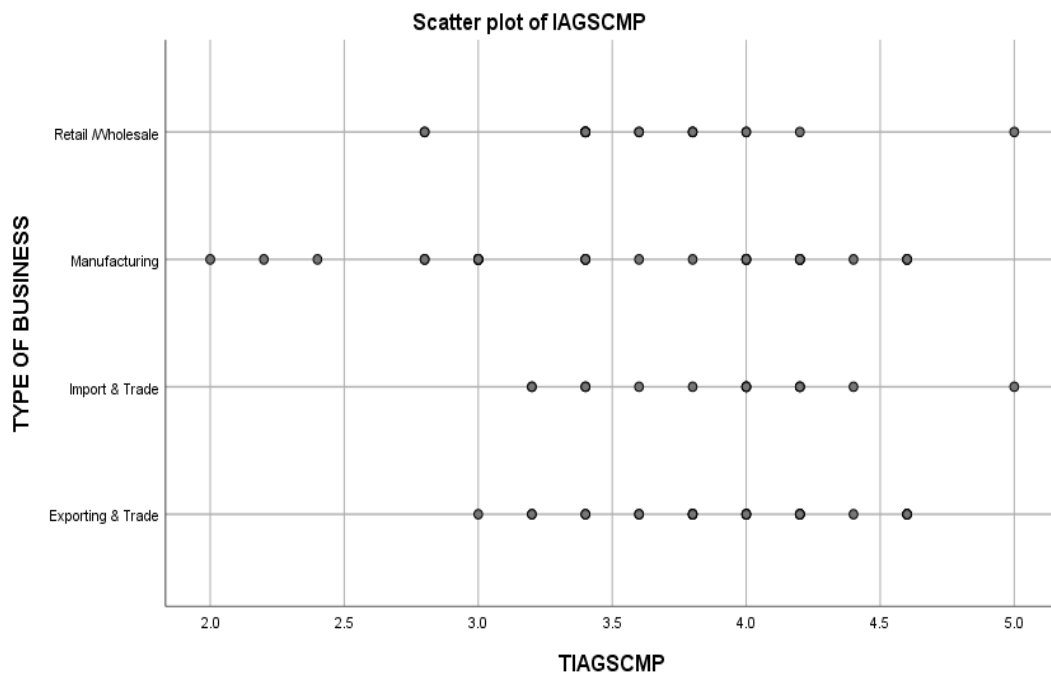


Figure 3.9.12: Distribution of IAGSCMP and Business type

Figure 3.9.12 shows that more organizations we surveyed are manufacturing type of business. The average of all companies for the IAGSCMP factor is 3.80. The average for the factor of IAGSCMP in term of manufacturing business is 3.59, retail and wholesale business type are 3.70, import trade business type are 3.95 and export and trade business type are 4.02. The highest average value is 4.02 for the factor i.e. export trade business type. The correlation factor between business type and IAGSCMP is .642 as shown in Table 3.7.12. So, I analyzed the results that the export trade business companies are following IAGSCMP practices to make their employee’s aware about the environmental impact of the products. They showed a positive and strong relationship between IAGSCMP and business type.

Table 3.7.12: Pearson Correlation between IAGSCMP and Business Type

Pearson Correlation	Business Type	IAGSCMP
Business Type	1	
IAGSCMP	.642**	1

3.8.6.13 Relation between GSCMP and EP

Figure 3.9.13 shows the scatter plot between EP and GSCMP. The average of all companies for the GSCMP factor is 3.81.

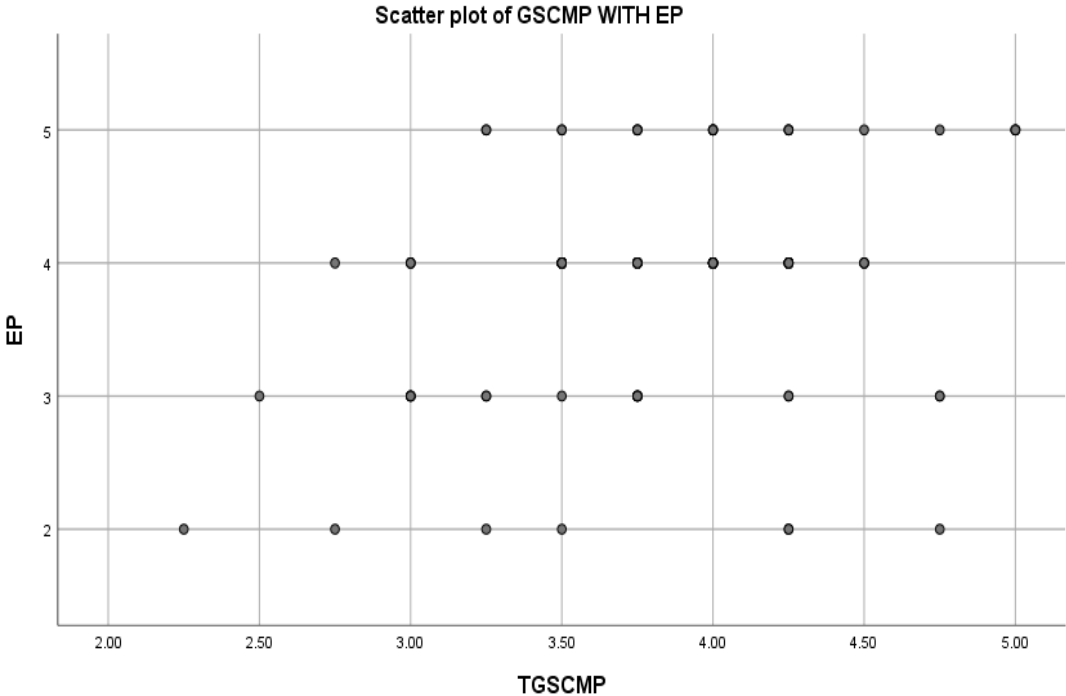


Figure 3.9.13: Distribution of GSCMP and EP

So, we analyze the results that these companies are correlated to GSCMP practices as they have a positive relation with EP. The companies follows the GSCMP practices in terms of certifications, decreasing carbon footprints etc., and their responses value are greater than the average. The correlation factor between EP and GSCMP is .603 as shown in Table 3.8.13. It shows that the companies are following GSCMP practices as in terms of environmental safety and precautions of their products. It shows a positive and strong relationship between GSCMP and EP.

3.8.6.14 Relation between GPPD and EP

Figure 3.9.14 shows the scatter plot between EP and GPPD. The average of all companies for the GPPD factor is 3.80.

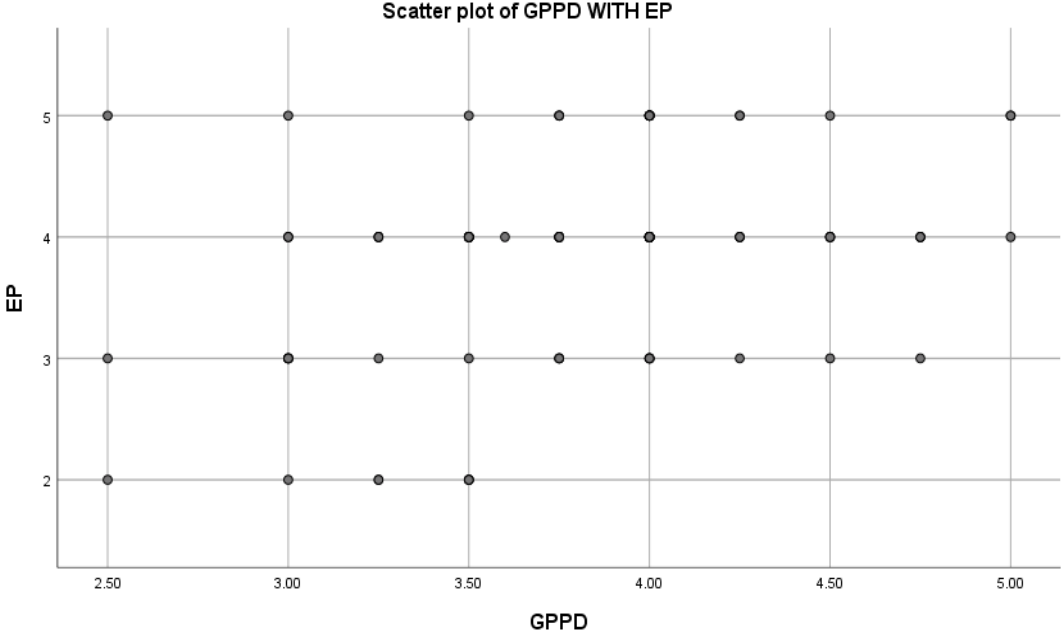


Figure 3.9.14: Distribution of GPPD and EP

The correlation factor between business type and GPPD is .453 as shown in Table 3.8. This means that most of the companies are not focused in to the product process design. It shows companies started to work on green product and process to increase the life cycle, recycling and reusing of their products. They showed a positive but moderate relationship between GPPD and EP.

3.8.6.15 Relation between IAGSCMP and EP

Figure 3.9.15 shows the scatter plot between EP and IAGSCMP. The average of all companies for the GSCMP factor is 3.80. The correlation factor between EP and IAGSCMP is .434 as shown in Table 3.8. So, I analyzed the results that the companies are following IAGSCMP practices to make their employee’s aware about the environmental impact of the products. They showed a positive and moderate relationship between IAGSCMP and EP.

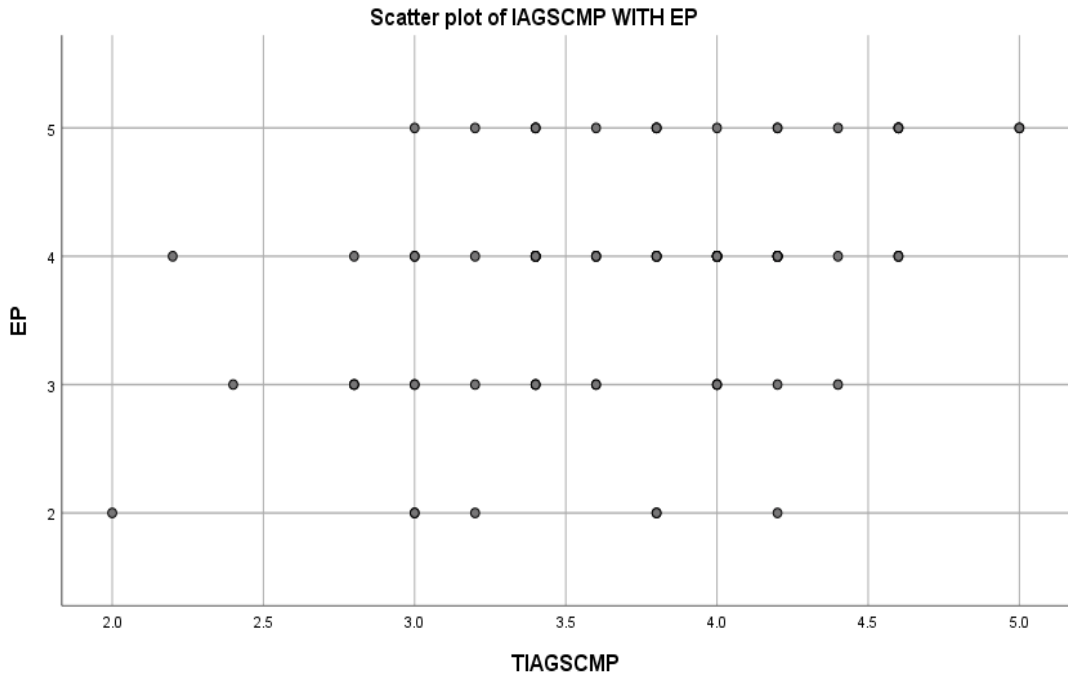


Figure 3.9.15: Distribution of IAGSCMP and EP

3.8.7 Correlation Analysis

The connection between environmental performance and GSCM practices is represented in Table 3.7.

Table 3.8: Pearson Correlation between variables

Pearson Correlation	EP	GSCMP	IAGSCMP	GPPD
EP	1			
GSCMP	.603**	1		
IAGSCMP	.453**	.351**	1	
GPPD	.434**	.345**	.445**	1

All correlation data is relevant, according to data received from respondents and Pearson correlation analyses. As a result, though I only use relationship analysis to assess the reliability of the relations between various variables, I will conclude that GSCMP, GPPD, IAGSCMP are all completely and correlated to Environmental Performance as a part of Organizational Performance.

Correlation analysis shows the linear relationship among proposed variables and explained how much strengthens that relationship between two variables. In my study, I present three independent variables which showed a strong impact on environmental performance as a part of an organizational performance.

Applying correlation analysis to my presented data I find out a very interesting result. GSCMP-EP has a correlation value of .603 which indicates that GSCMP has a positive and strong relationship with environmental performance as a part of an organizational performance. It shows that the companies are following GSCMP practices as in terms of environmental safety and precautions of their products.

IAGSCMP-EP has a value of .453 which indicates that IAGSCMP shows a positive but moderate relationship with environmental performance as a part of an organizational performance. It shows companies started to work on internal awareness of GSCMP as this variable has positive relation but moderate impact on environmental performance as a part of an organization performance according to given data.

GPPD has a value of .434 which indicates that GPPD has positive but medium relation with environmental performance as a part of an organizational performance. It shows companies started to work on green product and process to increase the life cycle, recycling and reusing of their products. At very last GPPD-EP has a value of .434 which indicates positive but medium relation with environmental performance as a part of an organization performance.

3.8.8 Multiple Regression Analysis

To explore the combined impact of multiple factors on the outcome, I ran a multiple regression analysis. Multiple regression analyses were performed using 3 independent variables i.e., GSCMP, IAGSCMP, and GPPD with one independent variable Environmental performance (EP) as a part of organizational performance (OP). OP (the dependent variable) a predictor is influenced by GSCMP, IAGSCMP, and GPPD.

The R square column gives out the value which is (the coefficient of determination), predicts the variance ratio of independent variables with the dependent variables. The R square value as indicated in Figure 3.10 is 0.295, which is 29.5% variance, is explained by the independent variables about dependent variable (OP organizational performance). It further proves that out of 100% (100%-29.5%) 70.5%

variations are the causes of other unpredictable factors which are not included in the model.

The adjusted R Square value shows .269 which is 26.9% indicating predictors in the model show 26.9% variations results of variables. Observing the values of the R square and the adjusted R square having a slight difference indicates this model is well-fitted.

Additional undetermined variables or factors reduce the adjusted R square while the meaningful variables increase the R square. Looking at the model, the adjusted R square is less than the R square. This model's standard error for this model is .57, which is in the way the model is measuring precision. This is a residual standard deviation, and this shows how the regression model is being used to predict or estimate dependent variables or interest variables and how inaccurate it can be. When R square increases the standard error decreases.

Environmental performance estimates while using the model on average are shown to be .57, but this is considered a minor error knowing that we are not predicting all factors of organizational performance when using the model. This concludes that the error margin is bearable.

The F value in the following multiple regression Figure 3.10 examines how suitable the aggregate model of regression is for this data of the study. Statistically, the independent variables of t value predictions of the study's dependent variable, which is environmental performance as an organizational performance illustrated in Figure 3.5, F value = 11.178 with $p (.000) < .05$ (shows a good fit of regression model to this data).

The p-values and T-values are shown in columns of “t” and “sig” in coefficient Figure 3.10. In the table, we can see that GPPD has a p-value (0.166) > 0.05 , which means that GPPD is not an important independent variable in the model. In contrast, the GSCMP p-value (0.036) < 0.05 , and IAGSCMP p-value (0.063) > 0.05 , are important independent variables in the model. This explains why green supply chain management practices (GSCMP) and the internal awareness of green supply chain practices (IAGSCMP) are in the model; there is no need to include green process and production design (GPPD) in the study model. There is no crucial role in defining organizational performance (OP) when these two variables are present.

As previously discussed, the standard error of this model fits, and so does the coefficient standard error in the regression Figure 3.10 output showing the minimum

values. This indicates how inaccurate the estimated value can be. For example, in the case of GSCMP, the error is .148 and for IAGSCP the error margin is .149, but they are minor and negligible.

The intercept .941 is the p-value (predicted value) of the study DV-environmental performance as a part of an organizational performance when keeping all the III-GSCMP, IASCMP and GPPD have all predictive values of these independent variables to be 0.

The unstandardized coefficient explains variations of the dependent variable and one independent variable while keeping other independent variables of the study constant to see the change in the dependent variable made by that specific independent variable. The unstandardized coefficient value of GSCMP is 0.316, which means that for every increase in GSCMP, the dependent variable organizational performance increases by 0.316. The unstandardized coefficient value of IAGSCMP is 0.281, which means that for every increase in IAGSCMP, the dependent variable organizational performance increases by 0.281. The unstandardized coefficient value of GPPD is 0.142, which means that in every unit increase in GPPD, the dependent variable-organizational performance increases by 0.142.

The beta seeds are standardized coefficients in the coefficient Figure 3.10 of regression. At a time when the predictive independent variable has multiplication with standard deviation, the rest of the independent variables in Figure 3.10 are constant. Therefore, this beta weighs and predicts how much the standard deviation rises the variable value. In this study, GSCMP is the predictor, with most collaborations having a value of 0.316 in defining OP, followed by IAGSCMP having a beta value of 0.281, and GPPD with a value of 0.142, which is a fair level of prediction.

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics	
					R Square Change	F Change
1	.543 ^a	.295	.269	.57765	.295	11.178

ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	11.189	3	3.730	11.178	.000 ^b
Residual	26.694	80	.334		
Total	37.884	83			

a. Dependent Variable: TEP

b. Predictors: (Constant), TIAGSCMP, TGPPD, TGSCMP

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.941	.486		1.935	.057
	TGSCMP	.316	.148	.265	2.135	.036
	TGPPD	.142	.102	.149	1.399	.166
	TIAGSCMP	.281	.149	.241	1.887	.063

a. Dependent Variable: TEP

Figure 3.10: Multiple regression results

The summary of this chapter is as follows. The researcher performed multiple analyses, including descriptive, regression, and demographic analyses. As per the analysis performed, the researcher concluded that the respondents who participated in the survey had master's degrees predominately and had good knowledge of green supply chains. Further, they observed from descriptive analysis that the highest mean value was for IAGSCMP; therefore, they interpret that most firms had sufficient awareness among their employees of information-sharing green supply chain management practices. From the multiple regression analysis, the researcher observed that GSCMP had the highest beta value at 0.316 and T value at 2.135, making it the most significant relationship with green supply chain management practices.

In the next chapter the researcher explained the complete details of our results and findings and their conclusion.

CHAPTER 4

4. RESULTS AND CONCLUSIONS

4.1 Results and Conclusion

The main objective of this study was to recognize the influence of green supply chain management practices on environmental performance as a part of organizational performance in the Turkish textile market. How the green supply chain management practices would be applied in the textile sector of Turkey and influence the organizational performance in terms of their environmental performance was studied.

Putting the above together, I could write up the results as follows: A multiple regression was run to predict environmental performance as a part of Organizational Performance, from green supply chain management practices, internal awareness of green supply chain management practices, and green production and process design. The model statistically significantly predicted Organizational Performance $F = 11.178$, $p (.000) < .05$, $R^2 = 0.295$.

According to the research, only one independent variable i.e., GSCMP (beta value = .036) was statistically significant when predicting a dependent variable i.e., environmental performance as a part of organizational performance. The highest contributing predictor is GSCMP (beta value = .036), followed by IAGSCP (Beta value=.281) and GPPD (Beta value=.142).

So according to the data analyzed in multiple regression, H1 is supported and H2, and H3 were not supported while in linear correlation H1, H2 & H3 are supported.

This study tests the hypothesis that GSCMP has a significant effect on environmental performance as an organizational performance measure of textile manufacturing SMEs in Turkey. The dependent variable, OP, was regressed on GSCMP to test this hypothesis. For the t value (2.135), it is found that GSCMP has a

significant impact on OP and plays a part in forecasting it (beta = .265). However, this impact is statistically significant at the 0.05 level so H1 can be supported. The GSCMP factor also statistically significant when we have run the correlation at .603, which shows a strong relation between the GSCMP-EP factors. This means that textile organizations have started to implement green supply chain management practices to improve their environmental performance as a part of organizational performance. Organizations are aware of the benefits of GSCMPs.

This study tests the hypothesis that IAGSCMP has a significant effect on environmental performance as an organizational performance measure for textile manufacturing SMEs in Turkey. The dependent variable OP was regressed on predicting the variable IAGSCMP to test null hypothesis H2. The t-value of IAGSCMP is (1.887), which does not exceed 1.935; thus, it supports the conclusion that IAGSCMP does not have a significant impact on OP and does not play a role in predicting it (beta= .281). Additionally, this impact is deemed insignificant as a p-value of 0.063 fails to meet $\alpha = 0.05$ threshold criteria required for statistical significance; therefore, the H2 hypothesis significantly affects the EP as a part of an OP, but it is not supported by the data of multiple regression analysis. While the IAGSCMP variable is statistically significant at .434 when we have run the correlation, which shows a moderate relation between the IAGSCMP-EP variables. The difference in the results of correlation and multiple regression analysis is because when we start calculating together these variables there are unrecognized factors which makes their relation insignificant in multiple regression analysis. From the results of the analysis, I conclude that internally in the organization, the information-sharing structure is not so strong, it should be that every department and working person be aware of green supply chain management practices. Organizations need to engage in learning and awareness activities so that their employees are aware of the GSCMP.

This study tests the hypothesis that GPPD has a significant effect on environmental performance as an organizational performance measure for textile manufacturing SMEs in Turkey. The dependent variable, OP, was statistically regressed on the predicting variable GPPD to determine whether H3 is true or not. For GPPD, the t-value is (1.399), which means that it does not have a greater impact than 1.935 and therefore does not support the claim that GPPD affects OP significantly. Additionally, this impact is also not significant at $p=0.166$. Therefore, the H3 hypothesis significantly affects the EP as a part of an OP, but it is not supported by the

data of multiple regression analysis. While the GPPD variable is statistically significant at .453, when we have run the correlation which shows a moderate relation between the GPPD-EP variables. The difference in the results of correlation and multiple regression is because when we start calculating together these variables there are unrecognized factors which makes their relation insignificant in multiple regression analysis. Organizations need to learn more about the products and processes they want to use and how they make sustainable products. For this, the organization should create an environmentally friendly production system that would be beneficial for the organization and the environment.

4.2 Limitations

This study was conducted to examine the impact of GSCMP on the exhibition of SME associations in the textile industry in Turkey. The extent of this examination is enormous, and information assortment is truly challenging because of restricted assets and time imperatives; only 84 respondents and reactions are incorporated. Future research should separate textile industry businesses into small, medium, and large size associations to observe a more significant impact on this area. There were multiple responses from the same company, but respondents' different departments had different perceptions of GSCM practices. This is also considered a limitation of this study. Moreover, because of the size of the review, not all the components and variables can be memorized in one review. Furthermore, green supply chain management methods can yield better results. However, the time requirements limit this progress. Future researchers should expand their exploration of GSCM practices.

4.3 Conclusion

From the research and analysis which the researcher has done on the Turkish textile industry, the researcher concludes with the following points. Environmental sustainability is still at a struggling phase in the textile industry in Turkey whereas, in the Ikram and Siddiqui (2019) study, observation has served the environmental sustainability in the textile industry of Pakistan. Therefore, green supply chain management practices are needed in Turkey's textile sector. Since there is a need for proper awareness, knowledge, precautions, and usefulness of green supply chain management practices in the textile sector, government bodies and other authorities

should take serious implications for this matter. As the researcher have seen there is an impact of green supply chain management practices on the overall performance of the organization so it will improve the textile industry growth exponentially if green supply chain management practices are implemented and followed properly this view is also supported by Ikram and Siddiqui (2019) study which states that a significant effect is made on environmental organizational performance by green supply chain practices.

Green supply chain management practices have become an essential part of modern business operations. This thesis aims to identify the relationship between various factors and practices involved in green supply chain management, as well as the level of internal awareness among textile organizations regarding these techniques. Additionally, it explores how product design and environmental performance are related to companies with a strong commitment to sustainability. This thesis research is focused on the impact of green supply chain management activities performed by textile organizations in Turkey and also considers other factors such as employees' awareness of green supply chain management practices, green processes, and product design that comply with sustainable environmental principles. This report contributes to ongoing research around the world, focusing on green supply chain management practices and environmental performance as part of organizational performance. The research objectives of this study were pursued using multiple regression and descriptive analysis, with a focus on determining the most significant factors influencing the outcomes. The main findings of this thesis study are significantly associated with the success or failure of the results analyzed by data.

1. The most important step for achieving environmental excellence in all textile organizations is green supply chain management practices. According to the research findings, it can be concluded that implementing these activities within an organization leads to improved environmental performance. This was validated by Ikram and Siddiqui (2019), who found that green supply chain management practices played an essential role in enhancing environmental performance. Turkish textile organizations are working on various ways to improve their environmental performance as a part of organizational performance internally and externally. The dependent variable, Ep, as part of OP, was regressed on the GSCMP to test this hypothesis. For the t-value (2.135), it was found that GSCMP has a significant impact on OP and plays a role in forecasting it (beta = .265). While the GSCMP variable is statistically significant when

we have run the correlation, which shows a strong relation between the GSCMP-EP variables. This means that textile organizations have started to implement green supply chain management practices to improve their environmental performance as a part of organizational performance, which is aligned with the study of Karabacak and Saygili (2022), which states that proactive approach organizations take toward a green environment voluntarily transforms performance in organizations. Textile organizations are aware of the benefits of GSCMPs.

2. One of the key features that have been studied in this thesis is an internal awareness of green supply chain management practices. It has been found by the results of our research have been found to have internal knowledge of a textile firm's green supply chain management practices that can have an impact on organizational performance. Textile firms are at the initial stage of working to implement and design an authentic way for internal information sharing of GSCM practices in their own organization's performance where a study by Ikram and Siddiqui (2019) states it is an influential strategic tool to add to the organization as in improving criteria for any organization. I conclude that internally in the organization the information sharing structure is not so strong, it should be that every department and working person be aware of the green supply chain management practices this argument was supported by Ikram and Siddiqui (2019) where the authors find evidence of lack of integration in regards to green supply chain management practices because it is overlooked factor. While the IAGSCMP variable is statistically significant when we have run the correlation, which shows a moderate relation between the IAGSCMP-EP variables. The difference in the results is because when we start calculating together these variables there are unrecognized factors which makes their relation insignificant in multiple regression analysis. Organizations need to engage in learning and awareness activities so that their employees are aware of the GSCMP.

3. Another hypothesis tested in this study is the relationship between green products and process design on environmental performance as a part of the organizational performance of a firm. It has been found in this research that the relationship between green products and process design doesn't effect on green supply chain management practices of the organization, unlike the study by Ikram and Siddiqui (2019) which states eco-design can play an influential role in both in the internal environment of organizations and in international market also help end users and ensure efficient consumption of resources and energy. While the GPPD variable

is statistically significant when we have run the correlation, which shows a moderate relation between the GPPD-EP variables. The difference in the results is because when we start calculating together these variables there are unrecognized factors which makes their relation insignificant in multiple regression analysis. There seem to be other factors that are not studied in this research, which might impact on the overall organizational performance of the firm. Textile organizations need to learn more about the products and processes in environmentally and technologically advanced ways that they want to use and how they make sustainable products. For this, the organization should create an environmentally friendly production system that would be beneficial for the organization or the environment.

This study demonstrates that textile manufacturing organizations in Turkey are starting to adopt GSCM practices. However, this is only the beginning- There's still much work to be done for textile companies to fully understand and appreciate the benefits of going "green." Moreover, it was observed that implementing GSCM practices has a positive impact on environmental performance within an organization. The results of this study showed that there is a significant impact of GSCMP on Ep as part of OP performance with significance equal to (0.036) as an individual effect of substructures of GSCMP, and there is no significant effect of (internal awareness of green supply chain management practices and green product and process design) on EP as a part of organizational performance.

This conclusion illustrates that if textile industry in Turkey at every level are determined to adopt GSCM practices, they will ultimately gain advantages. It is an enabler of EP as part of organizational performance in the Turkish textile industry. This study provides organizations with the knowledge necessary to improve their organizational performance as environmental performance through a green supply chain management process. In addition, it is important for textile businesses to identify the specific areas in which sustainability can be achieved. By employing effective strategies, a textile organization can make significant progress toward its sustainable goals.

4.4 Future Research

The findings of this report conclude that on a bigger scale, there's still room for improvement. This may help researchers in the future to develop more supportive

opportunities for future investigation. Future evaluations should be practical, with a larger sample that covers a larger segment space and larger respondent sizes. It is recommended that the findings of this study be validated by examining different demographics or significantly different countries and distinguishing between different social orders to see if there is any variation in the implementation of the classification. The results of this study should be cross-checked by examining different aspects of green supply chain management in different countries or industries and whether there is a significant adjustment in organizational performance. Furthermore, researchers should consider mediating and/or moderating variables, such as how GSCMP relates to organizational performance among small textile industry businesses in Turkey.

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APPENDICES

APPENDIX A

Dear respondents,

I'm a student of MBA. (Master in Business Administration) at Işık University, Istanbul, and conducting a study about the relationship between Green Supply Chain Management and organization performance of the textile industry in Turkey. In this regard, your participation is needed to precede this study.

Enclosed with this cover letter is a brief questionnaire which hardly takes 10 minutes of your precious time. Kindly mark the number that can best describe your opinions about the questions, e.g., 1= Strongly Disagree, 2= Disagree, 3= Neutral, 4= Agree, 5= strongly agree. Your response will be kept confidential, and it will not affect your career. If something is not understandable, drop your queries to the below-mentioned email address.

Thank you for your precious time.

Abdul Sammad Chohan

Researcher/ MBA Student, Isık University Istanbul

Consent:

I agree to participate voluntarily in this survey and I feel confident that it will be used for just research purposes.

Agree

Disagree

What is your Gender?

Male

Female

Total years of experience?

0-2

3-5

6-10

11-20

21-30

What is your age?

+18

20-25

26-30

31-35

35 & Above

What is your highest level of education?

Intermediate

Bachelor (2 years)

Bachelor (4 years)

Graduate

Postgraduate

What is the size of the company?

Less than 50

Less than 150

Less than 250

250 and above

What is your department of work?

Engineer

Finance

Supply chain and logistics

Procurement

Worker

How many years have you been working in this company?

0-1 year

1-3 years

4-6 years

6+ years

The number of suppliers you are working with?

0-10

11-20

20-30

30+

What is the type of business you are doing?

Manufacturing

Retail Selling

Exporting & Trading

What is the annual revenue of the company?

Less than 100000 \$

100001-200000 \$

200001-500000 \$

500001+ \$

For each of the questions below, mark the response that best describes how you feel about the statement, where: 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, and 5 = Strongly Agree.

Questions	1= Strongly Disagree	2= Disagree	3= Neutral	4= Agree	5= strongly agree
<p>Our firm cooperates with suppliers to meet environmental objectives.</p> <p>Türkçe</p> <p>Firmamız çevresel hedeflere ulaşmak için tedarikçilerle işbirliği yapmaktadır</p>					
<p>Our firm has reduced air emissions during the last three years.</p> <p>Türkçe</p> <p>Firmamız çevre sertifikalarına sahip tedarikçilerle işbirliği yapmaktadır.</p>					
<p>Our firm emphasizes purchasing eco-friendly materials.</p> <p>Türkçe</p> <p>Firmamız çevre dostu malzeme satın almaya önem vermektedir.</p>					
<p>Our firm cooperates with suppliers who have environmental certifications.</p> <p>Türkçe</p> <p>Firmamız çevre ile ilgili sertifikalara sahip tedarikçilerle iş birliği yapmaktadır.</p>					
<p>Our firm has partnerships with suppliers that aim to environmental solutions</p>					

<p>and/or development of environmentally friendly products.</p> <p>Türkçe</p> <p>Firmamızın çevreci çözümler ve/veya çevre dostu ürünler geliştirmeyi amaçlayan tedarikçilerle ortaklıkları bulunmaktadır.</p>					
<p>Our firm has reduced effluent wastes during the last three years compared to competitors.</p> <p>Türkçe</p> <p>Firmamız son üç yılda atık su atıklarını rakiplerine göre azaltmıştır.</p>					
<p>Our firm has reduced consumption of hazardous/toxic material during the last three years.</p> <p>Türkçe</p> <p>Firmamız son üç yılda tehlikeli/toksik malzeme tüketimini azaltmıştır.</p>					
<p>Our firm has sought to improve its environmental image /position during the last three years.</p> <p>Türkçe</p> <p>Firmamız son üç yılda çevresel imajını/konumunu iyileştirmeye çalışmıştır.</p>					
<p>Our firm has reduced energy consumption during the last three years.</p> <p>Türkçe</p> <p>Firmamız son üç yılda enerji tüketimini azaltmıştır.</p>					
<p>Our firm has reduced solid wastes during the materials three years.</p>					

<p style="text-align: center;">Türkçe</p> <p>Firmamız üç yıl boyunca malzemelerde katı atıkları azaltmıştır.</p>					
<p>Our firm emphasizes the design of products that can be reused, recycled, and recovered component parts.</p> <p style="text-align: center;">Türkçe</p> <p>Firmamız, yeniden kullanılabilen, geri dönüştürülebilir ve geri kazanılabilir bileşen parçalarının tasarımına önem vermektedir.</p>					
<p>Our firm emphasizes the design of products to reduce the use of harmful/toxic materials.</p> <p style="text-align: center;">Türkçe</p> <p>Firmamız zararlı/toksik malzeme kullanımını azaltmak için ürün tasarımına önem vermektedir.</p>					
<p>Our firm emphasizes the optimization of the design process to reduce solid and liquid waste.</p> <p style="text-align: center;">Türkçe</p> <p>Firmamız katı ve sıvı atıkları azaltmak için tasarım sürecinin optimizasyonuna önem vermektedir.</p>					
<p>Our firm has an information-sharing structure with customers.</p> <p style="text-align: center;">Türkçe</p> <p>Firmamız müşterilerle bilgi paylaşım yapısına sahiptir.</p>					
<p>Our firm cooperates with customers for using less</p>					

energy during products Transportation. Türkçe Firmamız ürün taşımacılığında daha az enerji kullanılması için müşterileri ile işbirliği yapmaktadır.					
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