DISSERTATION REPORT
ON
The Challenges in Establishing Sustainable Supply Chain in Bangladesh.

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Letter of Transmittal

Date: 5th December' 2022
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Subject: Submission of dissertation report.

Dear Sir,
I am here by submitting my dissertation report entitled The Challenges in Establishing Sustainable Supply Chain in Bangladesh, which was assigned to me as a requirement for the completion of the EMBA program. I have discovered this study very interesting, beneficial and insightful.

The entire report is based on my practical experience in Insaf Ltd. I expect this paper to be informative as well as comprehensive. This report will help me a lot in my future career.

Thank you very much for your guidance and cooperation during the course without which this dissertation report cannot be completed. Moreover, if you have any further enquiry concerning any additional information, I would be very pleased to clarify that.

Yours sincerely

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Abstract

In the corporate sectors, sustainable supply chain is a vital issue due to the business interest. Since 1980s it has been progressively amplified the attention of the supply chain management when the business organization showed the mutual relationship's benefits in the business organization. For this reason, all try hard to build up new theory for supply chain that can be helpful for business organization. The main objectives of this dissertation are offered a literature review on sustainable supply chain management taking papers published since 1990 to till date into account. Secondly, it offers a conceptual sustainable supply chain process model in light of triple bottom line theory.

The sustainable supply chain management research numbers are not sustaining. Among this most of the previous research focus on environment, social and economic aspects of standalone fashion in supply chain. The most of the previous studies based on dominant conceptual nature. Dissertation on sustainable supply chain management based on comprehensive empirical is very few. This paper focused on triple bottom line sustainability like – social, economic and environment that are related to Bangladesh supply chain.

List of Acronyms

1PL	In-house transport operation
3PL	Third Party Logistics
4 Ps	Product, Price, Placement, Promotion
A/P	Accounts Payable
A/R	Accounts Receivable
B2B	Business to Business sales via the internet
B2C	Business to consumer sales via the internet
BBC	Black Belt Champion (or Council)
BBS	Business Balanced Scorecard
C2C	Cash Conversion Cycle
C2C	Consumer to Consumer eg e-bay
CA	Chartered Accountant
CAD	Computer Aided Design
CAE	Computer Aided Engineering
CAF	Currency Adjustment Factor
CAFTA	Central American Free Trade Agreement
CAGR	Compound Annual Growth Rate
CAID	Computer Aided Inspection and Test
EI	Employment Insurance (Canada)
EIPP	Electronic Invoice Presentation and Payment
FA	Flexible Automation
FAA	Federal Aviation Administration (USA)
FAO	The United Nations Food & Agriculture Organization
GAAP	Generally Accepted Accounting Principles
GACAG	Global Air Cargo Advisory Group
IATA	International Air Transport Association
IBF	International Banking Facility

ICC	International Chamber of Commerce
ICC	Interstate Commerce Commission
ICE	Internal Combustion Engine
L/C	Letter of Credit
PLC	Product Life Cycle
QA	Quality Assurance
QA	Quality Agreement
QC	Quality Control
SC	Supply Chain
SCC	Supply Chain Council
SCE	Supply Chain Execution System
SCEM	Supply Chain Event Management
SCES	Supply Chain Execution System
SCM	Supply Chain Management
SCMC	Supply Chain Management Costs
SIG	Special Interest Group
SIOP	Sales Inventory and Operations Planning
SIPOC	Supplier Input Process Output Customer Diagram
TCM	Transportation Control Measures
TCO	Total Cost of Ownership
TDC	Total Delivered Cost
TDM	Team Data Manager
ULD	Unit Load Device (Air freight)
UN	United Nations
VAD	Value Added Distribution
VAN	Value-Added Network
VAS	Value-Added (Logistics) Services
VAT	Value Added Tax

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CHAPTER 1: INTRODUCTION

1.1 Introduction

Supply chain sustainability means the process and the technologies that aim at the delivery of the goods. It also focuses on the cost minimization of the goods as well. This increasing philosophy is based on socially responsible products that ensure the long-term sustainability of the business. It also focuses on the responsiveness of the supply chain as well.

Supply chain sustainability includes the reduction of the cost and the waste of energy. For this reason, it uses green technologies in logistics and transportation activities. It involves a great level of collaboration both in the external and the internal supply chain. It examines the process in the supply chain from time to time. It involves integrating flexible and beneficial practices throughout the supply chain. This process includes the design of the products, development and material selection, extraction of the raw materials, production, packaging, distribution, preservation, consumption, return, and recycling of the products. it helps business organizations to reduce carbon emissions. It also helps to optimize the business operation to save cost and get greater profitability. It can be achieved through sustainable practices throughout the supply chain.

Supply chain sustainability focuses on a different number of priorities. These priorities are as follows: -

- Leadership in the environmental production
- Preservation of the resources
- Decrease of the carbon emission
- Procession of the financial feasibility
- Performance of the corporate social responsibility

1.2 Background of the Study

Supply chain is activities in the organization process that focuses on the information, people, activates and resources to the customer and the suppliers. This focuses from the production process to the distribution of the finished products to the ultimate consumers. In the production process raw materials and others are converted into the finished products. it also creates value of the products and ensures greater sustainably.

Council of Supply Chain management Professionals (CSCMP) says that "Supply Chain Management encompasses the planning and management of all activities involved in sourcing and procurement, conversion, and all logistics management activities."

Supply chain focuses on the effective coordination of the partners like intermediaries, suppliers, third patty service providers and others. It focuses on the effective demand and the supply chain management as well. It integrates the function of the business organization. It links up among different business activates. It focuses on the high-performance business model. It includes different activates in the logistics. It drives different coordination process of the business operation like finance, marketing, sales, design of the product, finance and information technology.

1.3 Supply Chain Management

Supply chain management focuses on the flow of the goods and the services of the products. It includes the storage of the raw and the finished products in the organization. It functions from the point of the production to the point of consumption. Interlinked channels and business are involved in the supply chain. It is defined as the planning execution, control and the monitoring of the supply chain. It helps the organization to develop the competitive infrastructure,

worldwide logistics management, supply chain synchronization of the products. it helps to measure the performance of the business organization globally.

Supply chain management focuses on the operation management, procurement, logistics and information technology and their effective coordination among these departments.

1.4 Functions

Supply chain management system is the combination of different activities like the movement of the raw materials and the processes that aims at production of the finished products of the organization. It manages the movement of the finished goods outside the organization. Business organizations try to bring out the core competencies of the organization. Through this it tries to become more flexible, reduce the storage of raw materials in the distribution. Activities of the supply chain management are done through the outsourcing firms those can perform better and, in the cost, effective way. Through this it tries to reduce the cost of the organization satisfying customer demand. In the supply chain management, there are different parties. This increases the trust among the supply chain partners, visibility of the inventory and the velocity of the inventory movement.

1.5 Justification of the Study

Supply chain management has greater impact on the environment than the other operation. Most of the organization has the sustainable effect on the product characteristics. In the supply chain, sustainability issues must be considered related to the delivery of the finished items. It tries to reduce the amount of the carbon emission distribution related activities. There are different types of reasons those can be undertaken into the consideration for the sustainability in this sector: -

A. Increase in the financial performance- Different researchers have found it effective in the increase of financial performance.

B. Increase of the green practice- Supply chain increases the importance of the green practice in the supply chain. In the valuation of the share and sales, more components are being added.

C. Increased facilities- In the United States, different types of tax and investment facilities are being undertaken to help sustainable practice. This practice is being increased rapidly.

D. Increase of corporate social responsibility- Through these, different activities are being undertaken to increase the amount of supply chain management practices. It increases different practices among the vendors of the supply chain.

E. Reduction of the supply chain waste- it reduces the waste of the supply chain. It defines the sustainability of the supply chain.

1.6 Objectives of the Study

This research focuses on the existing and emerging barriers in supply chain management in Bangladesh. The aim of this research is to identify the major obstacles to establishing a sustainable supply chain. The objectives of the supply chain are as follows-

Identification of the major challenges in the supply chain

Ensuring the sustainability of the supply chain

Suggestion regarding the upcoming challenges in the supply chain in Bangladesh.

1.7 Research Question

A. What are the main barriers to the establishment of the supply chain

B. What are the challenges partnering with a supply chain face?

C. What are the components that impact the business in Bangladesh?

D. How these obstacles can be removed to ensure sustainability?

CHAPTER 2:

Literature Review

2.1 Literature Review

The supply chain is the interdisciplinary area where social and physical science interacts with each other. It is the inter-generational, multi-scale, and multi-dimensional aspect of market research. It has the complex nature of supply chain management. Much research was undertaken in the early 1990s. These researchers have identified the concept of supply chain management. It has undertaken the integrated perspective. This has led to the development of the integrated view of supply chain management. In this sector, network design has gained much popularity.

The practice of corporate social responsibility has risen. To determine the obstacles in supply chain management, possible areas of future research, the framework of this research, literature review, and methodologies of the study are added.

Different approaches, case studies, and research are analyzed. Different approaches to SSCM, competitiveness and its effect, strategies, methods of decision making, standardization, efficiency, and measures in the key performances are the main focus.

2.2 Supply Chain Sustainability

The domain of sustainability has magnified beyond the organizational boundary with the incorporation of the whole rubric of the supply chain (Gold et al., 2010). Unlike in the past, supply chains now need to consider social and environmental along with economic factors (Seuring and Muller, 2008; Carter and Rogers, 2008). Stakeholders' focus on sustainability is increasing in the industries that have substantial social, environmental, and economic impacts (Seuring et al., 2008).

For example, the global apparel market, valued at US$604 billion in 2014 employing 94 million people (IBISworld, 2016), is under close scrutiny of stakeholder groups for social and environmental compliance (de Brito et al., 2008). Its stakeholders are now concerned about the types of working conditions from where the products are manufactured and supplied (Carter and Rogers, 2008).

The concern for supply chain sustainability received even more focus because of the high-profile corporate failures (Aaronson, 2002), and the failure to observe social and environmental issues by the chain members (Kolk and Pinkse, 2006). Particularly, the hazardous working environment in apparel manufacturing companies of underdeveloped countries has drawn the attention of international bodies (Islam and Deegan, 2008; Emmelhainz and Adams, 1999). Branded apparel chains such as Nike, Disney, Levi Strauss, Benetton, Adidas, and C&A have been accused of child labor and sweatshop problems in the upstream supply chain members' plants. Consequently, focal companies are under the surveillance of stakeholders (e.g. government, activists, NGOs) for violation of social and environmental issues in the chain (Seuring and Muller, 2008). Breach of sustainability compliance results in risky payoff in terms of a consumer boycott or costly legal actions.

Therefore, supply chain sustainability in terms of social, environmental, and economic sustainability is inevitable. Previous studies predominantly discuss environmental and green supply chain management aspects (Eltayeb and Zailani, 2009; Holt and Ghobadian, 2009) rather than integrating social, environmental, and economic issues together. Consistent with this, Carter and Rogers (2008) also identify that comprehensive studies integrating social, environmental, and economic sustainability criteria are quite rare. Few studies (Ageron et al., 2012; Gold et al., 2010; Carter and Easton, 2011) can be cited with regard to sustainable

supply chain management; however, they fall short of incorporating a multi-criteria decision approach to satisfy stakeholders' requirements. This study develops a multicriteria supply chain sustainability model that incorporates social, environmental, economic, and other important criteria of supply chain sustainability.

CHAPTER 3:

METHODOLOGY

3.1 Methodology

Methodology refers to a set of processes, in which different research will be conducted. There are different research problems that are interrelated. Research may be qualitative and quantitative in nature. Quantities research focuses on numeric data. Whether quantitative research focuses on the attributes of the sample. However, most researchers use the mixed method. In this method, both the qualitative and quantitative approaches are used. Methodology in the research is selected on the basis of the topic of the research. For this reason, in this research mixed methodology is used to have the utmost viable idea.

3.2 Types of Methodology

This research is investigative in nature. This research will try to find out the challenges in supply chain management to ensure sustainability in this sector in Bangladesh. This research is exploratory in nature. This will analyze the expectation and the experience in the supply chain. In this research, key discussions related to the challenges in the supply chain will be discussed. The supply chain in this distribution system will be revised in this case. Some of the hypothetical decisions were undertaken in this case. Through this research, these options will be tested.

3.3 Data Collection Method

The main element of the research is data. With no sufficient data, no research will be conducted. Data may be qualitative and quantitative in nature. Quantitative data measures the numeric value of the research. On the opposite side, qualitative data analyses the feelings of the data. Through the primary and the secondary data collection method, these data can be gathered. Primary data is collected through the interviews of the officer in charge. The formal questionnaire will be

developed in this case to collect possible data from both the patient and the management. This will also focus on the current challenges in the supply chain. Secondary data is collected from the websites, news, magazines, report, and the annual report.

3.4 Sampling Method

The quota sampling method will be used in this research. This method of research is suitable for easy and limited-budgeted research. The size of the sampling can be big or small. Responses of the 50 participants will be used in this case.

3.5 Accessibility issue

Accessibility in the research is a vital factor. if the researcher cannot use the clear data of the research or cannot access the data, the research will be valueless. Accuracy of the data must be ensured. From different approved sources, different sources are used-

1. Official industry website in Bangladesh
2. Annual report of the organization
3. Management options by the interview
4. Report of the local government and the authorized sources

3.6 Ethical issues

Research focuses on the ethical issues and the secret information of the researched area. Personal information of the participants, and environment are disclosed. Ethics must be maintained in the research. For this reason,

1. Personal information is not disclosed
2. Secret information will not be disclosed
3. Information will be used only for the educational purposes
4. No pollution will have occurred
5. Collection of the information will not be done through force

3.7 Data Analysis Plan

Different tools and techniques will be used in this research. Different relationships and challenges must be undertaken for organizational success. For this reason, regression analysis will be used.

3.8 Research Limitation

There are some limitations to this research. Different limitations occurred in this research. These are as follows-

1. Researchers in this study got very limited time. Much time is needed in this research.
2. Budgetary limitation is the other fact in this research.

CHAPTER 4:

Supply Chain Sustainability

4.1 THEORETICAL OVERVIEW:

Sustainability of the supply is the issue of the business. The network of logistics affects the supply chain sustainability. Collaboration of the supply chain is needed in this case. Among the high-level managers, different values, and costs are considered. This will include a discussion with the supply chain manager. A sustainable supply chain will create different opportunities in the business. It will create a significant advantage in the supply chain. It includes the early investors in the organization.

4.2 Three Tiers of Sustainability

Tier 1: Getting the basics right

It is the basic level of the organization. Every organization has to perform PC and the light is switched off. Unused papers will be recycled. Carbon emissions must be reduced to have greener practices in the field of business. Some teleconferencing and self-procurement technologies must be used.

Tier 2: Learning to think sustainably

At the second level, business organizations must realize the sustainability of supply chain management. Organizations try to achieve these when they can understand the impact of the supply chain. Management of the supply chain management, design of the product, rationalization of the manufacturing, and organizational distribution must be recognized.

Tier 3: The science of sustainability

Supply chain sustainability is used to audit and benchmarks are undertaken to provide a framework to govern supply chain sustainability in the business organization. Cost and supply chain flexibility must be undertaken to ensure the operation of the business. Through the reduction of the cost, supply chain

sustainability will be ensured. Green operation of the business must be ensured in this case. At the level of the industry and the government, these approaches must be ensured.

4.3 Application of Sustainability

Business organizations try to implement sustainability to ensure the upstream. Organizations can undertake different opportunities to implement sustainable business strategies. Green supply chain practices must be ensured to get the utmost effort from the supply chain. Suppliers must be managed through the calculation of the inputs from the suppliers. The usage of water and energy must be reduced. Through this overproduction will be reduced. They must focus on the development of the supply chain metrics.

4.4 Benefit of Sustainable Supply Chain Management

Business organizations are increasingly relying on sustainable supply chain management to make it effective. It helps them to compete in the global market. In the management paradigm, traditional barriers of the supply chain will be used. It will help the entire business process in the organization. Multiple companies engage in the supply chain to attain the utmost value.

Many organizations like Acer have become very much integrated through information technology, globalization, and outsourcing. There are different key strategic activities. Organizational supply chain management helps the organization to get better sustainability. Among different parties in the supply chain, different collaboration is required. Different kinds of networks impact the structure of the supply chain. Different trade-offs also exist among the partners. Different structures of the network impact the sustainability of the supply chain. It concentrates on the input and output processes of the supply chain. Among

different players, individual concentration is a must. Choice in the internal management system focuses on the performance of the local firm.

4.5 Business Process Integration

Supply chain management focuses on the management of the function of the individual. It aims at the management of the individual in the organization. It combines key activities in the supply chain management. Purchasing department understands the requirement of the purchase and can do it frequently. Through this it can respond to the demand of the customers. It communicates with several distributors. Parties in the organization discuss different things to make solution of the problems in the supply chain. It can integrate the full processes in the supply chain.

Supply chain integrate different activities through the effective collaboration of the suppliers and the buyers. They can develop the product through the joint development of the products and the shared information. It requires continuous flow of the information. Through the implementation of the process, much organization has optimized the supply chain system. According to Lambert (2004) supply chain processes includes-

1. Management of the customer relationship
2. Management of the customer service
3. Style of the design management
4. Fulfillment of order
5. Flaw of manufacturing management
6. Relationship of the supplier relationship
7. Commercialization and the product development
8. Management of the returns

Demand management is researched and used in different organizations. Characteristics of the demand management are as follows-

1. External and the internal collaboration
2. Procedures to reduce the lead-time
3. Feed from the customers
4. Forecasting of the level of the customers

4.6 Customer Service Management Process

Relationship of customer focuses on the customer and the organizational relationship. Customer information can be derived from the customer service. Through the information of the product, customers can get the real time information. It helps the organizations with the strategic distribution in the supply chain. Following steps are followed in this case-

- Determination of the goals of the organization
- Maintenance of customer relationship
- Development of positive feeling

4.7 Procurement Process

Based on the information collected from the supplier, new product and the distribution channel are developed. It is managed globally. In the supply chain, time and cost of the product are reduced. Raid communication system is reduced through this. Electronic data interchange system helps the supply chain in this case. Materials are collected from the outside and the internal suppliers. Placement of the order, inbound and the outbound transportation is developed through this. It is the responsibility of the organization to coordinate different activates of the organization and in the supply chain. Different types of research is undertaken to strengthen the sustainability of the supply chain.

4.8 Product Development and Commercialization

Coordination among the customers and the suppliers is a must. This helps the organization to reduce the cost in the supply chain. For this reason, different products are being developed to ensure the satisfaction of the customer demand. Through this, customers become competitive in the market. Commercialization and the product development needs-

. Relationship management of customer for greater information

. Materials procurement with the suppler

. Development of the product for better coordination in the supply chain

4.9 Manufacturing flow Management Process

Process of the manufacturing engages the suppliers and the producers. This process must be flexible in this case. Mass production must be adopted to facilitate the production in the organization. As the process of the manufacturing is reduced, cycle of the manufacturing becomes less. This ensures the customer demand effectively. With rescheduling the activities manufacturing process becomes huge. It ensures the highest flexibility. It helps the organization with greater coordination. It helps the distribution activities easier.

4.10 Physical Distribution

It is concerned with the movement of the finished products to the customers. It is impacted by the final distribution channel. Availability of the product and the service is a must in the supply chain. In the marketing time and the effort are the vital parts of the physical distribution. Manufacturers, retailers and the customers are the obvious part of the supply chain.

4.11 Outsourcing/Partnerships

Outsourcing means the procurement and the service related to the products of the organization. Organizations are increasingly focusing on the activities of the value chain. This outsourcing has certain type of advantage and the disadvantages. In the activities of the logistics, this type of movement is prominent. Warehousing, inventory management and the transportation are the main focus of this. There are different partners in the supply chain of the organization. In the process of the outsourcing, flexibility must be focused. Performance management is done on the daily basis.

4.12 Performance Measurement

Researchers have found the strong relationship between the customer and the supplier relationship and market share and the profitability. Customer relationship management must be focused through the determination of the strong relationship. Firm's performance is related with the performance of the firm. In the management of the competitive advantage, there are certain factors of the critical management. Performance of the logistics must be managed to increase the performance. Unprofitable and the profitable operation became narrower nowadays. According to A.T. Kearney Consultants (1985), organizations those focus on the comprehensive management of the performance can realize the overall performance. It is analyzed by the firms. These include performance of the firm, service to the customer, quality and the measurement. Through the perception of the customers, external performance s measured.

4.13 Warehousing Management

Warehouse management focuses on the reduction of the cost of the warehousing and others to reduce the cost in the supply chain. It determines the time of the delivery to the customers, unloading and loading with proper manner, management of the stocks etc. for the lack of control in the warehouse, most of the problems occur. To maximize the efficiency of the organization, control of the organizational activates is a must. There are different objectives of the warehouse management. It tries to identify and focus on the activity of the supply cahin. It directs the achievement to maximize the performance in the organization. It tries to reduce the errors of human. It tries to optimize the operation of the business organization. Warehouse management system uses the bar coding system, radio frequency identification, different software and the hardware. Storage is the basic function in the organization. Quality control system, inspection, cross dock operation and lot control are the basic functions in warehouse management. Basic warehouse management must be done to select the location of the storage.

4.14 Workflow Management

In the workflow suppliers and the customers are handled tightly. Through this, it can achieve efficiency and the effectiveness in the supply chain. It is the key goal of the supply chain. In the supply chain management, there are different types of work. If there is no straight line of command in the work may be tough and costly. It refers a set of tasks that can be done to help the business organizations to maximize the performance of the business. It saves money for the organization. In the efficient business process, business tasks are designed with priority. It is done through the processes in the activity. It helps the mangers to perform better in the supply chain. There are different functions in this. Workflow management is needed to organize data. Different workflow management is vastly dependent on the information system of the business organizations. Based on the necessity

of the organization activities of the organization is needed. Irrespective to the size of the organization, this is helpful. It helps to increase the efficiency in the long run.

4.15 Supply Chain Theories

The Studies presented at 2015 on supply chain management has gaps in literature that are: The supply chain management boundaries or existence cannot support by any theory. Few authors like - Ketchen and Hult (2006), Halldorsson et al. (2003), and Lavassani et al. (2009) are provide the foundation theory for supply chain's different areas including organizational theories, that includes the following :

Transaction cost analysis (TCA)
Resource-based view (RBV)
Strategic choice theory (SCT)
Knowledge-based view (KBV)
Channel coordination
Systems theory (ST)
Just-in-time (JIT)
Agency theory (AT)
Materials logistics management (MLM)
Institutional theory (InT)
Network perspective (NP)
Material requirements planning (MRP)
Agile manufacturing
Supply Chain Roadmap
Requirements chain management (RCM)
Time-based competition (TBC)
Quick response manufacturing (QRM)

Customer relationship management (CRM)

Total quality management (TQM)

Available-to-promise (ATP)

Theory of constraints (TOC)

On the other hand, the most of theories that are analyzed is not only on supply chain but also includes other system like- relationship among supplies and buyers in the firms. In the relational view there are few exceptions that structured the theory understanding the network and dyads that are the key analyzing area for individual superior performance to the firm (Dyer and Singh, 1998).

4.16 Sustainability and Social Responsibility in Supply Chains

In the logistic network or supply chain management of the organizations the most affecting issues are supply chain sustainability that frequently compare with SECH ratings. SECH rating uses a triple bottom line including social, environmental and economic aspects. Ethical, social, cultural as well as health footprints are included into the SECH rating. The environmental impact is the highest aware area of the consumers on the basis of SECH ratings as well as non-government organizations (NGOs) that set the transitions agenda to foods grown originally, anti- sweatshop labor codes and goods that locally produced on companies and purchases.

CHAPTER 5:

Analysis and Finding

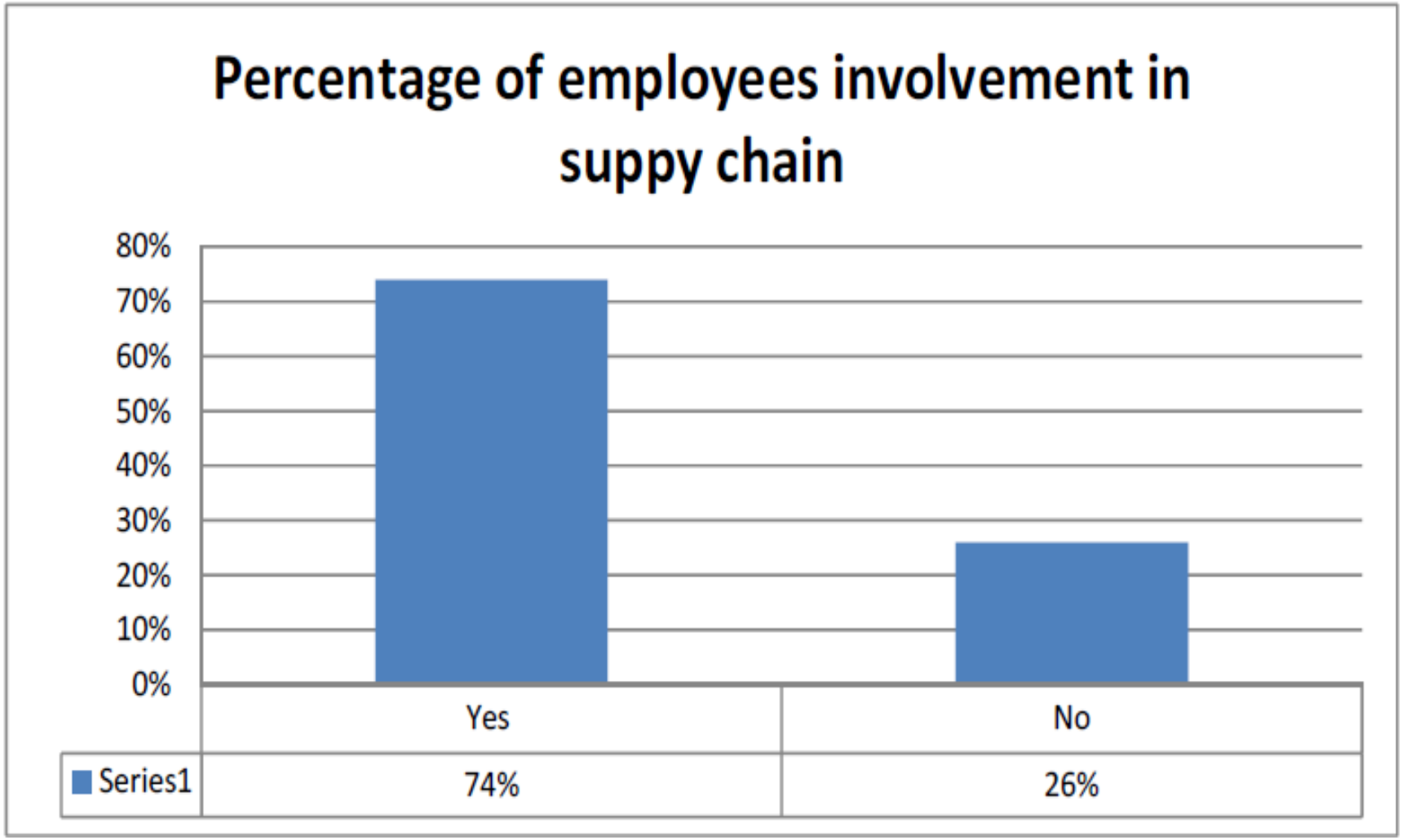
Analysis

In the global competitive business environment, sustainability is the major focus in different areas. It has integrated the social issues to the supply chain. It has imposed different law into the business environment. It was voluntarily accepted by the business world. It helps to ensure the better efficiency in this. Cost of the organization is reduced as well. It also results in increased market share as well. In the risk management it is more effective. It focuses on the definition of the market as well. Researches related to sustainable supply chain, focuses on the effective and less costly value chain management. Sustainable business practice has led to integrated supply chain.

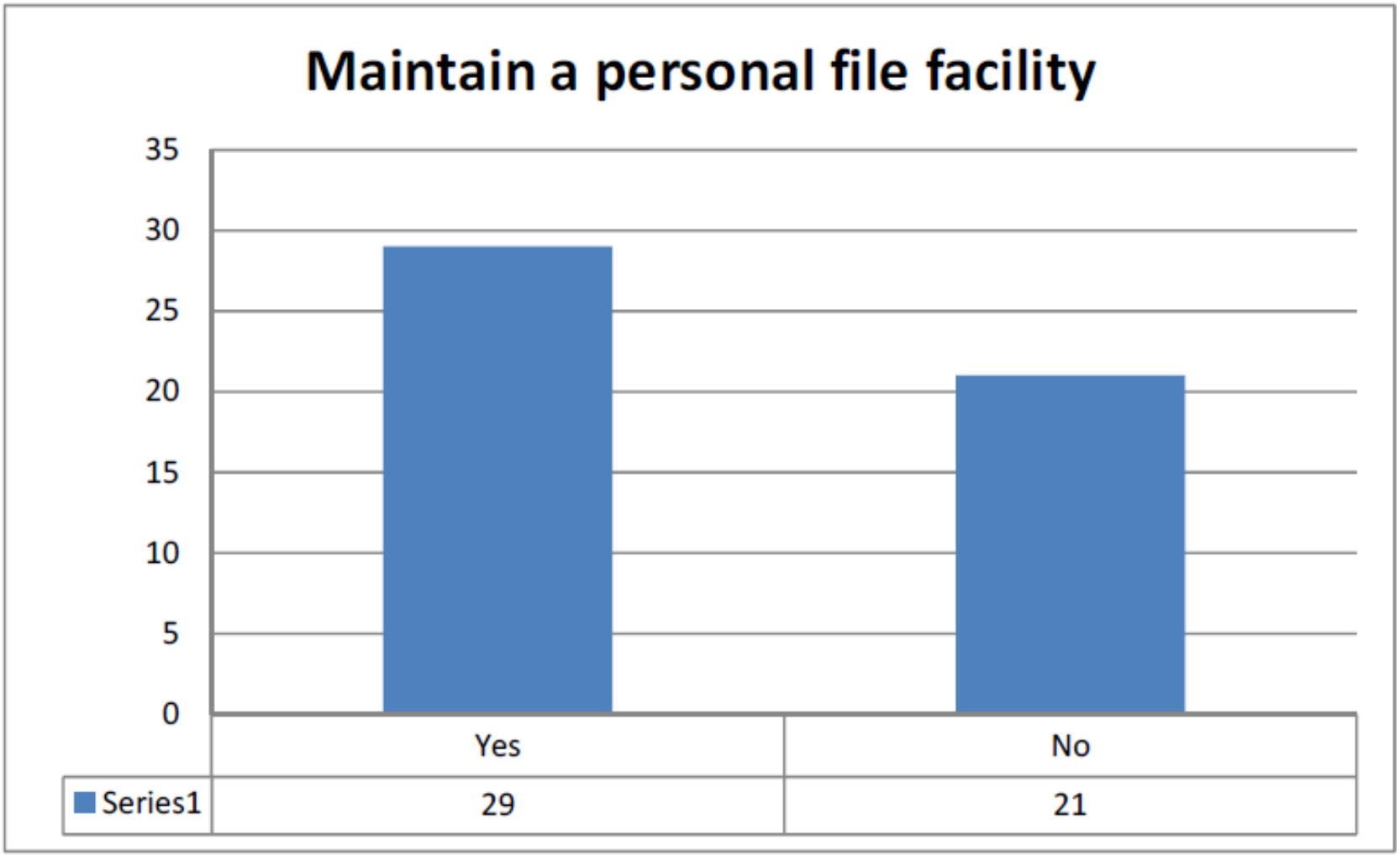
Finding

In this chapter collected result was analyzed. In this case researchers undertook the direct interview method. For this reason, structured questionnaire was developed. In this research, 50 interviewees were selected. In this case, all the data was collected through the systematic way. In table, qualitative data was presented. Quantitative data was presented in the graphical format. At the same time, collected data was analyzed. It results in the improvement of the actions. It results in the modification of the actions of the organization. Details analysis is given below-

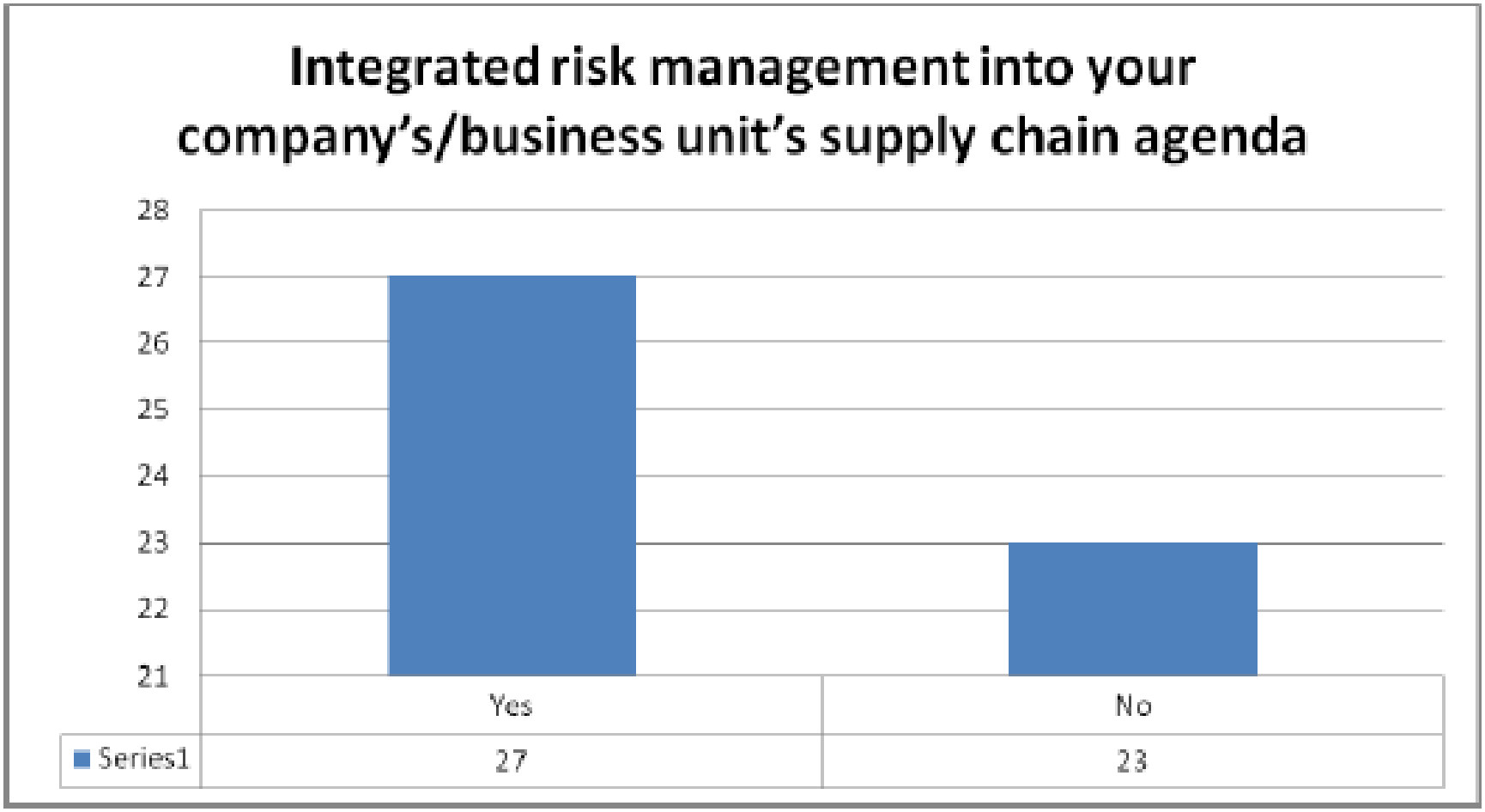
- **Percentage of employees involvement in supply chain management**



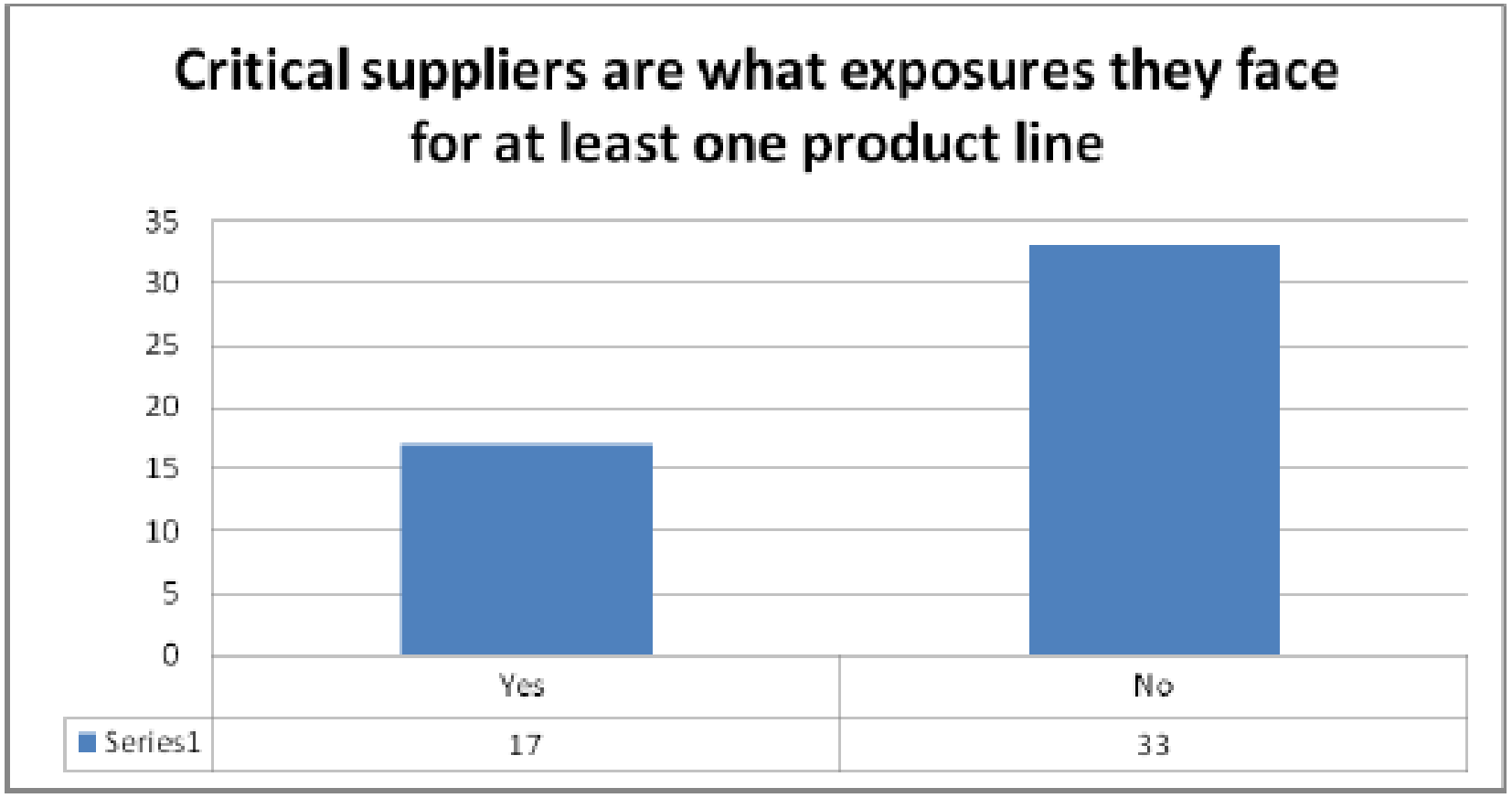
- **Maintain a personal file facility**



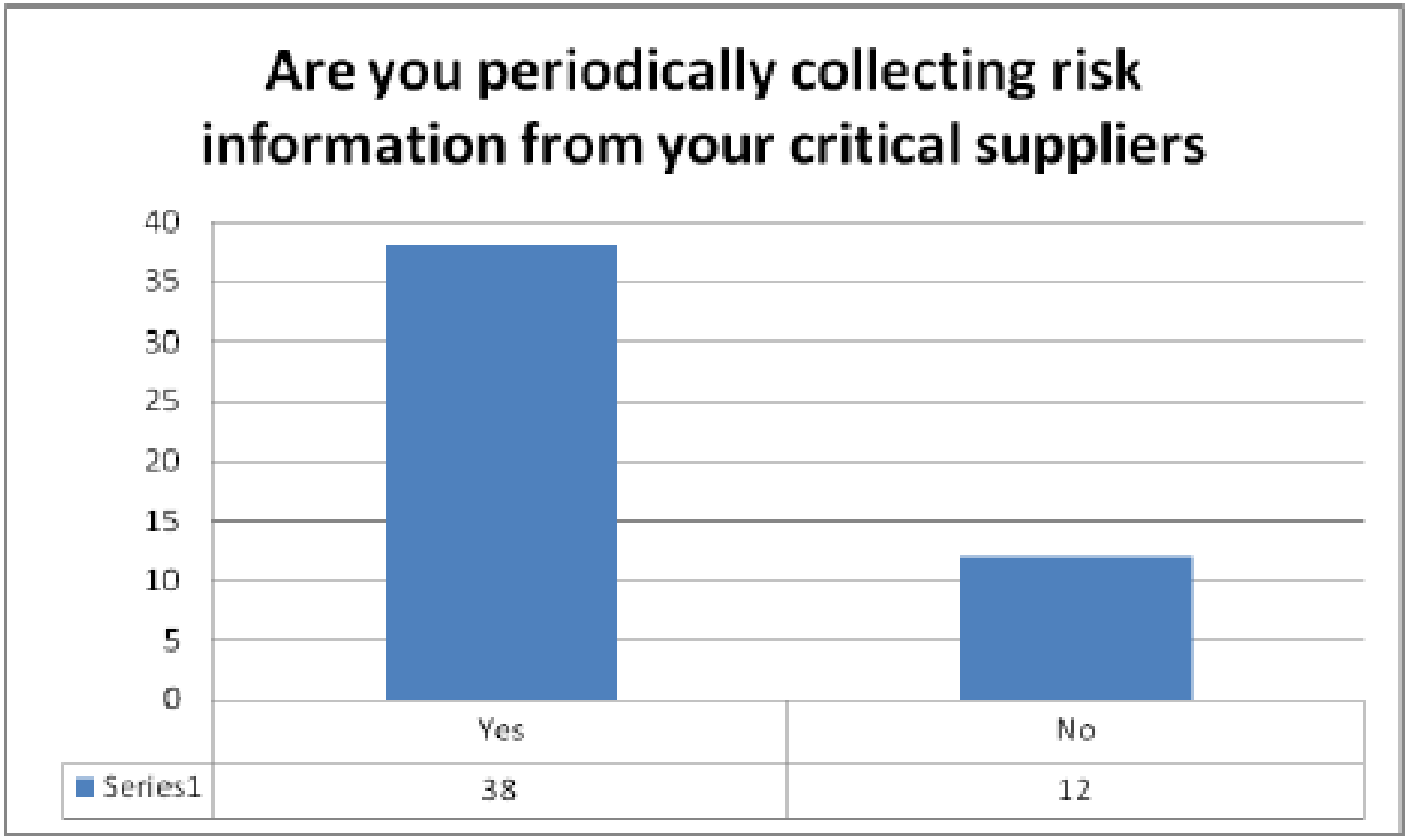
- **Integrated risk management into your company's/business unit's supply chain agenda**



- Critical suppliers are what exposures they face for at least one product line



- **Are you periodically collecting risk information from your critical suppliers**



- **Have you established an ongoing process of assessing supply chain risk for your organization/business unit**



Identification of the supply chain risk is similar to the risk identification in the medical device organization. For the risk mitigating collaboration, establishment of the good communication is vital. In easy theory, good relationship is fostered. It becomes very difficult, when supplier is very big. Some organizations are interconnected in nature. System Application Products (SAP) is easier to manage. Sometimes, small suppliers don't have enough resources to maintain this system. It considers how technology impacts on the supply chain.

CHAPTER 6:

Conclusion and Recommendations

6.1 Conclusion:

This study explores the challenges to sustainable supply chain management in Bangladesh's textile and apparel sector with the DEMATEL technique. In the first stage of this study, challenges to sustainable supply chain management in the manufacturing, automobile, leather, and textile industry in Bangladesh are collected through an extensive literature review.

Secondly, collected barriers are categorized into economic, environmental, societal, knowledge and technology, management, and stakeholder groups. Thirdly, opinion from expert focus groups is taken into account to justify the barriers and narrow down the list of barriers to ensure the most influential ones.

Finally, the collection of data and analysis is completed using the DEMATEL approach. This study is the first of its kind, in the textile and apparel sector of Bangladesh. Previous research explores sustainability adoption in supply chain management, sticking to the limited subset of sustainability concepts and dealing with environmental concerns only. Aggregation of sustainability subset: knowledge and technology, management, and stakeholder's commitment strengthen this study's outcome. Moreover, this study unravels the cause-effect relationship between the barriers and proposed corrective action to address the cause of barriers.

There are a few limitations in this study, which set the direction for future works. There is a scope to identify and collect more barriers from the extensive literature review. It is possible to include more categories of barriers to make the research work more comprehensive. Response for the DEMATEL matrix can be increased. This study can be stretched to a similar field in other countries. Different MCDM tools like ISM, AHP, and TOPSIS can be deployed to see the research outcome.

6.2 Recommendations

This study should be considered as a pilot study in a field where no previous study has been done before. It is hoped that the study will provide an impetus to employ more "structural equation modeling" in developing and testing models on subjects relating to TQM and SCM. Undoubtedly, future studies with larger samples, carried out periodically, will produce invaluable information for the firms in their search for business excellence through Supply Chain Management. Besides, future research should be conducted for individual industrial/service sectors to examine differences between industries. Moreover, efforts for coordinated Supply Chain Management Excellence Indices can be taken for sectors and on a city or national basis. The data thus obtained should constitute a basis for competitive studies at company levels. Harmonised measurement procedures are necessary in order to be able to combine individual indices and compare between domains, and as a basis for benchmarking efforts.

This research design is ideal for use in further studies. New items can be added to the questionnaire without distorting the relative values of existing items in the domain. This is an important property for future studies, since the domain of TQM is likely to expand as new practices are developed over time. For instance, the measure of Supply Chain Management Excellence in the model focuses on stakeholders' satisfaction. However, future studies may strive to include more objective data, particularly financial measures of performance.

CHAPTER 7:

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