
RESEARCH
on
The Challenges in Establishing Sustainable Supply Chain in
Bangladesh

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Masters in procurment and supply management



BRAC Institute of Govenance and Development (BIGD)

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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, researchers try hard to build up new theory for supply chain that can be helpful for business organization. The main objectives of this research 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 researcher takes in-depth interview for developing the model among the Poultry entrepreneurs. 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. Research 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. This study also highlights the future PhD research in this area.

LIST OF ACRONYMS

1PL	In-house transport operation
3PL	Third Party Logistics
4 Ps	Product, Price, Placement, Promotion
5W1H	Who, What, When, Where, Why & How
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	Lead Time Duration
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

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

Supply chain sustainability focuses on 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

1.2.1 Supply Chain

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 party 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.

1.2.2 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.

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.

1.2 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:-

- Increase in the financial performance- Different researchers has found it effective in the increase of the financial performance.
- 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.
- Increased facilities- In the United States, different types of tax and the investment facilities are being undertaken to help sustainable practice. This practice is being increased rapidly.
- Increase of the corporate social responsibility- Through these, different activities are being undertaken to increase the amount of the supply chain management practices. It increases different practices among the vendors of the supply chain.
- Reduction of the supply chain waste- it reduces the waste of the supply chain. It defines the sustainability of the supply chain.

1.4 Objectives of the Study

This research focuses on the existing and the emerging barrier in the supply chain management in Bangladesh. Aim of this research is to identify the major obstacles for establishing sustainable supply chain. 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

1.5 Research Question

- What are the main barriers of the establishment of the supply chain
- What the challenges partners in the supply chain face?
- What are the components that impact in the business in Bangladesh?
- How these obstacles can be removed to ensure the sustainability?

CHAPTER 2: LITERATURE REVIEW

Supply chain is the interdisciplinary area where social and the physical science interacts with each other. It is the inter-generational, multi scale and the multi-dimensional aspect of the market research. It has the complex nature of the supply chain management. Much research was undertaken in the early 1990's. These researchers have identified the concept of the supply chain management. It has undertaken the integrated perspective. This has led to the development of the integrated view of the supply chain management. In this sector, network design has gained much popularity. Practice of the corporate social responsibility has risen. To determine the obstacles in the supply chain management, possible areas of the future research, framework of this research, literature review, methodologies of the study are added. Different approaches, case studies and researches are analyzed. Different approaches of SSCM, competitiveness and its effect, strategies, methods of decision making, standardization, efficiency, measures in the key performances are the main focus.

Students and internal and the external projects are the areas of research. It has the simplified form of the supply chain in the universities. It has the integrated supply chain in the tertiary education. There are 3 levels in the supply chain management model.

CHAPTER 3: METHODOLOGY

Methodology refers a set of process, in which different research will be conducted. There are different research problems which are interrelated. Research may be of the qualitative and the quantitative in nature. Quantities research focuses on the 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 the 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.

3.1 Types of Methodology

This research is investigative in nature. This research will try to find out the challenges in the supply chain management to ensure the 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 discussion related to the challenges in the supply chain will be discussed. 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.

3.2 Data Collection Method

Main element of the research is data. With no sufficient data, no research will be conducted. Data may be of qualitative and the quantitative in nature. Quantitative data measures the numeric value of the research. In the opposite site, 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. 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.

3.3 Sampling Method

Quota sampling method will be used in this research. This method of research is suitable for the easy and the limited budgeted research. Size of the sampling can be big or small. Response of the 50 participants will be used in this case.

3.4 Accessibility issue

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

- Official industry website in Bangladesh
- Annual report of the organization
- Management options by the interview
- Report of the local government and the authorized sources

3.5 Ethical issues

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

- Personal information is not disclosed
- Secret information will not be disclosed
- Information will be used only for the educational purposes
- No pollution will be occurred
- Collection of the information will not be done through force

3.6 Data Analysis Plan

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

3.7 Research Limitation

There are some of the limitations in this research. Different limitations were occurred in this research. These are as follows-

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

CHAPTER 4: THEORETICAL OVERVIEW

Sustainability of the supply is the issue of the business. Network of logistics affect the supply chain sustainability. Collaboration of the supply chain is needed in this case. Among the high level of the managers, different values, cost are considered. This will include the discussion of the supply chain manager. Sustainable supply chain will create different opportunities in the business. It will create significant advantage in the supply chain. It includes the early investors in the organization.

4.1 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 light is switched off. Unused papers will be recycled. Carbon emission must be reduced to have the greener practice in the field of business. Some of the teleconferencing and the self-procurement technologies must be used.

Tier 2: Learning to think sustainably

At the second level, business organizations must realize the sustainability of the 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 used to audit and benchmarks are undertaken to provide a framework to govern supply chain sustainability in the business organization. Cost and the 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. In the level of the industry and the government these approaches must be ensured.

4.2 Application of Sustainability

Business organizations try to implement the 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 of the supply chain. Suppliers must be managed through the calculation of the inputs from the suppliers. Usage of the water and energy must be reduced. Through this over production will be reduced. They must focus on the development of the supply chain metrics.

4.3 Benefit of Sustainable Supply Chain Management

Business organizations are increasing relying on the 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 utmost value.

Many organizations like Acer have become very much integrated through the 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 network impact on the structure of the supply chain. Different trade off also exist among the partners. Different structures of the network impact on the sustainability of the supply chain. It concentrates on the input and the output processes of the supply chain. Among different players of the individual concentration is a must. Choice in the internal management system focuses on the performance in the local firm.

In the 21st era, changes in the business environment are being occurred. Globalization process, coordination among the supply chain is needed for better output. These has contributed to the development of the supply chain management. Agile manufacturing, Just in Time method, Lean Manufacturing have different impact on these activities. Different technological advancement had reduced cost a lot.

In the new structural form in the organizational form, different structures of the supply chain have recognized. Virtual Cooperation, extended cooperation, network of the Global Production has led to greater integration in the supply chain. This is known as the semi-independent organization. It has been developed to serve more than a market. Security management system was prescribed in ISO/IEC 28000 and ISO/IEC 28001. In the supply chain management different standards were joined. Information technology, procurement and the logistics impact on the organization.

From the discussion in this research, it is clear that supply chain management has the greater impact on the business performance. Most of the public focus has greater impact on the performance on the organization. Most of the corporate and the business organization have the sustainable impact on the performance of the business organization. Most of the public and the organization have the focus on the sustainable product. This is related to the distribution and the transportation of the product.

Sustainable supply chain management focuses on the reduction of the emission of carbon. Consumption of the resources is also fact in this case. There are different reasons for caring the network of the supply chain.

- Different experience and research has the significant impact on the sustainability of the supply chain.
- Wall Street recognizes the necessity to maintain the green practice of the organization. It increases valuation of share and sale.
- Different initiatives of the government are undertaken.
- It improves the sustainable practice in the supply chain.
- Different incentives are given to the organization to improve the sustainable practice.

- Investment incentives increase the sustainable practice in the organization. This trend is growing rapidly.
- It related with the corporate social responsibility in the organization. It helps thus to be the global citizen. It can add different benefits to the organization.
- Corporate customers are increasingly updating the practices of the corporate behavior.
- Wastes are being eliminated in the supply chain to ensure the sustainability.

4.4 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-

- Management of the customer relationship
- Management of the customer service
- Style of the design management
- Fulfillment of order
- Flow of manufacturing management
- Relationship of the supplier relationship
- Commercialization and the product development
- Management of the returns

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

- External and the internal collaboration
- Procedures to reduce the leadtime
- Feed from the customers
- Forecasting of the level of the customers

Many of the researchers suggested different organizational practice of supply chain other than the theory stated by Lambert. They are-

4.4.1 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

4.4.2 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. Rapid 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 activities of the organization and in the supply chain. Different types of research is undertaken to strengthen the sustainability of the supply chain.

4.4.3 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 supplier
- Development of the product for better coordination in the supply chain

4.4.4 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.

4.4.5 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.

4.4.6 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.

4.4.7 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.

4.4.8 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 tools and techniques to establish control in the supply chain. 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.

4.4.9 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. Business tasks are done to benefit the whole business. It helps the managers 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.

4.5 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).

4.6 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.

As example, Wal-Mart in July 2009 expressed its intention to create global sustainability index. The company carbon footprint may over 75% because of supply chains and companies are tried to improve the SECH rating by exploring ways. Such as- Wal-Mart announced

It will be based on the social and the environmental impact of the production and the distribution. Wal-Mart thinks its accountability regarding providing of the same infrastructure to the retailers of the supply chain as well.

Different business organizations are adopting different activities to protect the environment at the time of the selection of the suppliers. Carbon Trust found that 50% multinational organizations try to select the suppliers based on the reduction of the cost. They also predicted that 29% of the suppliers will lose their position, if they don't confirm the activities that protect the environment with the reduced amount of cost. This will be done to ensure the sustainability of the supply chain. If carbon emission is increased, productivity of a country will be reduced. As a result, cost of living will be increased. It is vulnerable to the change in climate. It results in the decreased gross national product. Economy of the country is affected by climate. It is the matter of the climate change on agriculture. Emission of the greenhouse gas is the important factor in this case. It is becoming worse.

According to US Dodd–Frank Wall Street Reform and Consumer Protection Act, was signed by Obama in July, 2010. It refers the supply chain sustainability in the form of the Conflict Mineral Law. SEC regulated organizations undertake third party audit to ensure whether the partners in the supply chain tin, tungsten, tantalum or gold. It is referred as the conflict minerals. Most of the raw materials are gathered from the Democratic Republic of the Congo. It is reported with standard of SEC. with the supporting information from the vendors, controlling is done.

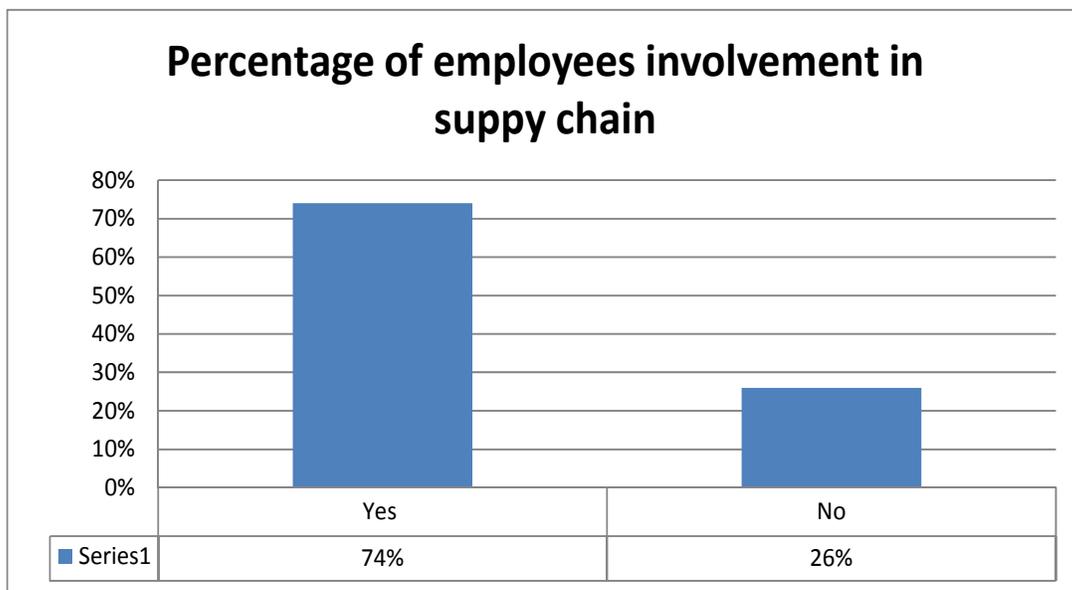
In Savar building collapse, has more than 1100 victims. It has led to the huge discussion about the corporate social responsibility globally. According to Wieland and Handfield (2013), multinational organizations must audit about the product and the suppliers of the products. These suppliers must ensure flexibility in the supply chain through the use of the electronic

technologies. Among the local partners coordination can be made based on that. It must be done to manage the social responsibility in the supply chain.

CHAPTER 5: RESULTS

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**



On the basis of 50 participants of this survey, 74% are male (37 out of 50) who work in the management process of supply chain. On the other hand female participants are 26% (13 out of 50) who involve into the management process of supply chain.

The statistics shows that male involvements are more that female involvements in the supply chian management process that are not good at all. It's need to enhance more participation of women in the supply chain management process.

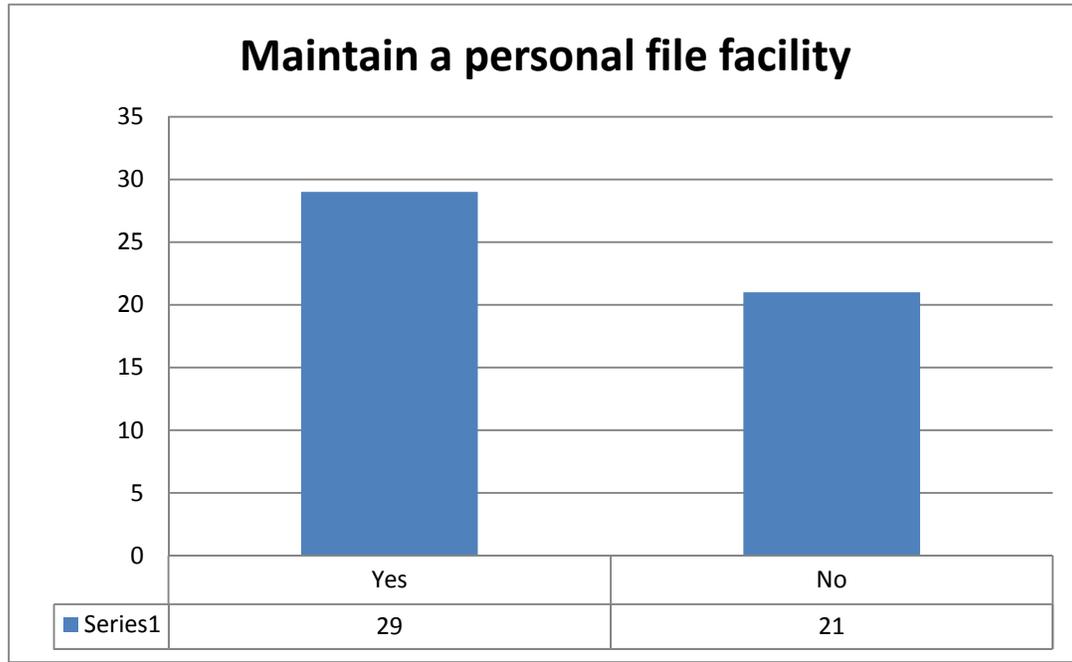
- **Language understanding when written agreement taken place**



By this question, the researcher tries to investigate that the employees got proper language facilities of not which leads 43 out of 50 procastination.

This includes the employment details set like – the language involve into the employment starting and ending process, functions information about instructions, instructions, rights and obligations about employees and employers. The survey investigate that most of the respondents understand their employment agreement language.

- **Maintain a personal file facility**



In this area researchers investigate about the personal file facility maintaining different level. Most of the respondents are agreed that company maintains their personal file facility. In the sustainable supply chain process this is very good indications.

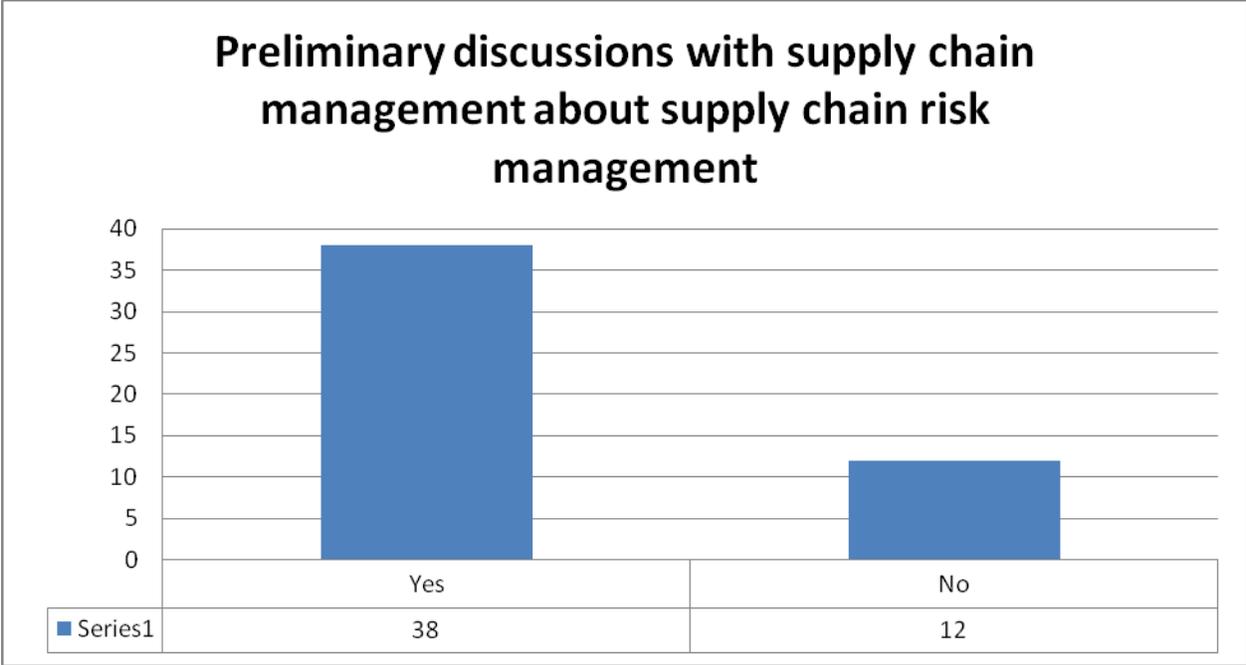
Employees give their personal files that need to maintain for any evidence that are necessary during Industrial disputes. At the time of maintenance it is also necessary to protect the file in appropriate way.

- **Is company really worried about supply chain risk**



Upper graph shows that, recently organizations are concerned with the risk in the supply chain. It can increase the effectiveness and the efficiency of the business organizations. Recent devastating flood in Thailand, tsunami in Japan, ash cloud in the volcano are the forms of the risks in the business organizations. After earthquake in Japan, global electronic use in the automotive sector was suffered. Organizations must consider the different models to measure the optimum balance in the financial efficiency throughout the supply chain.

- **Preliminary discussions with supply chain management about supply chain risk management**

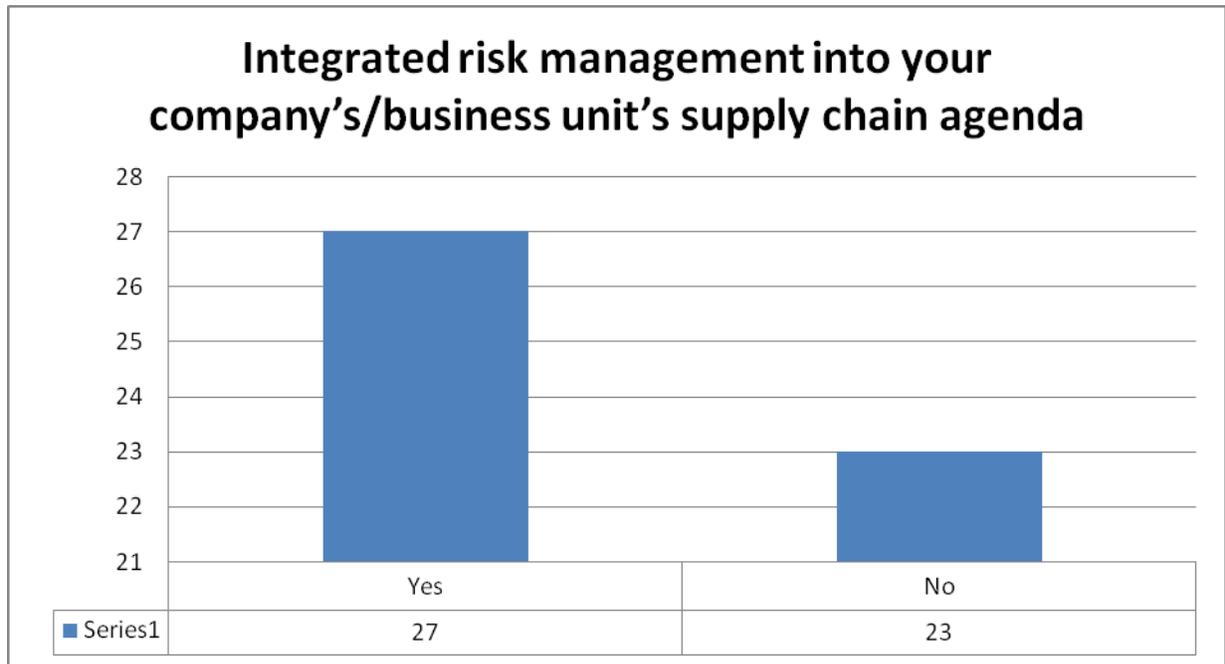


In the preliminary stage, risk of the supply chain management was discussed. It will focus on the reduction of the vulnerability of the supply chain. It will help to analyze and identify the risk factors. Counterfeit products can be a major threat to the product. In the logistics management mitigation of the risk is occurred. In the risk and financial management, cyber security matter. Normal business activities and the profitability is the main consideration of the supply chain. It will ensure the continuity of the supply chain. It will affect the business profitability.

Different channel in the market, pressure and the lean supply is beyond the organizational boundaries. Different service providers embrace different parties. It results in the possible disruption in this case. Different fluctuation, volatility in the price is the major factor. Sudden downturn may result in the disruption in the supply chain. Financial crisis in 2008, adversely affected the supply chain. Growth in the supply chain, cross border trade was affected. Different risk in the supply chain, value chain, functional and the operational risk in the supply chain are the major focus. McKinsey

Almost two-thirds of the respondents to a global survey conducted by Mckinsey found that, risks related to the supply chain have been increased over the past years. Most of the mangers don't take necessary actions to mitigate risks.

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



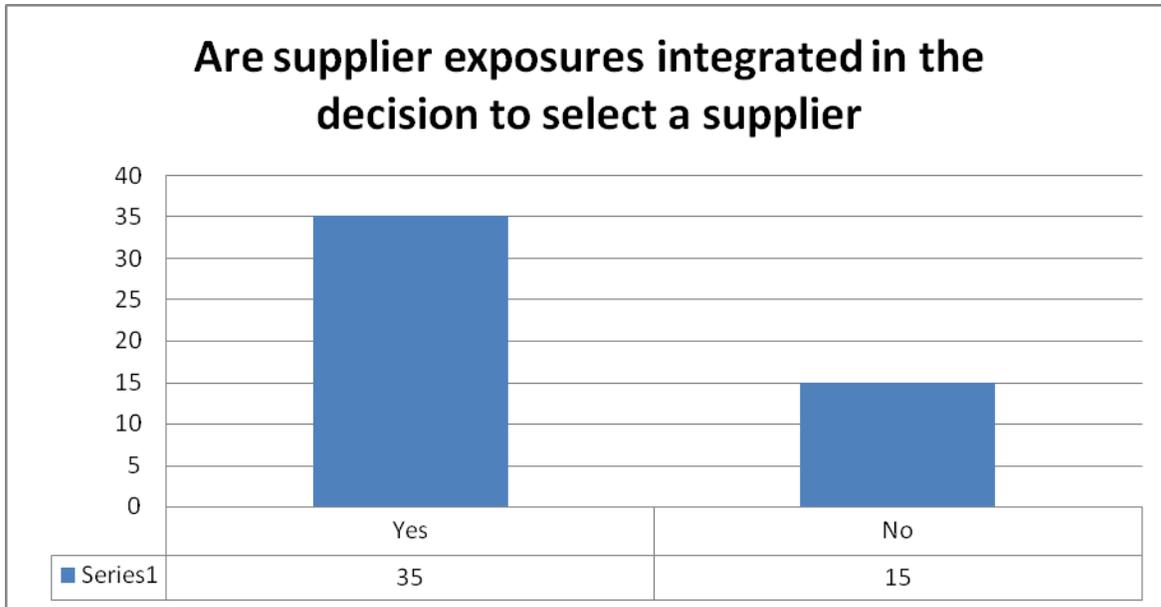
Supply chain is subject to a major change in different circumstances. Vulnerable economic condition is the main cause of the disruption in the supply chain. Unstable supply chain will effect on the increase on the vulnerability in the supply chain. It will help to better the service delivery of the operation. It will help to increase the profitability and strategy in the supply chain. Management must focus on the identification of the risks and the probabilities. It aims at the selection of the appropriate strategies in the market. It may be categorized into 7 categories. These are avoidance, hedging, speculation, postponement, control, security and sharing etc. through avoidance product line and the distribution can be reduced. It is mentioned in the joint effort. Different strategies may be undertaken based on the supply chain uncertainties. Different plans are followed for mitigation.

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



In the supply chain, customers must be concerned with everyone in the partners in the supply chain. It will help the organization to sustain in the business environment in the long and the short term. Income will be increased in the business operation. Different insurance may work for the loss occurred. Different cost, lead time must be considered. It will help the suppliers or the customers. Different issues must be identified in different level. They are strategic, tactical and the operational level. Information comes from the operational level. Based on the information strategies are set.

- **Are supplier exposures integrated in the decision to select a supplier**



Global economic crisis is needed to maintain the relationship among the buyers and the suppliers. Strong relation among the suppliers and the buyers will ensure the sustainability in the organization. It will help the organization to make money. If the financial support becomes less for the customers, it will ultimately effect on their purchasing behavior.

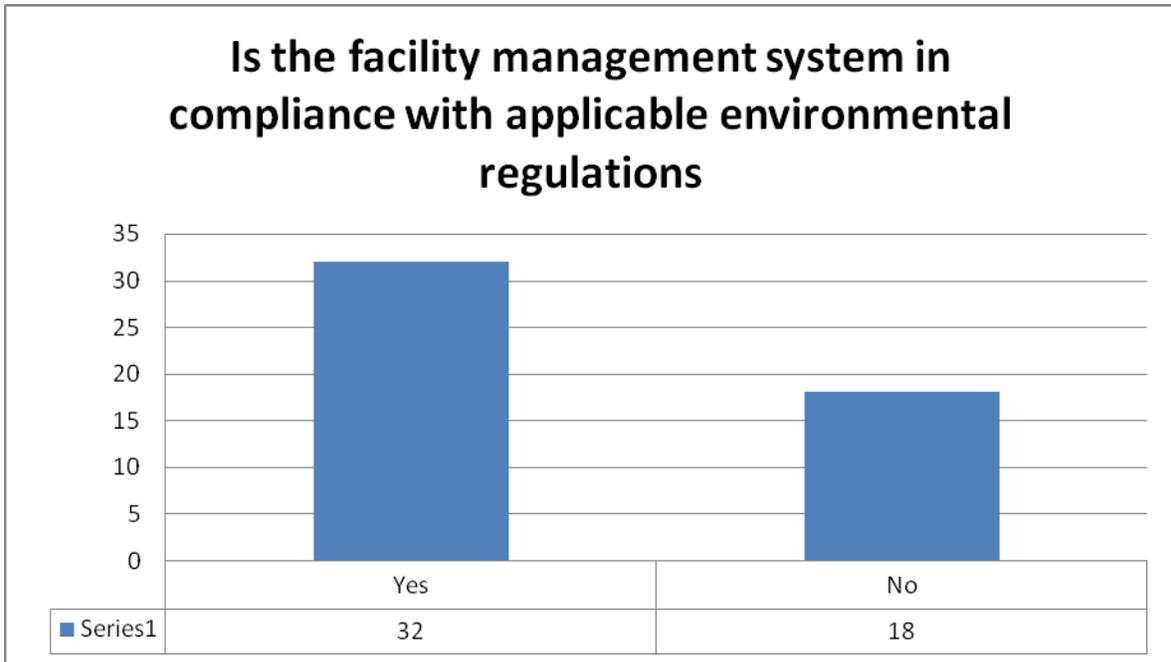
Failure related to the growth will affect the suppliers delivery efficiency. Supply chain and demand is unpredictable. There is different force beyond this. Suppliers will involve in the relationship in the risk management.

- **Suppliers willing to partner or are partnered with you to mitigate the risk**



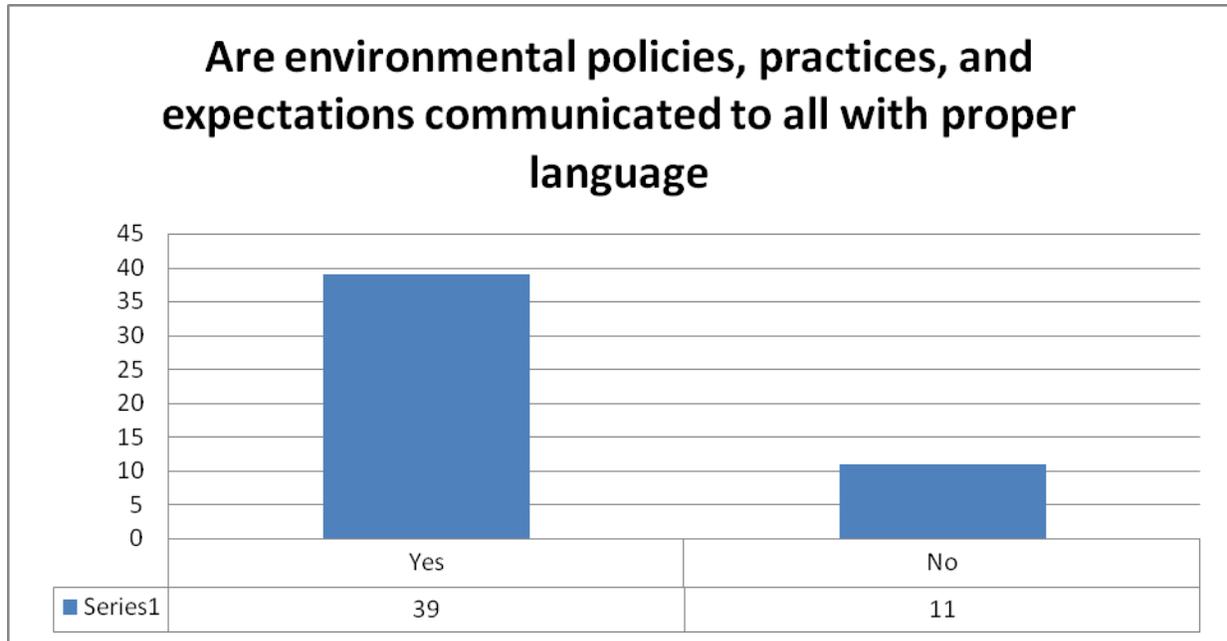
Supplier and customer tend to be updated by the growing number of the organization. It must ensure the development of the positive relationship with the strategic partners. Business planning, planning challenges and the result are mutually benefited. It will result in more cooperative and collaborative activities. Some of the commitment must be done in the supply chain. It will help the organizations to minimize the risks of the organizations. In the approaches of the supply chain, different cooperative approach must be undertaken. It will help to decrease the operational risk. It helps to do business on day to day basis. It will help to decrease the operational risk.

- **Is the facility management system in compliance with applicable environmental regulations**



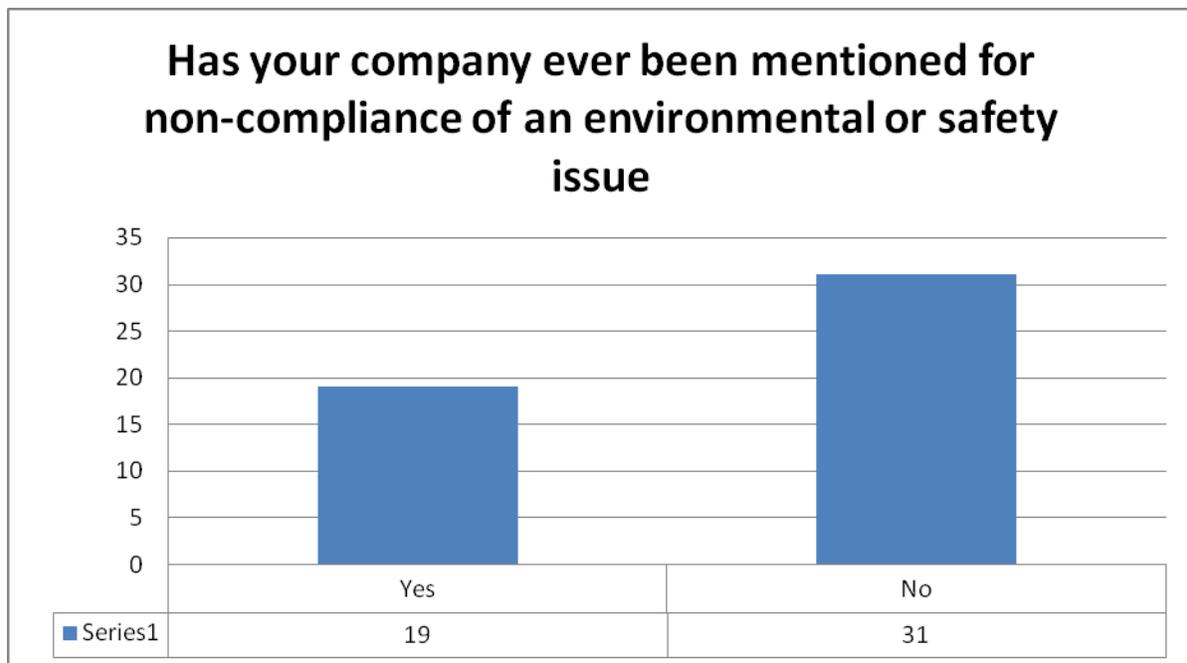
Most of the compliance programs depend on the search in the primary tool. It will help to review the regulatory requirement in the organization. Different federal facilities are given to different activities. It will help the organization to provide different information. States and Environment Policy Association help in this regard. It will help the organization to determine the rate of compliance under different states of the environment.

- **Are environmental policies, practices, and expectations communicated to all employees and suppliers with proper language**



Supplier should not discriminate the employees based on disability, age, ethnicity, marital status and gender, political affiliation, union membership in hiring. Employees must be rested based on the feasibility not on the biasness of the test result. Employees must be controlled based on the periodic control system. This will ultimately improve the performance of the organization.

- **Has your company ever been mentioned for non-compliance of an environmental or safety issue**



in the health and the safety program, different components of the health are included. it will ease the organizational performance of the organization. It will also protect the workers in the workplace as well. Employer's duty is to develop the health and the safety program in the organization. at the stage of the development, employees must be engaged. However, organizational health and safety program may be related to the other aspects as well.

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



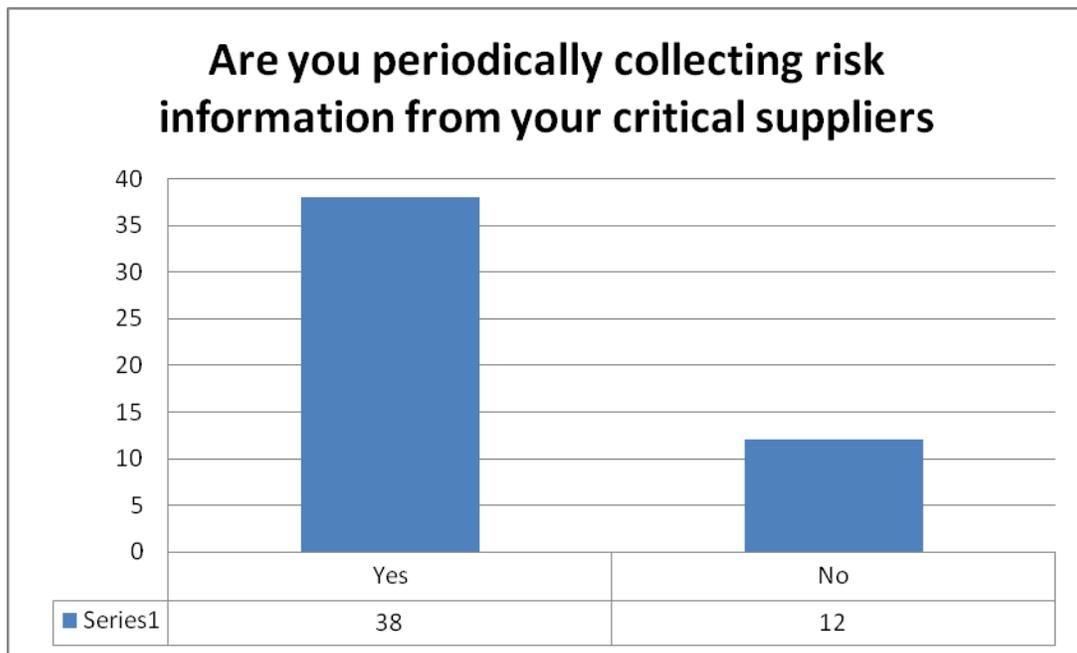
In the 21st century, business continuity planning program became important. Both the stakeholders and regulatory organizations demand the formation of the regulatory compliance. Different business community suggests that, reviewing plan is important for the organization. It will affect organizational plan and the process. It aims at reduction of the organizational disruption. It will help the organization with consideration of the continuity. It will impact on the development of the overall design.

- **Have you developed supply chain risk mitigation strategy**



For the effective supply chain, a manager has to confirm 3 things. These are identification, prioritizing and mitigating risk. At the first stage risks are being identified. After that 2 of the factors is focused. After that priority is developed based on the severity and other things. This is based on the feature of the organization and the risk. It considers some combination in them. After that, some steps are undertaken to mitigate the risks. This process continues for the new one.

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



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: FINDINGS

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.

CHAPTER 7: CONCLUSION

In the corporate social responsibility, sustainability in the supply chain management is key factor of focus. It impacts on the supply chain and the effective coordination. In the supply chain, economy and the social environment impact on the business. It focuses on the evolving market and the relationship. It defines some of the basic stages that the organizations can undertake to improve the productivity in the market. To ensure the sustainability of the supply chain, some of the basic standards must be followed. Organizations must follow some of the basic principles in that case to ensure the social impact and other responsibilities. Information technology may easier the problem in this case.

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APPENDIX

Draft Questionnaire

'The Challenges in Establishing Sustainable Supply Chain in Bangladesh'

No. of respondent

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Question 1: Name :

[Respondent is not bound to provide his name.]

Question 2: Age : _____

Question 3: Gender : _____

Question 4: According to you more percentage of employees that are male/female?

- a. Male (%)
- b. Female (%)

Question 5: Are all employees provided a written employment agreement with the facility in alanguage that they understand??

- a. Yes
- b. No

Question 6: Does the facility maintain a personnel file on every employee??

- a. Yes
- b. No

Question 7: Is your organization/business unit concerned about supply chain risks?

- a. Yes
- b. No

Question 8: Have you had at least preliminary discussions with supply chain management about supply chain risk management?

- a. Yes
- b. No

Question 9: Have you integrated risk management into your company's/business unit's supply chain agenda?

- a. Yes
- b. No

Question 10: Do you know who your critical suppliers are what exposures they face for at least one product line?

- a. Yes
- b. No

Question 11: Are supplier exposures integrated in the decision to select a supplier?

- a. Yes
- b. No

Question 12: Are your critical suppliers willing to partner or are partnered with you to mitigate the risk?

- a. Yes
- b. No

Question 13: Is the facility management system in compliance with applicable environmental laws and regulations?

- a. Yes
- b. No

Question 14: Are environmental policies, practices, and expectations communicated to all employees and suppliers in local or appropriate languages?

- a. Yes
- b. No

Question 15: Has your company ever been cited for non-compliance of an environmental or safety issue?

- a. No, my company HAS NOT been cited for non-compliance of an environmental or safety issue
- b. Yes, my company HAS been cited for non-compliance of an environmental or safety issue.

Question 16: Have you established an ongoing process of assessing supply chain risk for your organization/business unit?

- a. Yes
- b. No

Question 17: Have you developed supply chain risk mitigation strategy?

- a. Yes
- b. No

Question 17: Are you periodically collecting risk information from your critical suppliers?

- a. Yes
- b. No
