

Capacity assessment and measuring sustainable procurement practices- probing the case of an organization perspective

A Research Project Submitted in Partial Fulfillment of the Requirements for the Award of the Degree of Masters of Procurement and Supply Management (MPSM), BRAC Institute of Governance and Development (BIGD), BRAC University

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CERTIFICATION OF ACCEPTANCE

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The report has been formulated under my recommendation and is a record of his legitimate work carried out successfully.

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ABSTRACT

Measuring and reporting the effectiveness of sustainable procurement is a new challenge in the field of purchasing. In many organizations the effects of sustainable purchasing have not been determined or evaluated. The procurement effectiveness reporting tool will produce information on the effects of procurement that can be then used in developing the sustainable purchasing activities in an organization. This thesis gives the reader specifically for Hifab International AB an example as a case study of an approach on how to measure and report strategic project based sustainable procurement effectiveness through different variables. This practice will contain job descriptions for all roles involved in procurement, instructions on how to handle effective communication, purchasing ethics and policies and detailed descriptions of the sustainable procurement process and its sub process.

The following objectives were determined: defining different methods of measuring sustainable procurement effectiveness (1), creation of a procurement effectiveness reporting tool aligned with the corporate and procurement strategies (2) and drawing sustainable development plans for effectiveness reporting (3). The procurement effectiveness reporting tool focused on developing effectiveness factors that can be evaluated by using an evaluation scale.

Due to specific demands in sustainable procurement in the private sector is vastly different from its private counterpart. Public organizations for example have to meet higher standards regarding transparency, integrity, accountability, and exemplary behavior (Telgen, Harland & Knight, 2007) and have to abide to different rules and regulations than private organizations when they are procuring goods and services. The notion that public procurement is used as a policy tool to reach desired outcomes in society also makes public

procurement distinct from private purchasing. By implementing sustainable procurement the Dutch government is therefore adding complexity to the already complex procurement process.

Implementing sustainable procurement requires organizational routines to be changed and the implementation of sustainable procurement should therefore be viewed as an organizational change. This research has consequently used theories and insights from change management literature as a theoretical framework. Change management literature suggests that when an organizational change is studied five different aspects should be examined: process, content, context, leadership, and outcome issues (Kuipers et al., 2014). Based on the literature from both sustainable procurement and change management the most prominent factors for the implementation of SPP were identified for each aspect: change agents and procedural justice (process), red tape (context), fit with vision (content), top management support and transformational leadership (leadership), and commitment to change, sustainable procurement behavior and degree of sustainable procurement (outcome).

The theoretical background was established by acquiring information from literature, previous research and professional journals. The theory was used for applying ideas and methods to develop the reporting tool. Internal interviews and workshops were used to scan the challenges and issues with the current reporting tool. External interviews were used to find new ideas and concepts that could be applied to the reporting. Through the conducted research, a procurement effectiveness tool was created that fitted the needs of the commissioning organization. The tool focused on evaluating the other effects of procurement and on creating a common alignment for determining the cost savings produced.

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Chapter One

INTRODUCTION

1.1 BACKGROUND

Procurement means the buying or hiring of goods or learning of Goodness through purchasing and hiring, and the carrying into action of works and carrying out of services by any contractual means. (Fineurop-ESCB 2011a). The project procure strategy for development (PPSD) is a methodological analysis that is used to determine the optimum procurement attack to deliver the right procurement result. The PPSD requires Borrowers to consider, among other things, the market situation, the operational circumstance, previous experience and the risks present – then from this, determine the right procurement overture that will yield the right type of reply from the market. By designing the right procurement approach, there is far more likelihood of the right bidder participating, better bids being received, and an overall increased chance of achieving value for money. Therefore, determining the right procurement approach, informed by appropriate analysis is a critical activity that subsequently impacts every following stride of the procurement procedure, and onwards into Project effectuation. www.worldbank.org/procurement.

1.2 STATEMENT OF THE PROBLEM

Sustainable public procurement is increasingly recognized as an instrument of authorities insurance and a lever for wider economic, social and environmental changes. In Bangladesh, however there exist not a open slice criteria, principle or road map for sustainable procurement of commodity, whole works and services. In our quest as a nation in attaining sustainable ontogenesis, and transiting into a full middle income status commonwealth, sustainable procurement must be our main focal point. Public and private organizations procure good, works and services without consciously pickings into consideration its impacts on the environment. Legislations to sustainable procurement in East Pakistan are not clear cut, thus devising the implementation operation a cumbersome one. This resulted in local conditions and grocery, remaining devoid of Sustainable Procurable elements. Businesses in the country remain ignorant of the best sustainable procurement practice, since education in this field is limited. It appears that, government institutions go through a lot of lengthy bureaucratic processes in acquiring goods and services. This according to Nketia-Asante, (2009) lead-in to low productivity, inefficiency and loss of money and detrimental effect on government. This study

therefore looks at steps that should be carried out in Bangladesh to maximize the benefit of sustainable procurement practice.

1.3 PURPOSE OF THIS STUDY

The purpose of this thesis is to create a sustainable contribution to the sustainable procurement process:

1. Try to draw a mapping of the future sustainable procurement process and its sub process.
2. Try to draw a proposal for private service sector to set up a new sustainable procurement guideline which will eventually help them to make them competitive in to the external market.
3. To get more involvement or familiar to corporate personality since sustainable procurement is meeting the business needs for materials, goods and utilities.

1.4 OBJECTIVE OF THE STUDY

1. To determine whether there is any inefficiency in the generally procurement process in the consultancy business industry comparing between budget estimates and contract award value.
2. To determine the parameters of these inefficiencies and to find out whether these parameters are significant or not.
3. To find out the extent to which procurement practices in Bangladesh, embrace sustainability considerations.
4. To bring out the potential challenges existing in procurement practices, which work against sustainable procurement in Bangladesh, thus helping us move towards sustainable procurement.

1.5 MANDATES AND FUNCTIONS

At a glance at the Swedish as well as Bangladeshi laws defining the mandates and the functions of the Pvt. Ltd. Company in terms of the procurement, suggests that all the companies have a number of functions and responsibilities relating to procurement. In general, the sources of the procurement or the income of the local bodies consist of taxes, fees and charges; rents and profits of properties; contributions from institutions/individuals; government grants; returns from investment; loans and proceeds from sources of income placed at their disposal. All levels of local government laws are empowered to cover all the procurement related function.<http://www.sll.se/om-landstinget/miljo/>.

1.6 SIGNIFICANCE OF THIS STUDY

Sustainable procurement is a high profile matter for businesses today. It can help to save money, reduce waste, improve competitiveness and build a business' reputation. As part of their sustainability programs, many fossil oil companies have invested in topical anesthetic transportation networks or built schools. They provide Job and by sourcing supplies locally help to develop the local economy. The global oil industry has a responsibility to the countries in which it operates to manage its operations in as sustainable way as possible. A purchasing managing director might want to consider whether the supplier behaves responsibly, for example, adhering to ethical standard or sourcing raw materials in an ethical way. <http://www.upphandlingsmyndigheten.se/en>.

For example, Case is working with its existing provider to implement the Scale Provider Precept. These Set out the minimum standard which Shell suppliers need to meet. These include using energy and natural resources as efficiently as possible to minimize impact on the environment and cover health and safety issues. Even in the case of stationery organization has to think now to make it open for that choice options.

1.7 ORGANIZATION OF THE STUDY

The study is organized into several chapters. Chapter one provides the background of study, looks at the problem statement and continues to state the research aims and objectives. This chapter also includes the significance and organization of study. Chapter two focuses on the review of relevant literature concerning the study. Chapter three is devoted to the research design and methodology employed for this study, including analysis and key findings, as well as discussion of findings. Chapter four presents a summary of findings of the study. It also includes conclusions and recommendations of the study.

1.8 LIMITATIONS OF THE STUDY

Limitations of this research will primarily be the time constraint which in turn may not permit to make a comparison of research in terms of project based procurement in different organization. The procurement of goods and services are performed by procurement department, which are divided into two or more sub-divisions. The study will focus on the working divisions of

Procurement related works of private organization, which might significantly vary from the procurement of other company or any standard uniform.

The limitations and assumptions that were made during the research are mainly as follows:

1. For the purpose of collection of primary data with regard to estimates, the tender evaluation documents of last two (2) years have been taken. But, it could have been done separately for each different sub-division taking the data for last 5 years so that the trend in inefficiencies could be identified by time-series analysis.
2. The parameters of inefficiencies have been identified through qualitative interviews, but the parameters were not statistically tested to find which of those are most significant or which of those are not significant at all.

Chapter Two

RESEARCH METHODOLOGY

2 RESEARCH METHODOLOGY

This chapter will explain how the study was conducted, what methods were used.

2.1 RESEARCH STRATEGY

In order of magnitude to breakthrough out the inadequacy or any inefficiency that still fabrication in the summons or how the sustainable labor should be introduced more effectively in our commonwealth based procurement needs to be implemented is one of the Major objectives of this research. In this context to the caller's berth, the research has been based heavily on observed data from the consultation. The data gathered through consultation and some of the internal meeting, it has then been compared to present research to make sure that the resolution reached are in line with best drill according to those sources. The data gathered in this research is mainly qualitative data although some quantitative data has been used mainly in the best possible mode.

2.2 METHODOLOGICAL APPROACH

When I have started this research, Bangladesh was in the middle of a restructuring of the procurement section, with sherd from the old organization working position by side with fragments from the new organization. Because of this special situation the classical approach shot to unconscious process mapping, where a shot picture of the present situation is first created then possible betterment are identified and finally a future tense process map are created. Due to the ever-changing cognitive process in the present organization it was decided that a snapshot paradigm of the present situation would be hard to create and would contribute very little value to the process. Instead a future process description was created that the ongoing changes in the department could be steered towards.

I have created 7 steps through which I intend to this approach:

1. The first step was to identify all present procurement activities in an organization. This was done through secondary data in the form of documents routine descriptions and tools and template collected from the different branch office. Some interviews with people in the organization, especially in one of my friend's organization Hifab regional Dhaka office, also contributed to the identification of different procurement activities. Some ideas

for necessary procurement processes were also collected from the literature review. However in this stage not only present activities were collected but also ideas for new processes that could improve purchasing.

2. The second step was to organize the activities into groups so that main processes could be identified. It was also important to identify any connections between activities to be able to organize them into sequential flows.
3. When the present activities were identified it was important to see which activities were interesting to keep in a future procurement process. This was done by interviews with management personnel and through investigation of purchasing and logistics departments' targets and visions as well as the corporations targets and vision. Present activities were also compared with theoretical models from the literature review.
4. When the significance of different activities and their interrelations were established. A first draft of an overall structure could be created based on theoretical models, interviews and collected material.
5. This first draft was presented to a focus group containing procurement personnel from all branches and with different roles in the organization. The focus group provided valuable input into the process and the overall structure were adjusted according to new information that was discovered in the focus group.
6. When an overall structure was established the next phase was to try to place all identified activities in the new structure. This was done through interviews with different persons from the procurement organization who provided their view on where different activities were to be placed.
7. Once all activities were mapped into the structure it was important to validate the new structure of the procurement policy. This was done by presenting the structure to different people and get their view on it.

2.3 LITERATURE REVIEW

To gain an understanding of how procurement processes can be organized this research was started with a vast literature review. The literature review was conducted mainly through BRAC University Library. The data has been taken from mostly from PX project management from Hifab, regional Dhaka office software. These databases have given some input to the work but most of the input comes from printed material in the form of books and various types of reports. The results from the literature review have been used mainly to verify the information gathered in interviews.

2.4 SELECTION OF RESPONDENTS

Snowball sampling did the selection of respondents both for the secondary and primary data collection. This means that the first respondent is asked to recommend a few other persons who might also have valuable information for the research. The advantages of this method is that a large number of relevant respondents can be selected in a short time without detailed knowledge of different organizations and the researcher can get a good connection to the respondent since he has been involved with any company as direct employee. Both these conditions were met, the knowledge of the organization was limited and there was a great need for good contacts with relevant respondents, it was decided that snowball sampling would be the best sampling method for this study.

2.5 DATA COLLECTION

In this project both secondary- and primary data were used.

2.5.1 Secondary data collection

To get a picture of the present situation in the procurement organization secondary data were collected. The data that was collected were routine descriptions, process descriptions, tools and templates for procurement from all facilities in the corporation. This was done via e-mail and all Country Procurement Managers and Lead-Buyers were asked to submit all kind of services that were taken by the Hifab mainly for project management team as well as the different organization procurement team.

2.5.2 Primary data collection

The primary data collected were in the form of interviews and mostly sitting with the procurement staff of different organizations and my company Hifab, in Dhaka office. Usually the interviews were used for data collection to create proposals then these were used to validate the data collected through interviews. Often persons who were interviewed were also in the focus group and could then make sure that the answers that they had given were interpreted correctly.

2.5.3 Interviews

Interviews were conducted with personnel involved in the purchasing process. The interviews were conducted as semi-structured interviews, where the respondent was presented a questionnaire which then were discussed rather openly. Usually the result from the interviews were not a protocol or specific answers but more often a sketch describing their views on a certain process

or activity. During interviews the respondents were also asked to present any template or examples of documents or any other valid questions that can be added with the existing list, that they used during different activities or processes. These documents were then collected and used when creating the tools and templates part of the model. The roles in the company that were interviewed were:

- Head of Procurement (HOP). The purpose of the interviews with the HOP was to get his overall views on strategy and break them down to instructions for the creation of commodity strategies. The HOP's input was also important to Governance and administration process and especially the target setting and follow up parts. Interviews with the HOP were also used to get approval of drafts and clearance to continue working according to specific ideas.
- Lead-Buyers/ Commodity Managers. Lead buyers are the foundation of the new organization and the interviews with them were used to create operative processes of contracting, supplier management and strategic sourcing.
- Interviews are done through other professional also accountant, lawyer, lecturer and govt. official.

2.6 RELIABILITY AND VALIDITY

Since this entire project is based on interviews and observations and there are very few measurable facts to work with it is important to try to make the results as valid and reliable as possible. When conducting interviews it is always a risk that things are misinterpreted. To minimize the risk of this multiple persons have been asked to present their views on every process mapped. Another way to ensure the right interpretation is to try to create the process map in cooperation with the person leaving the information.

Chapter Three

THEORETICAL FRAMEWORK

3 THEORETICAL FRAMEWORK

This chapter presents a theoretical framework. This framework was used to validate the information gathered through interviews and workshops. But the theoretical models were also used to make sure that the right questions were asked in connection with service industry and company.

3.1 THE NATURE OF SUSTAINABLE PROCUREMENT

Sustainable procurement is a process whereby public institutions meet their needs for goods, services and works in a way that achieves value for money on a whole life cycle basis in terms of generating benefits not only to the organization, but to society and the economy, while minimizing damage to the environment (Aurora Energy system, 2008; DEFRA, 2006). Sustainable procurement (or Green Procurement) is a spending and investment process typically associated with public policy, although it is equally applicable to the private sector. It is linked to the wider agenda of sustainable development.



Traditional procurement has focused on value for money considerations only whilst sustainable procurement involves achieving value for money on a whole life basis by considering the economic, environmental and social issues having to do with the goods and services bought, with an aim of reducing possible extreme effects. The challenge is to define how to possibly include economic, social or environmental considerations in the process, while ensuring that, government's decisions, as far as procurement is concerned are fair and transparent. Sustainable procurement is a global problem and therefore Bangladesh is not an exception.

The purpose of this project is to find out the extent to which procurement practice in Bangladesh, embraces sustainability considerations. Secondly, to bring out potential challenges existing in procurement practices, which work against sustainable procurement in Bangladesh,

thus helping us move towards sustainable procurement. Mostly, sustainable procurement has been concentrated on environmental protection. For example, Lamming and Hampson (1996) argued that; in supply chain management the purchasing function is beginning to play a more important role in the future strategy of businesses and will need to have policies in place that can cope with a range of issues, many of which closely affect the environment. Similarly, a research by Vachon and Klassen (2006), concerned with green supply chain management, key themes developed included investigating the antecedents of engagement with environmental issues in supply management.

Sustainable procurement refers to the act of integrating a concern for broader social and environmental impacts within procurement undertaken by government or public sector bodies. (Preuss, 2009; Walker and Brammer, 2009). Several research works have contributed to the debate of attaining sustainable procurement, especially in the construction industry. There seem to be challenges in existing procurement processes and structure in the developing countries like Bangladesh.

In many sectors of the economy, there has been an evaluation in management practices towards more sustainable modes of operation. This has involved all facets of business operation, from procurement and production through to marketing, sales, packaging and labeling. Climate change and cognizance of the greenhouse emissions generated in the process of production of goods and services will keep the focus on the environmental performance of businesses and government well into the future (Carlsen, 2009). The above illustrates the importance of climate and environment on sustainable procurement. In a similar context, Carlsen, (2009) stated that, procurement is an essential component of environmental performance of business and government. So much so that, some companies now have dedicated Environmental Management Strategies [EMS], divisions, reporting processes and auditing programs built in to their organizational structure. Procurement is positioned as the starting point for improved environmental performance and transition towards more economically viable, socially acceptable and environmentally responsible business practices.

3.2 THE CHALLENGES FACING SUSTAINABLE PROCUREMENT

3.2.1 Absence of Internal Management Structure

The absence of support from the existing top management in driving procurement organizations towards sustainable procurement is identified as one of the factors militating against sustainable procurement. (The prince of Wales, 2004). In such situations, an organization will face difficulties in making its business more sustainable as becoming sustainable, requires additional investments in the supply chain, such as in quality control and adapted management structures.



3.2.2 Lack of Social drive

An external force, such as demand for quality and traceability (promoted by the regime and consumer demand for sustainability and safety), demonstrate lack of mixer responsibility in general. The press from NGO's and the media to bring problems to public attention for the country to be sociable ly and environmentally responsible towards sustainability has not been adequate. Helmsing and Knorringa (2008) identified that, buck private histrion have not become involved in the NGO's policy development nor do they influence monitoring and evaluation systems. Such lack of private efforts would result in securities industry pressure on the relevant institutions to ensure sustainability in the procurement operation, which will in bout fulfill corporate social responsibility.

3.2.3 Higher Initial cost of green products

In addition to the fact that, potential demand for green housing has not been fully explored for people's undeveloped environmental consciousness, Ning et al. (2003), identified that, the initial cost of green buildings is more than conventional buildings. They are also limited by design and technology levels which make them challenging when it come to the practice of sustainable procurement. He concluded that, the popularization of green buildings in the market need the participation and co-operation of all the interest groups involved in the green building practice, from the end user, the contractors to the government. This buttresses the need for multi-stakeholder approach as remarked earlier in this paper.

3.2.4 Information technology and sustainable procurement:

This seeks to examine the relationship between sustainable procurement and e-procurement, to the policy objective in public procurement in many areas. E-long dozen procurement and communication may help environmental, labour, health and other aspects of sustainable procurement. Conversely, e-procurement may hinder purchasing from local suppliers in project. Public sphere spending attributable to leverage of goods and services has been the subject of significant recent attention. {Brulhart and Trionfetti, (2004); Fernandez-Martin, (1996); McCrudden, (2004); Trionfetti, (2000)}. Within evolving discussions, concerning public procurement, the role of government activity purchases as a stimulus for sustainable development has been a topic of particular interest in recent years (McCrudden, 2004; Weiss and Thurbon, 2006). Although sustainable procurement has an increasingly high gear profile in policy Mexican valium around the world, very little is known about the extent to which sustainable procurement has an increasingly high profile in policy circles around the world, very little is known about the extent to which sustainable procurement policies and practice session are embedded within the practice of public procurement professional person globally. Electronic procurement in the public domain can be seen as a policy tool to support the delivery of public procurement policy, improving transparency and efficient (Carayannis and Popescu, 2005). Selective information technology offers a range of new opportunities to make sustainable purchasing operational for public sector governance (Legarth, 2001). E-commerce is expected to influence a wide range of supply range of mountains systems and thus lead to unidentified environmental wallop (Abukhader and Jonson, 2004).

3.3 THE STRATEGIC ROLE OF PURCHASING

Purchasing has for a long meter been considered primarily as an operational function without any strategic grandness (Baily, Fanner Jessop & Casey Jones, 1994). However in Recent period years the strategic importance of purchasing has been given more attention. One reason for this could be the vogue of increase in outsourcing. Companies tend to outsource a large act of activeness that were earlier part of their own operations (Vanguard Weele, 2005). This outsourcing 1 sense of mean the toll that were once internal monetary value such as 1 sense of wage and disk overhead are now external in the form of purchased goods or services. Chen et al (2004) United States Department of State that strategic purchasing will lead to communications with supplier, a express number of suppliers and a long-term orientation. They mean that this will lead to a higher customer responsiveness, which means that the buyer gives feedback to the

supplier and the supplier makes changes accordingly which lead to mutual gains and ultimately a higher financial performance, see figure 3.1.

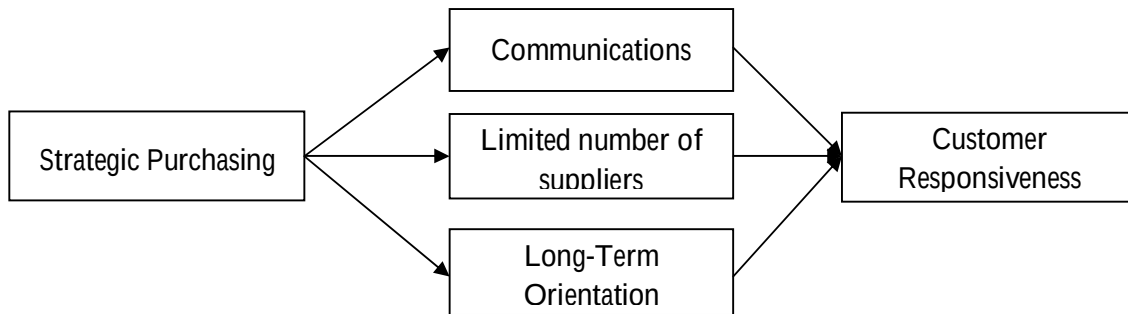


Figure 3.1. The contribution of strategic purchasing to the company's financial performance. (Chen et al, 2004)

3.4 PURCHASING ORGANIZATION

Axelsson and Laage-Hellman (1991) states that the shape of the organization is essential for procurement performance. They imply that how the organization is to be governed is depending heavily on the type of organizational structure adopted. Axelsson and Laage-Hellman (1991) identify three ways to organize purchasing according to specialization:

- Specialization based on commodity
- Specialization based on facility
- Specialization based on supplier

3.4.1 Level of tasks, responsibility and authority

In purchasing organization three levels of responsibility can be identified, strategic level, tactical level and operational level. Each level are concerned with different types of issues. The strategic level is the highest level and are concerned with more overall issues, while the level of detail are higher at the tactical level, and the operational level are concerned almost entirely with everyday details. (van weele, 2005).

3.4.1.1 Strategic level

On the strategic level are decisions made influencing the long-term market position of the company. These types of decisions are usually positioned rather high up in the organization preferably at top management level. (Van Weele, 2005).

3.4.1.2 Tactical level

The tactical level constitutes of decisions such as supplier selection and supplier evaluation and development. Decisions about purchasing actions that affect products and processes are also usually placed on the tactical level. (Van Weele, 2005).

3.4.1.3 Operational level

The operational level contains the daily activities of ordering and expediting. This level is also concerned with delivery surveillance and follow-up on orders.

3.4.2 Centralized versus Decentralized purchasing organization

One major decision that has to be made when building the purchasing organization is the degree of centralization (van Weele, 2005). The two extremes in this are centralized organization and decentralized organization.

3.4.2.1 Decentralized purchasing structure

The decentralized structure is common in companies with a business unit structure. With this type of structure the business unit manager is usually responsible for the financial result of the business unit, and are therefore often responsible for all purchasing within the business unit. One major disadvantage with this type of organization is that the company cannot use its full bargaining power since each negotiator can negotiate only for the spend of his/her business unit. This type of organization is usually favored when a company has business units with different needs and the products purchased at the different units are unique for each unit. (Van Weele, 2005).



3.4.2.2 Centralized purchasing organization

In a centralized purchasing organization a corporate level purchasing department are responsible for all purchasing. With this type of organization decisions about product specifications are made centrally, and the same goes for supplier selection. Contracts with suppliers are usually negotiated centrally and the same terms and conditions are



valid for all business units. With this type of organization, contracts tend to belong to term agreements that state from which suppliers purchases can be made and to what prices and delivery arrangements, but the actual purchasing within the agreements are usually carried out by the business units. This organizational structure is usually appropriate when multiple business units purchase similar products or services. (Van Weele, 2005).

3.5 THE PROCUREMENT PROCESS

Van Weele (2005) presents a basic model of the procurement process. This process has six steps:

- Defines specifications
- Selects supplier
- Contract agreement
- Ordering
- Expediting
- Evaluation



3.5.1 The governance process

The governance process is a process that has as a main purpose to measure the performance of the procurement and logistics department, but also to supply guidelines in the form of instructions and policies.

3.5.1.1 Measuring purchasing performance

Axelsson and Laage-Hellman (1991) state that a suitable way to govern purchasing is through target setting and measuring. They state that this could be done through Key Performance Indicators. The authors divide the KPIs into seven categories:

- Price related KPI:s
- Quality related KPI:s
- Delivery related KPI:s
- Inventory related KPI:s Savings related KPI:s
- Activity Related KPI:s
- Other

3.5.2 The Strategic Sourcing process

Developing a sourcing strategy is a complex process and there are a lot of factors that have to be taken into account, which factors vary between companies, commodities situation and environment. One

of the most common strategic decisions is the one of single versus multiple sourcing. This decision is discussed by Saunders (1994), Dobler and Burt (1996) Heniritzetal(1991)aswellasothers.

Earlysupplierinvolvement

DoblerandBurt(1996)statesthatifsuppliersareinvolved earlyinthebuyersdesign processtheycancontributewiththeirexpertiseinthefollowingnineareas.

- Materials specifications
- Tolerances
- Standardization
- Order sizes
- Process changes in service industry
- Packaging
- Inventory
- Transportation
- Assembly changes in buyer's plant

Number of suppliers

Dobler and Burt (1996) states that another aspect to consider when developing a strategy is how many parallel sources of supply should be used. A company can choose to take all supply from a single supplier, which is usually called single sourcing, or they can take their supplies from two or more suppliers, called dual or multiple sourcing. The different strategies are appropriate in different situations. According to Dobler and Burt (1996) single sourcing is appropriate when:

- Better prices can be achieved through large volumes (economies of scale)
- Quality is important.
- Strong influence over a supplier is advantageous.
- Lower costs are incurred to source, process, expedite, and inspect.

Share of supplier business

Dobler and Burt (1996) states that when a company decides its purchasing strategy they have to decide how large a share of the supplier's turnover they want to constitute. The larger share they constitute the more influence they will get but if they withdraw their business they might put the supplier in a difficult situation, which in turn might reflect badly on themselves.



Environmental considerations

In some cases environmental considerations have to be taken into account when purchasing. It is imperative that the buying firm makes sure that their suppliers do not handle environmentally problematic substances in such a manner that it could hurt the buying company. This could be through bad publicity or in some cases the buying firm might even be financially liable for problems created by a supplier. (Dobler and Burt, 1996)

Ethical considerations

A buyer must always be aware of potential conflicts of interest when developing a sourcing strategy and in particular when choosing suppliers (Dobler and Burt, 1996). For more information about this see chapter 3.4.2, ethics.

3.5.2.1 Supply market research

To be able to decide upon a sourcing strategy it is imperative to have all relevant information about the supply market. To get this information supply market research can be conducted. Van Weele (2005) presents the following systematic approach to conducting supply market research:

- Determine objectives, Cost-benefit analysis, Feasibility study, Design of research plan, Execution of research activities, Preparing research report and evaluation.

3.5.2.2 Kraljic's Matrix

A commonly used tool when working with strategies is Kraljic's matrix. This matrix is divided into four squares where commodities or suppliers are classified according to their financial impact on the company, and the supply risk. See figure 3:5. (Van Weele, 2005)

The four classes are:

- **Leverage products** are products with high financial impact but low supply risk.

Leverage	Strategic
Non-critical	Bottleneck

These products are usually sourced by competitive bidding.

- **Strategic products** are products with high financial impact as well as high supply risk. These products are usually sourced through partnerships.
- **Routine products** are products with low financial impact as well as low supply risk. They strive in the sourcing process for these products are to source them with as few man-hours as possible, for instance through automated
- **Bottleneck products** are products with high supply risk but with low financial impact. The commonly used strategies for these types of products are to secure the supply. (Van Weele, 2005)

3.6.1 Risk

Persson (2006) defines risk as:

"The probability that something unwanted should happen multiplied with the severity of the consequences of such an event."

- Inadequate knowledge of actual need
- Imprecise RFQ:s
- Losing key personnel
- And many other



External risks, or commercial risks are risks that have its origin within the suppliers such as:

- Rising prices or other costs
- Shortages
- Cancellation of production of desired products

- Exchangerates

VanWeele(2005)dividesrisksinpurchasing intofourcategories:

- Technicalrisk
- Commercialrisk
- Contractualrisk
- Performance risk

Technical riskisrelated to whether the supplier can deliver the functionality and performance agreedupon.Technicalriskarealsoconcernedwithwhetherthesupplier hastherequiredskillstoprovidewhatwasordered.(vanWeele,2005)

Commercial risksarerelatedtothecostsacompanyhasduetoapurchase.This might be prices as well as other costs that result from the purchase such as shipping, production cost,customsorother.(VanWeele,2005)

Contractual risksareconcernedwithwhetherthecontractispreciseenoughsothatno mistakes aremadeandthattheconsequences ofmistakesareclearlystated.Attaching penalties for inadequate performance can minimize contractual risks. (Van Weele, 2005)

Performance

risksaresimplytheriskthatthesupplierisincapable ofdoingwhatthe contractrequiresfromthem.(VanWeele,2005)



3.6.2 Ethics

Dobler andBurt (1996)statethatacompany hastwomainwindows totheoutside world,thesalesdepartmentandthepurchasing

department. Becauseofthisthey mean that the actions of these two departments are extremely visible and therefore important fortheperceptionofthefirmexternally.

EthicalPerceptionsAvoid the intent and appearance of unethical or compromising practiceinrelationships,actionsandcommunications.

Responsibilities to the employer. Demonstrate loyalty to the employer by diligently following the lawful instructions of the employer, using reasonable care and only the authority granted.

Conflict of interest. Refrain from any private business or professional activity that would create a conflict between personal interests and the interest of the employer.

Gratuities. Refrain from soliciting or accepting money loans, credits, or prejudicial discounts, and the acceptance of gifts, entertainment, favors or services from present or potential suppliers that influence, or appear to influence, purchasing decision.

Confidential information. Handle confidential or proprietary information belonging to employers or suppliers with due care and proper consideration of ethical and legal ramifications and governmental regulations.

Treatment of suppliers. Promote positive supplier relationships through courtesy and impartiality in all phases of the purchasing cycle.

Reciprocity. Refrain from reciprocal agreements that restrain competition.

Law. Know and obey the letter and spirit of laws governing the purchasing function, and remain to legal ramifications of purchasing decisions.

Small, disadvantaged and minority owned business. Encourage all segments of society to participate by demonstrating support for small, disadvantaged, and minority owned business.

Personal purchase for employees. Discourage purchasing's involvement in employee-sponsored programs of personal purchases that are not business related.

Responsibility to the profession. Enhance the proficiency and stature of the purchasing profession by acquiring and maintaining current technical knowledge and the highest standards of ethical behavior.

International Business. Conduct international business in accordance with the laws, customs, and practices of foreign countries consistent with homeland laws, your organizations policies, and these ethical standards and guidelines.

3.7 AUTHORITY

According to Heinritz et al (1991), a purchaser is an agent for his/her company who has been given the authority by owner or management to commit company funds.

There are often monetary limits

to the amount that may be spent by any single buyer

without securing specific approval

of the expenditure by general management. The authors' states further that the authority should be comparable with responsibility and the ability to meet that responsibility.



Chapter Four

SUSTAINABLE PROCUREMENT PRACTICES

4.1 INTRODUCTION

Since the 1980s, sustainable procurement has been applied worldwide as a mean of addressing and reducing negative environmental impacts related to the production and consumption of products (Ho, Dickinson, & Chan, 2010). Research on sustainable procurement indicates that procurement is indeed a policy tool that can help achieve desired outcomes in society and is critical in driving forward the sustainability agenda (Brammer & Walker, 2011; Carter & Rogers, 2008; Green, Morton, & New, 1998; Ho et al., 2010; Meehan & Bryde, 2011; Preuss, 2009). External pressures are often crucial in kick-starting the engagement for organizations in sustainable procurement; however, for it to become truly successful, certain organizational factors are needed (Højmosen & Adrien-Kirby, 2012). It is inside the organization that changes have to be made and barriers removed to achieve the desired outcomes in society.

4.2 SUSTAINABLE PROCUREMENT PRACTICES AT HIFAB

4.2.1 Company Description

Hifab is the leading project management company in Sweden – offering project management and advisory services for sustainable development. It was founded in 1947, with the business idea to act as the developer's independent representative, which at that time was a completely new concept in the Swedish construction industry. The business idea proved to be successful and the company flourished fast. Up until 1973, Hifab had exclusively operated on the Swedish market. However, seeking to expand internationally the group founded Hifab International AB in 1973 and its first international assignment in the same year was in Vietnam.

4.2.2 Major Sectors of Hifab Services



Infrastructure Development: Infrastructure development is the sector where it all started 35 years ago; and it is still where our largest share of activities takes place and where our core competence lies. We provide consultancy services within the whole spectrum of infrastructure development; from planning, designing and construction supervision of highways and complex industry and energy facilities, to small scale water and sanitation schemes and construction, rehabilitation, and maintenance of rural roads.



Human Resource Development: In the vastly diverse field of Human Resource Development, we have brought in considerable experience from both small and large infrastructure development projects, where institutional strengthening and capacity building have been key components.



Water Supply and Sanitation: We offer services for prospecting of water and development of water supply and sanitation facilities for both rural and urban areas. Hifab's services in this sector cover feasibility studies, project appraisal, mapping, modelling, master planning, construction, and maintenance of water supply, sanitation development and waste water management projects.



Power Transmission and Distribution: We have wide experience in power networks development, which includes project appraisals, pre-feasibility and feasibility studies, preliminary design and preparation of tender documents, bid evaluation, and assistance in contract negotiations.



Rural and Urban Electrification: Hifab has wide experience on rural electrification in developing countries. Hifab's services in this sector projects included studies and analysis of socio-economic, environmental and technical issues related to various alternatives for electrification, management of the project implementation, installation/rehabilitation of distribution networks, developing guidelines, procedures, and provisions of training with the aim of providing people a possibility to improve their living conditions by exploiting the benefits of electrification.



Urban Development: The accelerating rate of urbanisation during the past four decades has brought with it significant global socio-economic changes. A key feature of the urbanisation is the fact that many cities in developing countries are harbouring an increasing proportion of poor and low in-come groups. Hifab International stands well prepared to meet the increasing needs from governments, municipalities and other organisations involved in urban development world-wide.



Education: With a track record of project management and consulting services to education institutions and agencies ranging from primary and basic education to higher education, our services include institutional capacity building development of educational management information systems, project evaluations and studies and research.



Skills Development: Technical Vocational Education and Training (TVET)/ Skills Development is one of our focus areas encompassing all aspects of ever increasing labour-market and development of capacity of people to coping up with the market demand and improve their own livelihoods. Our activities in this field included analysis of labour

market demand, assessments of the social and economic aspects of skill development, policy formulations, curriculum development and teacher training.



Climate Change: Having climate resilient infrastructure development high on our agenda, we have been associated with a number of climate change impact management projects in south-east Asia region.



Rural Development: We provide services in the rural development focussing on improvement of livelihoods of the poorer communities, especially of the slum dwellers.

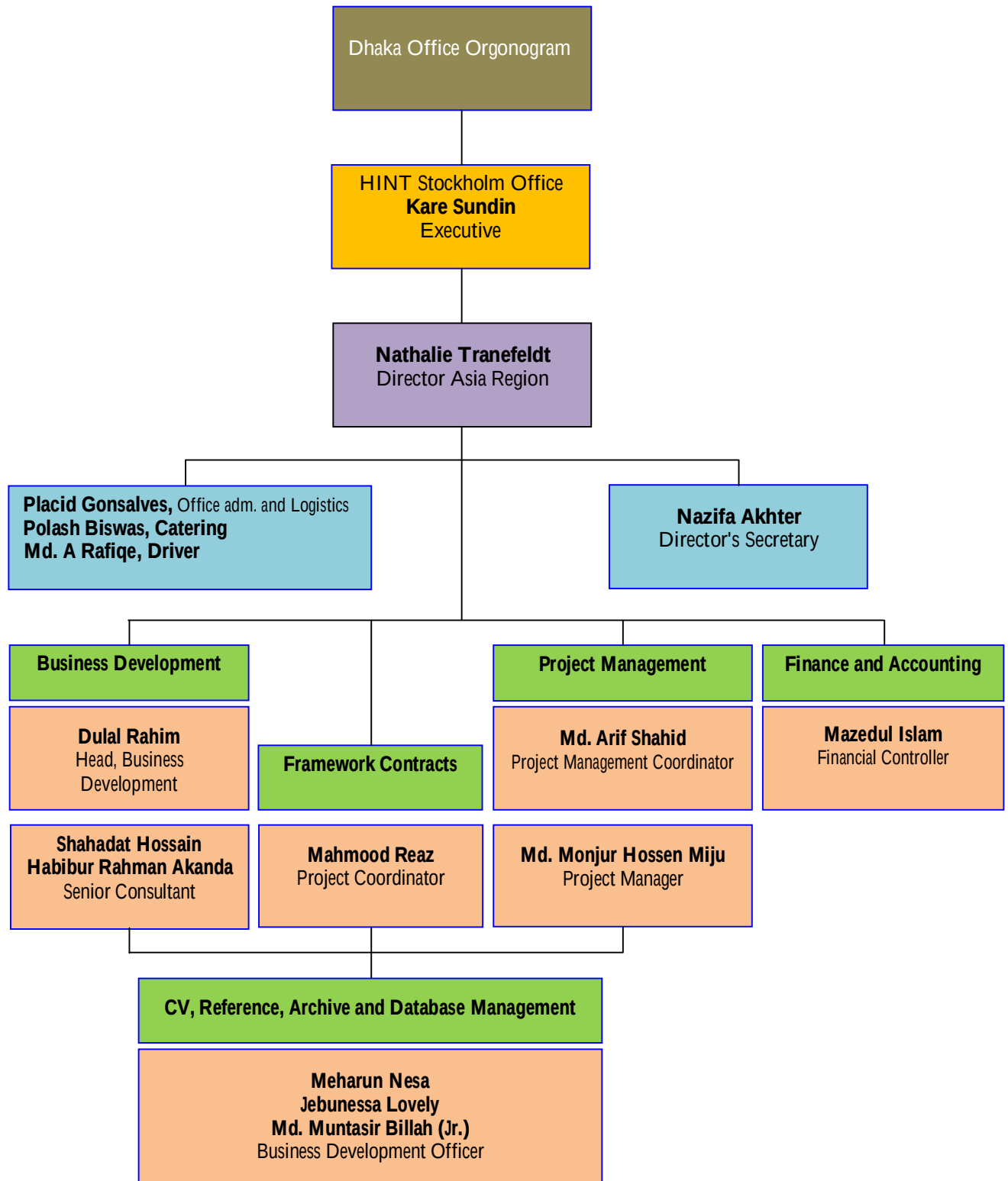
Hifab Regional Office in Bangladesh

Hifab's involvement in Bangladesh began in 1987 with the Rural Employment Sector Programme (RESP). Hifab became one of the first consulting companies working with Sida (Swedish International Development Cooperation Agency) on projects not only aiming at delivering physical output, but rather considering the whole spectra of participants in a development process and the social impact of the development efforts. Since then, Hifab International has had a continuous presence in the country and has thus gained experience and understanding of Bangladesh and its society second to none. Many of its permanent staff-members have worked and lived in Bangladesh for extended periods of time ensuring longevity and expertise with involved parties.

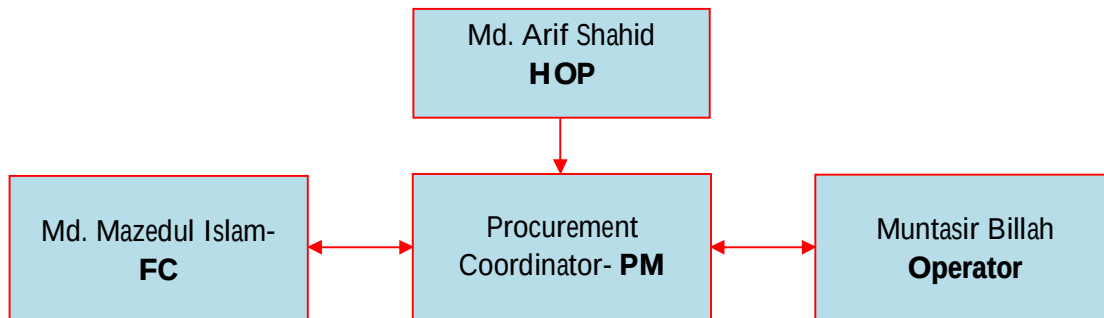


Our reference list in Bangladesh includes more than 40 projects. Through the years, from 1987 to date, Hifab has maintained its presence and good relations in Bangladesh by providing support to various development cooperation projects. It is the only Swedish consultancy company to have a permanent presence in the country. Hifab's long presence in Bangladesh is well reflected in its extensive contact network with various public and private sector agencies, institutions, organisations local consulting firms and a host of individual professionals.

Organizational Chart of Hifab Regional Office in Bangladesh:



Sample Procurement Team of Hifab Regional Office in Bangladesh



The purchasing and logistics department is subordinate to DRI and normally headed by the Head of Project management department. PM's are responsible to contact with supplier and to gather all the necessary information and document to make the procurement. Fc will ensure the budget as well as the legal process so that it does comply with law. Operator will ensure all the supporting document before making any payment and Finally HOP will authorize the payment will go to supplier end.

4.3 REENGINEERING AT THE PROCUREMENT & LOGISTICS DEPARTMENT

In 2012 procurement department of Hifab Dhaka Office were assigned to realize a savings potential of a certain percentage of the total procurement volume. In the summer of 2013 the realization of these targets were far from accomplished. Some crucial components were missing to be able to realize the savings potential:

- Consultant groups and structure
- Spend data spend map
- Spend analysis and development of strategies
- Organization, processes and governance

Then a decision was made to accelerate the procurement based procurement and the main purpose was to realize the savings potential and build a solid foundation for strategic project based procurement in different region.

Hifab procurement team has identified the following organizational challenges and improvement areas in November 2004:

- Procurement was not organized to maximize purchasing on a group/ centralized level.
- Low use of consolidated purchasing between respective project sites with few exceptions.
- Shorttermrequirements moreimportantthanlongtermstrategic sourcing.
- Procurement has notrecognized ascoretobusinessoperation- lowornostatus ofprocurement intheorganization so far.
- For more project sites, roles and responsibilities are defined but on local basis- limited manpower and job description are still lacking in procurement department.

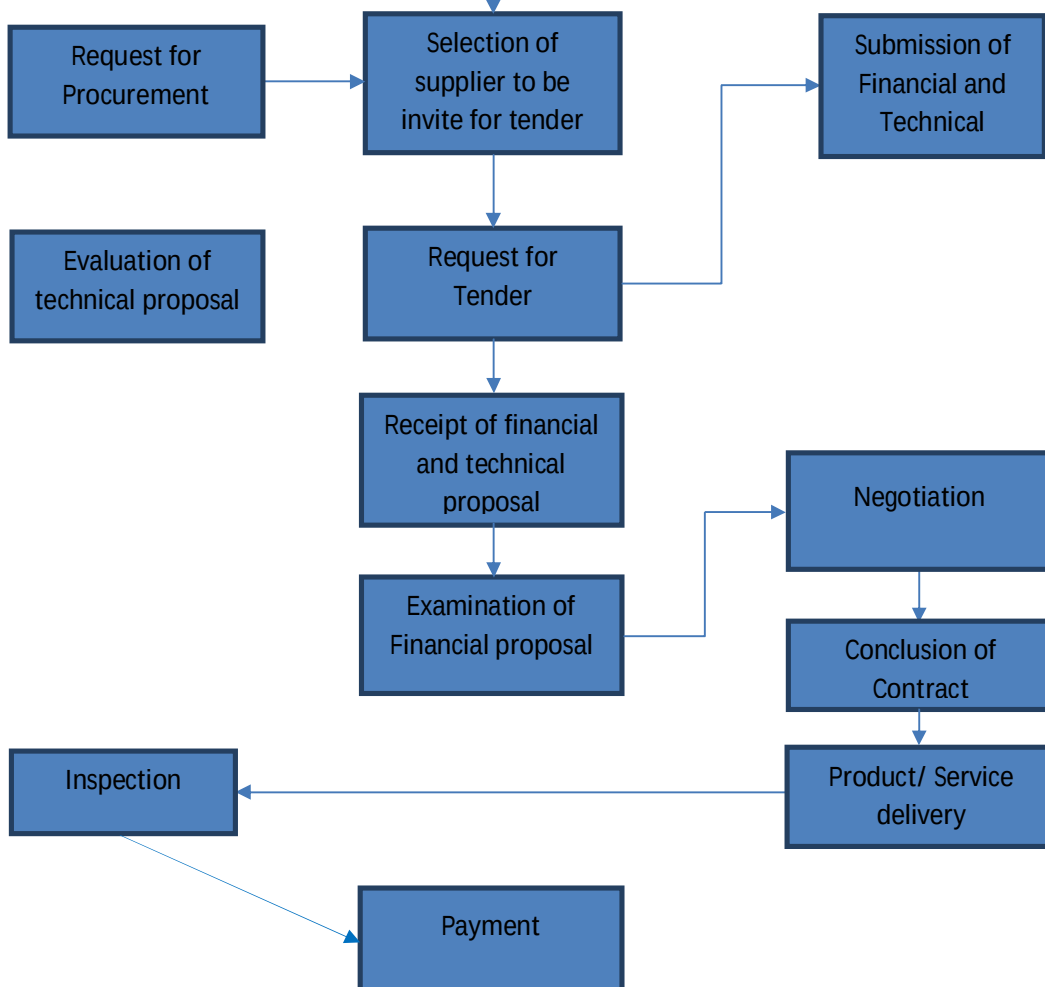
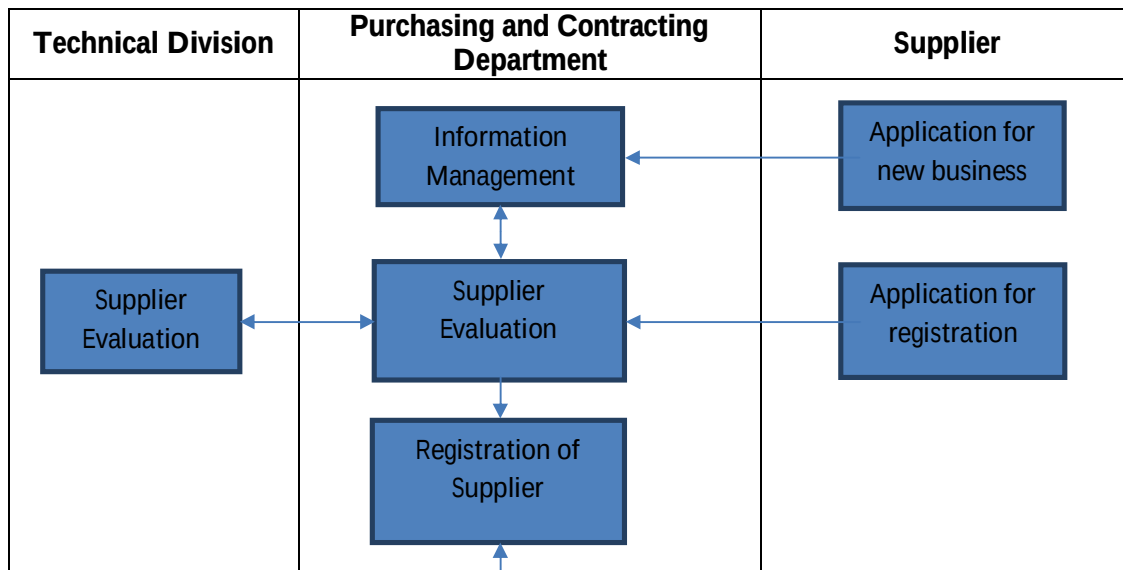
Most procurement organizations have resources with long experience as project based procurement- but limited in terms of strategic sourcing so that it does comply with organization goals.

4.4 MAIN PROCESS

The main processes were identified through interviews with the Procurement support officer and the HOP. Five main processes were identified.

- Governance and administration
- Strategic sourcing
- Contracting
- Operative procurement
- Supplier management

From the below diagram we can conclude that, Governance and administration covers the supplier evaluation and information management and the registration for the new supplier. Strategic sourcing covers also within the supplier evaluation. Technical and financial proposal receipt and its evaluation cover under the governance administration. When everything goes ok at the time selection process, and then comes conclusion with the contraction. Operative procurement and supplier management and its end result inspection come at the time of execution of the contract.



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4.5 GOVERNANCE AND ADMINISTRATION

The governance and administration process contains all activities concerned with controlling and measuring the performance of the procurement department. This process also contains all the administration of support systems, such as contract databases, supplier databases and other important tools for measuring performance.

4.6 STRATEGIC SOURCING

The strategic sourcing process contains all activities necessary to create service strategies. The service strategies are purchasing strategies for different services. Each strategy is adapted to the service rather than broken down from an overall purchasing strategy. This means that each strategy becomes more efficient than if it was constrained by an overall strategy. There are for

instance no overall strategy for the number of suppliers, so if it is beneficiary to increase the number of suppliers in one service and decrease the numbers in another that is possible.

4.7 CONTRACTING

The contracting process contains all activities concerned with contracting suppliers and creating agreements. This process take in all different types of contracting for running spend as well as projects procurement. However all follow up of contract compliance and supplier performance are placed in the supplier management process.

4.8 OPERATIVE PROCUREMENT

The operative procurement process contains all operative tasks in the procurement process such as placing orders and receiving goods and services. This process is usually the bridge between project implementation units and procurement department and many of the activities are actually conducted by operations or maintenance department.

4.9 SUPPLIER MANAGEMENT

This process is concerned with all activities that are connected to supplier relations. These could be such activities as contract compliance, supplier evaluation and surveillance.

4.10 GENERAL RATING

Based on the response to questionnaires, the researches has made the capacity level assessment subjectively of individual employee within the organization and result is a combined assessment which is shown below:

Assessing Area	Capacity Level
Organizational and staff Capacity	Low developed capacity
Information Management	Partially developed capacity
Procurement Practices	Partially developed capacity
Effectiveness	Subjective evidence of capacity
Accountability Measures	Unreliable evidence of capacity
Overall Rating	Partially developed capacity

PROCUREMENT CAPACITY ASSESSMENT & SUSTAINABILITY PRACTICES QUESTIONNAIRE AND ANSWERS

A. ORGANIZATIONAL AND STAFF CAPACITY

Question	Answer/ Finding
A.1. How many years of experience does the head of the procurement department/unit have in a direct Procurement role?	The HOP, Project manager and the Operator undertakes all the procurement activities; although, it is not identified as a Procurement Department/Unit. This technical section (ES) is headed by the Project manager which is assigned by Hifab Principal office.
A.2. How many staff in the procurement department/unit are? Full Time? Part Time? Seconded?	Total Seven (07) full time staff in total to look after the procurement and all of them are full time. Part Time zero (0) Seconded zero (0)
A3. Does the procurement staff have English language proficiency?	All the staff in the procurement are good in English. Since this is an MNC and we need to communicate with our management in English, therefore everybody has the English proficiency. But those are newly appointed need more training on language as well as technical.
A4. Are the number and qualifications of the staff sufficient to undertake the additional procurement that will be required under the any proposed project?	The Project management/ Procurement department need support from Finance as well as administrative with additional technical expertise during the procurement and implementation cycle. Staff Positions are sufficient for the current level of Local procurement. Generally, short term expertise to support will be essential as the level of activity expands.
A.5. Does the unit have adequate facilities, such as PCs, internet connections, photocopy facilities, printers, etc., to undertake the	Yes, they have adequate facilities in terms of equipment, within the working environment.

Question	Answer/ Finding
planned procurement?	
A6. Does the Project manager or concerned procurement team have a procurement training program?	None of the procurement staff or support staff has any training in either ADB Procurement Procedures for Goods and Works, ADB Financial Management Government of Bangladesh Public Procurement guidelines. Staff did attend trainings organized by other local agencies, like IPDP etc.
A7. Does the Hifab has a procurement department/unit, including a permanent office that performs the function of a Procurement Unit, and which serves as the main support unit of the Procurement function?	No, It does not have a separate unit or a separate place to particularly work with procurement function. Normally, we do have weekly meetings where users raise their need and according to budget and depending on the technical issues project manager goes for the procurement.
A.8. Who approves the procurement specifications	Works specifications are drafted by the Jr Project manager after hearing from USERS and submits to the HOP (Head of Procurement) for final approval for national or local budget.
A.9. Who drafts the terms of reference (ToR)?	Generally, the User department does not procure any services. If required, Project management section would prepare the ToR with the help from PMU.
A10 Who prepares the request for proposals (RFPs)?	If required, Technical Section would prepare the RFPs. For procurement of services under a project, the relevant experts at the project office would prepare the RFPs with the help of PM.

B. INFORMATION MANAGEMENT

Question	Answer/ Finding
B.1 Is there a referencing system for procurement files?	Yes, we have one MIS or we can say database named by MIS in our office. But no separate documentation has been happening in connection with procurement. Finance department maintain all the supporting in

Question	Answer/ Finding
	connection with any kind of procurement. This is a serious issue and I feel, highest level of concentration is required to maintain a separate database for the procurement function.
B.2 Are copies of invoices included with the contract papers?	Yes. Signed agreement copy or the original contract paper attached with the contract paper.

C. PROCUREMENT PRACTICES

Question	Answer/ Finding
C.1 Has the Procurement team undertaken foreign-assisted procurement of goods or works recently (last 12 months or last 36 months)?	Yes, the procurement team undertaken some of the procurement of goods and services assisted by foreign donor.
C.2 What were the major challenges?	Major challenges were the cash flow situation and Any future foreign-assisted project procurement of Goods or works, the Procurement team/ project managers will need procurement training under donor guidelines, supplemented with procurement training in GOB guidelines and SWEDISH procurement guidelines.
C.3 Is there a systematic process to identify procurement requirements?	The procurement process needs to be more organized in terms of Technical knowledge, user's requirement and most importantly to match with the annual budget.
C.4 Are there established goods receiving procedures?	Yes, Office manager receiving goods on behalf of the Unit.
C.5 Are all goods that are received recorded as assets or inventory in a register?	Yes, Office manager of the project office maintains or records the received goods recorded as assets and maintain an inventory register.
C.6 Is the Office manager / procurement department familiar with letters of credit?	Yes, they are familiar with the Letter of credit and they know how to take the letter of credit in case of faulty goods or not fitted services.

Question	Answer/ Finding
C.7 Does the procurement department register and track warranty and latent defects liability periods?	Yes, warranty and latent defects liability periods are recorded in the concerned contract file, which is kept open until the specified period is over, and all pending issues are resolved.
C.8 Is a consultants' selection committee formed with appropriate individuals, and what is its composition (if any)?	Normally our Business development team select the consultant team in both National and International at the time of EOI submission.
C.9 What are the criteria we use at the time supplier selection?	Normally go for the frame work contract with our enlisted supplier, but If needed then we go for the other supplier. Main focus is to get the best quality product/ service with a minimum cost.
C.10 Are advance payments made?	No, advance payment made at the time of signing the contract.
C.11 What is the standard period for payment included in contracts?	This period is included in the standard contract conditions. According to the payment conditions and based on the positive cash flow payment conditions are enclosed with contract.
C.12 When late payment is made, are the beneficiaries paid interest?	No, beneficiaries don't get any interest for late payment.

D. EFFECTIVENESS

Question	Answer/ Finding
D.1 Is contractual performance systematically monitored and reported?	There is no such systematic monitoring system that we have right now. However, project manager in their day to day project operations look at the status of the service provider and check the quality of the services but not in a formal way.
D.2 Does the project manager and account section monitor and track its contractual payment obligations?	Yes. Accounts section monitors the payment obligations through tracking the contract-wise lists. And also through accounting system.

Question	Answer/ Finding
D.3 Are procurement decisions and disputes supported by written narratives such as minutes of evaluation, minutes of negotiation, notices of default/withheld payment?	Yes. During the field visit the project manager was shown a few records which appeared to be within the contractual guidelines.

E. ACCOUNTABILITY MEASURES

Question	Answer/ Finding
E.1 Is there a standard statement of ethics and are those involved in procurement required to formally commit to it?	No, we don't have such kind of standard statement of ethics particularly for the procurement section. What we have a general statement where it mentioned ethical code of conduct for office norms.
E.2 Are those involved with procurement required to declare any potential conflict of interest and remove themselves from the procurement process?	No, we don't have such kind of mechanism.
E.3. Is the commencement of procurement dependent on external approvals (formal or de- facto) that are outside of the budgeting process?	No.
E.4. Who approves procurement transactions, and do they have procurement experience and qualifications?	Normally the project manager they approve the procurement transactions which are finally approved by the HOP and Head of Finance.
E.5. Is the same official responsible for: (i) authorizing procurement transactions, procurement invitations, documents, evaluations and contracts; (ii) authorizing payments; (iii) recording procurement transactions and events; and (iv) the custody of assets?	Normally project manager take initiative of everything but when it comes to the approval of payment and procurement, HOP or Head of finance or the country manager approves the payment.

F. SUSTAINABILITY PRACTICES

Question	Answer/ Finding
F.1. Is there any written guideline for Sustainable procurement practices?	No
F.2. Is there any training on sustainable procurement?	Yes, we have started training on sustainable procurement. We have our first step in transportation sector, like avoid air fly as much as possible. The office staff have the diploma certificate on different SDG's based on UN global compact.
F.3. What are the challenges right now the company is facing?	First of all, awareness. Secondly there will be other things followed by the cost, Proper regulation/governance and client perception.
F.4. What are the social issue that the company is trying implement right now?	They are currently trying to address issues of social policy, such as inclusiveness, equality, international labor standards and diversity targets, regeneration and integration.
F.5. What are the economical and ethical issues?	On a macroeconomic level, it can be argued that there are economic benefits in the form of efficiency gains from incorporating whole-life costing into decision-making. But top management is still in the decision making process for all the ethical issues of different region.
F.6 Fair Trade	Trying to do fair trade and sustainable procurement demands the implementation of responsible practices in relation to workers, environment and society to be followed by suppliers as to promote a chain of sustainability between service and its consumption.

Chapter Five

RESEARCH METHODS, RESULT ANALYSIS, DATA INTERPRETATION AND FINDINGS

5.1 INTRODUCTION

This chapter presents the methodology employed for the study. It explains the research design, population, sample as well as the sampling procedure adopted to achieve the objectives of study. It describes the research instrument used, validity and the reliability of the instrument, data collection procedures, and how the data was collected and analyzed. The study was aimed at determining the extent to which public and private organizations take into consideration, the negative impacts such processes have on the environment.

5.2 DESIGN OF STUDY

The study made use of descriptive survey, designed to assess sustainable procurement in Bangladesh particularly in Dhaka city. A survey research is well suited to descriptive studies or where researchers want to look at relationships between variables occurring in particular real life contexts. A descriptive survey aims predominantly at describing, observing and documenting aspects of a situation as it naturally occurs rather than explaining them. It is therefore appropriate when a researcher attempts to describe some aspects of a population by selecting unaided samples of individuals who are asked to complete questionnaires. It is concerned with the conditions or relationship that exists, such as prevailing practices, conditions and attitudes, processes that are going on, opinions that are held; or trends that are developed. Descriptive survey design was an ideal one for this study because it only elicits ideas, perceptions and level of acceptability as well as the level of satisfaction of clients, challenges, and effects associated with attaining sustainable procurement in Bangladesh.

5.3 SOURCES OF DATA

Both primary and secondary sources of data were obtained for the study. The primary data was obtained directly from respondents through the administration of questionnaires. The primary data provided reliable and accurate first-hand information to the study. The secondary data was obtained from the library, internet, journal

articles, newspapers and research reports. The idea of secondary data was to gather the necessary information to guide the conduct of the study in order to confirm or reject primary data.

5.4 PRE-TEST

In order to test the reliability and validity of the data collection instrument, pre-test was carried out. There was a reconnaissance study in order to pre-test the instruments. This stage revealed the suitability of the methods and instruments that were employed in the study. This consequently led to early detection of errors and distortions in the questionnaire which were corrected in the process.

5.5 DATA COLLECTION INSTRUMENT

Questionnaire was the main data collection instrument used for this study. The questionnaire was appropriate because, it was assumed that, procurement staffs in different private organizations, building and civil consulting outfits, few building and civil engineering contractors, government Officials and some project administrator. In this regard questionnaires were distributed to sample size of 100 no. randomly to procurement staffs, from one office to the other. Most of the questions in the questionnaire were designed using Likert scale strategy, which measures respondents' attitude by asking the extent to which they agree or disagree with the issues at stake.

According to Saunders, (2007) questionnaire is used for explaining research which will enable the study to examine and explain relationships between variables, in particular cause-and-effect relationships. In all, 100 questionnaires were circulated of which 55 were received and analyzed using descriptive statistic tools like mean, median, mode and standard deviations. Sample questionnaires can be found in the Appendix. The questionnaires were not personally administered to the respondents every time.

5.6 DATA ANALYSIS AND PRESENTATION

This section deals with the methods of analysis of the data. Quantitative and qualitative methods were used to analyze the data. Computer data analyses has been done through various excel format that aided the descriptive statistic tools like the mean, median, mode and standard deviations employed to analyze the data. Interpretation of results were then carried out. The justification for the choice of this program was that, it facilitated word processing and data analysis.

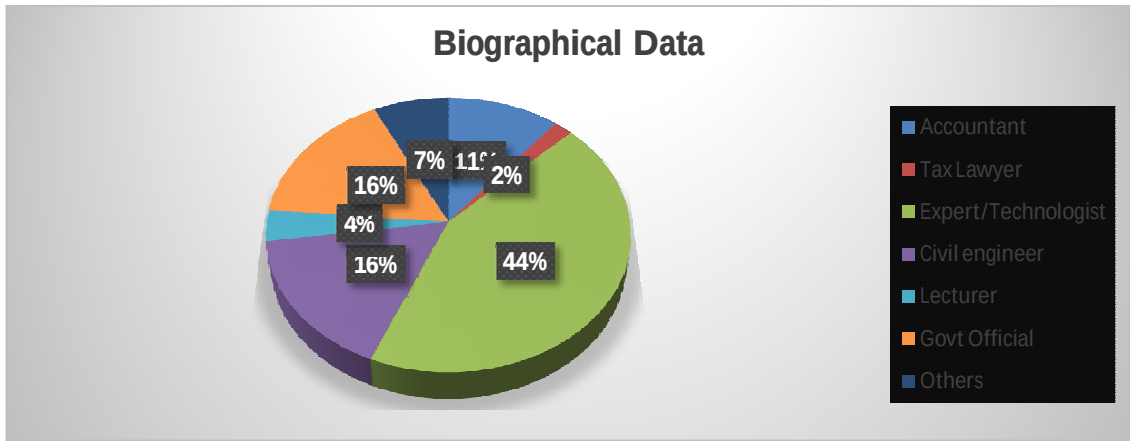
5.7 DISTRIBUTION OF RESPONDENTS

The data showed the distribution of respondents into various occupations namely accountants, who were four in number representing 10.7%, one Govt. Official representing 1.8%, twenty five Procurement staff giving 44.6%, civil engineers representing 16.1%, two lecturers representing 3.6%, Project officials representing 16.1%, as well as 4 workers without main specifications representing 7.1%, the total number giving 55.

5.8 DATA ANALYSES AND FINDINGS

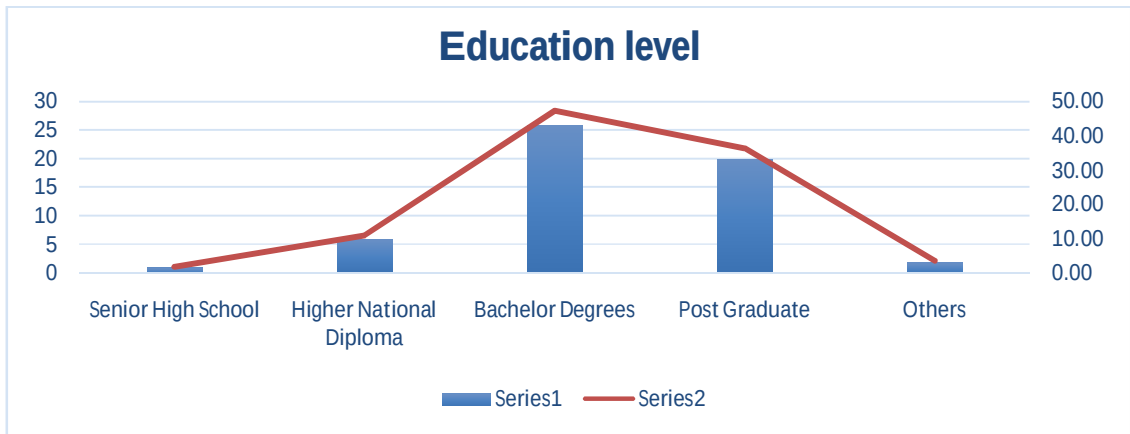
The tables below summarize the descriptive statistics for the questionnaires. Means and Standard deviations are the main descriptive tools. A sample of the questionnaire can be found at Appendices.

BIOGRAPHICAL DATA:



This pie chart represented who were the respondent from different profession from different organizations. From this table we can see that, technical project based expert 44% are the majority portion since they are procuring most of the procurement in the service sector industry.

EDUCATION LEVEL



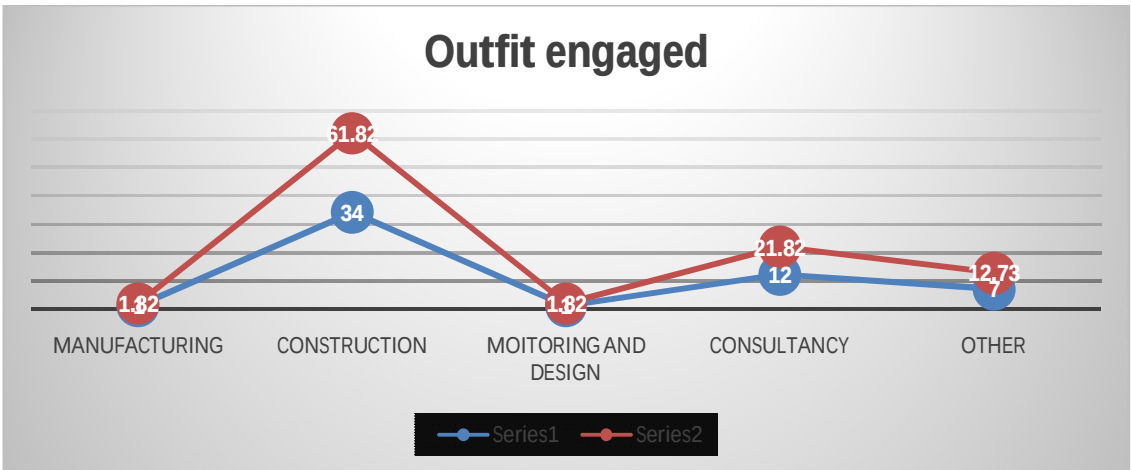
This graphical presentation represented or we can see the education level of the interviewer. Bachelor degrees and the post graduate degrees are the most interviewed person at the same time we can essence the level of out would be from this survey.

NO. OF YEARS EXPERIENCE:



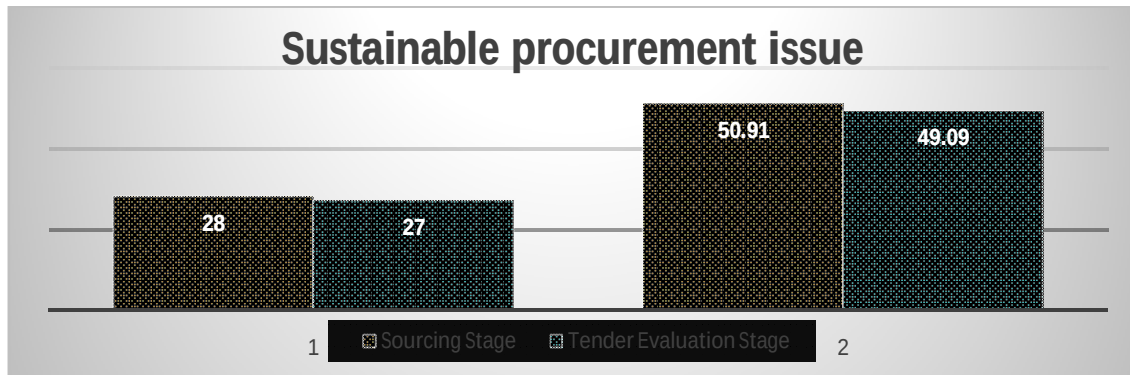
This table represented the no. of years' experience that the interviewer have and the highest percentage we can see between 4-6 years where the percentage shows close to 37%. I was expecting 7-10 years should be the highest %, since this is one of the new sector in Bangladesh, therefore people used to get involve on this not so many years before.

ORGANIZATIONS ENGAGED IN:



This table represented the interviewer are engaged from different sector business community. Most of the case it shows the construction business and it's the highest 34%.

SUSTAINABLE PROCUREMENT

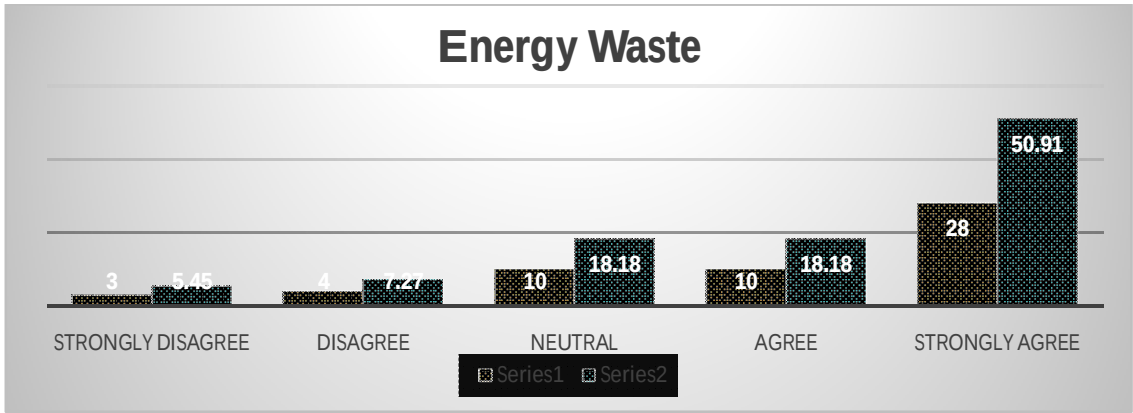


This graphical representation shows at what procurement level the interviewer consider the sustainability issue. Most of the interviewer under this survey sees the sourcing stage is the stage to see all the sustainable procurement issue and it comes up with a percentage of 50.91%.

SUSTAINABLE PROCUREMENT DESCRIPTIVE ISSUE:

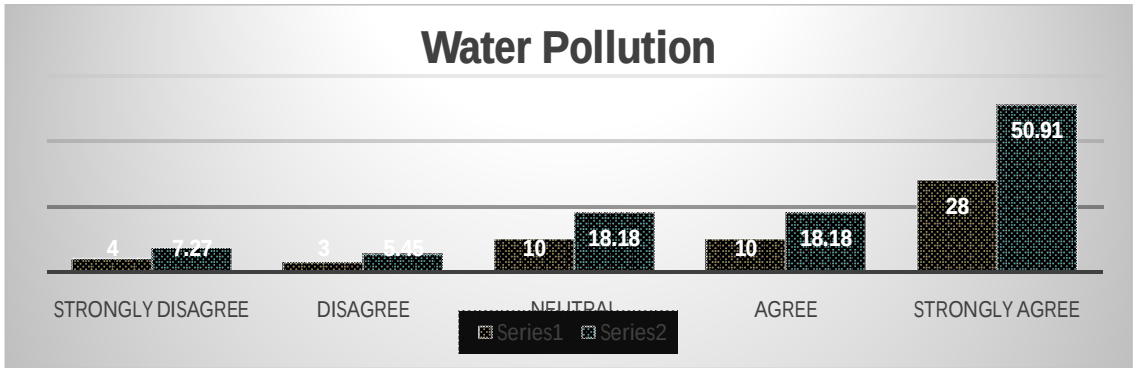
	No	Minimum	Maximum	Mean	Std. Deviation
What is the sustainability issue that you have ever considered? Energy wastage	55	1	7	4	1.22
What is the sustainability issue that you have ever considered? Water pollution	55	1	7	4.04	1.25
What is the sustainability issue that you have ever considered? Air pollution	55	1	7	3.84	1.32
What is the sustainability issue that you have ever considered? Deforestation	55	1	7	3.87	1.29
What is the sustainability issue that you have ever considered? Greenhouse effect	55	1	7	3.51	1.43
What is the sustainability issue that you have ever considered? Destruction of life forms	55	1	7	3.33	1.21

ENERGY WASTE:



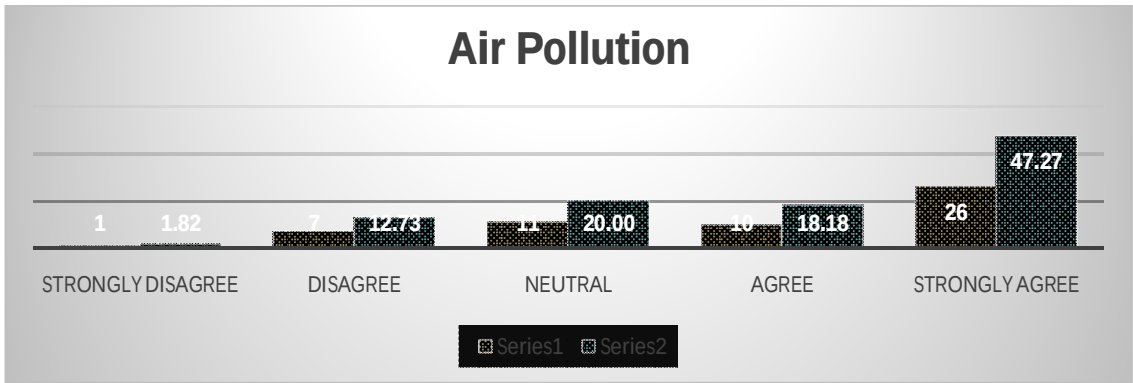
We can see from here that, most of the interviewer considered the energy waste issue when it comes to the question of sustainable procurement issue and it shows the strongly agree 50.91%.

WATER POLLUTION:



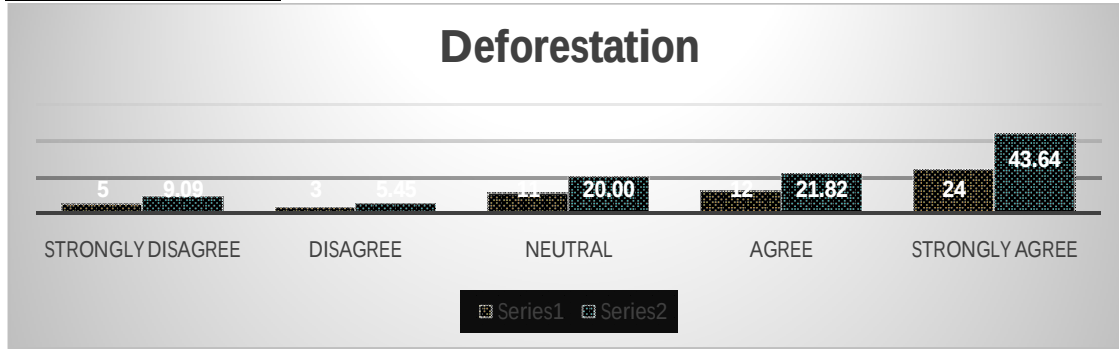
We can see the same result for water pollution also- 50.91%

AIR POLLUTION:



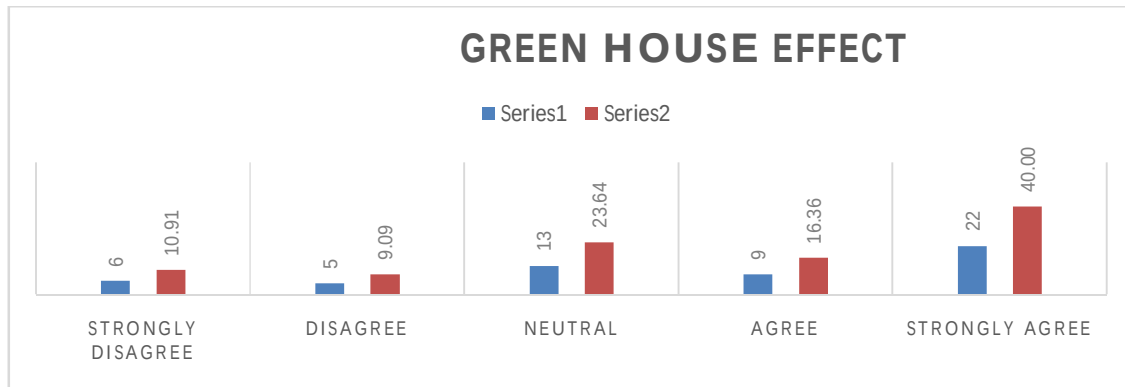
Here we can see that 47.27% considered the sustainability issue when it comes the Air pollution. Most of them given example, like- because of this IT development now a days no one is interested to travel. That considers the avoidance of air pollution.

DEFORESTATION:



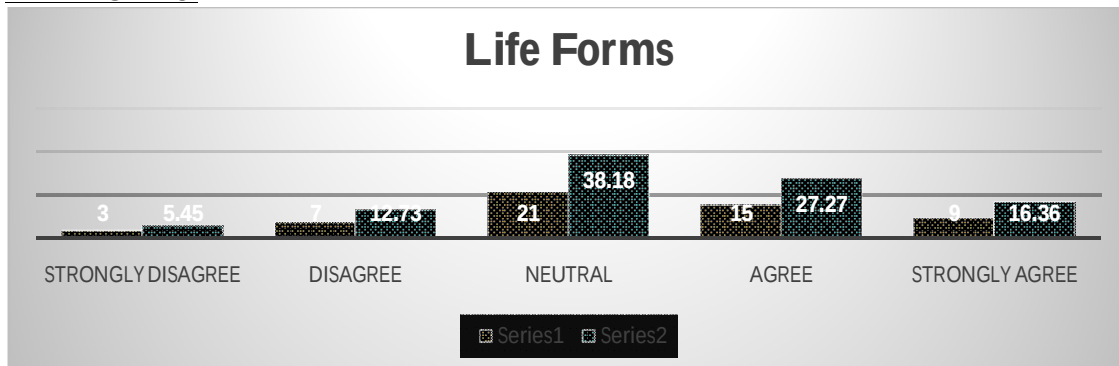
Deforestation can have a negative impact on the environment. The most dramatic impact is a loss of habitat for millions of species. Eighty percent of Earth's land animals and plants live in forests, and many cannot survive the deforestation that destroys their homes and we can see from this survey that most of the interviewer 43.64% strongly agree on that.

GREEN HOUSE EFFECT:



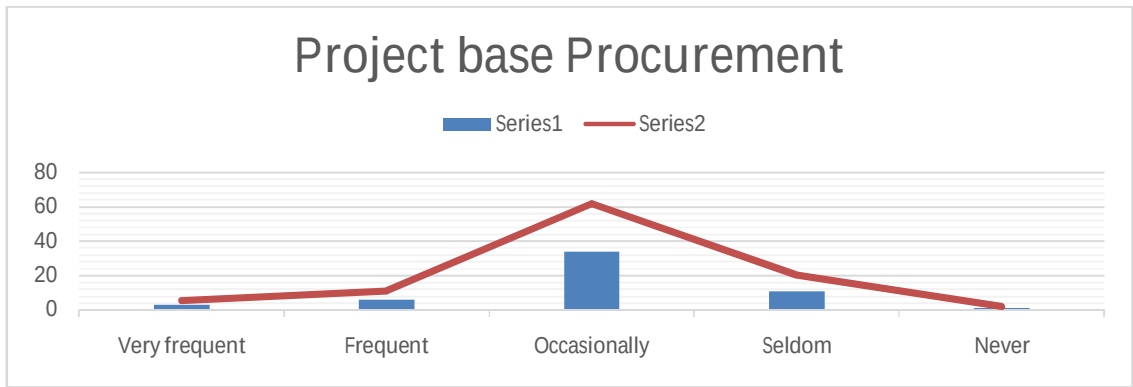
We all know, the greenhouse effect is the process by which radiation from a planet's atmosphere warms the planet's surface to a temperature above what it would be without its atmosphere and most of the strongly agree on this and that percentage is 40%. Since this one of the burning issue now, seems that everybody knows about that and they try to follow at the time of sustainable procurement so that, earth's natural greenhouse effect does not go beyond.

LIFE FORMS:



In this graphical presentation we can clearly see the highest level of neutrality and it seems that the characteristic overall form and structure of a mature organism on the basis of which it can be classified of life forms.

PROJECT BASED PROCUREMENT:



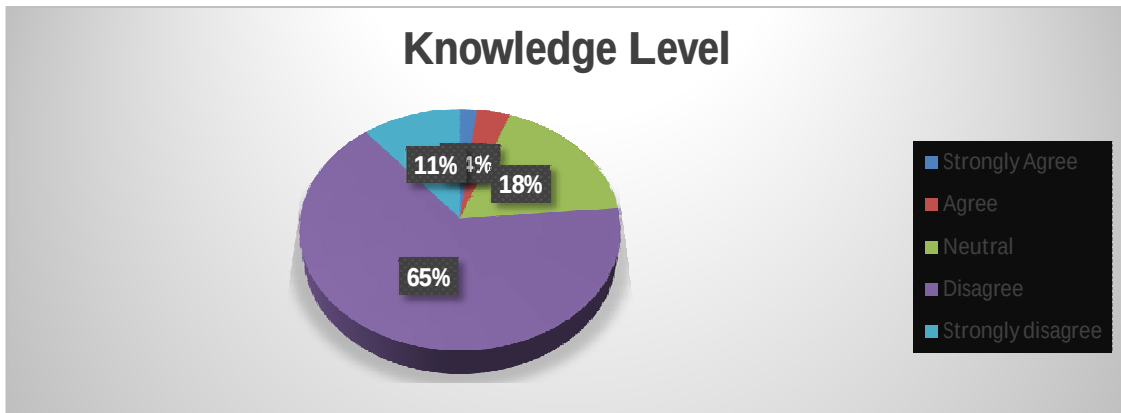
Purchasing roles are evolving from traditional commodities procurement to also managing project-based sourcing of services, such as construction bidding and equipment sourcing for real estate, development and facilities maintenance efforts and other service sector industry also.

Within the last year, many of the world's biggest brands have followed this trend, including some of North America's largest big and small box retailers as well as the Nation's largest and most well-known retail financial institutions. Sourcing departments for many other organizations have also met the challenge of adding construction bidding to their list of responsibilities, some more effectively than others.

"For many companies the cost to build and maintain properties is significant. The unique nature of construction and facilities procurement has led to emerging technologies that enable companies to address very important aspects of construction bid management,"

This table represent the project base procurement is done in most of the case it is occasionally and its percentage is 34%.

KNOWLEDGE LEVEL OF PROJECT BASED PROCUREMENT:

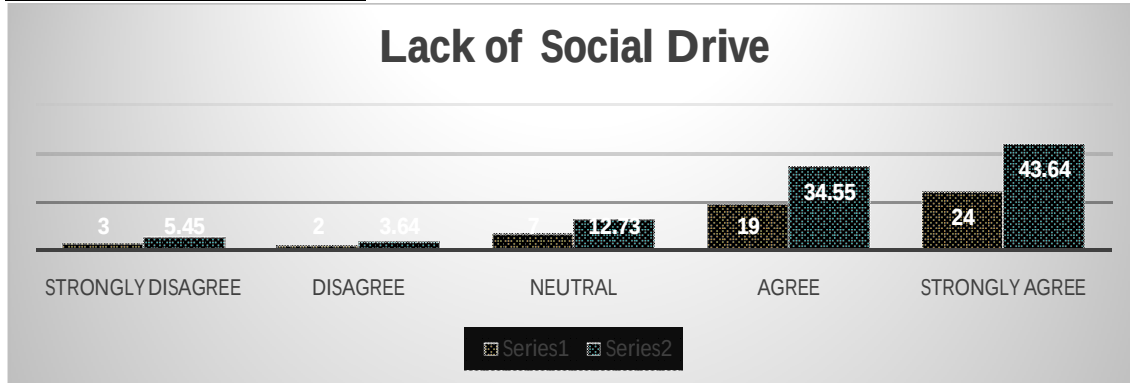


Knowledge of sustainable project base procurement is not wide spread in Bangladesh and from this graphical presentation we can see that and therefore, we can see from this survey that highest level -36% people are not aware of this.

CHALLENGES AFFECT SUSTAINABLE PROJECT BASED PROCUREMENT IN BANGLADESH:

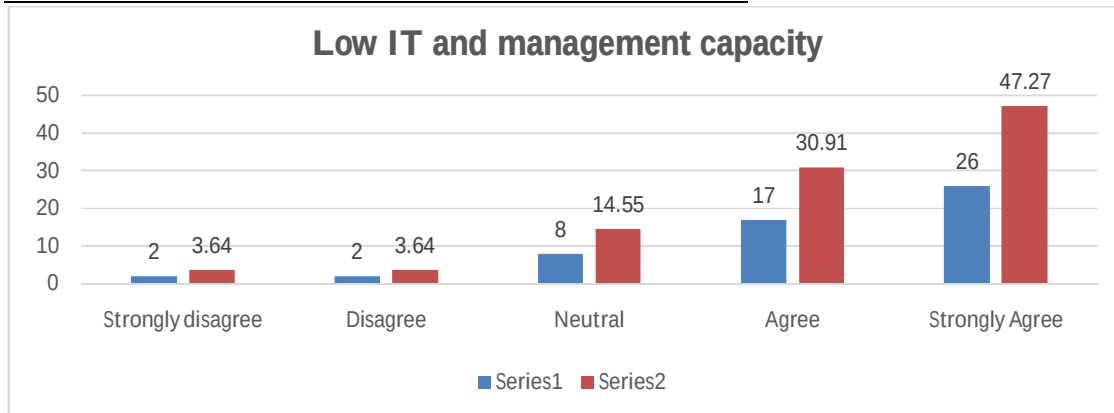
	No.	Minimum	Maximum	Mean	Std. Deviation
Lack of Social drive	55	1	5	4.07	1.09
Low Technical and management capacity	55	1	5	4.07	1.12
Low multi stakeholder approach	55	1	5	4.04	1.04
High initial cost of green products	55	1	5	4	1.26
Sustainable procurement and difficulties in ICT application	55	1	5	4.01	1.28
Lack of training	55	1	5	3.9	1.35
Lack of motivation	55	1	5	3.8	1.34

LACK OF SOCIAL DRIVE:



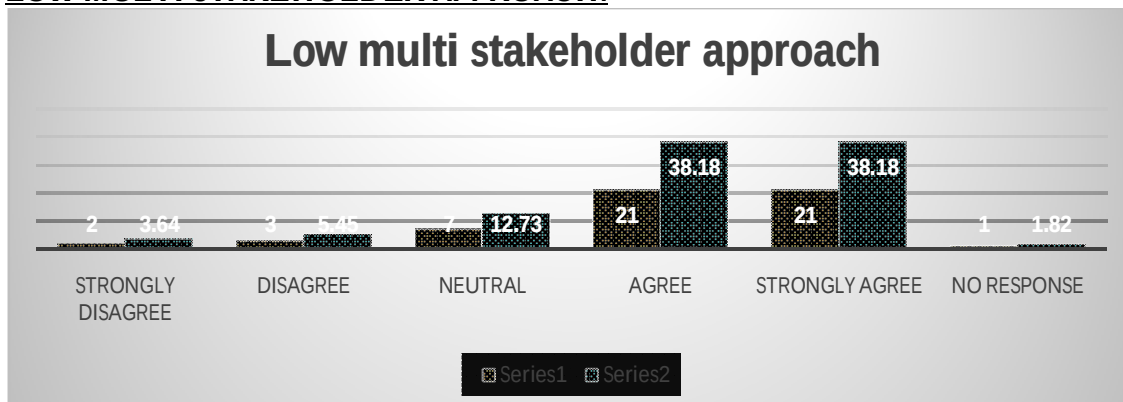
In this graphical presentation we can see that and I have always noticed that seem to lack social drive. People also strongly agree with that and the rate is 43.64%. However all kind of awareness program will help people to come out from the social anxiety.

LOW TECHNICAL AND MANAGEMENT CAPACITY:



This examines the role of knowledge management capacity in the relationship between strategic human resource practices and innovation performance from the knowledge-based view. We can see that, from this presentation that, there is low technical and management capacity and 47.27 % were strongly agree with that.

LOW MULTI STAKEHOLDER APPROACH:



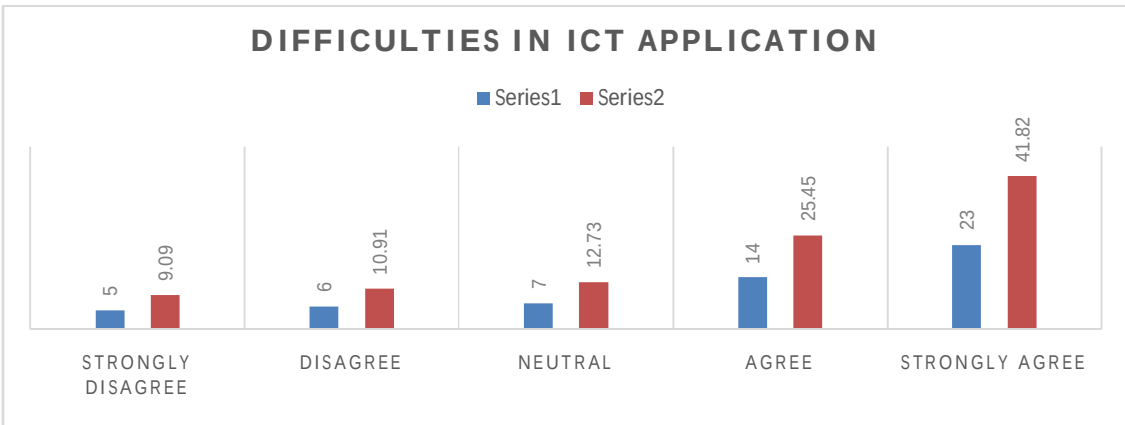
From this presentation we can see that, the role of companies in multi stake holder network and critical review of stakeholder is not in the highest standard and people also agree in highest percentage.

HIGH INITIAL COST OF GREEN PRODUCT:



Green product cost normally 50% higher than the normal product. Therefore, it becomes costly for the company who are trying to sustainability issues. From this presentation we can see that, this statement agreed by highest number of interviewer and percentage wise it is 47.27%.

DIFFICULTIES IN ICT APPLICATION:

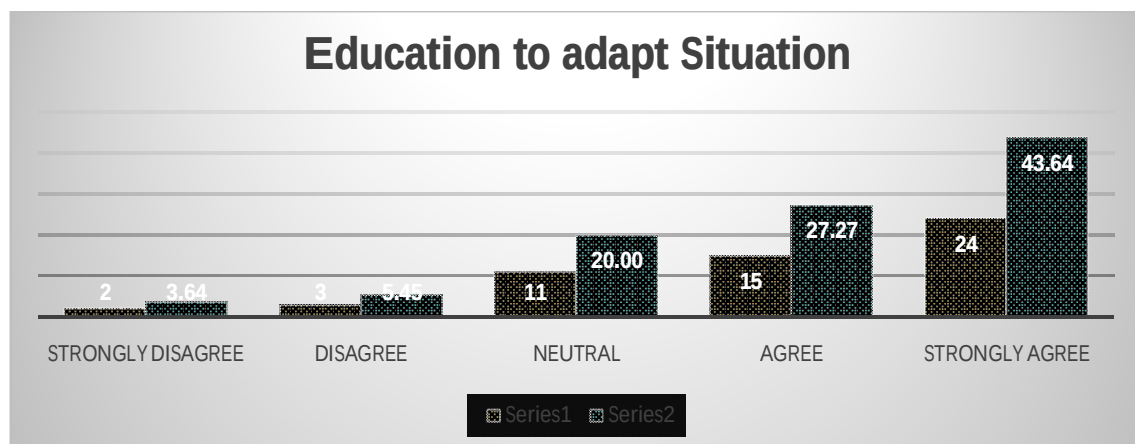


From this presentation we can see that, in ICT application also there is difficulties and 41.82% agree with that.

**MEASUREMENT TAKEN FOR SUSTAINABLE PROJECT BASED
PROCUREMENT IN BANGLADESH:**

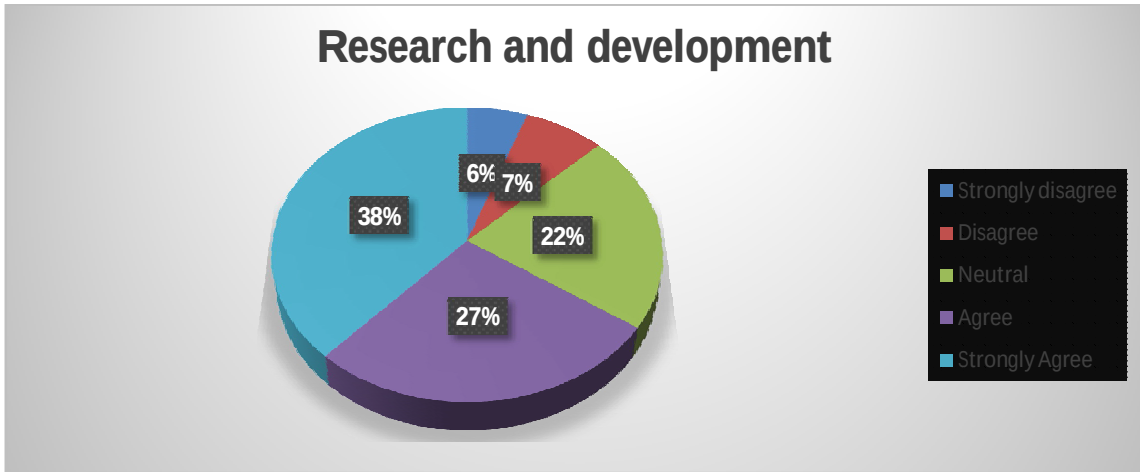
	No	Minimum	Maximum	Mean	Std. Deviation
What measures does your organization undertake to mitigate environmental problems? Education to adapt to situation	55	1	5	4.02	1.09
What measures does your Organization undertake to mitigate environmental problems? Research & development to find better ways	55	1	5	3.88	1.17
What measures does your organization undertake to mitigate environmental problems? Stakeholder consultation	55	1	5	3.9	1.14
What measures does your organization undertake to mitigate environmental problems? Compensation	55	1	5	3.82	1.08

EDUCATION TO ADAPT SITUATION:



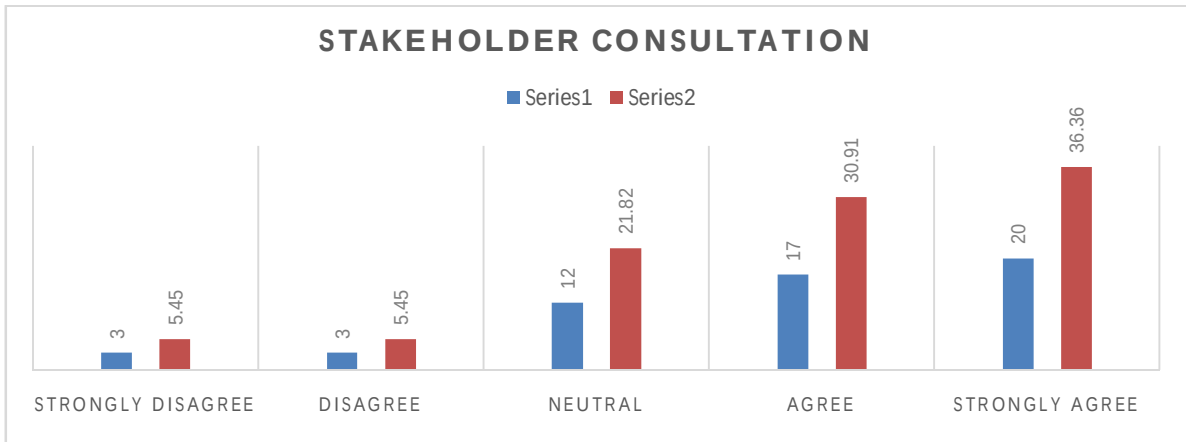
From this table we can see that, education is required- 43.64% strongly believe that proper education or training is required to make it happen or get used to all the sustainability issue.

RESEARCH AND DEVELOPMENT TO FIND A BETTER WAYS:



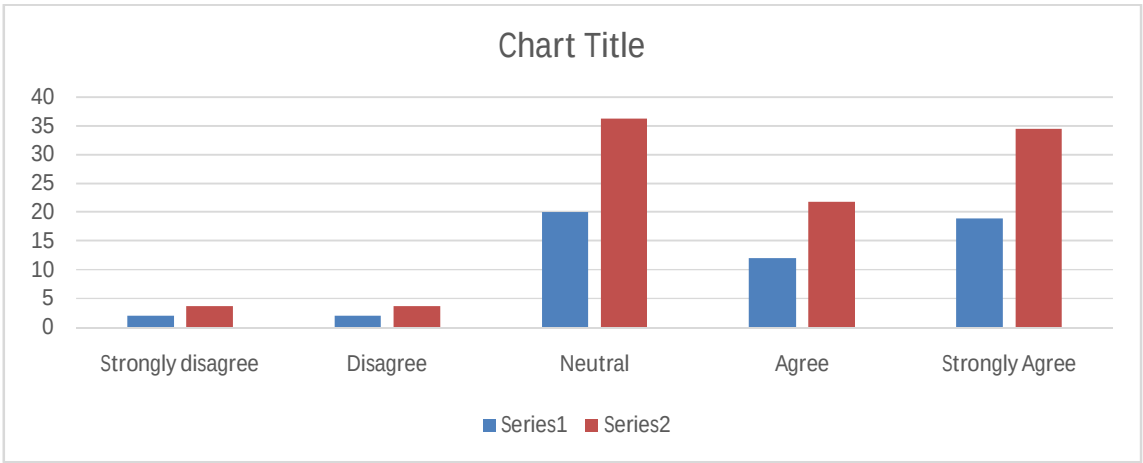
From this diagram we can see that, 27% agree that this problem are solvable with the help of proper research and development.

STAKEHOLDER CONSULTATION:



As discussed earlier, that the Consultation is a two-way process of dialogue between the project company and its stakeholders. Stakeholder consultation is really about initiating and sustaining constructive external relationships over time. Companies that start the process early and take a long-term, strategic view are, in essence, developing their local “social license to operate. This survey 36.36% people strongly believe that stakeholder consultation is required at all stages when it comes to the sustainable procurement.

COMPENSATION:



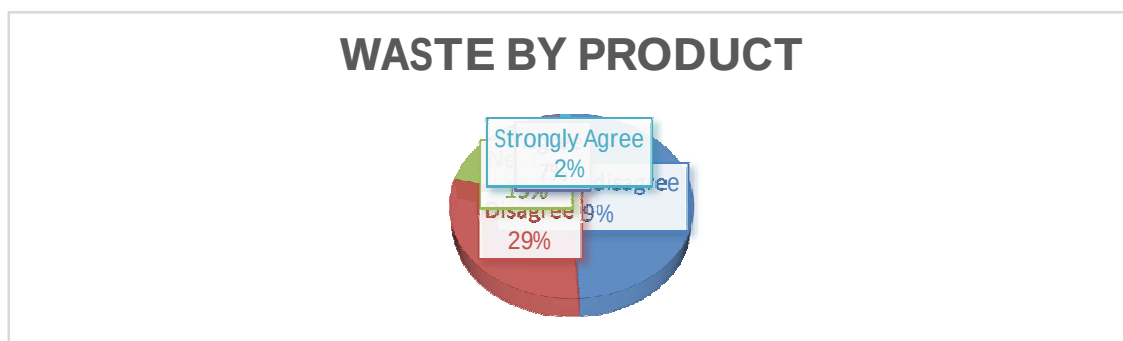
Theactorstateofcompensating, asbyrewardingsomeoneforserviceorbymakingupforsomeone'sloss,damage,orinjurybygivingtheinju redparty an appropriate benefit. From this graphical presentation we see that, 20% people are neutral at the preliminary stage for any kind of compensation, but when its get going 19% people will ask for the compensation for early setup cost.

**ENVIRONMENTAL CONCERN FOR SUSTAINABLE PROJECT BASED
PROCUREMENT IN BANGLADESH:**

	No	Minimum	Maximum	Mean	Std. Deviation
What does your organization consider as the primary environmental concern in connection with its operation? Disposal of waste or by products.	55	1	5	4.17	1.02
What does your Organization consider as the primary environmental concern in connection with its operation? How to protect Energy.	55	1	5	4.21	0.84
What does your organization consider as the primary environmental concern in	55	1	5	4.1	1.12

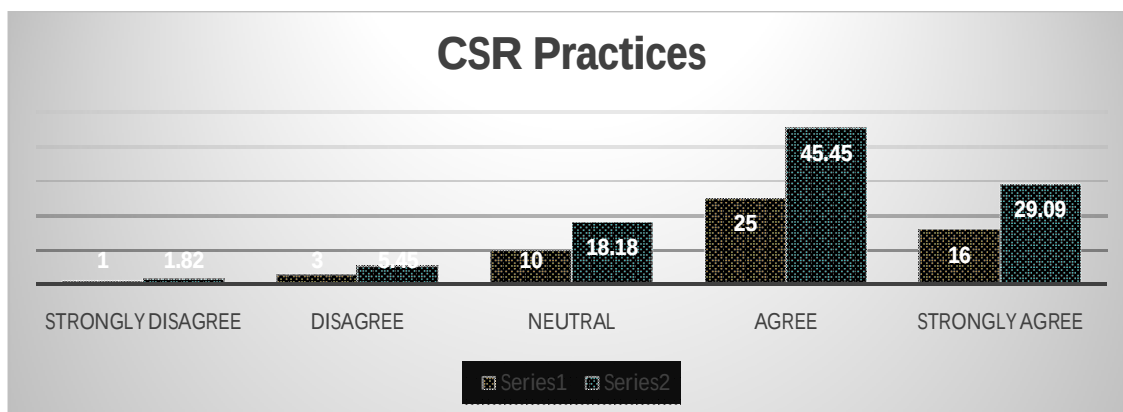
	No	Minimum	Maximum	Mean	Std. Deviation
connection with its operation? Ethical Practices					
What does your organization consider as the primary environmental concern in connection with its operation? Safety at work place.	55	1	5	4.3	0.8

WASTE BY PRODUCT:



From this presentation, we can see that 49% strongly believe that their organization doesn't think about the primary environmental concern in connection with its functional operation.

CSR PRACTICES:



All the companies believe that, they don't just plant – but create a wide socio-environmental impact. Together with Corporates they embark upon a journey which starts with planting trees, becomes visible as they grow taller and also touch many hearts as their roots get deeper into the

ground. This is just one example and they try to follow in all the sector and 45.45% and 29.09% strongly believe on that.

ETHICAL PRACTICES AND SAFETY AT WORK PLACES:



In both case we can see that most of the people emphasis on the ethical practices and obviuosly saftey at work places for all the staff. It shows the percentage 45.45 % and 27.27%

Chapter Six

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

The study was set out to assess the extent to which procurement practices in different organizations in Bangladesh, embraces sustainability issues, and to bring out potential challenges existing in procurement practices, which work against sustainable procurement in Bangladesh. The study was undertaken purposely not only to fulfill the academic pursuit, but also to ascertain the extent to which sustainability elements are being considered in procurement practices.

6.1 KEY FINDINGS

- The study revealed that, low technical and management capacity, low multi stakeholder approach, higher initial cost of green products, lack of social drive as well as difficulties in ICT application, are major factors that are preventing the easy attainment of sustainable procurement in Bangladesh. Major problem is that, people are not fully aware of the sustainable procurement. They don't have proper education, training as well as motivation to get things actually going.
- The study also revealed that, procurement practices are well known, since most of the organizations knew about the Public Procurement Act of Bangladesh. There is however, limited knowledge, as far as application of sustainable procurement strategies in the procurement process were concerned, with about 65% agreeing to this.
- Table 6-11 seeks to find out what sustainability areas the respondents have ever involved themselves. It came to light that apart from destruction of life forms most of the respondents have not ever considered in procurement. Most of the respondents have however strongly more than 40% feel with energy waste and water pollution. About 40% of the respondents have never considered greenhouse effect. This trend clearly shows the limited commitment in the area of sustainable procurement.
- The study found out that, effective ways of mitigating environmental problems, in the procurement process such as research and development to find better ways, stakeholder consultation and compensation were not being considered at the various levels of the procurement process.
- Many considered disposal of waste, saving power or electricity, saving water and safety at work place as the primary environmental concern in connection with its operation, with

an average of 76% of the people agreeing to this. There is however lack of commitment in conserving wildlife and endangered species.

- The study also shows that, sustainability issues are generally considered at the sourcing and tender evaluation stages. A greater percentage of people, considered energy wastage, water pollution, air pollution deforestation and greenhouse effect as grave sustainability issues, but do not take concrete steps in mitigating them, some of the reasons being lack of social drive and higher costs involved.
- The current Public Procurement Act has succeeded in harmonizing entities. Most procurement entities consulted followed the laid down procedure or the provision of the act which states that all procurement entities should prepare procurement plans. There are sustainability issues however, since the procurement act is not clear cut on green procurement elements.

6.2 CONCLUSION

The world of procurement had moved on and many changes had occurred, including changes in specifying requirements of how goods, works and services are procured. Our Public Procurement has to keep pace with such changes. It is important we make our procurement processes environmentally friendly and climate neutral. Factors such as the efficient use of energy and resources, reforestation, and eliminating wasteful practices that could lead to global warming and environmental pollution must be adopted. We need to develop sustainable procurement guidelines which will establish the criteria that may be used by any organization or procurement entity for the procurement of local order categories of goods, works and services in Bangladesh. The Public Procurement Act, needs to be amended to embrace sustainability requirements. Vigorous sensitization has to follow this to make people aware. The government has made efforts as far as this is concerned. There is however limited commitment, in working on sustainability elements in the procurement process. Government must put in place effective processes that will help curb corruption and bureaucratic tendencies in the procurement process. This will help in the attainment of sustainable procurement and sustainable development. One other conclusion that can be drawn is that changes in a large corporation involves a large portion of policies, and everyone has a different view on what needs to be done and how it is best done. However this creates an interesting atmosphere and we get an understanding that everything is not black or white and there are many ways to view a problem. It has also become clear to me that structures and order in everything from documents to procedures and routines makes it

easier to understand and control, but this has to be balanced against the creativity and skills of the people in the organization. The more structure and controlled procedures, the lesser is the room for creativity and free thinking. The best situation would be a good structure that leaves room for creativity and when someone comes up with a new and creative way to do something, the structure is changed so that other people can benefit from it.

6.3 RECOMMENDATIONS

The following recommendations were made to ensure the easy and effective attainment of sustainable procurement.

- It is suggested that, there should be a re-designing of the country's procurement policies and procedures, to include sustainability elements in terms of bottom environmental impact, but also in terms of producing the most constructive social impacts.
- We also see from here that, public sector procurement is a major contributor to industry growth and stability across a wider range in the different department. This provides the driving force of finances and contracts that will eventually help to reorganize the sustainable procurement as a tool in the wider development in the country's procurement.
- Binding and tactically directing public/private investment can see government using its purchasing power as a long term incentive to excite green investment production and innovation across domestic and global value chains, thereby creating jobs, diversifying industry, and preparing domestic enterprises to compete internationally on green and equitable products and services.
- Each department needs to design sustainable public/private procurement policies that are suited to their legal and institutional governance structures. To have better control insight the public as well private procurement, these procurement policies needs to be implemented in the root level.
- Government has to put in place programs to control corruption in the public procurement process in Bangladesh, as well as making Green procurement one of its policy priority areas.
- There are some inefficiency in the generally procurement process in the consultancy business industry comparing between budget estimates and contract award value. Therefore it is recommended to negotiate the procurement budget at the pre-bid meeting before the contract awarded.

Chapter Seven

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Chapter Eight

APPENDICES (A):-QUESTIONNAIRE SAMPLE

TOPIC: Capacity assessment and measuring sustainable procurement practices- probing the case of an organization perspective.

INTRODUCTION

Do you Procure Sustainably? To What Extent in project base procurement? What Challenges do you face in Sustainable Procurement in your organization?

With your help, this survey attempts to answer these questions.

This study is to draw individuals and corporate organizations attention to the fact that procurement has negative impact on the environment and that the health of our nation Bangladesh is at risk and requires legal rethinking as Public Procurement Act lacks Sustainability issues. The purpose of this survey is to draw on the experiences of procurement officials on the nature and extent to which Procurement processes in Bangladesh embraces Sustainability considerations.

The survey is in the following way:

- **Biographical Data.**
- **Procurement Officials experience regarding Sustainable Procurement.**

Answering this questionnaire will take approximately 10 minutes of your time. The following definitions will help one understand better certain words while answering this questionnaire.

- **Procurement:** An acquisition process.
- **Sustainable Procurement:** An acquisition process to achieve value for money in a whole life cycle basis while minimizing negative impact on the environment.
- **Environment:** Our surroundings
- **Green House Effect:** The destruction of the Ozone layer by carbon dioxide leading to rising temperatures on Earth.
- **Air Pollution:** Releasing harmful substances into the atmosphere.
- **Water Pollution:** Releasing harmful substances into water bodies.
- **Deforestation:** Indiscriminate cutting down of trees leading to the destruction of forests.

NAME: MD MAZEDUL ISLAM

SIGN:.....

TOPIC: Capacity assessment and measuring sustainable procurement practices- probing the case of an organization perspective.

QUESTIONNAIRE BIOGRAPHICAL DATA

You're Profession / Occupation

Accountant
Tax Lawyer
Expert/Technologist
Civil Engineer
Lecturer
Government Official
Other (Please specify)

Highest Education Level

Senior High School
Higher National Diploma (HND)
Bachelor Degrees (including honors')
Postgraduate (MA/MSc/MPhil/PhD)
Other (Specify)

Number of years of experience

1 to 3 years
4 to 6 years
7 to 10 years
11 to 24 years
More Than 15 years

What is your organizations engaged in?

Manufacturing
Construction
Monitoring and Design
Consultancy
Government Ministry
Other (Specify)

SECTION B: SUSTAINABLE PROCUREMENT IN BANGLADESH

At what procurement cycle stage do you consider Sustainability issues?

Sourcing Stage

Tender Evaluation Stage

What is/are some of the sustainability elements that you have ever considered in your outfit?

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Energy Wastage				
Water pollution				
Air Pollution				
Deforestation				
Green House Effect				
Destruction of Life forms				

In your opinion to what extent do procurement officials make sustainable decisions in project base procurement?

Very Frequent

Frequent

Occasionally

Seldom

Never

Is knowledge of sustainable procurement is wide spread in Bangladesh?

Strongly Agree

Agree

Neutral

Disagree

Strongly Disagree

What are the challenges affect sustainable project base procurement in Bangladesh?

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Lack of social Drive				
Low Technical and Management capacity				
Low multi stakeholder approach				
High initial cost of green product				
Sustainable procurement and difficulties in ICT application				
Lack of training				
Lack of Motivation				

What are the environmental concern for sustainable project base procurement in Bangladesh?

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Disposable of waste or by products				
Ethical Practices				
Safety at work places				

What measurement can be taken for sustainable project base procurement in Bangladesh?

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Education to adapt situation				
Research and development to find better ways.				
Stakeholder consultation				
Compensation				