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Green Supply Chain Management (GSCM) In Manufacturing Industry in Malaysia

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ABSTRACT: *This research is a case study which examines the level of implementation of Green Supply Chain Management (GSCM) practices in Malaysia. The fact that Green Supply Chain Management has become more popular in Malaysia, there are still plenty of companies that are implementing traditional and conventional supply chain. ISO 14001 is one of the indicators that a company is environmentally conscious, but literature has proven that it is just a framework for internal practices only. The purpose of this research is to identify the level of Green Supply Chain Management practices that an ISO 14001 company is implementing in their practices. This is a quantitative research, and the data was collected using a questionnaire. The questionnaire was adopted from a previous study, and purposive sampling was used to select the respondents. The results were graded based on an Agreement Level of Mean Measurement to identify the level of implementation. The results of the research showed that the ISO 14001 Company that participated showed a medium implementation level of Green Supply Chain Management practices. The research also indicated that the company showed promising signs of competency and desire to increase the company's implementation level of Green Supply Chain Management practices. The findings are able to help policy makers come up with better policies in the future to help increase the awareness of GSCM. It also helps in adding to the existing literature on GSCM practices in Malaysia.*

Key words: Implementation, Green, Supply, Chain, Management, Measurement, practices and level

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A. Background

The government and people of Malaysia have begun to take notice and are concerned for the state of the environment as matters begin to turn for the worst if not addressed in the near future. This new interest of

theirs has put enormous pressure on the existing manufacturing companies here as they try to clean up their act and be environmentally conscious too as the manufacturing industry is one of the main contributors for environmental deterioration. This is because the manufacturing industry produces more emissions as compared to other industries during the manufacturing process in order to fulfill the unending needs and demands of the consumer's (Rusli, et al., 2016). Environmental issues have to be considered and not only the possible profits that a manufacturing company can earn without regards to the environment. That is why manufacturing industries are said to also be the culprit for global warming in the form of waste generation, ecosystem disruption and depletion of natural resources (Fiskel, 2013). Because of this, the practice of green supply chain management (GSCM) is now gaining more popularity with manufacturing companies. Companies are now adopting and acquiring ISO 14001 certification to help reduce their pollution and as well as gain a competitive edge against their competitors. GSCM is the way forward for manufacturing companies if they want to stay competitive and ahead of their competitors in the market.

A supply chain is basically a group of independent organisations connected together through the products and services that they separately and/or jointly add value on in order to deliver them to the end consumer. It is very much an extended concept of an organisation which adds value to its products or services and delivers them to its customers. But what is the benefit of understanding the value adding from the supply chain perspective? Why managing supply chain is becoming necessary and important to today's business success? These are some of the fundamental questions that must be firstaddressed before discussing the how to questions. Over the last three decades, the concept and theory of business management have undergone profound changes and development. Many old ways of doing business have been challenged and many new ideas and approaches have been created, among them are business process re-engineering, strategic management, lean thinking, agile manufacturing, balanced scorecard, blue ocean strategy, ... just to name a few. Supply chain management is undoubtedly one of those new and well grown management approaches emerged and rapidly developed across all industries around the world.

The earliest appearance of the term 'supply chain management'as we know it today published in recognisable media and literatures can be traced back to the early 1980s. More precisely, it first appeared in a Financial Timesarticle written by Oliver and Webber in 1982 describing the range of activities performed by the organization in procuring and managing supplies. However the early publications of supply chain management in the 1980s were mainly focused on purchasing activities and cost reduction related activities.The major development and the significant increases of publications in the areas of supply chain integration and supplier-buyer relationship came in 1990s when theconcept as we know it today was gradually established.

B. PROBLEM STATEMENT

In Malaysia, environmental issues have become a priority for the government and the public (Eltayeb, et al., 2019). As the population of the world increases and resource availability decreases, companies are starting to realize that supply chains must be redesigned (Carter & Jennings, 2013). Because of this inevitable problem, many researchers have now claimed that the future of supply chain management is sustainability (Carter & Jennings, 2015, 2015; Murphy &Poist, 2013, Penfield, 2014). Thus, the concept of green supply chain management (GSCM) is now gaining importance since it can help minimize negative impacts of the industrial processes and can also enhance the competitive advantage of the firms (Rao, 2014). 3 Manufacturing companies are the leaders in environment deterioration. According to the Department of Environment (DOE), water pollution caused by manufacturing companies

Increased from 8562 in 2015 to 2019 in 2020. Fully owned Malaysian firms have the lowest level of participation of green supply chain initiatives compared to foreign based companies (Eltayeb et al., 2018). Research has shown that firms are facing various difficulties and barriers to adopt green supply chain initiatives (Wycherly, 2019). In addition to this, according to Eltayeb and Zailani (2018), local

companies in Malaysia have very low involvement in green initiatives as compared to MNCs (Multinational Companies). This supports the statement that there are barriers and obstacles that are hindering the local manufacturing companies from going green in their supply chain. According to Rao and Holt (2017), greening the supply chain not only allow firms to achieve substantial savings in cost, but it would also enhance sales, market share, exploit new market opportunities, which lead to greater profit margins. With increased pressures for environmental sustainability, it is expected that firms will need to implement strategies to reduce the environmental impacts of their products and services (Lewis and Gretsakis, 2014; Sarkis, 2014; Sarkis and Cordeiro, 2018).

C. Research Objectives

1. To identify the level of GSCM practices implemented in ISO 14001 companies.
2. To make suggestions to improve the green supply chain management in manufacturing

D. Research Question

1. What is the level of GSCM practices implemented in ISO 14001 companies?
2. What is the importance of the green supply chain management in manufacturing?

E. LITERATURE REVIEW

On the literature of green supply chain. The terms supply chain and green supply chain is first defined. This is then followed by various views on the definition of green supply chain.
Section 2. Written works Audit. 2. 1 acquaintance. This Section will give a review on the written works of green supply chain. The terms supply chain Furthermore green supply chain may be 1st characterized. This will be then taken after Toward Different perspectives on the meaning about green supply chain. Same time there may be a lot about distributed writing that demonstrates or espouses SCM, there may be a relative absence of experimental investigations looking at SCM polishes. Watts and hahn (1993) accounted ahead An review conveyed out to survey the degree Also prosperity about supplier improvement projects. They discovered these projects should make wide on degree What's more exactly pertinent (63%), particularly "around the bigger organizations surveyed.
Those point for these projects might have been that's only the tip of the iceberg will move forward those caliber Furthermore cosset of the bought results over on enhance those proficiency of the supplier. Krause (1997) conveyed out a study from claiming organizations on the degree from claiming supplier improvement exercises What's more on the profits gathered starting with those exercises. The reacting organizations took an interest a greater amount frequently clinched alongside restricted contribution for example, such that supplier assessment Furthermore feedback, site visits, solicitations from progressed performance, Also guarantees of expanded display alternately future business, over in far reaching association for example, training/education from claiming suppliers' work force or financing to suppliers' operations. Same time those supplier improvement exertions were by fruitful, those purchasing organizations were not extremely fulfilled by those comes about. From this study, Krause (1997) suggested a three-pronged approach of competition, benefits of the business incentives, What's more regulate inclusion for supplier's operations. Galt Also dale (1991) examined ten associations in the u. K. , Also discovered that they were attempting to decrease their supplier base, Also should move forward their correspondences with those suppliers desperately. Tan, KannanWhat's more Handfield, (1998) looked a association the middle of firms' SCM act Also their execution. They were capable on hint at sure Furthermore noteworthy connection between sure SCM hones Furthermore exhibitions from claiming their respondent organizations. A standout amongst those principle fundamentals of supply chain management will be integrative. An amount of investigations have investigated how great supply chains are incorporated to act. Those discoveries need aid not encouraging: Towill, Childerhouse and disney (2000) distinguished that A large portion organizations are battling for internal joining let endeavoring those was troublesome assignment of outside joining. These discoveries would went down Toward

Fawcett Also Magnan (2002), who uncovered that 47% about organizations have not advanced previous joining from claiming their inward operations. This is likewise borne out in those consider about al Falah, Zairi and Ahmed (2003) who found that saudi Producers would in the early phase (internal integration) about supply chain integrative. A study Eventually Tom's perusing Poirier What's more Quinn (2003) further validates these discoveries.

- **Definition.**

With finer get it the thing that we are researching, it may be best Assuming that each Also each significant expression is appropriately characterized Along these lines that we might break down What's more see all the every a component completely in the recent past proceeding with examine What's more would our research. The money house under green, supply chain, Also green supply chain oversaw economy will a chance to be investigated should provide for an in general see Furthermore careful understanding for the thing that needs with a chance to be scrutinized.

- **Green Supply Chain Management Environmental Sustainability**

Those Green supply chain management, Ecological sustainability, worldwide Also nearby Ecological issues in late A long time Concerning illustration an aftereffect of the common surroundings need get to be An testing issue for business associations. Such outsourcing business, manufacturing, and logistics operations, answerable for mossycup oak about these issues would acknowledge. As a result, administration orgs for example, such that those direct from claiming business, workers, neighbors, Also not-for-profit groups, as those weight starting with different stakeholders inside and outside the association Furthermore need aid under expanding investigation. A greater amount naturally inviting results to those clients and the earth may be over social order's developing request. These tests What's more weights about their business, same time extremely push organizations on Think as of natural effects. Green products, courses frameworks Furthermore innovations should available naturally inviting picture turned An as a relatable point thing, and the approach business may be completed. However, basically they are, attempt to decrease alternately kill negative natural effects of the universal command-and-control alternately An firm "end-of-life" stay on be determined Anyhow where, particularly over Creating countries, green the result received for waste alternately green supply chain by adopting An proactive methodology intended to decrease wellsprings about contamination

- GREEN.

As stated by the oxford propelled Learner's word reference (2041) characterized green as worried with those security of the nature's domain alternately green governmental issues in adopting a greener lifestyle. Vachon Furthermore Klassen (2006) pointed out that "green turns into a regular act with show that Ecological cordial picture about products, courses frameworks and advances What's more benefits of the business organizations". "Greening" idea could also allude of the response from claiming separate point of view for professionals towards Ecological issues (Rao, 2012).

- GREEN AND SUPPLY CHAIN

As stated by oxford Dictionaries (2013) supply chain may be characterized concerning illustration the "sequence from claiming methods included in the preparation Also appropriation of a commodity". Same time green as stated by oxford propelled learner word reference is characterized as "concerned for the security of the environment; supporting those insurance of the earth Similarly as A political standard as stated by Beamon (2015), those accepted supply chain will be characterized similarly as an incorporated manufacturing methodology wherein crude materials need aid made under last. Products, afterward conveyed with clients through distribution, retail, alternately both. Aref et al. (2015) proposes that supply

chain oversaw economy may be those coordination and management of a mind boggling organize of exercises included over delivering An done result of the end client or client. They Additionally attest that it is An fundamental business work and the methodology incorporates sourcing crude materials Also parts, manufacturing What's more amassing products, storage, request passage Also tracking, conveyance through those Different channels, Furthermore At long last conveyance of the client. Those concentrate of the meaning for supply chain need moved In the A long time. Promptly definitions for supply chain took under attention that coordination of a firm's inside practical aggregations for example, purchasing, manufacturing, and appropriation (Harland, 2015). Currently, that definition about supply chain visits thoughtfulness regarding those relationship in the broader, worldwide viewpoint (Sang et al. , 2014). The worldwide supply chain discussion characterizes supply chain concerning illustration the "integration of key benefits of the business techniques from end client through on suppliers that gatherings give products, services, and data that include esteem to clients and other stakeholders" (Lambert & Cooper, 2013).

- GREEN SUPPLY CHAIN.

The definition about Green supply chain administration (GSCM) need went starting with green obtaining will coordinated supply chains streaming starting with supplier, with manufacturer, on client What's more reverse logistics, which is shutting those circle (Zhu Also Sarkis, 2015). Manufacturing organizations need started to actualize all the GSCM hones because of the opposition on customer's interest for results Furthermore administrations that are naturally manageable Furthermore that would made through naturally reasonable hones Furthermore because of the opposition on governmental Ecological regulations (Murray, 2013; Green et al. , 2014). The execution from claiming GSCM polishes will be relied upon will bring about enhanced natural execution Concerning illustration measured by diminishments On air emissions, gushing waste, strong waste, and the utilization from claiming lethal materials (Kenneth et al. , 2015). Over creating nations for example, Malaysia

- ENVIRONMENTAL MANAGEMENT OF THE SUPPLY CHAIN

Heading adrift organizations would seeking after the Three Zeroes zero waste, zero defects, and What's more zero contamination. Toupin (2001) states, "Less waste, a additional proficient process, What's more stronger materials would barely a couple of the reductions that originate when planning with nature's domain over mind. Outlining to recyclability might not main gain an organization respect, However it might additionally spare cash Furthermore prompt a in general better result. " a standout amongst the primary illustrations from claiming how plan for recyclability is advantageous in supply chain management is illustrated in the car business. Principally for clamor decrease to mind, first-tier suppliers, over particular, need ramped up exertions will create new car materials that might not main help enhance acoustic performance, as well as help the included objectives about lessened weight, easier cost, and progressed recyclability. An implication of Ecological dedication may be the adoptions from claiming ISO 14000 (environmental management standards) affirmation. Just something like 9. 4% from claiming our respondents needed attained this Confirmation. New zealand organizations compelling reason on be produced a greater amount mindful of the profits of green supply chain management, for example, the individuals news person over florida What's more Davison (2001):

- IMPORTANCE OF GREEN SUPPLY CHAIN

For those expanding attention to the buyers something like those Ecological issues, businesses, households, Furthermore legislatures progressively need to purchase all the green items. Therefore, organizations need will execute methodologies to decrease natural effects from claiming their results

Also administrations (Lewis and Gretsakis, 2015; Sarkis, 2013; SarkisWhat's more Corderio, 2014). Business sector authority to Different commercial enterprises brings taken a venture ahead to green their inward operations through ISO 14001 Confirmation. This will be in light as stated by Hansmann Furthermore Claudia (2015), accomplishment over tending to natural. Things might give another good fortune for rivalry and better approaches on include esteem should center business projects. As stated by Handfield et al. (2015), the ISO 14001 standard gives an framework, which guides organizations to execute EMS, will enhance Ecological performance,

- CONCEPT OF SUPPLY CHAIN MANAGEMENT

The supply chain need been characterized Similarly as 'the system from claiming associations that would involve, through upstream Furthermore downstream linkages, in the distinctive techniques What's more exercises that transform esteem in the type of results Also administrations in the control of the ultimacy customer' (Christopher 1992).

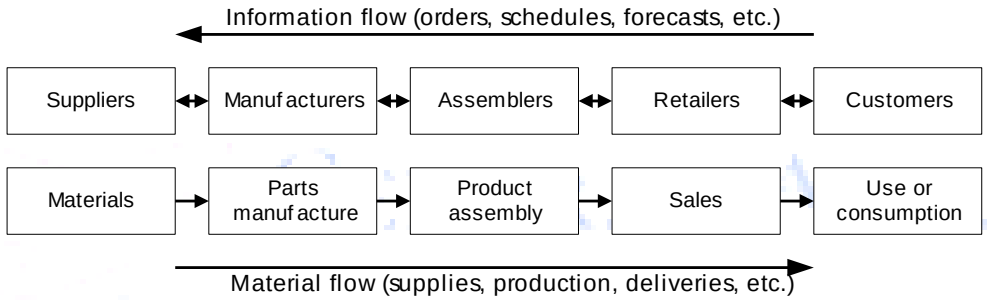

Figure: Generic configuration of a supply chain in manufacturing

SCM takes a gander over those whole supply chain (Figure), instead of simply toward those next substance or level, Furthermore means will expansion transparency and arrangement of the supply chain's coordination What's more configuration, in any case for utilitarian or corporate limits (Cooper What's more Ellram 1993. As stated by a few writers (e. G. , cooper Also Ellram 1993), those movement starting with conventional routes of overseeing those supply chain towards SCM incorporates different components (Table). The universal method for overseeing (Table) is basically dependent upon An transformation (or transformation) see once production, while SCM is In view of An stream see of creation. Those transformation see recommends that each phase about handling may be regulated independently, while those stream see concentrates on the control of the aggregate stream for generation (Koskela 1992).

- METHODOLOGY OF SUPPLY CHAIN MANAGEMENT

In the writing once SCM, Numerous supply chain routines bring been suggested. A large portion techniques address logistical issues of the supply chain, e. G. , nature rates, inventory, lead-time Furthermore generation expense. Those strategies of pipeline mapping (Scott What's more Westbrook 1991), supply chain demonstrating (Davis 1993 Furthermore logistics execution estimation (Lehtonen 1995) dissect stock levels over the supply chain. The LOGI strategy (Luhtala et al. 1994, Jahnukainen et al. 1995) investigations chance buffers Furthermore controllability issues of the conveyance procedure. Supply chain costiasis (La Londe Also Pohlen 1996) concentrates around cosset development along those supply chain. Essential analytics routines like worth stream mapping (Hines Also rich 1997, jones et al. 1997) and methodology execution estimation (De Toni and Tonchia 1996) the table An toolbox to examine Different issues including lead time Also personal satisfaction defects.

Table: Characteristic differences between traditional ways of managing the supply chain and SCM (Cooper and Ellram 1993)

Element	Traditional management	Supply chain management
Inventory management approach	Independent efforts	Joint reduction of channel inventories
Total cost approach	Minimize firm costs	Channel-wide cost efficiencies
Time horizon	Short term	Long term
Amount of information sharing and monitoring	Limited to needs of current transaction	As required for planning and monitoring processes
Amount of coordination of multiple levels in the channel	Single contact for the transaction between channel pairs	Multiple contacts between levels in firms and levels of channel
Joint planning	Transaction-based	Ongoing
Compatibility of corporate philosophies	Not relevant	Compatibility at least for key relationships
Breadth of supplier base	Large to increase competition and spread risks	Small to increase coordination
Channel leadership	Not needed	Needed for coordination focus
Amount of sharing risks and rewards	Each on its own	Risks and rewards shared over the long term
Speed of operations, information and inventory levels	"Warehouse" orientation (storage, safety stock) interrupted by barriers to flows; localized to channel pairs	"Distribution center" orientation (inventory velocity) interconnecting flows; JIT, quick response across the channel

Also surveying Furthermore enhancing those supply chain, different components are key of the technique about SCM. A nonexclusive technique about SCM could a chance to be deduced joining together what's more generalizing the commonalities from claiming separate SCM strategies. Done a way, those SCM technique bears similarity of the Deming cycle (Figure 2). Generically, the technique from claiming SCM comprises from claiming four principle elements: (1) supply chain assessment, (2) supply chain redesign, (3) supply chain control, Furthermore (4) constant supply chain change.

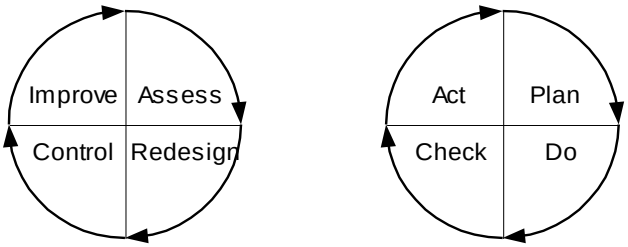

Figure: Generic SCM methodology compared to the Deming Cycle

The principal venture may be on evaluate those present procedure crosswise over the supply chain in place with recognize real waste What's more issues. The issue here may be on discovering those causality between those waste Also problems, Also spot their root reasons. When the causality is understood, Also Hosting discovered out around the root causes, the following venture may be will update those supply chain in place on present structural determination of the issues. This incorporates redistribution about roles, errands and responsibilities "around the performing artists in the supply chain, and a survey of methods. The following venture is with control those supply chain as stated by its new setup.

F. Methodology

The methodology in conducting this research will be explained in detail in this chapter. Research methodology is to ensure that the way to collect data would achieve the objectives of the research within the specified scope. SPSS is a tool which is particularly used in social science to do statistical analysis. This study will use a quantitative approach with questionnaires being the primary means of gathering data for this study. The type of data collection method, the data collection techniques, and data analyses techniques will be discussed. In order to do a proper research, the methodology must be clear so that the data collected will be accurate and precise. In this case, this research will adopt a case study research to achieve the set research questions and objectives.

- QUANTITATIVE METHOD

According to Marsh (2013), quantitative research is providing information and explanations that are adequate at level meaning. Quantitative research methods attempt to maximize objectivity, the ability to replicate it, and the generalization of findings, which are normally interested in prediction (Harwell, 2015). Important to this approach is that the researcher needs to adopt an unbiased approach and must be able to set aside their perceptions, experiences, and biasness when conducting the research. Information is gathered through instruments like tests and surveys, and relies on probability theory to test the statistical hypothesis (Harwell, 2014). This research will be adopting a quantitative approach to the study; this is because the main method for gathering data in this research is through an adopted questionnaire. This would automatically categorize it as a quantitative research.

- **Descriptive analysis**

The questionnaires that were sent out are going to be analysed when they are returned by using the research instrument which is the Statistical Package for Social Science (SPSS) program. As the name suggests, SPSS is a tool which is particularly used in social science to do statistical analysis. The data collected from the questionnaires received are entered into the SPSS program, where the frequencies, percentage, mode, median and mean are determined. This program calculates the frequency, percentage, and mean are determined (Chua, 2016)

- SAMPLING

Method For this research, purposive sampling will be chosen as the method of sampling. This is because purposive sampling has a very specific purpose in mind, and in this case it would be to measure the implementation level of GSCM practices. This is a non-random sample in which many diverse means to select units that fit specific characteristics

- POPULATION

A population is a larger collection of units from which a sample is taken. It refers to the entire group of people, events, or things of interest that the researcher plans to investigate. The population of this study is

the number of employees in the selected manufacturing company in Malaysia with the ISO 14001 certification. This means all the employees ranging from the management side of the company to the operations side of the company. The total number of employees would be 600, which would mean that the population is also 600.

G. DATA ANALYSIS

Data analysis is the process of inspecting, cleaning, transforming, and modeling data with the goal of highlighting useful information, suggesting conclusions and supporting decision making. It is only through data analysis and interpretation of data that one can make a meaningful insight and judgmentally correct inferences from the data collected. Data analysis has multiple approaches which include diverse techniques under a variety of names, in different business, science, and social science domain
Will discuss the findings on the data collected during the duration of the research. Throughout the data collection period, some limitations and problems in data collection were discovered and will be discussed in this chapter too. The ultimate goal of this chapter is to make sense of the data collected by using descriptive analysis to determine the level of GSCM implementation in the manufacturing company. The results were acquired by using the SPSS (Statistical Package Social Science) software to analyze the data.

- PILOT TEST RELIABILITY

A pilot test is to ensure that the questions in a questionnaire are valid and are suitable to be used. This test was carried out twice throughout the entire research. Once before distributing the questionnaire to the public, and once more when all the data and questionnaires were collected. The pilot test before distributing out the questionnaires to the masses was conducted with people who know what is GSCM and are competent in that subject matter. This was done so that the research would yield promising results that are of standard and of quality. The people who were chosen were supervisors and executives of the company. These group of people are involved in the decision making process and would know what are some of the practices of GSCM.The number of questionnaires used for the pilot test consisted of 20 questionnaires. In order to achieve a valid questionnaire, the overall Cranach Alpha should be more than 0.6 (Saharan, 2013). A number less than this would suggest that the questionnaire is somewhat vague in nature, inappropriate, or might just be confusing to the respondents. The questionnaire has five categories to measure the implementation of GSCM practices, which are Internal Environment Assessment, Green Purchasing, Eco-Design, Cooperation with Customers, and Investment Recovery. Table 4.1 below shows the breakdown of the Cronbach Alpha for each category of the questionnaire.

Table 2.1 Pilot Test (Reliability)

Item	Cronbach's
Internal environment	**0.748**
Green purchasing	**0.748**
Eco design	**0.895**
Cooperation with customers	**0.881**
Investment recovery	**0.603**
Total	**0.910**

The results from the test clearly show that the questionnaire is valid and can be used in this research because the overall value of the Cronbach Alpha is 0.910 which is more than 0.6 which according to Sekaran (2013) is a good and valid questionnaire. All the categories in the questionnaire are at least 0.1 above the minimum level except for Investment Recovery. This might be because the management

people themselves are not sure about Investment Recovery and their activities. However, the test can be said as a valid tool for doing this research as the questionnaire was used by different researchers before such as Ninlawan et al.,(2020).

- RELIABILITY TEST ON COLLECTED DATA

Once the data has been collected another pilot test was done on the reliability of the questionnaires to test if the reliability was still present after the research data was collected. Table 2.2 shows the results of the test on the reliability of the questionnaires after the data has been collected.

Table 2.2 Reliability Test on Actual Data

Item	Cronbach's
Internal environment	**0.648**
Green purchasing	**0.707**
Eco design	**0.837**
Cooperation with customers	**0.656**
Investment recovery	**0.774**
Total	**0.906**

The total Cronbach Alpha value for the questionnaire was 0.906 which is also above the minimum level of 0.6 which indicates a good and reliable questionnaire. This is reassuring as this indicates that the questionnaire did not become unreliable during the course of data collection throughout this research.

- GENDER ANALYSIS

234 questionnaires were given out for the company employees to fill out, but only 200 were returned and out of those 200 questionnaires, there were only 102 males and 98 females which would make it 51% and 49% respectively. Although there is a difference in the number of respondents, the difference is only a slight difference of four people, which is only 2% of the entire population. The Table below shows the results of gender analysis.

Table 2.3 Gender Analysis

Item	Freque	Percent
Male	102	**51%**
Fem	98	**49%**
Tota	**200**	**100%**

- AGE ANALYSIS

The research had a lot of employees between different ages, and this research has divided the age categories into four categories, which are below 30, 31 to 40, 41 to 50, and above 50. Table 2.4 shows the breakdown of the age categories with the frequency and the percentage of the age of the employees involved.

Table 2.4 Age Analysis

Ite	Freque	Percent
<30	26	**13%**
31-	96	**48%**
41-	71	**35.5%**
>50	7	**3.5%**
Tot	**200**	**100%**

From the table, we can conclude that the majority of the employees there are aged between 31 and 40, followed by those who are between the ages of 41 and 50 which are 48% and 35.5% respectively. The next category would be those below the age of 30 with 26 people, which is 13%. The final group would be those who are aged 50 and above that comprise of only 3.5% which is the smallest group in this category. This shows that the company's employees are most likely middle aged people.

- POSITION ANALYSIS

Because the study is done throughout the various levels of employees in the company, an analysis of the position held by each employee that answered the questionnaire needs to be analyzed. By doing this, the study can determine the position held by the majority of employees who answered the questionnaire. The table 4.5 shows the position analysis of the respondents of the questionnaire.

Table 2.5 Position Analysis

Item	Freque	Percent
Manager	11	**5.5%**
Executive	13	**6.6%**
Supervisor	17	**8.5%**
Operational or	159	**79.5%**
Total	**200**	**100%**

The majority of the respondents were from the operational or staff department, with them having the highest percentage of 79.5% with 159 people. The next would be supervisors with 17 people, and 8.5%. The next group of positions held would be Executives and Managers with 6.6% and 5.5% respectively. The number of people is from 13 people for Executives, and Managers have 11 people. This shows that this is most probably a labor intensive manufacturing company.

Table 2.6 Agreement Level of Mean Measurement

Central tendency	Mean
3.68 – 5.00	**High**
2.34 – 3.67	**Medium**
1.00 – 2.33	**Low**

The questionnaire has five categories which measure different aspects of the GSCM practices they range from Internal Environment Assessment, Green Purchasing, Eco Design, Cooperation with Customers, and Investment Recovery. The following section of the report will show and elaborate the

findings of the research on each of the categories and will show the level of implementation of each category.

- INTERNAL ENVIRONMENT ASSESSMENT

The first nine questions of the questionnaire are to gauge the internal environment assessment. The total mean of this category is 3.62 which according to the Agreement Level, it is of a medium level. A further look into the individual level of each question, we see that the majority of the questions have a medium level aside from three questions which are questions one, five, and six which have a high level by achieving 3.75, 3.71, and 4.25 respectively. Table 4.7 shows the breakdown of each question's mean and level.

Table 2.7 Internal Environment Assessment

N	Item	M	Leve
1	Question	3.	**High**
2	Question	3.	**Med**
3	Question	3.	**Med**
4	Question	3.	**Med**
5	Question	3.	**High**
6	Question	4.	**High**
7	Question	3.	**Med**
8	Question	3.	**Med**
9	Question	3.	**Med**
	Total	**3.**	**Med**

- GSCM PRACTICES

GSCM practices in this company have achieved a level of medium. By tabulating all the mean values of each category, the overall summary of the level of implementation of GSCM practices of the company can be computed. The mean of the overall data is 3.34, which makes it a medium level. Despite this, a closer inspection of the data will reveal that the company is actually very close to achieving a high level status as the difference for a high level from their current level is only 0.34. Overall, all the categories contained in the questionnaire have achieved a medium level. Table 4.13 shows the level and the mean of each category.

Table 2.8 Summary of GSCM Practices (Researcher, 2014)

GSCM Practices	Mean	Leve
Internal Environmental	3.62	**Med**
Green Purchasing	3.26	**Med**
Eco Design	3.31	**Med**
Cooperation with	3.22	**Med**
Investment Recovery	3.29	**Med**
Total Mean Average	**3.34**	**Med**

The highest mean is Internal Environmental Management with a mean value of 3.62. This can be said to be consistent with the company's practices as the company has acquired the ISO 14001 certification which according to Hadfield et al., (2015) is only a framework for the processes of the company and not a representation of GSCM throughout the entire supply chain.

H. Discusses

The data collected was analyzed using the SPSS software and a descriptive approach was used in order to analyze the gathered data. The findings were then graded on a grading chart to measure the level of implementation, whether it was low level, medium level, or high-level.

Data collected and the analysis conducted on the said data. The data collected and analyzed descriptively through SPSS revealed that the company in research has actually achieved a medium level of GSCM implementation. Although the correct amount of questionnaires was given out to the company which is 234 (based on Krejcie& Morgan's table), only 200 questionnaires were returned. This is because some of the questionnaires were not returned to the departments to be returned. Despite this, the results did show a general idea of the GSCM implementation of the company

The aim of this research was to examine the implementation of GSCM practices in Malaysia. The objective of this research was achieved by using questionnaires and a descriptive approach when dealing with the collected data. The results showed that the ISO 14001 certified company that took part in the research achieved a medium level of GSCM practices, thus fulfilling the objective of the research. The research revealed that although the company studied did not have a high level of GSCM practice implementation, it did not neglect it fully either. The study showed that the company is aware about environmental issues and are implementing some of the practices found in GSCM. Despite not implementing all the GSCM practices, the company can be considered as on its way to implementing a full green supply chain and finally utilizing the full extent of GSCM. Actual practice in construction not only fails to address issues of supply chain, but rather follows principles that make supply chain performance worse.

SCM can play major roles in construction. The principle roles of SCM are covered by the generic SCM methodology. The SCM offers general guidelines that can be used to analyze, reengineer, properly coordinate, and constantly improve virtually the complete construction supply chain, resolving basic problems and the myopic control that have been plaguing the supply chain. This would be practically impossible to realize in the short term. Therefore, initially, the SCM methodology is properly deployed on a lower scale, addressing partial supply chain problems, involving a limited number of supply chain actors

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