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DRIVERS AND BARRIERS TO GREEN SUPPLY CHAIN: A CASE STUDY OF TAMER COMPANY

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ABSTRACT

Supply chain management is an important part of any business that involves flow of products and services. It is managing products and inventories through looking into details of collection of raw materials production or manufacturing, distributing and selling of goods that finally reach in the hands of the customers. The supply chain practices have brought deterioration of the environment, thus green supply chain strategies is developed which to add to the competitive advantage and sustainable development. The purpose of this study is to identify the drivers and barriers (internal and external) in relation to the green supply chain. This study used quantitative method and the data was gathered through online questionnaire survey. This study focuses on one of the logistics company in Saudi Arabia, Tamer Company. There are 29 employees successfully completed the questioner survey. The obtained data is then statically analysing. The importance of this study is to provide an insight of green supply chain practices and the factors affecting it. The findings revealed the importance of knowing the barriers and drivers of the green supply chain practices and strategies.

INTRODUCTION

Green supply chain management has gained a lot of attention by environmentalists and the businessmen. Green supply chain practices are now used by most of the companies because it is eco-friendly and it reduces the cost of the organizations processes. According to the research done by Hervani et. al (2005), they discovered green purchasing, manufacturing, distribution, marketing, materials management, and reverse logistics [1]. These are regular processes that a company performs but green supply chain practices have been

integrated for better performance and support the environment to give the best results. The processes serve as innovative techniques and in some cases have competitive advantage over the competitors as they are still using the old methods and have not updated them with that of the new ones that are eco-friendly. They can adopt these practices too for supporting the cause of sustainable development; less consumption of resources (money, labor, raw materials), less energy, less pollution and more for the future generation to use and rely on.

Likewise, Diabat and Govindan (2011) claim that "People and especially companies will not spend any more on environmental issues than is required to achieve their own maximizing economic goals, as these investments would not benefit themselves in total. So, the need for green practices is often not just a matter of choice, but is required by law." [2]. This shows that the companies are less concerned with the ecological problems and are not into finding and offering solutions to them. They just want to maximize profits and expand their businesses by any means.

Bowen et. al (2001) said that the internal factors are strategic purchasing and supply, corporate environmental proactivity, and supply management capabilities [3]. These drivers help achieve sustainability and protection of the environment. New et al. (2000) claim Company should be ready to leave their conventional methods and accept the right ones to support and protect the environment [4]. Other companies use green supply chain to reduce additional costs that come along with the use of supply chain. The managers usually look forward to taking in the activities that are of long-term value and sustainable so that the future generation can benefit too. Walker et al. (2008) has recognized that the desire to improve quality and pressure from the investor also help in gathering more support for the green supply chain practices [5].

Some company usually follows green supply chain for the benefit of the company by gaining a competitive advantage against competitors in the market [6]. The customers and the society also play a vital role in determining the performance of the company by bringing in a pressure and forcing them to take in serious steps against activities that are against the green practices. Hall (2001) mentioned that the stakeholders associated with or against the company; all are interested in the company's decisions of practicing and developing environmental strategies for helping, not only the company, but also the society on a whole [7].

Walker et al. (2008) clearly specified that "Internal barriers include cost and lack of legitimacy, whereas external barriers include regulation, poor supplier commitment and industry specific barriers." [5]. Carter and Dresner (2001) claim that additional costs in the company add up to the barriers in bringing green supply chain to the organization [8]. Min and Galle (2001) claim that company focused mainly on cost reduction and they do not look into the depth of green practices in the supply chain [9]. Zhu and Sarkis (2006) also stated that different companies have different challenges to look after too [6]. Each sector of the industry has to look forward to meet up to solving these

challenges but they fail at doing it because of lack of idea of green practices and commitment problems from them as well.
Recently, many organizations are aware of their environmental footprint and the inherent financial benefit in moving towards green supply chains management practices [10]. Therefore, this study aims to identify the drivers and barriers (internal and external) in relation to the green supply chain focus on one of the logistics company in Saudi Arabia, Tamer Company.

METHODOLOGY

This section will discuss the process and parameters used in conducting the study on green supply chain practices in relation to the suppliers and barriers. One of the logistics company in Saudi Arabia is considered in this study which is Tamer Company.

Generally, there are three types of research method namely qualitative, quantitative and mixed methods. This study will focus on quantitative method whereby a questionnaire survey is used to collect the data.

Data Collection Tools

This study used questionnaire survey to gather the primary data. The prepared questionnaire surveys are distributed to the employees in Tamer Company. The questionnaire covered both the internal and external drivers and barriers related to green supply chain.

Primary Data

The data obtain through the questionnaire survey by the employees of Tamer Company will used as the primary data in this study.

Sample Size

The sample size is 29 employees in Tamer Company. The participation on this study is entirely voluntarily and the participant is allows to withdraw their participation at any time.

Data Collection

The data was collected through online questionnaire survey. The questionnaire questions are distributed by sending the link via emails to the employees of Tamer Company. The information provided by the employees in this survey will be kept strictly confidential and responses will be treated as anonymous based on ethical consideration of research.

RESULT AND DISCUSSION

This study considered a company as a case to study the drivers and barriers in relation to the green supply chain. Tamer Company.is a logistic company based in Saudi Arabia that is responsible in operations and functions in relation to the supply chain. The demographics of the participants were collected which involved name, gender, and educational qualifications.

The survey was all filled by males which showed that there was no woman in the operations and management department of the company. About 51.7% of them are qualified with bachelors and 41.4% are master students while the remaining is qualified from the high school.

Figure 1 and Figure 2 indicate the responses of participant towards the impotency of supply chain and the approval of internal drivers and barriers respectively. Figure 1 shows majority about 62.10% strongly agree regarding the important of supply chain. In Figure 2, about 79.30% of the participants agreed for approving the internal drivers and barriers.

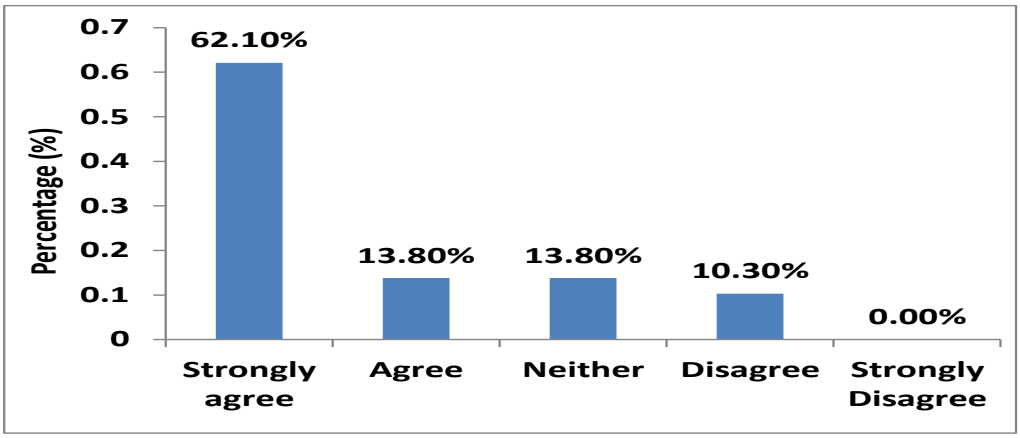

Figure 1. Importance Of Supply Chain

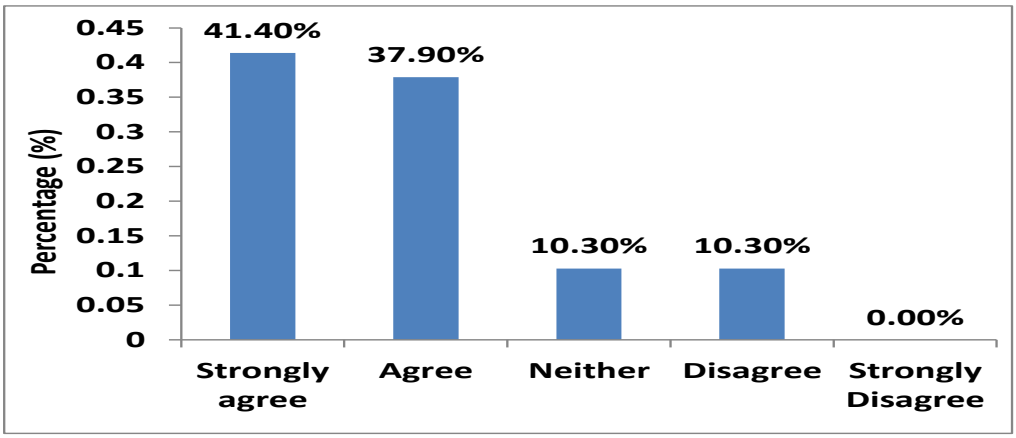

Figure 2. Approving The Internal Drivers And Barriers

Internal Drivers

The internal drivers to the green supply chain are commitment to the environment, brand image, reduction in cost and energy, and the opportunity to enter into the foreign markets. Figure 3 shows that about 68.97% of respondents agree that the environmental commitment is followed by the company and is important while the others disagreed to it.

Figure 4 represents that 37.93% of participants strongly agree and 31.03% of participants agree that the brand image is relatively important while the others

feel that it is not as important as it seems to. They disagree with the factor of brand image.

Green supply chain is known to reduce energy and cost in which majority of the respondents agree to this point where Figure 5 shows that about 31.03% and 34.48% of the participants strongly agree and agreed respectively.

Green supply chain also brings in the opportunity to enter into the foreign markets and Figure 6 shows that the majority of the respondents about 75.86% feel like entering into the foreign market will also be achieved.

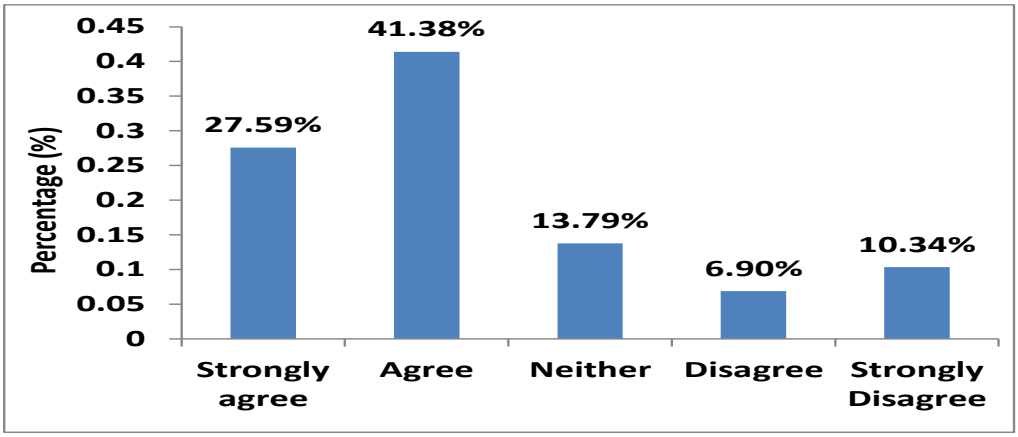

Figure 3. Data Representing Environmental Commitment

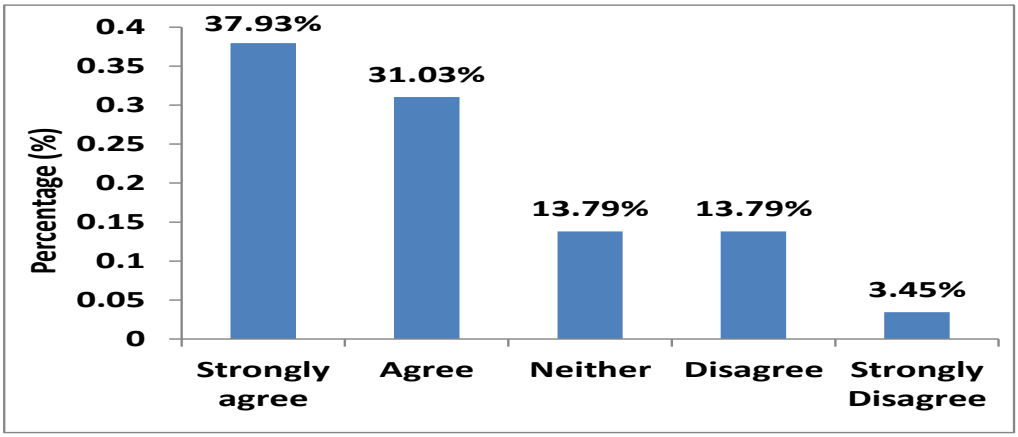

Figure 4. Data Representing The Importance Of Green Supply Chain With Respect To Brand Image

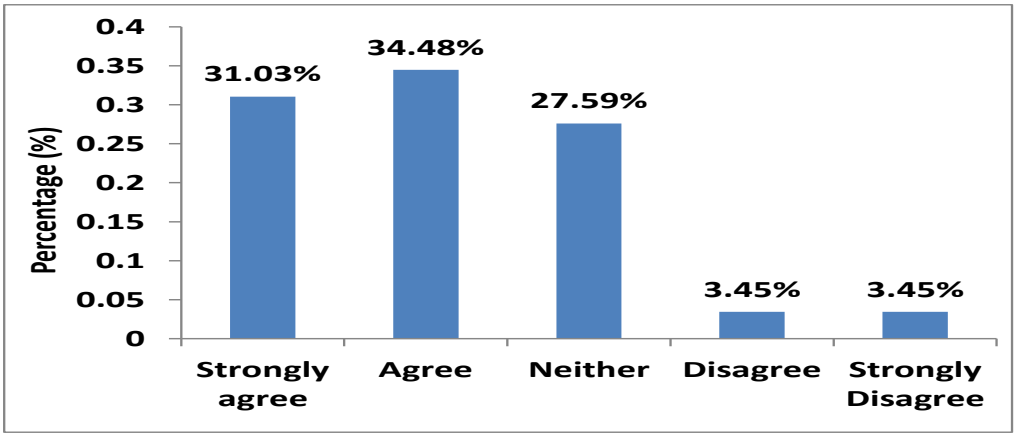

Figure5. Data Representing The Importance Of Green Supply Chain With Respect To Cost And Energy.

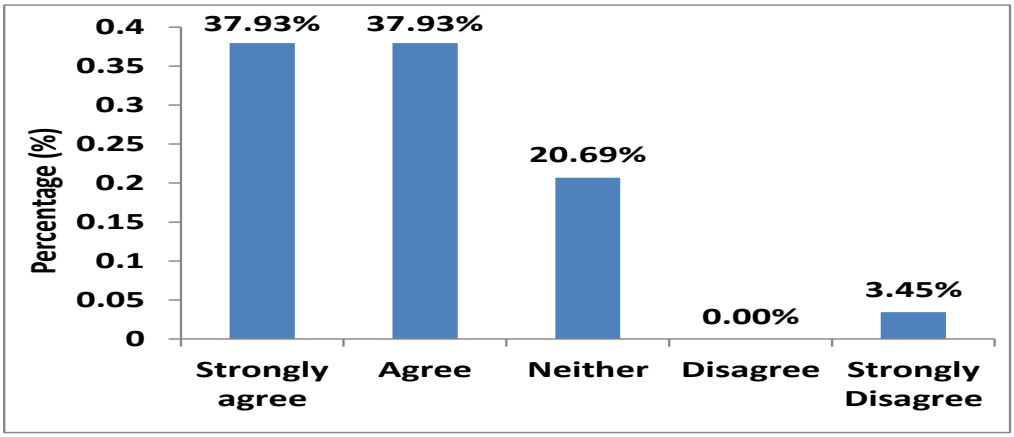

Figure 6. Data Representing The Importance Of Green Supply Chain With Respect To Opportunity Entering Into Foreign Market

External Drivers

The external drivers are the government regulations, pressure from the stakeholders, pressure from the competitors and pressure from the end consumers. Figure 7 represents that the government regulations are highly important for bringing in the green supply chain, which agreed by 79.31% of the participants.

Stakeholders are very important to determine the green supply chain value in the company. Figure 8 shows there are 72.41% of the participants agreed to it while the remaining does not agree.

Likewise, competitors are very crucial in determining and evaluating the effectiveness of the green supply chain. Figure 9 shows majority of 68.96% agreed to the importance of role of the green supply chain with that of the customers.

Figure 10 shows the end consumers who agreed to the importance of green supply chain were 62.07% of participants. Whereby, only 24.14% employees disagreed.

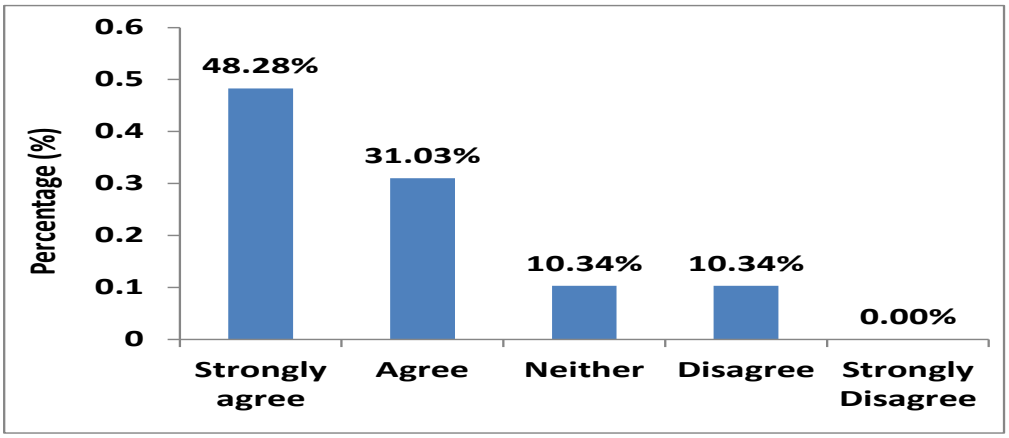

Figure 7. Data Representing The Importance Of Green Supply Chain With Respect To The Government Regulations

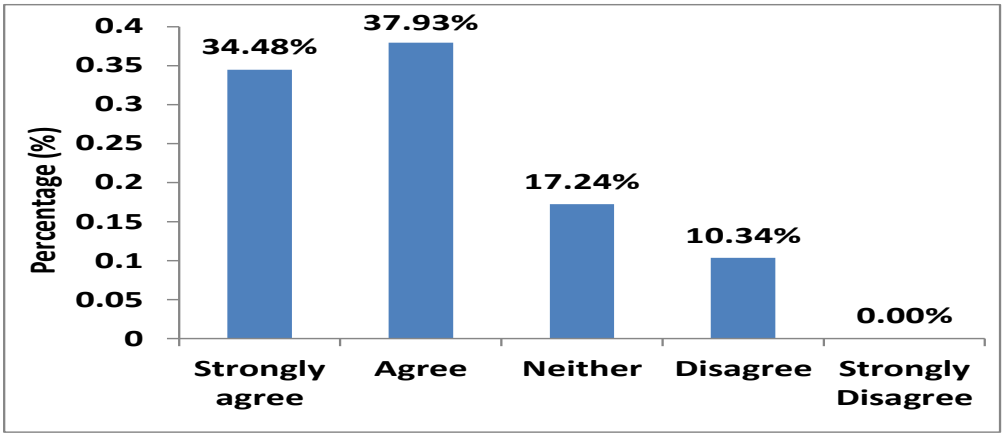

Figure 8. Data Representing The Importance Of Green Supply Chain With Respect To The Stakeholders

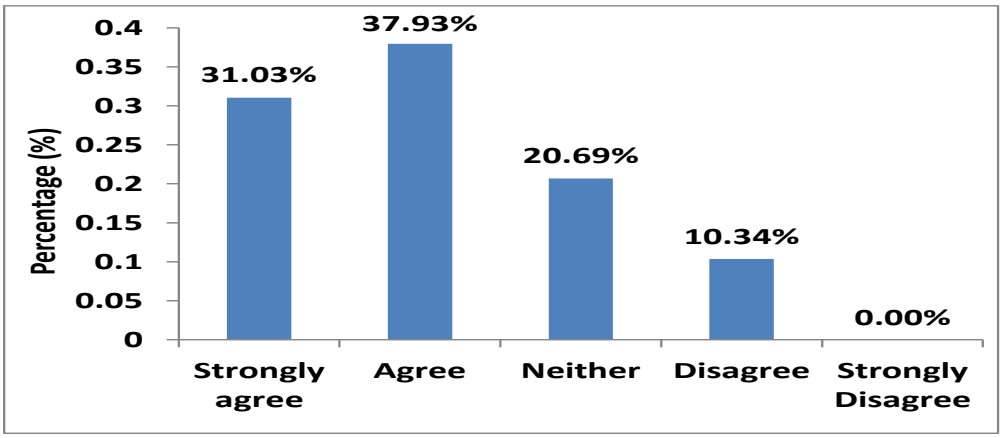

Figure 9. Data Representing The Importance Of Green Supply Chain With Respect To The Competitors

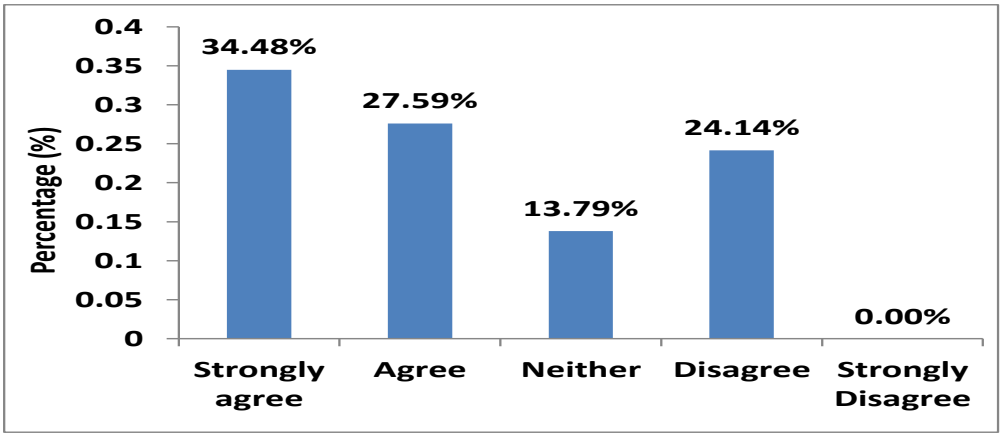

Figure 10. Data Representing The Importance Of Green Supply Chain With Respect To The End – Consumers

Internal Barriers

The internal barriers are the high cost of implementation, lack of knowledge and awareness of green practices. Figure 11 shows that75.86% of participants feel that costs of implementing and incorporating green supply chain practices are very high. There is 13.79% of the participants claim that the costs are not that high. Figure 12 shows most of them about 75.86% agree to the point that there is lack of knowledge of green practices in the company.

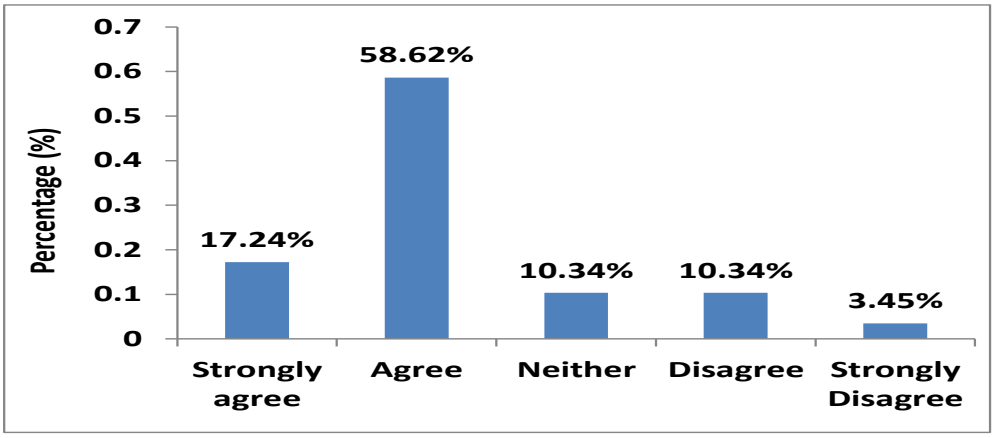

Figure 11. Data Representing The Importance Of Green Supply Chain With Respect To The High Cost Of Implementation

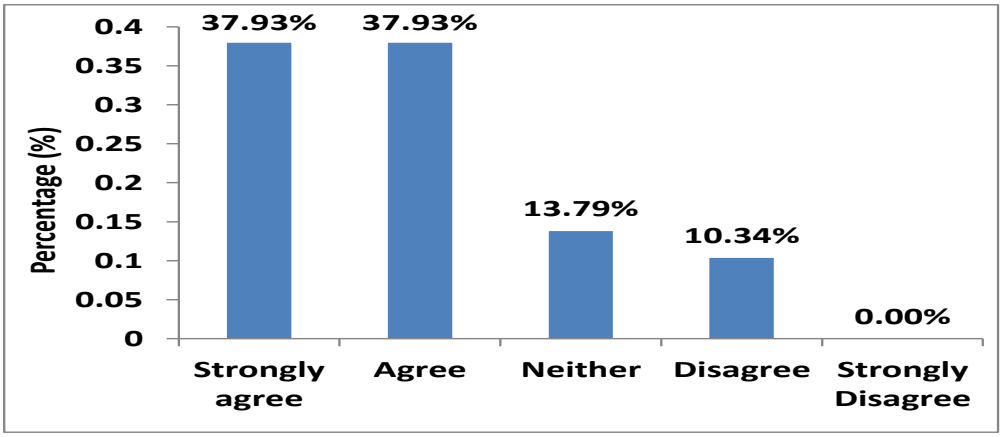

Figure 12. Data Representing The Importance Of Green Supply Chain With Respect To The Lack Of Knowledge And Awareness Of Green Practices

External Barriers

The external barriers are lack of green professionals and green suppliers. There is an acceptance of the shortage of green professionals and suppliers in the industry. Figure 13 and Figure 14 show majority of the respondents about 75.87% and 68.97% agreed to it respectively.

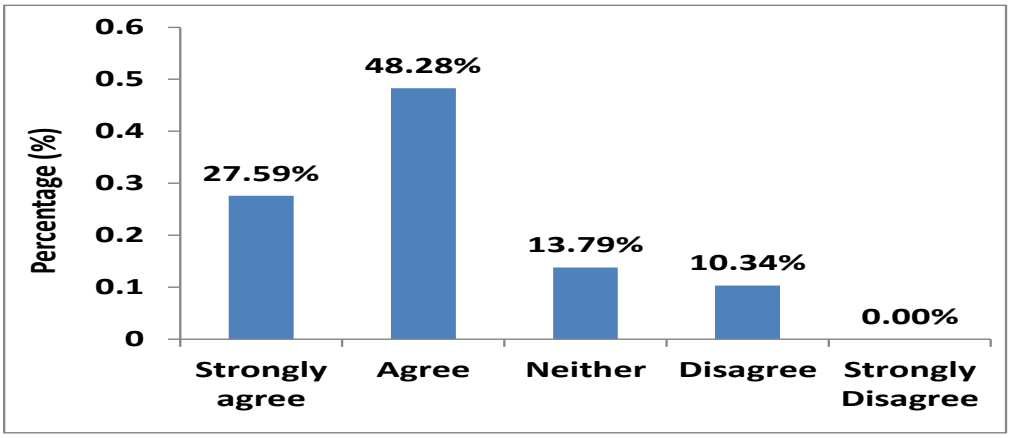

Figure 13. Data Representing The Importance Of Green Supply Chain With Respect To The Shortage Of Green Professionals

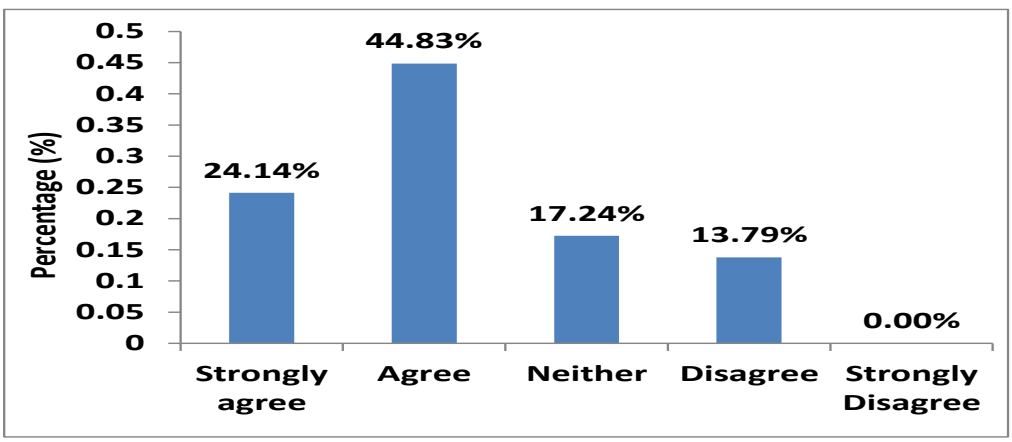

Figure 14. Data Representing The Importance Of Green Supply Chain With Respect To The Shortage Of Green Suppliers

CONCLUSION

This research has discussed the internal and external drivers and barriers related to the green supply chain strategies. The obtained result shows that majority of the participant agreed with the internal drivers such as green supply chain important to company side, build good reputation, reduce cost and energy, benefit in entering foreign markets, while external drivers are government regulations, pressure from stakeholders, competitors and end-consumers. Besides that, majority of the participants also agreed with the internal barriers such as high cost of implementation and lack of knowledge and awareness of green practice, while external barriers are shortage of green professional's acts, shortage of green suppliers, tight and inflexible stakeholders as well as lack of collaboration from stakeholders. This study recommends to increases the number of participants in future study especially in numerical and statistical analysis in order to have a clear insight of the study.

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