

Sustainability and the Competitive Advantage: The Perspective of the Logistics Industry

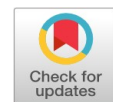
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Abstract: This research aims to fill the void that relates to sustaining competitive advantage in the academic world. Some research has shown that sustainable actions improve consumers' trust and reputation that will help companies sustain their competitive advantage. Unfortunately, sustainability research in sustaining competitive advantage only received limited attention. The authors hope that this paper could fill the gap in that matter. Thus, the research question of this paper would be how does sustainability matter in the logistics industry to sustain competitive advantage? Two theories will be used to discuss this matter, which is Research-Based View (RBV) and Dynamic Capabilities (DC) theory. Data and literature, which include government report, company report, and research papers, were collected through several search engines, such as SmartCat Rug, Google Scholar, LibGuides University of Groningen, EBSCO, Science Direct, and Emerald Insight. The inductive approach is used in this paper. The result showed that companies who adopt sustainable practices within their operations could sustain their competitive advantage due to the improvement of their customers satisfaction and the company's Environmental, Social, and Governance (ESG) factors ratings. Also, the use of DC theory complements the RBV in the sense that resources should be maintained and developed rather than taken for granted. It is relevant to discuss this issue since the demand for logistics is increasing over time, and the activities will impact the environment to a greater extent.

Keywords: Sustainability, Sustained competitive advantage, Freight transport, Logistics industry, Sustainable Supply Chain Management (SSCM)

Received: 23 June 2019 / Accepted: 28 August 2019 / Published: 29 October 2019



INTRODUCTION

The globalization era has changed the way citizens of a country live. There is almost no significant barrier between countries. Transactions happened practically freely in the global market that involves countries around the globe. According to the 2018 Sustainable Freight Transport in Support of the 2030 Agenda for Sustainable Development, published by United Nations Conference on Trade and Development (UNCTAD) (United Nations, 2018), demand for maritime transport is a derived demand that moves alongside with the growing world population, consumption needs, industrial activity, urbanization, trade and economic growth. As those factors are increasing, the need for fast and reliable goods distribution is becoming important. Thus, the demand for logistics or freight transportation is growing as well.

According to the World Bank (n.d.) database, the world's merchandise exports have incremental growth since 1960. The value of it was first recorded around 122 billion US dollars in 1960, and it grows to 19.6 trillion US dollars in 2018.

The traditional barrier between freight and passenger transportation is also diminishing, one of which is because of the appearance of mobile apps and the internet that simplify things to a large degree (Speranza, 2018). This condition makes the industry grow more quickly and makes it more desirable, especially for companies and countries that mainly do the export and import activity.

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The increase in the need for logistics all around the world increases the frequency of transportation, in this case, the transportation of goods. This will result in the heightened of vessel or plane usage since these are the conventional ways of transporting goods. The escalation towards the need of the logistics industry, of course, is not without consequences. In 2012, total shipping emissions reached approximately 938 million tons of carbon dioxide, while international shipping emissions accounted for 5% of this total, or approximately 2.2% of total global carbon dioxide (United Nations, 2018). According to the European Environment Agency (2018), vessels and planes will be expected to contribute to 40% of global carbon dioxide emissions by 2050 if mitigation action is not taken.

Sustainability then should be taken by companies who work on the supply chain field. It is crucial for us to move towards a more sustainable lifestyle to preserve what Mother Nature has given to us and make any resources that we have still available for some more years ahead. Also, adopting sustainable practices will increase customer satisfaction which will lead to an increase in the profits of the firm (Lintukangas, Hallikas, & Kahkonen, 2013). And many leading companies pursue sustainability because it has a financial impact on the company (Bonini & Swartz, 2014). However, there is not much literature that specifically discusses sustainable freight transport will lead to sustaining competitive advantage. Hopefully, this paper will be able to fill the void that relates to sustaining competitive advantage in the academia world.

Two theories will be incorporated to analyze the sustainability of freight transportation in the logistics industry, which are RBV theory and DC theory. RBV discusses the inside-out approach that explains a firm's internal resources as a factor to gain competitive advantages while DC points out that capabilities should be developed instead of taken as given (Marques Morgado, 2014). These theories will be brought together to complement each other with the hope of giving some new perspectives of understanding the firm's competitive advantage.

After considering the above explanation, the author came up with one broad research question:

How does sustainability matter to the transportation of freight in the logistics industry to sustain a competitive advantage?

To answer that it is important to look further into the related factors and theories that formulate this research that will be discussed in the later chapters of this paper. Additionally, there will be two sub-questions in this paper that the author wants to address:

1. In what way does a company determine the market needs for SSCM appropriately?
2. How does a company ensure that SSCM will generate the expected outcomes?

The result of this paper will assist business players, especially those in the logistics industry, to sustain their competitive advantage through sustainable practices incorporated within the company. Sustainable practices, in fact, might help business players to reap more benefits, such as improved company's reputation, customer satisfaction, and many more.

Sustainable topic in the logistics industry is very substantial to our condition right now as barriers between countries are getting thinner, and it is also supported by industry 4.0 (Hofmann & Rusch, 2017). This will increase the supply chain demand and eventually will bring impacts on the environment. Sustainable actions need to intervene to balance all the aspects, such as economy, environment, and society.

LITERATURE REVIEW

Industry overview

Logistics is considered to be growing in this digitalization era, mainly because of a trade agreement between nations, and it leads to fewer barriers to overcome for firms or countries. It boosts the performance of the global supply chain and increases the frequency of transporting goods globally.

The development of megacities a city with over than 10 million residents in it also supports the growth of the logistics industry in overall. It is because megacities will create their own economies of scale, the cities will develop its unique ecosystem, and transport demands will be specific to the needs and capabilities of the cities (Transport Intelligence, 2019).

According to the World Bank (n.d.) database, the world's merchandise exports are showing a significant growth since 1960. The value shows 122 billion US dollars in 1960, and it eventually grows to

19.6 trillion US dollars. Even though the value shows a significant improvement from 1960, that does not mean that it goes smoothly along the way. In fact, the World Bank data shows volatility between 2008 and 2016. It is possible because the world was recovering from the financial crisis in 2008.

In the logistics industry, goods are conventionally transported by three modes; air, road, and sea freight. Road freight is used the most to transport goods around which is accounted for almost one-third of global logistics spend or 1.8 billion US dollars, while air and sea freight is accounted only for 4% of total global logistics spend (Transport Intelligence, 2019). However, since China is developing access of connecting Asia and Europe through the project called the Belt and Road Initiatives (BRI) or One Belt One Road (OBOR), sea trade might be threatened with the appearance of that road access in the future. Rail freight might be the most popular modes of transportation when the project is finished. Even though rail transportation is considered as an old fashion for moving goods, it actually has massive impacts on improving efficiency and effectiveness (Egger & Larch, 2008). For instance, socks manufacturer in the inland Chinese city of Yiwu could transport their products from Yiwu to London within 14 days only, which it is 31 days faster than using ocean transportation (Wheeler, 2018). Compared to air shipping, the intercontinental railways might reduce the transportation costs by 40%, and it is 50% more productive in promoting international trade than road freights (Egger & Larch, 2008).

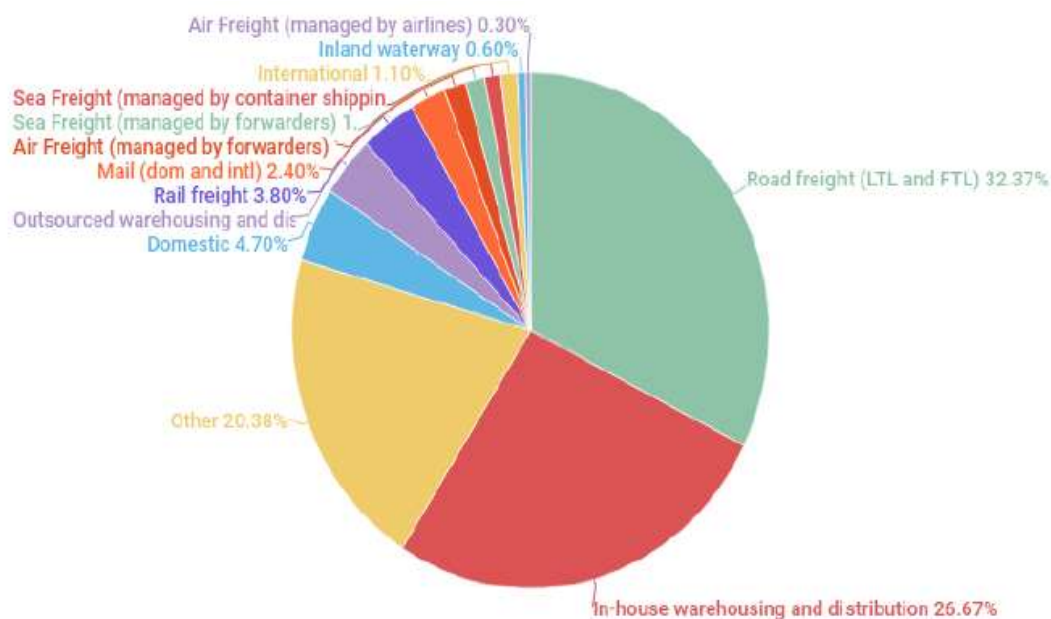


Figure 1. Value chain analysis model. Source: Michael Porter's Value Chain Model

As for 2018, Asia Pacific has the biggest market size in terms of the global logistics market, with a total spend of more than 2.4 trillion Euros or nearly 45% of global logistics spend. North America market is in the second place with total spending of 1.4 trillion Euros or 25.1% of the global logistics spend and European market on third place with 0.9 trillion Euros of total spending (Transport Intelligence, 2019). The presence of BRI will also help to improve the regional trade. Since the location of BRI is centered on Asia, it is expected to boost the trade in the region.

Technological advancements play an important role as well in shaping the logistics industry in this 21st century. As we are now entering the industry 4.0 and Internet of Things (IoT), those technologies bring innovations and ease come into practice. Industry 4.0 itself is described as a shift towards a more decentralized and self-regulating approach of value creation with the use of IoT, cloud-computing based, and smart factories to help companies meet future production (Hofmann & Rusch, 2017; Phungphol & Pooripakdee, 2018). There are five major forces considered in transforming transportation and logistics in the near future. They are digitalization, shifts in international trade, software-driven process changes, changes in markets domestic commerce, and machine-driven process changes (Piyachat, 2017; PricewaterhouseCooper, 2019).

All in all, there is a huge potential that the logistics industry has. It could grow bigger and more advance as the digitalization era is started to begin as well. Since the industry will possess higher growth in the near future and the logistics activities might affect people's lives as well, the next chapter will explain the impact it has on the environment and society.

Environmental impacts of logistics activities

There are many environmental aspects that are affected by logistics activities all over the world, for instance, air pollution, water pollution, climate change, and noise pollution. According to [Organisation for Economic Co-operation and Development \(1997\)](#), environmental impact is considered to have three important aspects: (1) environmental stressors, such as pollutants, noise, or exotic species; (2) the total amount of stress placed on the environment which is determined by the quantity of goods and the distance they are transported; (3) the physical impact because of the stress placed on the environment. Those aspects are related to what the logistics companies produce these days to deliver the goods to their customer. As logistics and transportation are crucial for global supply chain today, the demand for it increases as well. The frequent use of vessels, trucks, and aeroplanes contributes to impacting the environment.

Another reason for the environmental effects of trade to happen is because of the expanding role of companies for gaining market growth and economies of scale ([Stevens, 1993](#)). This condition encourages companies to trade more frequent as they need to capture the market growth, and it brings adverse effects to the environment. The more companies try to capture the market growth and expand, the more the scarce natural resources to be depleted and degraded due to the failures to internalize environmental costs ([Stevens, 1993](#)).

In terms of emission, different modes of transportations have the same effects to the local pollution and global climate change as they contribute through emissions of carbon dioxide, methane, Nitrous oxide (N₂O), and water vapour discharged by airplanes; these gases absorb radiation in the stratosphere, and it may raise the temperature of the atmosphere ([Organisation for Economic Co-operation and Development, 1997](#)). Each gas also has its own life in the atmosphere before being absorbed by biological and chemical processes. For example, CO₂ ranges between 5 and 200 years, methane stays on the atmosphere around 12 years, and 114 years for N₂O ([Brief, 2012](#)).

The air quality is altered negatively as those gases stay longer in the atmosphere. Highway vehicles, marine engines, locomotives and aircraft are the source for the same gases that are explained above, and it is associated with cancer, cardiovascular, respiratory and neurological diseases ([Raheja, Guo, Phyo, Lee, & Zhong, 2017](#); [Rodrigue, Comtois, & Slack, 2016](#)). In some cases, chemicals are combining themselves through a chain reaction and form into new chemicals that could be harmful. For example, chemical reactions lead to the formation of photochemical smog that becomes a problem in cities such as Athens and Los Angeles ([Organisation for Economic Co-operation and Development, 1997](#)).

As the need for shipping in the logistics industry is increasing, water quality is also affected by the activities. Dredging, waste, ballast waters and oil spills are types of activities that affect the water the most. Those activities have potentials to contaminate the water since each activity involves chemical compounds and high-level bacteria that can be hazardous for public health and disrupt the marine ecosystem ([Rodrigue et al., 2016](#)).

Increased activity in the logistics industry entails greater energy consumption. Energy demand from international shipping increased at an annual rate of 1.6 per cent between 2000-2014 ([United Nations, 2018](#)). Also, shipping used approximately 300 million tons of bunker fuel per year in 2012, in which international shipping accounted for 86 per cent of this total. The bunker fuels itself have high carbon intensity and are highly polluting, which could bring adverse impact to the environment ([United Nations, 2018](#)).

The need for sustainable actions then is increasing due to the high demand for logistics activities and the environmental damage that will follow because of it. Those who are operating within the logistics area should take sustainable actions to diminish and prevent more chaotic damage. The following part will explain how sustainable supply chain can help sustain the environment and the competitive advantages.

SSCM

As the environmental effects of logistical activities have been pointed out earlier in this paper, sustainable development should be incorporated within the supply chain process of logistics companies. Besides, using greener energy and renewable sources is in accordance with the United Nations Sustainable Development Goals ([United Nations Development Programme, n.d.](#)). By definition, sustainable development means a development that meets the needs of the present without compromising the ability of future generations to meet their own needs ([World Commission for Environment and Development, 1987](#)). Rather than just focusing on a single aspect of either social, economic, or environment only, the concept of sustainable development is about three dimensions of the triple Bottom Line (3BL) which to achieve social, economic, and environmental sustainability altogether ([Touboulic & Walker, 2015](#); [Wichaisri & Sopadang, 2013](#)). The idea behind the 3BL paradigm is that a firm's success can and should be measured not only by the traditional financial bottom line but also by its social/ethical and environmental performance ([Markley & Davis, 2007](#)).

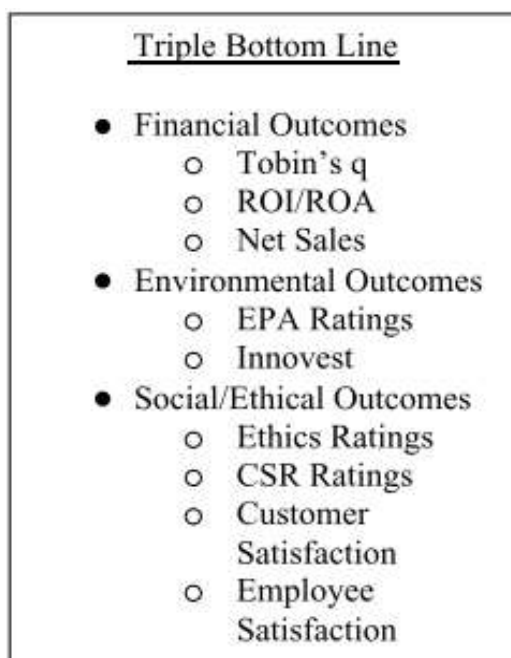


Figure 2. Triple bottom line aspects ([Markley & Davis, 2007](#))

According to [Seuring and Muller \(2008\)](#), SSCM is the management of material, information and capital flows as well as cooperation among companies along the supply chain while taking goals from all three dimensions of sustainable development, i.e., economic, environmental and social, into account which are derived from customer and stakeholder requirements. The way companies adopted SSCM is not entirely coming from their consciousness, instead, there are internal and external pressures or factors that influence companies to take up SSCM. However, it is actually the external factors, such as government regulations, NGOs, or market condition which have more impact on the development of sustainable supply management as compared to the internal factors, even though both factors have a positive impact on sustainable supply management ([Ageron, Gunasekaran, & Spalanzani, 2012](#)).

The external factors encourage companies to implement SSCM in their line of work. It is because companies have the need to increase their external legitimization to fit some socially constructed system of norms, values, beliefs and definitions ([Darnall, Jolley, & Handfield, 2007](#)). As most businesses and companies are participating in creating environmental damage, going beyond the minimum regulations or addressing customers expectation through sustainability can actually improve their environmental performance, which then will improve their competitiveness as well ([Ageron et al., 2012](#)).

External factors can impact companies or organizations in both ways, either positively or negatively. Regulations as an external factor could impact companies negatively by imposing penalties or fines. While

environmental programs, grants, partnerships, etc., could bring positive impacts and encourage companies to take SSCM, providing them with benefits of undertaking pro-active environmental strategies (Ageron et al., 2012). This could also lead to a sustainable competitive advantage if the regulation is modelled after a company's existing production and supply chain processes (Ageron et al., 2012).

Another external factor that can influence companies is the market condition. As customers are becoming more aware to their environmental impact and willing to pay more for green or sustainable products, this would force companies to adopt SSCM (Ageron et al., 2012). In fact, customer awareness of sustainable product is actually increasing. A survey was conducted in 2014 by West Monroe Partners among European customers. Of 1,100 respondents being surveyed, more than half (54%) are willing to pay 5% extra for more sustainable products, and 76% would wait at least one extra day for more greener delivery. This result shows that actually, the demand for greener products and sustainable supply chain is increasing. Hence, companies and managers have to be prepared to meet this future demand.

Putting SSCM into practice is not an easy task. There are barriers to implementing and applying SSCM. Some of the major barriers are financial costs, green investments, ROI, top management commitment, the organizational culture of suppliers firms, production capacity, human resources, etc. (Ageron et al., 2012; Lintukangas et al., 2013, 2013). Moreover, the applicability of SSCM seems to be difficult for SMEs than for large firms due to the resources and financial condition that each firm has (Ageron et al., 2012).

Consequently, implementing SSCM would bring benefits for firms too. Some benefits that companies will get by putting SSCM into practice are customer satisfaction, suppliers innovation capacity, improved companies reputation, and customers trust (Ageron et al., 2012).

All in all, to reap the benefits out of SCM and improve customer satisfaction companies need to engage in sustainable supply management as the trend towards sustainable lifestyle is growing and it can be the source of efficient use of resources and environmental capabilities (Ageron et al., 2012).

RBV

RBV is a theory that focuses on the Strategic Human Resource Management (SHRM) principle, which states that the variety of resources in an organization creates an organization's distinctive nature and could be used as a source of competitive advantage (Assensoh-Kodua, 2019), or in other words, resources will determine the firm's position. An organization needs to concentrate on its internal resources and capabilities as their main source to survive and gain a competitive advantage in facing the growing commotion in the external business environment (Assensoh-Kodua, 2019). Resources here could be interpreted as strengths or weaknesses of companies, and the resources are either tangible or intangible (Wernerfelt, 1984).

In order for organizations or firms to create or sustain competitive advantage the resources need to have these four attributes: (1) Valuable, meaning that it exploits opportunities and/or neutralizes threats in a firm's environment, (2) Rare, meaning it must be unique among a firm's current and potential competitors, (3) Inimitable, meaning it should not be easy to duplicate, (4) Non-substitutable (Barney, 1991). However, the presence of those four attributes only is actually not sufficient. Each resource needs to exhibit each of the four attributes to be a possible source of sustainable competitive advantage (Marques Morgado, 2014).

In this paper, the RBV theory is used as guidance to determine whether the firm's internal resources and capabilities are sufficient and decent enough to actualize sustainable practices. However, RBV theory sees the firm's internal resources as something that is given, whereas businesses are operating in a dynamic and flexible environment. Therefore, this theory needs another theory to complement it. The next chapter will discuss the DC theory.

DC theory

The second theoretical framework that will be used in this paper is DC theory. DC theory was voiced out by Teece, Pisano, and Shuen (1997). DC mainly discusses how firm-specific capabilities can be built and redeployed (Marques Morgado, 2014). Also, according to Teece et al. (1997), winning firms in

the global marketplace are the ones who can demonstrate timely responsiveness, flexibility in product innovation, and capability to effectively coordinate and redeploy internal and external competencies. The term dynamic in DC also represents flexibility approach in this theory since environment, especially the business environment, is changing frequently and rapidly, which sometimes difficult to predict (Teece et al., 1997).

The way DC theory is used in the business world is to determine the competitive advantage of a firm from their specific resources and capabilities. Even though DC and RBV theories have the same function in determining a firm's competitive advantage, they actually have a substantive difference. RBV sees a firm's competitive advantage only from a firm's internal resources, and it sees the resources as something that is given rather than something that is developed (Marques Morgado, 2014). On the other hand, DC theory sees a firm's resources as something that needs to be developed and adjusted in accordance with the dynamic environment outside (Teece et al., 1997).

The concept of DC theory is used to explain long-term competitive advantage as it uses a dynamic view (Beske, 2012). A volatile or changing environment is not necessarily required for DC to be successful; instead, it can be useful in all market environment (Beske, 2012). Therefore, this DC theory complements RBV theory by using a more dynamic view towards the firm's internal resources, and instead of taking the resources and capabilities as granted, firms can develop and reconfigure their resources in response to the rapidly changing environment.

METHODOLOGY

This paper is written under the philosophy of an interpretivist as this paper is researching on the social sciences topic. The concern of social sciences is to explore and understand the social world using the understanding of the participants and the researchers. Thus, the interpretation of this paper is based on moral freedom and decision-making, which involve less certainty (Snape & Spencer, 2003).

Also, the inductive approach is used in this paper since the generation of new concepts and conclusion will be based on the reports and previous research on a similar topic. The inductive approach suits the nature of social science research that needs a cause-effect link to be made between particular variables without an understanding of the way in which humans interpreted their social world (Saunders, Lewis, & Thornhill, 2019). The deductive approach will be too rigid for social sciences research as it does not allow alternative explanations of what is going on (Saunders et al., 2019).

Archival research then would be incorporated by the researcher considering that this study is based on a literature review. Relevant literature was gathered to gain access to past papers and to help in drawing the findings and conclusion.

This paper will observe the specific phenomenon, which is about sustainable freight transport in the logistics industry, at a certain point in time without looking at the trend that might occur under a specific time frame. Therefore, this paper will make use of a cross-sectional timeline.

Data and literature, which include government report, company report, and research papers, were collected through several search engines, such as SmartCat Rug, Google Scholar, LibGuides University of Groningen, EBSCO, Science Direct, and Emerald Insight.

The keywords that were used to look for relevant literature are sustainable supply chain management, sustainable practices in the logistics industry, RBV, dynamic capabilities, environmental impact, and many more. More than 20 research papers and reports were collected by the researcher to structure this paper.

Ultimately, the purpose of this paper is to identify the effect of sustainable freight transport in the logistics industry to sustain a competitive advantage. The following chapter will discuss the findings of this paper.

ANALYSIS

Shifting from conventional practices towards more sustainable practices for a firm is usually not done without pressures. The internal and external pressures are the factors that force firms to adopt and develop sustainable supply chain management (Ageron et al., 2012). By developing sustainable supply

chain management a firm hopes to reap more benefit out of it.

However, it is not easy to develop a product or a solution without addressing the need of the customer accurately. Hence, the author raises a question in regards to this matter:

- In what way does a company determine the market needs for SSCM appropriately?

Understanding the end-customers needs and the transparency of the business process could speed up the delivery of customer-specific tailored solutions (Lintukangas et al., 2013). Customer participation then will be considered important to develop a better solution and better sustainable supply chain management.

According to Bitner, Faranda, Hubbert, and Zeithaml (1997), there are three levels of customer participation which are classified as low (customer presence), moderate (customer inputs), and high (customer co-creation). From those three classifications, customer inputs will be used here since customer inputs are required for service creation (Bitner et al., 1997), and logistics activities mostly are in the form of service. These inputs could be information, effort, or materials to support the service creation and also used to address the customer needs precisely.

The customer then would have more active roles in determining the services that are provided by companies and companies could reflect from this input to deliver better services for their customers. Instead of being passive and being controlled by firms, customers are fundamentally changing the dynamics of the marketplace, and they are playing an active role in creating and competing for value (Prahalad & Ramaswamy, 2000). Therefore, we hypothesized:

H1: A firm will develop better SSCM when the customer is actively giving input to the firm during the development of sustainable supply chain management.

<i>Low:</i> Customer presence required during service delivery	<i>Moderate:</i> Customer inputs required for service creation	<i>High:</i> Customer co-creates the service product
Products are standardized	Client inputs customize a standard service	Active client participation guides the customized service
Service is provided regardless of any individual purchase	Provision of service requires customer purchase	Service cannot be created apart from the customer's purchase active participation
Payment may be the only required customer input	Customer inputs (information, materials) are necessary for an adequate outcome, but the service firm provides the service	Customer inputs are mandatory and co-create the outcome
<i>Examples:</i>		
<i>End consumer</i>		
Airline travel	Hair cut	Marriage counselling
Motel stay	Annual physical exam	Personal training
Fast-food restaurant	Full service restaurant	Weight-reduction programme
<i>Business-to-business customer</i>		
Uniform cleaning service	Agency-created advertising campaign	Management consulting
Pest control	Payroll service	Executive management seminar
Interior greenery maintenance service	Independent freight transportation	Install wide area network (WAN)

Source: Adapted from Hubbert (1995)

Figure 3. Levels of customer participation across different services (Bitner et al., 1997)

A good product or a good solution cannot be developed only through the customer's active participation. There needs to be a mechanism to keep the product development process going as expected and to be able to generate the best result. Therefore, the author raises another question:

- How does a company ensure that SSCM will generate the expected outcomes?

A project management audit could be one of the tools to keep a project or product development to stay in line with the project goals.

Project management audit is an auditing tool that takes into account all elements of a project, such as objectives, plans, resources, schedules, budgets, and so forth (Ruskin & Estes, 1984). It does not only concern with the financial records; rather, it concerns with all aspects of the project.

Auditing is necessary for a firm with the purpose of recognizing potential failure that might occur in a project and find corrective actions to rectify the failure. Also, auditing is performed to provide the true status of a project to the management team and investors or clients (Ruskin & Estes, 1984). Thus, we expect that:

H2: SSCM delivers better sustainable products and services when a firm reinforces project auditing within the project.

Not only auditing but controlling also plays an important role to keep a project go accordingly with the predetermined project goals. The difference between auditing and controlling is located in its execution time. Auditing is conducted only at a specific time, usually at the end of the project while controlling is conducted in the middle of the process of a project to check continuously the progress.

Controlling is crucial for firms with the reason that all employees would not always be willing to act on behalf of the company's interest. If all employees were willing to act on the company's best interest, then controlling might not be needed (Merchant, 1982). Also, controlling becomes important since people as a human being have a number of innate perceptual and cognitive biases which make us unable to process new information optimally and to make consistent decisions (Merchant, 1982).

If the firm did not prevent for this thing to happen and nobody takes any actions towards this matter, then it would lead to major repercussion caused by the possible occurrence of undesirable behavior (Merchant, 1982). Hence, we hypothesized:

H3: SSCM delivers better sustainable products and services when a firm reinforces controlling within the project.

Other than delivering sustainable products and services, the application of SSCM could bring positive impacts to the company. Companies that apply SSCM within its operations will receive more benefits than the companies who did not. The benefits are an increase in consumer's trust, customer satisfaction, and the company's reputation (Ageron et al., 2012). This argument is in line with Markley and Davis (2007) 3BL concept in which customer satisfaction is the measure of the company's social performance.

Moreover, as companies reinforce project auditing and controlling within the implementation phase of a project, it will help companies to recognize potential failures faster and ensure that the employees are working on the interest of the company to meet the customer needs precisely. Under this condition, it will further improve customer satisfaction. Therefore, we hypothesize that:

H4: SSCM will increase customer satisfaction further when a firm reinforces project auditing and controlling within the project.

Implementing SSCM within the company also improve the company's environmental ratings in which it is used to assess the company's environmental performance. The need to assess the company's environmental performance is also in line with Markley and Davis (2007) 3BL concept.

In effect, companies with high ratings for ESG factors have a lower cost of debt and equity (Bonini & Swartz, 2014). Also, companies with high ESG ratings will outperform the market in the medium (3 to 5 years) and long (5 to 10 years) run (Bonini & Swartz, 2014). This condition will generate a positive return to those who apply SSCM.

The reinforcement of project auditing and controlling, indeed, has the same purpose on the company's ESG ratings as it has on customer satisfaction. Both are needed to control the internal environment of a company to act in the same interest as the company. Since the company has control over its internal environment, the company will be able to realize the expected outcomes of implementing SSCM and, in turn, will generate high ESG ratings for the company. Hence, we expect that:

H5: SSCM will improve a firm’s ESG ratings better when a firm reinforces project auditing and controlling within the project.

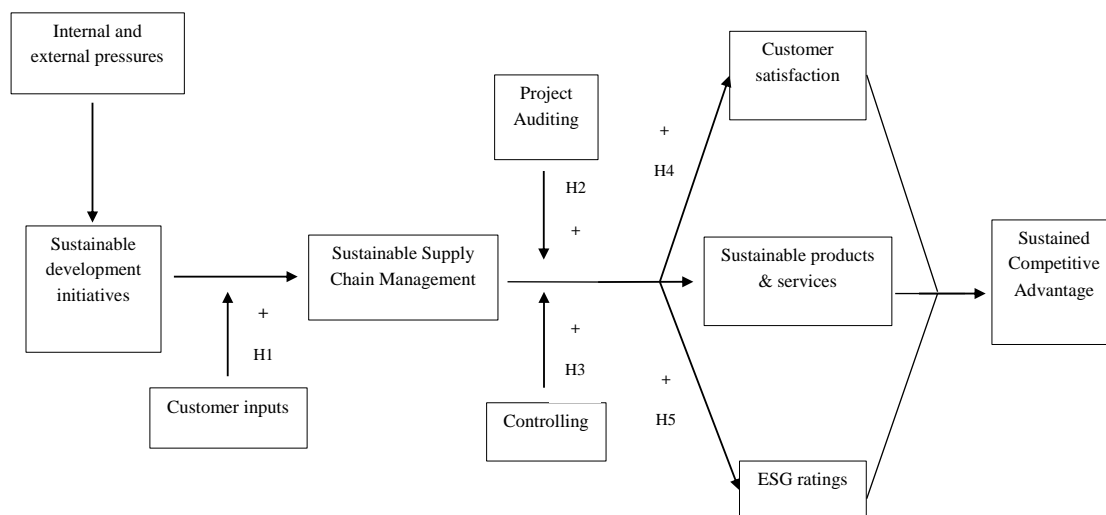


Figure 4. The conceptual model

CONCLUSION

In this paper, the author is intended to answer a question on whether sustainability matters for sustaining competitive advantage for companies in the logistics industry. Since the need for global trading increase due to globalization and technology advancement, flexible and swift logistical supports are needed to transport the goods in a timely manner. However, the frequent use and the rapid movement of logistics activities will have major impacts on the environment.

As the trend is shifting towards a sustainable lifestyle and customers are more aware of it, a company that offers sustainable products and services are preferable by customers.

Nonetheless, addressing the market needs for sustainability is not as easy as it seems. Companies need to engage with the customers to know their need accurately. Therefore, customer inputs are crucial for companies to deliver better SSCM.

Offering sustainable products and services through SSCM will further improve customer satisfaction and the company’s ESG ratings since it is more convenient to do business with a company that will not sacrifice the future for the present needs. Providing a choice to delay the shipment for one extra day or charging a higher price for less sustainable shipment could be the options to encourage people to adopt a sustainable practice. These conditions could be the source for sustaining competitive advantage for companies since the improvement of customer satisfaction, ESG ratings, and the company’s reputation will strengthen the company’s position in the market.

Furthermore, project auditing and controlling need to be enforced when implementing SSCM to have a better control in actualizing the expected benefits and results. Also since the employees would not always act in the best interest of the company, it is better to recognize failures and employees undesirable behavior early in the development process so that there will be enough time to fix it.

Although sustainable practices bring some benefits to the company, implementing it would not be easy. There are barriers to it, such as a company’s financial reserve, regulations, and the measurement and assessment system. Therefore, once companies have the resources for SSCM, they need to manage and maintain it well.

From the perspective of RBV, internal resources are determinant to determine whether a company could create competitive advantages or not. Each resource should exhibit the four criteria in order to create competitive advantage. However, RBV sees the company’s internal resources as something that is given. This condition, then, would be complemented by DC theory which takes a dynamic approach towards the environment where the company operates. Not only that the resources should exhibit the

four criteria, companies should also treat their internal resources dynamically as the environment keeps changing and is not static.

LIMITATIONS

Nonetheless, this study has some limitations to it. This study does not specify whether SSCM is for big companies or SMEs since there would be differences in how they manage and utilize their resources. The company's exposure to the international market is not discussed clearly. There could be possibilities that MNCs or international companies have more obligations in enforcing SSCM, considering the market scope that they enjoy.

Also, this paper does not take into account other activities that might exist within the logistics industry. Instead, this paper only discusses mainly on the transportation of freight, either by planes, ships, or trucks.

FUTURE RESEARCH

Future research, then, is required to develop a more comprehensive model for SSCM with the help of empirical data. Empirical research is important to gain more insights from the actual experience rather than just from the theories or past papers. Hypotheses that are generated in this paper could also be proven by using empirical data collected from companies. So, the study on SSCM would be more legitimate and valid with the support of real data instead of just with theories and arguments.

Using a more holistic view in assessing the industry would also help strengthen the study in this particular topic. Taking into account all activities within the industry, specifying the companies need for adopting SSCM, and assessing the company's exposure in the global market are suggestions that could be done in the future. By analyzing the industry thoroughly, the conclusion that is drawn would be more complete and unambiguous.

REFLECTION

Doing research on this paper has broadened my horizon in seeing things around. I did not realize, at first, that logistics activities have that big of an impact on the environment. It could be said that logistics is burning the planet, considering the need for logistics has increased significantly in the past few years. After knowing all of the facts about the impact of logistics on the environment, I feel the urge to protect the environment, and it should start now. Since it is us who started all of these things, then it should also be us the one that will protect the earth and ensure the sustainability of it.

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