

Green Supply Chain Initiatives and Sustainable Performance: A Case Study of Darlings' Milktea Shop in Iloilo

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ABSTRACT

This paper determines the green supply chain initiatives being implemented by Darlings' Milk Tea Shop and its influence on the sustainable performance of its business. Data were collected, transcribed, coded, and categorized to capture emerging themes. The research findings showed that eco-design and reverse logistic were the two highlighted GSCM initiatives that are being implemented by the business while there are still many factors in green purchasing that need to be considered. The findings of the study, however, are not universally applicable across different sectors. Hence, future research in multiple case study analysis and in different industrial contexts is recommended to provide generalization of the findings.

Keywords: green supply chain management, green supply chain initiatives, sustainable performance

INTRODUCTION

Over the past decades, environmental problems have attracted enormous attention and public concern. Many companies are seeking more innovative methods on promoting eco-friendly environments by integrating green practices in their business functions. Green Supply Chain Management is considered as an environmental innovation. Chin et al. (2015) mentioned that companies that implement GSCM practices benefitted from cost savings, better public image and decreased environmental liability. Many authors from other countries have addressed the importance of Green Supply Chain in achieving sustainable development (Green et al., 2012; Sarkis et al., 2011). However in the Philippines, there are only few existing literature on Green Supply Chain Management and the number of studies examining the effects of green supply chain initiatives or practices on the three dimensions of sustainability i.e. economic, social and environmental is very limited. Moreover, there are only a few businesses in the Philippines who are practicing GSCM due to lack of concern and awareness to the environment (Geng et al., 2017). This is the gap that

the researcher wants to address given that there are many local businesses in the province of Iloilo.

Objectives of the Study

The general objective of this study is to determine the current green supply chain initiatives being implemented by Darlings' Milk Tea Shop and its influence on the sustainable performance of its business.

Theoretical Framework

This study was anchored on the 2030 Agenda for Sustainable Development which states that the business sector is an essential partner in achieving the Sustainable Development Goals (SDGs). The SDGs serve as guidelines for businesses to assess and manage social, economic, and environmental risk, while contributing to bettering their reputation, image and their strategic position in the world's market (Khan, 2018). Moreover, green supply chain practices are a constitutive part of sustainability (Sezen et al., 2019).

METHODOLOGY

Research Design

The qualitative research design was used in this study. It involves the studied use and collection of empirical materials such as case study, personal experience, interview, observational, historical, interactional and visual texts that describe routine and problematic moments and meanings in individuals' lives (Denzin & Lincoln, 2005). According to Stake (1955), case study is a strategy of inquiry in which the researcher explores in-depth a program, event, activity, process or one or more individuals.

Research Participants

The participants in the study were the two (2) owners of Darlings' Milk Tea Shop. Interviewing the owners allows the researcher to identify, as well as, solicit knowledge from those who Patton (2002) calls, "key informants". Key informants are people who are knowledgeable about the inquiry setting and articulate about their knowledge, and whose insights can be helpful in assisting an observer in understanding events that have happened and reasons why those events happened. Moreover, in order to achieve a rich descriptive for the case (Esterberg, 2002; Merriam, 2002), it was very important that the

researcher selected the owners of Darling's Milk Tea Shop to acquire data that are most relevant to the study.

Data Gathering Procedure

Interview was deemed the most appropriate means for data capture. The in-person interview was conducted with the owners of Darlings' Milktea shop. The interviewer used open-ended questions for a period of 20-30 minutes. A recording device was used with participant consent during the actual interview. Stern and Porr (2011) identified a need to record interviews to ensure all information provided by the participant has been heard. Recording interviews is an effective method of capturing interview data (Yin, 2014). During the interview the researchers took notes while they listened to the participants to track key points and highlight ideas of particular interest or importance. Additionally, coding was done on the notes taken during the interview (Scott, 2011). The audio-recording was transcribed into written form for data analysis.

Ethical Considerations

The researchers sought permission from the owners of Darlings' Milk Tea Shop. The

participants were informed as to the type of the research, the objective and the significance of the study, as well as the structure of the interview. Furthermore, the said participants were adequately briefed as to their right to dismiss their participation anytime they wanted. Respect for their privacy and privilege not to divulge any critical information about their business operations was respected throughout the interview and were assured that information revealed are to be kept with strictest confidentiality and will be used for academic purposes only.

Data Processing Procedure

The method of analyzing data

requires the researcher to look for patterns in the data (Stake, 1995; Yin, 2014) as well as similarities and differences. The verbal responses of the participants were transcribed, coded, and categorized to capture emerging themes associated with green supply chain initiatives and sustainable performance. Factors pertinent to Green Supply Chain Management initiatives identified by Eltayeb and Zailani (2009), as well as, the performance measures of Cankaya and Sezen (2018) guided the participants in the development of the research questionnaire.

RESULTS

The themes included: 1) eco-design; 2) green purchasing; and 3) reverse logistics. Sustainable performance was developed based on the following themes: 1) environmental performance; 2) social performance; and 3) economic performance.

Eco-design

The participants explained that *"Bamboo cups are reusable. It's all-natural and we have ways on how to maintain these bamboo cups so that*

we could reuse it for drinks". Darlings' Milk Tea Shop produces products and materials that have recyclable contents and are free from hazardous substances. Based on controlled testing and sampling by the China Industry Testing Center, bamboo produced an astonishing result which reduces 99% bacteria over a 24-hour period that makes bamboo cups possess antibacterial properties. Hence, it does not need any toxic chemical treatments. According to Elivia James, harvesting bamboo does

not require pesticides and chemicals. Thus, its cultivation is really natural. The statement of the interviewee about the bamboo cup was validated by the researcher through direct observations of the cup itself. The physical aspect can be described as all-natural because it does not contain any color and the natural smell of a bamboo has been retained in the cup. Hemel and Brezett (1997) argued that some materials and additives are better avoided because they are toxic or may cause toxic emissions during production, use or when dumped. The findings was further confirmed by the owner when she stated that *"If you wanted it to last, dapat ibulad siya sa init, i-expose sa sunlight, i-dry gid siya to prolong its useful life. Iya life is two to three weeks kung everyday siya gamiton but if limited lang ma-last gid siya more than a month."* Based on the previous statement of the participant, it can be concluded that the business uses the traditional drying method for reducing the moisture content of bamboo cups through direct sunlight.

The interviewees explained that at the beginning of the production process, the bamboo cups were all hand-made *"Before gamay palang ang orders namon, hand-made lang siya or mano-mano. But now kay damu na kami orders, we are now using a planer or sander machine that uses electricity para dasig ang production. The*

discarded parts of the bamboo are used as "alkansya". We are making it as freebies and the others are used as decorations. For example, sa bagacay bamboo ang mga extra parts gina ubra namun into vase. We make sure nga wala may mauyang nga kawayan." Handcrafted products or works done by hand consume less energy than a mass production assembly line, which makes it more environmentally sustainable (Edmonds, 2008). Despite the increase in production rate, the owners justified that they still used natural sunlight in drying their bamboo cups to conserve energy. According to Wakulele et al. (2016), reduction of material used is one of the main issues addressed by eco-design for the energy using products, and it is one of the priorities for products not using energy. It was also pointed out by Hemel (1995), that products should be designed so that they use the least harmful source of energy as well as encourage the use of clean and renewable energy sources. The system of product's end-of-life cycle ensures that reusing the products and its components or materials can reduce the environmental impact of a product by reinvesting the materials and energy involved in its manufacture while preventing hazardous emissions (Hemel & Brezet, 1997).

The responses of the participants implied that Darlings' Milktea shop has

to some extent implemented some eco-design practices such as the use of non-hazardous and recyclable materials. This confirmed that Darlings' Milktea shop is conscious of the environment hence keen on the type of raw materials they use for their cups.

Green Purchasing

Green purchasing refers to the affirmative selection and acquisition of products and services that most effectively minimize negative environmental products over their life cycle of manufacturing, transportation, use and recycling or disposal (NIH, 2011). The measurements for green purchasing were identified by Hammer (2006) as follows: product content requirements, product content restrictions, product content labeling or disclosure, supplier questionnaires, supplier EMSs, supplier certification, and supplier compliance auditing.

In the case of Darlings' Milktea shop, coordination and collaboration with the supplier is not a problem because as stated by the participant *"Most of our supplies are our family members."* However, they do not provide green specifications yet to their suppliers and they do not have an Environmental Management System (EMS) nor they are requiring their suppliers to have a certified EMS. However, the participants clarified that they still make sure that the products

they purchased from suppliers should contain green attributes and must not have environmentally undesirable items, *"Pero, Yes! Gina-evaluate gid namun ang amon mga suppliers nga dapat ang gina produce nila nga products kay wala sang hazard sa environment, less waste and wala pollution."*

Reverse Logistic

The participants explained that they always encouraged their customers to drink their milk tea from bamboo cups since it is eco-friendly and recyclable. They also recommend to their customers that if they decide not to reuse the cups they can transform it into beautiful bamboo items which they can use at home, *"The cups are for take-out and for dine-in. If the customers opted not to reuse it for drinks, it can still be used in other things such as organizers and plant pots ... we always encourage our customers to drink their milk tea from bamboo cups."* According to Kopicki (1998), reverse logistic is a broad term referring to the logistic management and disposing of hazardous or non-hazardous waste from packaging and products.

Moreover, the business owners collect back the used bamboo cups from customers for reuse and for recycling. Reddy (2011) mentioned that recovery is actually one of the

activities involved in the whole reversed logistic process. At Darlings' Milktea Shop, the quality of bamboo cups are assessed and then a decision is made on the type of recovery. If the quality is still good, the cups that underwent proper cleaning and sun drying can be reused by other customers. If not, another type of recovery is involved such as converting it into decorations or pots.

Influence of Green Supply Chain Initiatives on the Environmental Performance of Darlings' Milk Tea Shop

Green Supply Chain Management initiatives or practices cover every effort to reduce the adverse effects of a company's products or service on the environment. The participant stated that there are a lot of improvements in the environmental situation of their business, "*Yes...there is reduction in waste and pollution*". This statement was justified with the use of their all-natural, reusable and biodegradable bamboo cups as vessels for their beverages. In the study of Eltayeb et al. (2011), he affirmed that GSCM initiatives positively impact the improvement of environmental performance by reducing the consumption of solid wastes and hazardous substances, reducing the incidence of environmental incidents and improving community health.

The participants mentioned that they have received positive feedback from the consumers about their unique packaging. The participant stated "*Actually, we heard a lot of comments that using bamboo cups is one way and a step forward to a zero plastic usage. Although slowly, but at least we are trying a step forward to build a better and a sustainable future.*" It may be stated that the improvement in the environmental performance of Darlings' milktea shop stem substantially from their green supply chain initiatives. Their practices in terms of eco-design and reverse logistic are the variables that greatly affect their environmental performance.

Influence of Green Supply Chain Initiatives on the Social Performance of Darlings' Milk Tea Shop

The participants mentioned that the integration of green supply chain initiatives to their business has improved their relationship with their customers, potential customers and the society as a whole. The participant stated that, "*There is an improvement in customer satisfaction. We have received a lot of feedbacks that it is a unique way of preserving and helping our nature.*" Increased customer satisfaction was evaluated by the researcher through interviews with

consumers who have tried Darlings' milk tea. The researcher validated the response of the participants through the number of social media engagements in the different social media platforms of Darlings' Milktea Shop, as well as, through the photographs of repeat and new buyers posted on their official Facebook page. Zhou (2019) appraised that customer satisfaction can be conceptualized based on consumers' total purchase and consumption experience with a company's goods or services overtime. It is considered the benefit afforded to a company by a customer who perceives that his expectations have been met. Given some evidence of positive association between the environmental practices of Darlings' milktea shop and the satisfaction they receive from customers, it can be interpreted that improved customer satisfaction is associated with the GSCM initiatives of the business.

The participants further stated that, *"There's also an improvement in our brand image because Darlings' Milk Tea is unique and known for its eco-friendly packaging – that is our bamboo cup which makes us different from other milk tea shops. We are confident that we have also built up awareness among the community. More naga shift na sa something native, gusto nila i-try ang native. It's a new trend to go back to our nature*

and to become eco-friendly. Most of the people nowadays are mga plant tito and plant tita na, [because] that's the trend...and we go with it." The GSCM initiatives of Darlings' milktea shop present its image as a responsible company, and it is also a basis on which customers identify with companies. Generally, people tend to support businesses that support their identities. This was confirmed by Cankaya and Sezen (2018) when they said that businesses that adopt and implement an environmentally sensitive production approach will be able to develop better relationships with societies.

"Yes. There's an improvement in the health and safety of employees. For our franchise and all our staff, we have conducted several trainings held at District 21 Hotel. So, every details about Darlings' Milk Tea was disclosed during the training. We discussed to them the health protocols, the proper way of handling the customers and the proper way of taking care of their bamboo cups. For social projects, we are planning to adopt a community and we are looking forward to make it happen."

According to the owners, there was also an improvement in training and occupational health and safety of their employees. However, the business does not have investments yet on social projects but they were

planning to adopt a local community in the future. Cankaya and Sezen (2018) explained that raising awareness on corporate social responsibility requires equal consideration of social issues in managing a supply chain. By doing the aforementioned activities, Darlings' milktea shop will not only improve its positive image in the eyes of customers but also in the eyes of its personnel and the society. The findings imply that successful environmental practices strengthen firms' relationships with all stakeholders.

Influence of Green Supply Chain Initiatives on the Economic Performance of Darlings' Milk Tea Shop

According to the participants, *"Bamboo milk tea is very affordable compared to drinking your milk tea in plastic cups. Bamboo milk tea is only 80 pesos, while if you compare it to other milk tea shops ... it's too pricey. So, we believe that bamboo milk tea is affordable... with a good price."* They further added that, *"Mas barato ang bamboo cups because you can reuse it compare to plastic cups nga one use lang."* Based on the researcher's inquiry, the price of milk tea in a plastic cup in the City of Iloilo ranges from

P90.00 to P180.00, depending on the flavors and sizes. Additionally, the average price of single-used plastic cups range from P50.00 to P10.00 per bundle (1 bundle comprising of 10 cups). Hence, milk tea in a bamboo of Darlings' Milktea shop is considered more affordable. According to Cankaya and Sezen (2018), one of the processes that may be carried out for environmentally sensitive packaging is to use reusable packages. Although these packages are initially more expensive than disposable packages, they will reduce procurement and waste costs, as they are used multiple times. They also stated that, *"There's a great increase in our earnings or profit when we discover this bamboo milk tea. Ang sales namun everyday naga-taas man kay damu ang naga-wanted to try and experience...damu ang gusto mag-try something new."* The participant mentioned that there was improvement in their earnings since they discovered this milk tea in a bamboo cup. They also experienced sales growth since there were a significant number of customers who wanted to try their products because of its innovativeness.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

Generally, eco-design and reverse logistic were the two highlighted (2) green supply chain initiatives that are being implemented by Darlings' Milk Tea Shop. Furthermore, there are still many factors in green purchasing that the business needs to work on, especially in providing green specifications to their suppliers and the development of an Environmental Management System (EMS). Many

performance measures have been mentioned by the owners to have a relevant impact and benefits to their business.

Recommendations

The researchers recommend the adoption of some specific facets of Green Supply Chain Initiatives for sustainable performance.

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