

# INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY: APPLIED BUSINESS AND EDUCATION RESEARCH

2023, Vol. 4, No. 8, 3003 – 3033

<http://dx.doi.org/10.11594/ijmaber.04.08.35>

---

## Research Article

### A Case Study on Philippine Sustainable Enterprises Aligned with the Quantum Sustainable Organizing Theory (QSOT)

Angelique C. Blasa-Cheng<sup>1</sup>, Rhett M. Chiu<sup>1</sup>, Catherine M. Dy<sup>1</sup>, Su Jin Kim<sup>1</sup>, Paul D. Trono<sup>1</sup>, Patrick Adiel H. Aure<sup>1</sup>, Raymond Allan G. Vergara<sup>2\*</sup>

<sup>1</sup>Department of Management and Organization, De La Salle University – Manila, Manila 1004, Philippines

<sup>2</sup>Department of Marketing and Advertising, De La Salle University – Manila, Manila 1004, Philippines

---

#### Article history:

Submission June 2023

Revised August 2023

Accepted August 2023

#### \*Corresponding author:

E-mail:

[raymond.vergara@dlsu.edu.ph](mailto:raymond.vergara@dlsu.edu.ph)

#### ABSTRACT

The research aims to build on Dyck and Greidanus' (2016) study on the Quantum Sustainable Organizing Theory (QSOT) by analyzing Philippine sustainable enterprises and how they adopt and execute the principles of QSOT into their organization. The data gathered from the multiple-case study were collated and used to promote sustainability and build knowledge on the contemporary theory. The research utilized a qualitative embedded multiple-case study design in investigating the exhibition of QSOT in Philippine sustainable enterprises.

Through in-depth interviews with three (3) Philippine sustainable enterprises or potentially QSOT organizations, the paper identified and illustrated QSOT-aligned business practices, operations, and functions. Among the three Philippine sustainable enterprises studied, two were identified as fully QSOT-oriented companies. The researchers note that QSOT can be operationalized in the country; however, the success of adoption and integration is dependent on the industry, ability to innovate the business structure, entanglement of "external" entities, and financial capacity.

The study framed sustainable organizing practices in a manner that is concrete and specific—practices that enhance social and ecological well-being were elaborated. As the Quantum Sustainable Organizing Theory (QSOT) is a contemporary theory, more research is needed to understand the concept, especially in the Philippine context.

**Keywords:** *Business ethics, Business innovation, Corporate governance, Corporate social responsibility and corporate social initiatives, Entrepreneurship, Humanistic management*

---

#### How to cite:

Cheng, A. C. B., Chiu, R. M., Dy, C. M., Kim, S. J., Trono, P. D., Aure, P. A. H., & Raymond Allan G. Vergara, R. A. G. (2023). A Case Study on Philippine Sustainable Enterprises Aligned with the Quantum Sustainable Organizing Theory (QSOT). *International Journal of Multidisciplinary: Applied Business and Education Research*. 4(8), 3003 – 3033. doi: 10.11594/ijmaber.04.08.35

## Introduction

### *Background of the study*

Many studies have shown that the Earth is in a precarious state resulting from the actions of its occupants. A study by a group of scientists shows that the worsening conditions of the climate puts the future of the planet at a bad spot (Bradshaw et al., 2021). The continuous increase of Earth's temperature will be disastrous for humanity and biodiversity (Urban, 2015; Steffen et al., 2018; Strona and Bradshaw, 2018). Scientists are calling on world leaders, businesses, and the public to acknowledge their responsibility and take action to address these prevalent environmental issues.

There are stakeholders who are doing their part in addressing socio ecological issues. An example of these is sustainable enterprises, which seek the "sweet spot" of minimized harmful social and environmental impacts, and adequate economic or financial returns. (Nguyen & Slater, 2010) While generating profits, they are able to implement sustainable operations in their business models to minimize their impact on the environment, as sustainable enterprises measure success in terms of a triple bottom line (Savitz & Weber, 2006). Moreover, as Shepherd and Patzelt (2011) defined, "Sustainable entrepreneurship is focused on the preservation of nature, life support, and community in the pursuit of perceived opportunities to bring into existence future products, processes, and services for gain, where gain is broadly construed to include economic and non-economic gains to individuals, the economy, and society."

According to Dyck and Greidanus (2016), businesses that are conventional and sustainability-oriented while practicing Newtonian assumptions fail to meet the goal of addressing socio ecological issues faced by the Earth. Most businesses' view the environment as an entity they least prioritize in operations. Dyck and Greidanus believe that from a QSOT perspective, it is important for businesses and organizations to have a deep understanding and connection with nature to increase overall social well-being (Francis, 2015). Dyck and Greidanus (2016) in "Quantum Sustainable Organizing

Theory: A Study of Organization Theory as if Matter Mattered" discussed the ideas of "entanglement" and "indeterminism" to introduce "Quantum Sustainable Organizing Theory" (QSOT). The authors explore how these quantum ideas challenge conventional organizational theorizing and have relevance for developing QSOT, focusing on sustainability theorizing (the view of the natural environment and the view of the socioeconomic world) and general organizational theories (behavioral assumptions and the hallmarks of organization theory). QSOT argues that 1, in such a way that challenges the conventional and Newtonian organizing theories.

With the lack of literature and data regarding QSOT in the Philippine context, the researchers take on the opportunity to build on existing knowledge about sustainable enterprises in the Philippines and to promote more sustainable practices in businesses. This research aims to answer "How is QSOT operationalized in Philippine sustainable enterprises?" Through a multiple-case study approach, the paper will present evidence of the adoption and alignment of QSOT principles in Philippine sustainable enterprises. The researchers will investigate Philippine sustainable enterprises that explicitly promote and claim sustainable practices. Moreover, the researchers will highlight the responses of these sustainable enterprises to the COVID-19 Pandemic, given that this global crisis has impacted all businesses in all industries. The enterprises' response to these challenges can bring insight into their QSOT qualities.

### *Objectives*

Given this paradigm shift that Dyck and Greidanus (2016) bring into discussions about sustainability and organizational theories, this research aims to build on the development of the foundational study, particularly in the Philippine context. With the ideas of entanglement and indeterminism, being the heart of QSOT, challenging the boundaries between a firm and its natural and social environment, the importance of self-interested individualism and (socioeconomic) financial measures of performance, the emphasis on competitiveness, and the hallmarks of rational theory and practice,

the research aims to develop and collate business practices that exhibit QSOT. In particular, the research builds on Dyck and Greidanus' (2016) study by analyzing Philippine sustainable enterprises and how they adopt and execute the principles of QSOT into their organization. Through a series of interviews with selected sustainable enterprises, patterns and insights will be determined and used to build knowledge and data about the execution of QSOT in organizations.

**Scope and Limitations of the Study**

The main theory to be used for the study is Dyck and Greidanus' "Quantum Sustainable Organizing Theory." The researchers will be using a case-study approach in analyzing how sustainable enterprises are able to reach social, ecological, and economic goals. Aside from the data they will be getting from the businesses, they will also be developing a framework in implementing a QSOT approach in organizations.

Since quantum theory is an extensive and complex study in physics, the researchers are heavily relying on management and organizational literature rather than foundational quantum theory literature. Drawing a parallel between physics research and management studies is done metaphorically, but there are currently very limited references that would reinforce or disprove the framework.

The researchers assume that most Filipino businesses operate from an NSOT perspective (conventional organization theory and Newtonian sustainable organizing theory), which anchor on sociomaterial measures and wellbeing. In selecting Philippine sustainable enterprises to feature in the case studies, the researchers will prioritize those which are reputable in the country for integrating sustainable practices in their business or those which explicitly claim that they are a sustainable enterprise. However, the research will not focus on the sustainable enterprise's strict conformance to a particular definition or framework of a sustainable enterprise.

**Literature Review**

The researchers have gathered literature to provide context to Dyck and Greidanus' Quantum Sustainable Organizing Theory - namely the six domains of the framework. This section also defines sustainable enterprises to establish how the researchers will be looking for potential businesses for the study. The literature review will guide the researchers in crafting the questionnaire and conducting a thorough analysis of the responses of the participants of the study.

Table 1: Review of Related Literature Matrix

Domain	Theme	Description
Sustainable Enterprises	Definition of Sustainable Entrepreneurship (Shepherd & Patzelt, 2011)	"Sustainable entrepreneurship is focused on the preservation of nature, life support, and community in the pursuit of perceived opportunities to bring into existence future products, processes, and services for gain, where gain is broadly construed to include economic and non-economic gains to individuals, the economy, and society." (Shepherd & Patzelt, 2011)
	The Sustainability Sweet Spot (Nguyen & Slater, 2010)	Sustainability is "concerned with meeting the needs of the present without compromising the ability of future generations to meet their own needs." (Nguyen, D., & Slater, S., 2010) With that, sustainable enterprises seek the <i>sweet spot</i> , which is the balance

Domain	Theme	Description
	<p>Environmental Sustainability Orientations on Firm Performance in the Philippines (Roxas, Ashill, &amp; Chadee, 2017)</p>	<p>between minimizing harmful social and environmental impacts, and realizing an adequate rate of return.</p> <p>Assessed the effects of entrepreneurial and environmental sustainability orientations on the performances of small businesses in the Philippines. Findings of the study have shown that small businesses are able to implement environmentally sustainable practices if they have an entrepreneurial orientation, contrary to the notion that only larger firms can integrate sustainable practices given their great amount of resources. The lack of resources of these small businesses, it was important to note that their sustainable practices tend to be less formal and structured compared to larger firms. While this is the case, the study emphasized the importance of having an entrepreneurial orientation to be innovative in adopting environmentally sustainable practices as these create a positive impact on their business such as pollution reduction.</p>
	<p>Role of Organizational Culture in Addressing Environmental Issues (Roxas &amp; Chadee, 2012)</p>	<p>Organization culture also impacts a firm's eagerness to address environmental issues. Having environmentally sustainable initiatives are likely to be continued by firms if they appreciate the positive returns they get in the long term.</p>
	<p>Efficiency and Effectiveness in Sustainable Businesses (Young &amp; Tilley, 2004)</p>	<p><i>Eco-Efficiency.</i> Reducing environmental impacts by being eco-efficient creates the illusion of short-term relative improvements. This is not enough for corporations to become truly sustainable.</p> <p><i>Eco-Effectiveness.</i> Business practices should go beyond pollution control and eco-efficiency toward a way of doing business that restores and enhances the environment. This is through a renewing cycle of cradle-to-cradle analysis, transforming the industrial capitalism model for linear thinking to a closed loop system.</p> <p><i>Socio-Efficiency.</i> This requires the minimization of negative impacts such as accidents at work and the maximization of positive impacts such as training and health benefits. It essentially refers to a firm's efficient use of natural resources.</p> <p><i>Socio-Effectiveness.</i> Fulfills the company's core social mission above all, which often includes secondary aims of educating stakeholders on the social ob-</p>

Domain	Theme	Description
View of natural world		jective (e.g. fair trade). This refers to the assessment of a firm's absolute social performance, and whether their products are accessible, and not simply benefitting a specific or elite few.
	Neo-classical Environmental Economics (Ramos-Martin, 2003)	The researcher maintained that neoclassical environmental economics is not the best way to describe the behavior of economies. Economies are open complex adaptive systems which are far from thermodynamic equilibrium. The search for predictive policies to correct environmental systems is seen as a social steering mechanism.
	Long Now (Carpenter, 2002)	The "long now" is a concept that ecosystems include historical influences that shape present ecologies and the future consequences of present events. The authors used predictive capability as new options for management in order to determine ways to improve the understanding of future consequences of present choice through ecological information. They aimed to develop environmental decision making through increased predictability.
	Paradox Theory (Walker, Yu, & Zhang, 2020)	The Paradox Theory states that businesses should focus on the three components of the triple-bottom line simultaneously, and not just on 1 component - particularly profit maximization (Hahn et al., 2015, 2018; Van der Byl and Slawinski, 2015). The intention of the holistic approach is similar to quantum physics' idea of entanglement as mentioned by Dyck - that without the environment, an economy will not exist. Focusing solely on profits can be harmful to the environment which in turn can impact companies' long-term viability.
	Complex Adaptive Systems (CAS) theory (Dentoni, Pinkse, & Lubberink, 2020)	A literature review was conducted by the authors in assessing how strategic partnerships are important in the business models of sustainable businesses to attain socio-ecological resilience. The Complex Adaptive Systems (CAS) theory states the nature of interdependencies and interactions inside a system, along with the agents and the system itself. With this, a business model proposed by the authors is that despite the challenges, businesses should engage in cross-sector collaboration to achieve their socio-ecological goals.
		Slow fashion is beneficial not only for the environment, but for its workers and materials as well.

Domain	Theme	Description
View of socio-economic environment	Slow Fashion' Movement (Forbes, 2014)	Considering its economic sustainability, there are drawbacks to it with regards to environmental and social sustainability. While slow fashion comes at some cost (i.e., slower production of products), this method allows the reduction of consumption of resources, with workers having longer lead times which not only improves the quality they produce, but also their welfare. In the hotel and tourism industry, there are sustainable initiatives being implemented by some companies. The Hyatt Regency has started a series of initiatives in line with their environmental framework focusing on climate change and water conservation such as increasing the number of water stations in the public spaces of their hotels, and educating their employees about embracing an eco-friendly lifestyle.
	Sustainability-Driven Innovators (Kiron, Kruschwitz, Rubel, Reeves, & Fuisz-Kehrbach, 2014)	Described "Sustainability-Driven Innovators" as companies that modified their business models by implementing a sustainable approach and, in effect, has remained profitable. Overall, companies who embed sustainability in their businesses also can improve economic benefits.
	Sustainability-balanced scorecard (S-BSC) (Tsalis, Nikolaou, Grigoroudis, & Tsagarakis, 2013)	MSMEs have interest in adopting a sustainability-balanced scorecard (S-BSC) in their operations, but there are barriers in doing such - mainly because of their business structure and lack of financial resources. Some SMEs even acknowledge that their hesitation to pursue a sustainable approach is attributed to their lack awareness and understanding of their responsibility to the environment.
	Expectations of SME owners in environmental responsibility (Lewis, Cassells, & Roxas, 2015)	SME owners expect the government is the one to take responsibility in taking care of the environment in which the authors find worrying. This complacency on the government affirms the common notion that businesses easily assume compliance is enough which does not allow these owners to be voluntarily involved in terms of environmental responsibility.
Behavioral assumptions	Hesitations of corporate leaders in adopting sustainable practices (Blonkowski, Jones, Naik, & Raman, 2014)	Key barriers identified by corporate leaders in adopting sustainability include the cost, lack of government incentives, insufficient resources, and the shortfall of environmental consciousness. The major reason for their hesitancy is that their

Domain	Theme	Description
	<p>Corporate social responsibility and stakeholder value maximization (Deng, Kang, &amp; Low, 2013)</p>	<p>perception of this approach brings minimum to no benefits of a return on investment.</p> <p>While Dyck emphasized how pursuing QSOT in businesses aims to create long term socio ecological impact, studies have also shown other obvious reasons on why companies would consider integrating sustainability in their business. Results have shown that the more CSR initiatives a firm has, the higher its shareholder value is. This makes it more enticing for shareholders to pursue a long term relationship with the firm.</p>
<p>Hallmarks of organization theory</p>	<p>Enlightenment: Organization Theory in the Age of the Anthropocene and Gaia (Banerjee, &amp; Arjalies, 2021)</p> <p>Shifting to sustainable societies (Meima &amp; Welford, 2016)</p>	<p>Focused on human-nature dualism as a product of “Enlightenment” (man’s release from self-incurred tutelage) that is primarily responsible for ecological crisis—and should not be the basis for meaningful solutions. For context, enlightenment rationality is deeply embedded in the idea of Empire which European historical narratives celebrate it as a liberating and progressive force. Instead, researchers maintain that it has brought about genocides, colonial domination, environmental destruction, cultural devastation, and spiritual impoverishment. The authors also highlight the role of indigenous philosophies that reflect connections between humans and nature (not subjugated to Western scholarship of rationality and empiricism). Their insight is that a decolonial imagination fosters understanding that addresses ecological crises. Their call of action is that management and organization practitioners and scholars look into indigenous worldviews as opposed to the economism that is widespread in industries.</p> <p>The authors’ point of contention is that global environmental crises cannot be narrowed to specific techniques. These include, and are not limited to, new production technologies, green fiscal policies, packaging and emission laws, waste minimization, solar architecture, vegetarian diets, and composting. These principles that “shift to sustainable societies” have characterized the utopian worldview that is labelled as appropriate technology. Management systems should not be facilitated by these technical fixes, but more of ecological actions through lobby groups and principle/cultural changes.</p>

Domain	Theme	Description
	Examining Collaborative Partnerships (Iver, 2007)	Organizational ecology, as a theoretical perspective, is used to understand the (constantly) changing dynamics of partnerships. It is also used to develop models of collaboration which capture the diverse characteristics and capacities of organizations. Their findings reveal the varying degrees of involvement and capacity among organizations that aim to manage the tension between the priorities of their organizations and their collaborative effort.
Indeterminism	Indeterminism in Physical Theory (Popper, 1982)	Critiques the 'scientific' and metaphysical forms of determinism. Scientific determinism states that "any event can be rationally predicted, with any desired degree of precision, if we are given a sufficiently precise description of past events, together with all the laws of nature". Popper argues that there exists at least one event that is not predetermined, or not fixed in advance. He states in favor of an "open" universe that the future is not contained in the past or the present, thus theories should not implicate the loss of common sense. In light of human freedom and creativity, Popper makes room for indeterminism in physical theory.
Entanglement	Discussion of Probability Relations between Separated Systems. (Schrödinger, 1935)	Formulated the concept of "entanglement" in quantum mechanics. The concept of entanglement is defined to be the probability relations that can materialize between two distinct or separated physical systems which will only transpire taking into account that their state is determined by a representative in common. The state or value of a physical system can be determined by observing its counterpart. In this phenomenon, otherwise called "nonlocality", the two separated physical systems determine each other instantaneously and uniquely, even with a difference in time and space. There becomes a "one-to-one" relationship between physical systems where how they affect each other can be observed even as time progresses, disagreeing with the conventional physics of cause and effect. The concept further progresses to claim that the probability relationship between two physical systems can occur infinitely with many other physical systems.



While the study is based on an existing theory, there are limited studies attributed to it as mentioned. Similarly, there are also limited studies regarding the lack of case studies involving sustainable enterprises in the Philippine setting. Hence, the literature used by the researchers were mainly based on the concept of business sustainability locally and globally. As the theory is not utilized by much studies, the researchers reviewed literature discussing business owners' views on integrating sustainability in their business model - this includes their hesitations and possible incentives for doing so.

## Research Framework, Design, and Methodology

### Framework

Dyck and Greidanus' Quantum Sustainable Organizing Theory served as the research's fundamental framework in exploring a sustainable organization's structure altogether. The theory explored the difference between the conventional (Newtonian) methods, views, and beliefs in contrast to a modern and innovative approach (Quantum) and why the Quantum Sustainable Organizing Theory is far more advantageous. Where the conventional approach considers the environment, society, and economic entities as third persons that humans need to control in order to reap benefits, the Quantum Sustainable Organizing Theory argues that the roles as human beings are deeply intertwined with these entities which are not purposed to be controlled. The theory even goes as far as to claim that this reformation of the very structure of how companies and organizations operate socioeconomically and socio-ecologically is necessary to truly provide solutions to the planet's problems.

The Quantum Sustainability Organizing Theory, simplified for application of this research, is anchored on the two concepts of entanglement and indeterminism drawn from quantum mechanics:

**Entanglement.** The concept of entanglement relates to "nonlocality" or the phenomenon of which a group of elements are heavily interconnected, thus influencing each other simultaneously and instantaneously (Dyck and

Greidanus, 2016). For the purpose of this paper, entanglement is defined as the shift from the idea of distinct entities interacting with one another to entities being heavily intertwined with one another. The scope of this paper's definition of entanglement also pertains only to the philosophy of "nonlocality" in the context of the organization interacting with what would traditionally be defined as "externalities" (e. g. the environment or the society)

**Indeterminism.** The concept of indeterminism relates to the idea that there are limitations for which variables would be quantified or measured, thus will remain uncertain (Dyck and Greidanus, 2016). In opposition to the Newtonian approach where an independent variable would always have a dependent variable (a cause and effect relationship), the Quantum approach would infer that variables affect one another in no exact order. This concept even goes to suggest that variables from the future or on different timelines affect each other because they are not bounded by time order. With this, indeterminism establishes the idea that a variable can not control "external" factors; any direct effect could not be measured properly. For the purpose of this paper, indeterminism refers to the idea that an entity detaches from their fixation on controlling internal and external factors and instead commits to actions without expecting and measuring end results. The scope of this paper's definition of indeterminism also pertains only to the philosophy of enigmatic causation manifested in an organization's intentions, motivation, assumption, values, and beliefs.

The manifestation of these concepts in the areas of an organization would mean that the organization is able to exhibit QSOT qualities. In the paper by Dyck and Greidanus (2016), they analyze four domains of an organization where the concepts of entanglement and indeterminism are most possibly present should they have QSOT qualities. These four domains would be the following:

**View of the natural world.** Dyck and Greidanus (2016) compare the view of the natural environment between the Newtonian and Quantum approach. They determined that the key difference between the approaches is how

an entity would exploit or nurture the ecological environment. The Newtonian approach would see ecological externalities as resources to manage and exploit while the Quantum approach would not see these resources as “externalities” but as a “web of life” where each entity must learn to coexist. For the purpose of this paper, the view of the natural world refers to the perceptions and beliefs that an entity holds about the ecological environment.

**View of socioeconomic environment.** According to Dyck and Greidanus (2016), the Quantum approach’s view of the socioeconomic is exhibited in the way an entity would treat the Earth with dignity while positively valuing and nurturing the relationships of the physical and social aspects of an industry. For the purpose of this paper, the view of the socioeconomic environment refers to an entity’s beliefs and perceptions about the physical and social aspects of a business and of an industry.

**Behavioral assumptions.** The conventional approach or the Newtonian approach has accepted that entities ordinarily behave with self-interest and individualistic motivations as argued by Dyck and Greidanus (2016). On the other end, the Quantum approach would then behave around the principles of interconnectedness. For the purpose of this paper, behavioral assumptions refer to the principles, assumptions, and values of an entity that motivates it to behave in a certain way.

**Hallmarks of organization theory.** The Newtonian approach dictates three assumptions related to the hallmarks of organization theory (Dyck and Greidanus, 2016). First is that there are boundaries between a firm and external environments. Second is that individualistic motivations and self interest is innate and admissible. Last is that the goal of a firm is to maintain its competitive advantage and to exploit available opportunities in order to improve the firm’s profits, share, and the like. On the other hand, the Quantum approach establishes that firms should always find a compromise between variables to achieve mutually beneficial outcomes. For the purpose of this paper, hallmarks of organization theory refers to the values, beliefs, and perceptions that an entity has in terms of how they view themselves

when put alongside other entities such as competitors, the environment, society, and the like.

The researchers compared three sustainable enterprises and determined their different manifestations of QSOT qualities specific to the four aforementioned domains. The business aspects of marketing, customer relations, supply chain, human resource management, finance, and COVID-19 influences were explored. From these data, the researchers investigated underlying motivations, beliefs, assumptions, and philosophies in order to identify if entanglement and indeterminism were present.

To further guide the analysis of the data gathered from the interviews, the researchers have formulated the following propositions which served as the criteria for scoring on how much the enterprises were able to execute the QSOT qualities of entanglement and indeterminism in the four domains:

For the first proposition, the research posits that the Philippine Sustainable Enterprise possesses QSOT qualities by exhibiting entanglement and indeterminism in their view of the natural world.

For the second proposition, the research posits that the Philippine Sustainable Enterprise possesses QSOT qualities by exhibiting entanglement and indeterminism in their view of the socioeconomic environment.

For the third proposition, the research posits that the Philippine Sustainable Enterprise possesses QSOT qualities by exhibiting entanglement and indeterminism in their behavioral assumptions.

For the fourth proposition, the research posits that the Philippine Sustainable Enterprise possesses QSOT qualities by exhibiting entanglement and indeterminism in the hallmarks of organization theory.

Lastly, for the fifth proposition, the research posits that the Philippine Sustainable Enterprise is a QSOT-oriented company since it exhibits entanglement and indeterminism in all the four domains.

In order to identify which of these propositions stood true, the data gathered have been juxtaposed against NSOT and QSOT principles to identify which of these practices are more aligned to which specific organizing theory. The researchers have also identified the level of

which the sustainable enterprise has become a purely QSOT-oriented organization.

### **Research Design**

This paper utilized a qualitative embedded multiple-case study research design in investigating the exhibition of QSOT in Philippine sustainable enterprises. According to Yin (2009), the case study research design is useful in addressing explanatory questions like “how” and “why” questions. In exploring a contemporary theory with real life context, a multiple-case study design is appropriate to gather sufficient data, and to understand differences and similarities across multiple stakeholders in the ecosystem. The researchers conducted at least three (3) case studies to meet the objectives and propositions of the study.

### **Data Collection**

In addition to the data from Dyck and Greidanus (2016), primary qualitative data was collected through interviews with the respondents, or the selected Philippine sustainable enterprise representatives. With this, the researchers have employed purposive sampling, intentionally selecting and collaborating with sustainable enterprises they had performed prior research on. The researchers began by collecting relevant information of three (3) Philippine sustainable enterprises from their websites and social media pages as preliminary investigation and research, to determine whether or not the organizations are aligned with QSOT. Among the Philippine sustainable enterprises the researchers explored and looked into are those which explicitly claim sustainability or sustainable practices being done in their operations - namely The Plaf, Bisaya, and Sewn Wear. These sustainable enterprises will be discussed in detail in the Data Results and Analysis section.

### **Research Instruments**

For every organization that has consented to participate, the researchers conducted one (1) main in-depth interview, and succeeding follow-up interviews, as necessary. The interview questions and structure primarily followed Dyck’s own Interview Guide used in his

own research. The interview questions revolved around open-ended questions about the organization and its different processes and functions, i.e. founding, human resources management, marketing, supply chain, accounting, leadership, etc. The main objective of the interview was to holistically capture the organization, in order to identify elements, patterns, and/or similarities which can better explain QSOT. With the data gathered from the interviews, the researchers uncovered patterns across the Philippine sustainable enterprises and tested the propositions presented in Table 2. The researchers assessed if a company fully exhibits, partially exhibits, or does not exhibit QSOT qualities or practices according to each proposition. Therefore, the researchers will adopt a qualitative approach in presenting the data gathered from the interviews, and in illustrating the selected sustainable enterprises’ case studies.

## **Data Results and Analysis**

### **Participants**

As mentioned previously, the three sustainable enterprises that participated in the research’s in-depth interviews were (1) The Plaf, (2) Bisaya, and (3) Sewn Wear. Creating an alternative to Osterwalder and Pigneur’s (2010) Business Model Canvas, Sparviero (2019) introduces a conceptual instrument for “explaining the rationale, infrastructure, and use of resources that allows an SE and its intended beneficiaries to create value.” Sparviero (2019) reimagined the conventional Business Model Canvas to take into consideration the challenges faced by sustainable enterprises. The Social Enterprise Model Canvas (SEMC) is composed of building blocks both new and specific to the analysis of sustainable enterprises, and inherited from the Business Model Canvas. Using Sparviero’s (2019) Social Enterprise Model Canvas, the researchers have summarized the businesses below:

The Plastic Flamingo, or The Plaf, is a Philippine social enterprise with the goal of addressing the alarming plastic waste pollution in the country. They offer plastic waste collection services to both consumers, private companies, and other organizations and upcycles plastic

into sustainable construction materials. Allison is the Communication and Marketing associate and has been working in the company for more than a year handling logistics, marketing and communications.

Table 2. Social Enterprise Model Canvas (SEMC) of The Plaf (Sparviero, 2019)

<p><b>Governance</b>                  Management: CEO oversees The Plaf from France; 2 directors (Chief Operations Officer and Chief Products Officer) with subordinate associates operate in Philippine office                  Production line: factory workers manage plastic handling and drivers collect plastic waste from pick up points</p>		
<p><b>Non-Targeted Stakeholders</b>                  - Investors                  - Interior designers and engineers                  - Communities</p>	<p><b>Key Resources</b>                  - Physical: Plastic waste, upcycling machines, delivery vehicles                  - Human: labor for factory workers and office employees                  - Financial: cash, funding investor, company partners</p>	<p><b>Channels</b>                  - Social media sites, company website                  - Awareness seminars (for schools, companies, and NGOs)</p>
	<p><b>Key Activities</b>                  - Collecting, cleaning, shredding, extruding, and furnishing plastic waste                  - Awareness campaigns through social media and seminars</p>	<p><b>Customer &amp; Beneficiaries Engagement</b>                  - Self-service: Can donate plastic waste through 200 stationed pick up points                  - Co-creation: Client (companies or NGOs) can arrange specific terms of service</p>
<p><b>Mission Values</b>                  - To end plastic pollution through maximal social impact</p>	<p><b>Social Value Proposition</b>                  - Collecting and upcycling plastic waste into sustainable construction materials</p>	<p><b>Impact Measures</b>                  - Plastic waste collected                  - Community and media feedback                  - Seminars conducted                  - New employees hired</p>
<p><b>Objectives</b>                  - To provide jobs to low-income families, collect and upcycle plastic, and build an environmentally-proactive community</p>		<p><b>Output Measures</b>                  - Upcycled products sold                  - Product innovations                  - Collection partnerships                  - Expansion of recycling lines</p>
<p><b>Cost Structure</b>                  - Variable costs: Marketing &amp; logistical costs                  - Fixed costs: Warehouse and office rental, labor, utilities, machine and vehicle depreciation, insurance</p>		<p><b>Income</b>                  - Plastic waste collection partnerships with companies and NGOs                  - Licensing for plastic collection                  - Upcycled products (Ex: Ecolumber)</p>

Bisaya is a social enterprise which supports local farmers by purchasing goods from them, and supplying them to the local sector in Iloilo and Bacolod. Established last May 2020, Bisaya's mission is to provide farmers a source of

livelihood in a sustainable manner. With their key products such as native chickens, native ducks, and adlai grains, founder and sole proprietor Angelo Jon aims Bisaya to be the primary food of choice in his hometown.

Table 3: Social Enterprise Model Canvas (SEMC) of Bisaya (Sparviero, 2019)

<u>Governance</u> Sole proprietorship			
<u>Non-Targeted Stakeholders</u> - Farmers	<u>Key Resources</u> - Physical: Native chickens, native ducks, and adlai grains - Human: Farmers, Customers - Social: Facebook page	<u>Channels</u> - Social Media (Facebook) - Interpersonal communications with stakeholders	<u>Customers &amp; Beneficiaries</u> - People residing from Ilo-Ilo and Bacolod - Wholesalers and retailers
	<u>Key Activities</u> - Farming of goods - Delivery of goods to customers (only within Ilo-ilo and Bacolod) - Social media promotions	<u>Customer &amp; Beneficiaries Engagement</u> - Organic and community-centered engagement for customers who want convenience for purchasing food	
<u>Mission Values</u> - To help local farmers have a source of livelihood especially during the peak of the pandemic	<u>Social Value Proposition</u> - Fresh produce sourced from local farmers delivered straight to the customers' homes	<u>Impact Measures</u> - Amount of farmers helped - Number of products offered	
<u>Objectives</u> - To address shortage of food in the city		<u>Output Measures</u> - Number of customers - Amount of farmers helped	
<u>Cost Structure</u> - Variable costs (Profits are split 80:20 between the farmers and the founder) - Economies of scale: Word-of-mouth through the Facebook community		<u>Income</u> - Retained earnings and reinvestments of proprietor - Value customers pay for: convenience - Pricing: low profit margin; product feature dependent	

Sewn Wear is a clothing brand that advocates for slow and sustainable fashion through their repurposing of flour sacks and scrap cloths, otherwise known as *katsa* and *retaso* in the Philippines. With their founders being members of the youth, the business aims to inspire the younger generation to be instruments of positive change in the hopes of further

normalizing ethical and eco-friendly practices to pursue their vision of having a fashion industry that primarily practices ethical and sustainable production of garments. Ms. Alexandra Jae Aguirre and Ms. Marie Dominique (Madie) Banson are the founders and owners of the Instagram-based business and contributors to the interview conducted by the researchers.

Table 4: Social Enterprise Model Canvas (SEMC) of Sewn Wear (Sparviero, 2019)

<b>Governance</b>			
<ul style="list-style-type: none"> <li>- Mutual and collaborative partnership between the two founders</li> <li>- Ms. Banson handles the production line: contacting bakeries, coordinating with seamstresses and sending out orders.</li> <li>- Ms. Aguirre handles “front-end” jobs: curating social media posts, organizing orders, and contacting clients.</li> </ul>			
<b>Non-Targeted Stakeholders</b>	<b>Key Resources</b>	<b>Channels</b>	<b>Customers &amp; Beneficiaries</b>
<ul style="list-style-type: none"> <li>- Seamstresses</li> <li>- Local bakeries and baking supply distributors</li> <li>- Delivery riders</li> </ul>	<ul style="list-style-type: none"> <li>- Physical: upcycled materials</li> <li>- Human: labor of seamstresses and delivery riders</li> </ul>	<ul style="list-style-type: none"> <li>- Social Media (Instagram)</li> <li>- Interpersonal communications with stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>- Female, Gen-Z to millennial consumers</li> <li>- Segmented market: sustainability-driven/ conscious consumers</li> </ul>
	<b>Key Activities</b>	<b>Customer &amp; Beneficiaries Engagement</b>	
	<ul style="list-style-type: none"> <li>- Sourcing of reusable materials from bakeries</li> <li>- Production of items by seamstresses</li> <li>- Delivery of items to consumers by delivery riders</li> </ul>	<ul style="list-style-type: none"> <li>- Community-centered relationships for sustainability-driven consumers</li> </ul>	
<b>Mission Values</b>	<b>Social Value Proposition</b>		<b>Impact Measures</b>
<ul style="list-style-type: none"> <li>- To contribute to an industry that respects human rights and natural resources; that does not solely accept social and environmental ramifications but acts upon them</li> </ul>	<ul style="list-style-type: none"> <li>- Fashionable pieces made of upcycled materials for sustainability-driven consumers</li> </ul>		<ul style="list-style-type: none"> <li>- Information gathered from social media and competitors;</li> <li>- Innovations introduced to sustainable fashion businesses</li> </ul>
<b>Objectives</b>			<b>Output Measures</b>
<ul style="list-style-type: none"> <li>- To show that being fashionable does not come at the expense of negatively impacting both the community and the environment</li> </ul>			<ul style="list-style-type: none"> <li>- Quantity of customers/sales, especially return customers</li> <li>- Feedback from customers</li> </ul>
<b>Cost Structure</b>	<b>Income</b>		
<ul style="list-style-type: none"> <li>- Variable costs: cost of materials, cost of labor/salaries</li> <li>- Economies of scale: collect orders for group/bulk production</li> </ul>	<ul style="list-style-type: none"> <li>- Investments from founders’ own savings</li> <li>- Value customers pay for: sustainability factor</li> <li>- Pricing: low profit margin; product feature dependent</li> </ul>		

**Interview Data**

With the in-depth interviews with the three sustainable enterprises, the researchers have analyzed the three case studies and summarized the results by aligning the data with the four QSOT domains. Each sustainable enterprise’s interview data and analysis is presented below, followed by Table 5.

**The Plaf**

While a product’s life span ends at its disposal, often in landfills and dumpsites, this is where the business of The Plaf starts. The Plaf recognizes the necessity of proper plastic disposal and built the principles of their sustainable enterprise around this, thus their mission to “end plastic pollution through maximal social

impact” as captured in The Plaf’s SEMC (Table 3). They do this through collecting all types of plastic wastes, either from their off points or collection partnerships with private individuals, companies, or communities. True to the Complex Adaptive Systems (CAS) theory (Dentoni, Pinkse, & Lubberink, 2020), The Plaf is able to create strategic partnerships within different sectors including consumers of plastic-using goods and the producers of these goods to achieve their socio-ecological goals. Going beyond garbage collection, another objective they have as captured in The Plaf’s SEMC is to build a community sharing the same commitment to end plastic waste. In their awareness campaigns and marketing efforts, they give weight to the environmental impacts of improperly disposed plastic by shedding light on its effect on land and marine ecosystems. Through these, The Plaf communicates to students and business managers that the mission to preserve the natural environment goes beyond the obligation of a sustainable enterprise. The Plaf believes that consumers should be more aware and responsible in the disposal of the goods they consume. With this, The Plaf is able to create avenues for consumers to easily attain this such as through their collection sites scattered across Metro Manila. Imposing the responsibility of nurturing the environment towards their “suppliers”, as the consumers give The Plaf their plastic, closes the loop for the up-cycling of plastic. With this, The Plaf is able to exhibit entanglement because they become reliant on “external” stakeholders and these stakeholders also benefit from them. The Plaf is successful in providing solutions for the environmental issue they aim to address while building a community of “changemakers” to support this vision.

Their main process innovation is creating value out of materials that would otherwise be expendable. When asked what the most valuable resource of The Plaf is, “plastic” was the indisputable answer. Being a “multi-sided market” as mentioned in their SEMC (Table 3), another income avenue The Plaf has explored is partnering with advocacy driven organizations like Alliance To End Plastic Waste and corporations such as Procter and Gamble Company, Mondelez International, and Coca-Cola

Philippines. These partners would pay The Plaf for their garbage collection service and the issuance of a certificate of collection. Allison mentions that “if you’re a company who wants to embody sustainability then our products are really what that company might want” alluding to the fact that companies, although aim to profit from their partnership, still hold the desire to care for the environment. In this thought, The Plaf is considered as a “Sustainability-Driven Innovator” (Kiron, Kruschwitz, Rubel, Reeves, & Fuisz-Kehrbach, 2014) as they are able to embed sustainability in their business while benefiting from economic benefits. Regardless of shifting focus towards profitability, the new network of including the producers in the process chain of The Plaf exhibits entanglement because the issue of sustainability is now being addressed by the key contributors to it. In another perspective, tackling the issue of plastic waste management through the consumers and producers exhibits indeterminism because the distinction between which entity affects plastic pollution is now more indistinct as they all contribute and address the issue simultaneously.

While The Plaf offers the service of collection which enhances wellbeing overall because of the proper disposal mechanisms (ex. no waste accumulation in landfills or bodies of water), there is recent evidence that points that they have begun leaning towards Newtonian principles. For context, The Newtonian approach assumes that entities behave with self-interest in mind, motivated by individualistic gain. These include maintaining a firm’s competitive advantage because of the goal of improving profit, shares, and the like. To provide concrete examples, it was mentioned that social awareness was initially the priority, followed by brand awareness. Now, their directors have expressed interest in shifting the focus on financial gain. Their activities transitioned from social awareness (i.e. webinars) to financial profit-making (i.e. selling). Moreover, at the onset of the business, 70% of their priorities were aligned with education. Now, about 40% or less was considered to be the benchmark. In addition, the same can be observed with some of the companies they are involved with—there are partner entities that want the

“cheapest alternative” when it comes to recycling, even mentioning incineration but that is not something The Plaf considers. They reach compromises by negotiating on the price of their recycling. Lastly, the employees themselves haven’t truly embodied the advocacy. For instance, their Christmas party activities still involved plastic cutleries. In a sense, the management promotes sustainability but it is not fully reflected in company culture.

The Organization Theory in the age of the Anthropocene and Gaia in the context of enlightenment, which focuses on human-nature dualism with ecological crisis as the primary responsibility can be applied in the operations of The Plaf. At the heart of their company, their mission is to upcycle plastic waste into sustainable products to be used as construction materials for outdoor furniture. With regards to shifting to sustainable societies, it can be observed that new production technologies, green fiscal policies, packaging and emission laws, waste minimization, and the like have been carried out by The Plaf’s ecological actions through their programs. One of the most recent examples is their collaboration with Adidas Philippines last May 15, 2022 with their program “Run for the Oceans: End Plastic Waste”. This is also a prime example of how they foster collaborative relationships—as described in organizational ecology, it is used to develop dynamics of partnerships that reveal involvement and highlight organizational collaborative effort.

### *Bisaya*

With the pandemic starting during the second quarter of 2020, Bisaya founder Angelo Jon noticed a lingering problem in his hometown. Noticing the shortage of food in the city along with the lack of opportunities for farmers given the pandemic, Bisaya was established. Aside from the 2 aforementioned opportunities addressed by the business, Bisaya also provides convenience to customers with its free delivery within Iloilo city - mitigating the concerns of people who are not comfortable with leaving their homes to purchase food as mentioned in Bisaya’s SEMC (Table 4).

With the recent milestone of the business as they reach 2 years of operations, the business

is on track on reaching its vision of being a platform where local producers will be empowered and at the same time, be a store of choice among the citizens in the locality. Mr. Jon mentioned that their farmers chose to partner with Bisaya because the farmers “trust the mission of the business” which is providing more farmers livelihood in a sustainable manner. The farmers feel secured with Mr. Jon as the business provides them a sustainable source of income regardless of the pandemic. Adapting the Complex Adaptive Systems (CAS) theory (Dentoni, Pinkse, & Lubberink, 2020), Bisaya is able to create a business model such that the founder has made strategic partnerships with their local farmers to achieve the goals of the business and launch Bisaya to success. Initially working with 5 farmers, the business is now collaborating with 20 farmers who have been providing them with their products - native chickens, native ducks, and adlai grains. With the increasing number of farmers in the business, Bisaya actively pursues its mission and offers a wider selection to its customers. With their mission, Bisaya does not limit its farmers to supply their goods to the business alone as Mr. Jon wants its farmers to also explore opportunities that would benefit them. This further proves the trust placed by the farmers in the business as Mr. Jon genuinely wants what is best for their farmers which is in line with the advocacy of Bisaya. He believes that this even makes the farmers more motivated in meeting their goals for the business under his leadership and passion for his advocacy as they continue to reach out to more customers and grow the business. As stated by Iver (2007), collaboration among parties who share the same interest make the attainment of their goal much easier despite obstacles. Despite the goal of providing an opportunity for the farmers to have a source of income, Bisaya does not focus on extending more support to the farmers aside from their current business operations. While the profits earned from the business go to the farmers, Bisaya does not go beyond their resources to assist their farmers in means outside the business.

As indicated in Bisaya’s SEMC (Table 4), Mr. Jon classifies Bisaya’s customers into two — wholesalers and retailers. Wholesalers refer to



restaurants and resellers who purchase Bisaya's products for their menu offerings, while retailers refer to consumers who purchase Bisaya's products for house consumption. Mr. Jon estimates the average quantity of their customers to be around 300 - residing from Iloilo and Bacolod. Among these 300, 50 are wholesalers where 5 are consistent buyers, and 300 are retailers where 200 are consistent buyers. When asked about the purchase intention of the customers, Mr. Jon admits that only a select few purchase their products because of the advocacy. The primary purchase intention of the majority of his customers is the convenience that the business offers especially during the early stages of the pandemic where food was more scarce in the city.

As a business student, Mr. Jon always wanted to maximize his entrepreneurial mindset. With Bisaya, not only was he able to do such, but he is also able to promote his advocacy of helping out local farmers in his city. In fact, he really sees Bisaya as more of a passion project than a business. "I would rather describe it as a purposeful or purpose-driven project. I believe that with this initiative I started, it's really hinged on how to be able to help these farmers have a source of livelihood especially during the peak of the pandemic." His priority for the business is more on helping the farmers rather than earning profits. In his words, "Making money is just a bonus." The business has remained profitable since Day 1, with its sales even reaching six digits, through their loyal customer base despite the competitive pricing. According to Mr. Jon, this is because the main intention of the enterprise is to support the farmers. "It's really competitive since we have to take into consideration that we provide free delivery and at the same time we support these farmers." With his passion for his advocacy, he crafted the profit model of the business to be split to a 80:20 ratio, with 80% going to the farmers, and 20% going to him. However, with his advocacy in mind, he still makes sure to reinvest whatever profit he earns to the business so that he can be able to grow the business more and help out more farmers. In its first few months of operations, Bisaya only offered 2 products - native chickens and native ducks. Once he was able to have enough capital, he

was able to reach out to more farmers and assess what they can bring to the business. After negotiations, Bisaya was able to add a new product to their business - adlai grains.

While the business is a sole proprietorship, the founder attributes the success of the business to its stakeholders - the farmers, and the customers. "Relationships are what actually matters after all. Parang building that relationship with them, fostering that relationship makes the business grow." When Mr. Jon was asked about what he thinks is a measure of success for Bisaya, he did not mention the six-digit figures that they earned. Rather, it is the sense of fulfillment that he feels for helping out the farmers in his hometown. "It's really priceless to support these individuals. It makes me feel good and makes me feel fulfilled at the end of the day which is I guess priceless, you know, it's hard to substantiate how much that will be or yeah." With 2 years of successful operations, Mr. Jon hopes to further grow the business and offer more products to people with the help of Bisaya's stakeholders.

#### *Sewn Wear*

With the rise of fast fashion and the fashion industry largely contributing to environmental waste, 20-year-olds Alexandra Jae Aguirre and Marie Dominique Banson felt the responsibility to create a brand that respected the production process and resources in the fashion industry while taking into account the community, society, and environment. Striving to achieve sustainability in all their business practices, Ms. Banson and Ms. Aguirre understand the need to focus on all three components of the triple bottom line. Just as cited previously, Walker, Yu & Zhang (2020), through the Paradox Theory, highlight the idea of entanglement between the environment and economy that the founders of Sewn Wear similarly understand. Fortunately, there also was an increasing awareness of such issues that allowed more sustainable businesses to flourish, especially over the pandemic. However, Ms. Aguirre and Ms. Banson observed the misconceptions emerging about sustainability being expensive. Exhibiting indeterminism, the owners of Sewn Wear understand that the social issues around the fashion industry are complex and may not be

significantly improved by their business; nonetheless, they continue to strive to contribute in their small way by proving to others that sustainability and sustainable practices can be achieved without unnecessarily high costs and prices—mission values and objectives outlined in Sewn Wear’s SEMC (Table 4).

Not only do they take into consideration the impacts of their operations and actions within the business toward the environment and society, they also aim for shared value for their customers. Ms. Banson and Ms. Aguirre know the competitive nature of the fashion industry, so they choose to be inclusive in the curation of their clothing items. While they can admit that they address a consumer want rather than a need, they see the opportunity to offer better options for those who simply want to make more sustainable purchasing decisions. In itself, the concept of utilizing and repurposing existing materials or textiles exhibits QSOT qualities in that it stems from the idea of decreasing the production of additional materials and the idea of nurturing the ecological environment. Aside from using repurposed flour-sacks from bakeries and baking supply distributors, they also collect scrap cloths used for their products from their seamstresses. Sewn Wear goes beyond this and minimizes same-day deliveries to decrease their carbon footprint and ensures that their packaging is around 95% biodegradable. Moreover, they collect orders over a period of time before sending all orders for production to produce just enough to satisfy their demand, aligning their practices with the Slow Fashion Movement (Forbes, 2014)

Ms. Banson and Ms. Aguirre share the same strong passion for sustainability, evident in their interview: “We want to show that being fashionable does not come at the expense of negatively impacting both the community and the environment but rather, these could come

hand-in-hand.” Ms. Banson shared. With their good working dynamic and governance presented in Table 4, the two-man team also manages to maintain ethical and collaborative relations with their stakeholders, specifically their seamstresses, bakeries and other baking supply distributors, and delivery riders. They ensure that their stakeholders are paid fairly with a mutually agreed upon amount. Doing so, they allow their stakeholders to feel involved in their business and integral to their mission. Not only do these practices exhibit collaborative partnerships (Iver, 2007), but also Dentoni, Pinkse, & Lubberink’s (2020) Complex Adaptive System theory in the way the business acknowledges and values the interdependencies within their system that allows them to better achieve their socio-ecological goals. The owners of Sewn Wear acknowledge the concept of entanglement through their positive relations with and empowerment of their stakeholders.

As the founders have shared, they aim to make “small consistent change.” They do not measure their success based on their financial growth or popularity. Instead, they value whether or not they got their message across. Evident in the overview of the sustainable enterprise, its SEMC (Table 4), its impact measures and output measures are based on the idea of promoting sustainability, more than financial success. As a sustainable enterprise, they do their best to uphold sustainability all throughout their process, from sourcing their materials, to communicating with stakeholders, to preparing, and to delivering their products. Doing their part to achieve the *sweet spot* (Nguyen & Slater, 2010), Sewn Wear “envisions to see an industry that respects human rights and natural resources; an industry that does not solely accept social and environmental ramifications but acts upon them,” as Ms. Banson shared.

Table 5: Summary of Interview Results and QSOT domains

Domain	The Plaf	Bisaya	Sewn Wear
View of natural world	- Believes that waste such as	- Aimed to address	- Slow fashion brand

Domain	The Plaf	Bisaya	Sewn Wear
	<p>plastic can be a main resource</p> <ul style="list-style-type: none"> <li>- Promotes minimizing carbon footprint through plastic waste collection and manufacturing sustainable products</li> </ul>	<p>many problems in Iloilo city during the start of the pandemic - namely the scarcity of food in the city.</p> <ul style="list-style-type: none"> <li>- Found a profitable opportunity with the farmers they were initially in contact</li> </ul>	<ul style="list-style-type: none"> <li>- Demand-based production</li> <li>- Upcycled and repurposes materials like flour-sacks and scrap cloths</li> </ul>
View of socioeconomic environment	<ul style="list-style-type: none"> <li>- Monetizes plastic collection, licensing, and publicity through partnerships</li> <li>- Targets to hire lower-income workers</li> <li>- Imposes responsibility of waste management to consumers and producers (companies)</li> </ul>	<ul style="list-style-type: none"> <li>- Acknowledges the value of its stakeholders - the farmers and the customers</li> <li>- Constantly finds ways to expand to be able to help out more farmers. (e.g. Initial menu only had native chickens and native ducks, but adlai grains were added with the new farmers onboarded)</li> </ul>	<ul style="list-style-type: none"> <li>- Maintains ethical and collaborative relations with stakeholders</li> </ul>
Behavioral assumptions	<ul style="list-style-type: none"> <li>- Began focusing on revenue streams over social awareness</li> <li>- Employees of The Plaf have not fully embodied sustainability advocacy</li> </ul>	<ul style="list-style-type: none"> <li>- Founder's main intention for launching the business is "helping out local farmers and meeting the needs of the city"</li> <li>- Profits are split to 80:20 - 80% to farmers and 20% reinvested in the business</li> </ul>	<ul style="list-style-type: none"> <li>- Believes that a sustainable business goes beyond being a good image for consumers.</li> </ul>
Hallmarks of organization theory	<ul style="list-style-type: none"> <li>- Ecological crisis management is still a primary responsibility</li> <li>- Development of sustainable societies are supported by The Plaf (i.e. new production technologies, green fiscal policies, waste minimization)</li> </ul>	<ul style="list-style-type: none"> <li>- Describes the business as a COVID project then turned to a passion project to help out more farmers</li> <li>- Primary purchase intention of customers is more of a need and rather than supporting the advocacy of the business.</li> </ul>	<ul style="list-style-type: none"> <li>- Ultimate goal of offering a better or more sustainable option for consumers</li> <li>- Creates shared value through sustainable practices all throughout its operations.</li> </ul>

## Discussion

The research propositions mentioned earlier in the paper were evaluated given the findings from the interviews conducted with the three sustainable enterprises, together with the knowledge gathered through the SEMC analysis, seen in Tables 2 to 4. The researchers proposed that a sustainable enterprise's qualification as a QSOT-oriented company would be dependent on its adoption or exhibition of the four domains derived from Dyck and Greidanus

(2016)--(1) view of the natural world, (2) socioeconomic environment, (3) behavioral assumptions, and (4) hallmarks of organization theory.

With the results of the data gathered from the interviews, the researchers have interpreted and weighed the sustainable enterprises' performance in terms of exhibiting QSOT qualities in the different domains which can be seen in the table below:

Table 6. Evaluation of QSOT Orientation

Proposition #	Proposition	The Plaf	Bisaya	Sewn Wear
1	The Philippine Sustainable Enterprise possesses QSOT qualities by exhibiting entanglement and indeterminism in their view of the natural world.	✓	×	✓
2	The Philippine Sustainable Enterprise possesses QSOT qualities by exhibiting entanglement and indeterminism in their view of the socioeconomic environment.	✓	✓	✓
3	The Philippine Sustainable Enterprise possesses QSOT qualities by exhibiting entanglement and indeterminism in their behavioral assumptions.	✓	✓	✓
4	The Philippine Sustainable Enterprise possesses QSOT qualities by exhibiting entanglement and indeterminism in the hallmarks of organization theory.	✓	○	✓
5	The Philippine Sustainable Enterprise is a QSOT-oriented company since it exhibits entanglement and indeterminism in all the 4 domains.	4/4 QSOT-oriented company	2/4 Partially QSOT-oriented company	4/4 QSOT-oriented company

Legend used:

- ✓ - indicates that the sustainable enterprise fully exhibits QSOT
- - indicates that the sustainable enterprise partially exhibits QSOT
- ×

Table 6 shows the results of the evaluation of research propositions. After conducting the interviews and gaining a deeper understanding of each sustainable enterprise, the researchers

identified that The Plaf and Sewn Wear exhibited QSOT qualities in all four themes or domains of QSOT, making them fully QSOT-oriented companies. On the other hand, Bisaya

exhibited QSOT qualities in only two themes. However, this does not mean that Bisaya is not a QSOT-oriented company, but rather a partially QSOT-oriented company, that has potential to further its sustainability integration within its business operations.

The researchers recognize that sustainable enterprises are already highly likely to possess QSOT qualities, granted they stay true to their sustainability claims. Because QSOT is based on complex concepts that are not quantifiable, particularly entanglement and indeterminism, the researchers argue that a sustainable enterprise can be said to be QSOT-oriented, granted they claim and prove to be sustainable. However, their position in the spectrum of being QSOT-oriented is what the research aims to explore. The sustainable enterprises' integrity or power to stay true to their sustainability claims, their business structure, and even their innovations, are what will allow them to overcome the challenges brought about by QSOT and emerge as a successful QSOT-oriented sustainable enterprise.

It is worth discussing that while The Plaf and Sewn Wear exhibited enough QSOT qualities to be considered QSOT-oriented, their qualifications as QSOT varied for a number of reasons. Evidently, the two sustainable enterprises belong in different industries, which created a different parameter for discussions of QSOT pieces of evidence. For The Plaf, the sustainable enterprise exhibited QSOT qualities in the way its operations revolved around plastic waste management. In itself, plastic waste collection shows strong QSOT qualities; however, they innovated to sell products made of recycled plastic. Additionally, The Plaf had been established for over a year before the pandemic hit, causing the sustainable enterprise to endure the impacts and challenges of the pandemic differently than Sewn Wear did. For Sewn Wear, the sustainable enterprise exhibited QSOT qualities in its utilization of repurposed materials and relations with its stakeholders. Having been established during the COVID-19 pandemic, Sewn Wear operated within the pandemic circumstances and challenges, allowing it to adjust as the pandemic progressed. Given the difference in nature of business, the parameters or evaluations the

researchers adopted had to be adjusted accordingly. On the other hand, the two sustainable enterprises were similar in the way they aim to maximize ecological resources to reduce additional waste. Both The Plaf and Sewn Wear exhibited QSOT qualities that made them QSOT-oriented companies. Though the missions of both sustainable enterprises are similar and inherently QSOT-oriented, they went beyond by integrating sustainability into their operations as holistically as possible.

Bisaya, considered to be partially QSOT-oriented, can continue to innovate to become more QSOT-oriented. Given that the business was established during the COVID-19 pandemic, it is highly likely that it has yet to adjust to the volatile and rapidly changing circumstances and trends in the market. When all three businesses are analysed side by side, Bisaya did not exhibit the same entanglement and indeterminism in its view of the natural world. While The Plaf and Sewn Wear evidently aims towards the minimizing of waste and the production of additional materials in the ecological environment, Bisaya only aims towards empowering its partner farmers. Bisaya did not have a clear focus on explicitly sustainable methods of farming to compare with the other two sustainable enterprises. Similarly, for the QSOT domain of hallmarks of organization theory, Bisaya merely aimed to be a middleman or avenue for farmers to reach consumers. The Plaf and Sewn Wear both advocate for collaborative partnerships and relations with their stakeholders, working towards the empowerment of all parties. However, Bisaya only partially exhibited QSOT as it did not show a clear blurring of boundaries between the business, environment, and society. The owner admitted to his customers' purchase intent to be based on necessity rather than support of his advocacy.

Bisaya's lower level of entanglement evident in its operations is what differentiates it from the other two sustainable enterprises. The Plaf and Sewn Wear both exhibited entanglement in the way they collaborated with their stakeholders and the environment. Operationalizing entanglement, The Plaf monetized plastic waste collection and the manufacturing of sustainable products. Beyond addressing

ecological issues, they maximize their social impact by collaborating with the community and providing jobs for lower-income workers. On the other hand, Sewn Wear operationalizes entanglement by maximizing the use of materials and repurposing them to create fashionable items. Additionally, they embrace highly collaborative working relationships with their stakeholders, involving them in their operations. While Bisaya does exhibit entanglement in the way it aims to benefit its partner farmers, the sustainable enterprise did not go beyond this advocacy and embrace the potential opportunity to further their impact— whether it be through advocating for more sustainable farming practices or empowering the partner farmers to be more self-sufficient or even innovating the product offerings of the farmers; Bisaya simply worked as a middleman, helping bridge the farmers with consumers.

Operationalizing indeterminism, on the other hand, The Plaf is able to make more indistinct which entity affects plastic pollution as all contribute and address the issue simultaneously. Similarly, Sewn Wear makes indistinct who contributes and addresses the issues around fast fashion. Moreover, both sustainable enterprises blur the lines between their business and the community by involving their stakeholders and partners in their advocacy and operations. Bisaya does not exhibit indeterminism as deeply as the other sustainable enterprises as there is still a clear distinction between its partner farmers, as producers, and the business, as the bridge or middleman. Additionally, the community is not as greatly impacted by its advocacy as purchase intention leans towards need over advocacy support. Nonetheless, all three sustainable enterprises have QSOT-oriented advocacies such that consumers' support of these businesses creates impacts towards the environment and community, one way or the other.

Evidently, the COVID-19 pandemic had its impacts on the three sustainable enterprises. Because of this, another perspective to assess the business' QSOT orientation is its response to the pandemic. The Plaf exhibited QSOT qualities in the way the team enforced protocols to secure their safety and health. Though they had to let some team members go often for the

workers' convenience and choice, The Plaf reassessed their strategy to continue operating in both the work-from-home setting for the management team, and on-site setting for the rest of the workers. Since then, they have been able to adjust accordingly and expand the team as needed to continue their innovations. As for Bisaya and Sewn Wear, having been created during the pandemic, the sustainable enterprises operated within the pandemic's challenges and they managed to adjust as the pandemic progressed. For both businesses, they maintained and upheld their sustainable practices within their operations and towards their stakeholders, exhibiting QSOT-oriented qualities.

## Conclusion

The researchers were able to explore the different facets of a sustainable enterprise across the industries of farming, fashion, and service. Delving deeper into the daily operations of these companies, it uncovered many insights as to how the concept of QSOT was able to manifest in the domains of their view of the natural world and socioeconomic environment, behavioral assumptions, and hallmarks of organization theory. Each of the companies were able to depict how they were able to exhibit QSOT but all of these differed according to their industries. The Plaf and Sewn Wear's main QSOT-oriented innovations are more explicit through their products and services. In the case of Bisaya, the focus of QSOT qualities is more on their ways of working with their internal stakeholders. This solidifies that becoming QSOT oriented is sustainable across different industries but it is to be taken into account that the level of QSOT-oriented impact should be measured in different degrees. Although material and financial manifestations of QSOT are more quantifiable, the essence of the theory is highly dependent on the perspectives and assumptions of an organization which is the basis of the evaluation the researchers provided. The evaluation of a company being QSOT-oriented should be done through studying its performance and also its philosophies conjointly.

It is also important to note that not all businesses are familiar with the concepts of entanglement and indeterminism in addition to what

QSOT is about. With regards to operationalizing these two concepts for companies who wish to be QSOT oriented, it is first important to differentiate the two. Entanglement is more focused on innovating the business model of an organization. As Dyck and Greidanus describe it, it is a remarkable interconnectedness across time and space, among two or more quanta. Hence, it is important for the different functions of an organization to be in sync with each other, to an extent that each function becomes subconscious with the other. To attain entanglement in an organization, management must instill the values of teamwork in such a way that each is reminded of how all of them working cohesively contribute to the overall success of the organization. On the other hand, indeterminism is focused more on continuing operations without consciously needing to fully measure the extent of one's efforts. Management will play the most crucial role to attain indeterminism. As a sustainable enterprise, they need to remind themselves that they are working for something much bigger aside from reaching profit targets. It is important for management to orient their teams about the mission, vision, and purpose of their organization. Employees in the organization must be drawn to their work to a point that they become subconscious with their short-term goals while still being driven and passionate to focus on the bigger picture - working for their chosen advocacy.

One challenge that the researchers encountered was identifying QSOT qualities in the aspects of the sustainable enterprises. This is because the companies have come from different industries. To give an example, the researchers had to carefully weigh the context of Bisaya. Bisaya which is an agricultural enterprise would unquestionably have to operate with farmers and nature as their primary resources. Because farmers are a marginalized group in the country and nature is tied to the environment, Bisaya can be accepted as a QSOT-oriented company. However, this would imply that all agricultural companies in the country would be a QSOT company. Because of this conflict, the researchers had to consider deeper aspects of the three social enterprises such as their philosophies and ability to manifest QSOT qualities. In

this thought, the researchers were able to reiterate the concept of QSOT where QSOT orientation can not solely be identified by an enterprise's output but through their different beliefs, assumptions, and views.

#### *Advantages of Adopting QSOT Beliefs and Practices*

The three companies were able to exhibit entanglement in the business operations and this became both an advocacy-driven action and a strategy. When a sustainable enterprise becomes well entangled with "external" entities, it is not merely taking on more responsibilities for the organization, but also the resources and opportunities that come along with it. For the case of The Plaf, the company was able to integrate everyday consumers innovatively into their business structure—having them voluntarily donate the main resource of the company. While a traditional structure would focus more on sourcing their materials internally, say through logistics, by being entangled with their consumers, The Plaf was able to outsource this aspect of their operations. The advantage of adopting entanglement into a sustainable enterprise is that the company will have more access to resources and possibly at lower cost and risk to them. When responsibilities are shared beyond the sustainable enterprise, opportunities are shared and impact becomes greater.

Another benefit to this phenomenon is the company being able to build more loyal relationships with their customers. Entanglement with a company's employees, consumers, and partners build a joint identity aligned with the advocacy they support. This could possibly lead to more repeat purchases, more frequent partnerships, and even consumers organically creating traction for the sustainable enterprise's advocacy. These results have already been depicted by The Plaf's consistent volunteers and Sewn Wear's customers who promote the advocacy of the company without the company instructing them to promote. Entanglement with different entities within and outside the company encourages proactiveness in supporting the advocacy and manifesting aligned actions within the society. This leads to greater societal and ecological impact as the

motivations of these entities are much more aligned and collaborative. In addition to this, because these entities have become more involved in the practices of the sustainable enterprises, feedback and input is more instantaneous. For example, Bisaya's practice of entanglement is manifested through catering their product list and sales targets based on the capacity and desire of their farmers. This is a contrast to the traditional practice of the managers solely dictating the direction for the business. In another perspective, feedback has become more instantaneous as consumers have now built identities aligned with the sustainable enterprise and are therefore more inclined to monitor and hold companies accountable for their actions. Sharing the responsibility with regulatory authorities, proactive consumers have now become part of regulating and ensuring that these companies are motivated and act accordingly. This serves a benefit toward society as it urges companies that claim to be sustainable to truthfully perform and give evidence to their societal and ecological impacts.

#### *Risks and Cautions in Operationalizing QSOT*

Since adopting a view of entanglement merits heavy interconnectedness, both simultaneously and instantaneously, organizations will be interacting with externalities. While said interaction has the potential to bring about increased shared resources and opportunities, the same can be said with the risks involved within the external entity being interacted with. For instance, their social reputation can be associated with the business that they are entangled with. There is no "choosing" which aspects to be entangled with—benefitting from the positive facets and leaving out the neutral or non-positive thrusts of the organization is not what it means to be entangled or nonlocal. In this respect, there will also be more public and private scrutiny. Since more stakeholders are being involved in the process of entanglement, and indeterminism merits a level of uncertainty within entities, there is no complete control over the multiple exchanges, which stakeholders can observe and react on. While perceiving such exchanges can be a source of motivation for some stakeholders, there is also

the possibility or risk of giving the opposite effect on another group of stakeholders. In addition, it can be said that businesses adopting entanglement and indeterminism should be prepared to be on the receiving end of higher expectations. This can result from the consumer base of the entangled organization's brand loyalty. Lastly, businesses should be careful with creating an expanded and extended web of messages and advocacies. Perhaps in the process of being entangled with other organizations and entities, the messages will compound and the advocacy loses its focus or priority.

One observation that was evident across the three social enterprises was their apparent struggle with financial outcomes. Since they are all operating as businesses, sustainability in terms of profit can not be neglected, however this subsequently has affected both the internal operations of the companies and their impact. For the case of a bigger social enterprise such as The Plaf, their prior behavior of being dedicated to spreading awareness and building socially-active communities has become overshadowed by their "necessity" to find more avenues of generating income. The Plaf solidifies the idea behind Blonkowski et al.'s "Hesitations of corporate leaders in adopting sustainable practices" (2014) where it states that the primary barrier of corporations joining the movement towards sustainability is the lack of return on investment. The Plaf was able to monetize their service to increase their reach to corporations and magnify their impact. The researchers claim that focus on financial sustainability of a social enterprise can still be a QSOT-oriented action if this is motivated by the intention to solve a societal issue. Looking at the phenomenon from smaller scale social enterprises such as Bisaya and Sewn Wear, their impact is much less evident because of their financial restrictions even with having aligned philosophies and principles to QSOT. In "Sustainability-balanced scorecard" (Tsalis, Nikolaou, Grigoroudis, & Tsagarakis, 2013), the lack of financial resources and an effective business structure are the barriers in properly exhibiting sustainability. This is evident in the scope of impact of Bisaya and Sewn Wear being limited to only their internal partners and a smaller



number of customers who are aware of their advocacy.

Another challenge posed to these enterprises is being able to communicate and nurture the advocies they are built on to their customers and stakeholders. While the three enterprises have exhibited QSOT qualities in their principles, they have encountered tribulations in communicating the benefit of choosing their company apart from their product or service benefit: Bisaya owner, Gelo, admits that their products are sought out more due to necessity and not in support of their advocacy; The Plaf has focused on corporate partnerships that seek publicity over awareness campaigns for the youth. This suggests that Philippine consumers are still in the beginning stages of accepting the QSOT concepts as a plan of action that will benefit their natural environment and society.

With the three cases of The Plaf, Bisaya, and Sewn Wear, the researchers can conclude that the three sustainable enterprises are QSOT-oriented and possess QSOT qualities with The Plaf being able to exhibit a sustainable structure of adopting this. However, the full and profound integration of QSOT within a sustainable enterprise is gradual or progressive as factors, such as the nature and industry of the business, awareness and proactiveness of consumers towards the advocacy, and scale of the company affect this. Additionally, QSOT-orientation can be measured in many ways, including the sustainable enterprise's response to challenges as extreme as that of a pandemic. Regardless, measuring QSOT orientation must be rooted in the concepts of entanglement and indeterminism in an enterprise's beliefs, assumptions, and views. In the operationalizing QSOT beliefs and practices in the country, there is evidence of Philippine consumers being proactive and participative in QSOT-oriented trends that would incline them to build their identity as a loyal consumer with companies by supporting them. This asserts that companies will thrive and build loyal customer relationships if they were to adopt QSOT despite encountering both advantages and disadvantages.

## Recommendations

### *For future studies*

As this study served as an exploration of Dyck's Quantum Organization Theory, the researchers have provided recommendations for future researchers who wish to contribute to this study.

In relation to the selection process of the participating companies for the study, it is best to maintain the variety of the industries of the companies as what the researchers have done, and consider looking into other industries. This would give the researchers more in-depth insights as each industry has different measures that would allow them to have a better understanding of QSOT implementations in various types of businesses. The researchers also recommend improving the qualifications of the participating companies by inviting more established organizations to the study - preferably medium to large enterprises, DTI-registered and compliant to government requirements, and have been operating for more than 5 years so as to ensure the credibility of the information that these institutions will be contributing to the study. Future researchers may also consider making other company resources mandatory such as financial figures which can serve as a variable in determining the intent of the organizations in pursuing QSOT. Future research may build on the current rubric set by the researchers as seen in Table 2, and create a more comprehensive rubric in assessing the QSOT-orientedness of the participating companies. Lastly, it is also very important to note that one of the major limitations of this research is that this study was conducted in the middle of the pandemic where there are lockdown restrictions set in the Philippines - limiting the number of people inside an establishment. Thus, the researchers were unable to conduct visits in the actual establishments of the participating organizations. With this, it is recommended to continue this study during a period where there are no restrictions in the country to fully optimize data collection. Future researchers are advised to conduct site visits in the office of the organization to have a more in-close look of how they operate, and possibly obtain more data from employees, staff, and more.

### For businesses looking to explore QSOT

With the increasing level of consciousness and awareness that surround micro, small, medium, and even larger companies, the group intends to provide different recommendations for enterprises that express their interest in exploring QSOT as a means of driving their processes. To start, businesses that are ready to evolve by applying QSOT principles should have a strong foundation—a clear “why” to guide and refer to once the demands of QSOT bring tension between the financial aspect and the sustainability aspect. Businesses should ensure that their target audience, as well, is able to understand the goal and the reason (“why”) for applying QSOT principles. The proponents place clear emphasis on the idea that it is imperative to have a “why” because there will be “non-negotiables” for the execution and implementation of the principles and processes. For instance, with the natural world, there must be initiative to preserve the environment. While there might be conditionals, most of the actions that are directed towards maintaining a QSOT approach are rigid—in an attempt to massively transform the ways enterprises conduct their business—which, in turn, benefits the natural, socioeconomic, behavioral, and organizational worlds.

### Acknowledgments

First and foremost, we offer this research to God, for He has given us the opportunity to build knowledge for the promotion of sustainable development in the country. We thank Ms. Angelique Blasa, our Thesis Adviser, for her guidance and support throughout the term. Her encouragement, motivation, and patience have inspired us to produce a meaningful research paper. Additionally, we express our appreciation for our panel members. Their feedback and criticism allowed us to explore the topic more critically and create an insightful and relevant paper. We extend our gratitude to the Management and Organization Department and its professors for motivating us to contribute valuable and relevant knowledge for the promotion of sustainable development. We also thank Mr. Bruno Dyck for not only providing us with an

inspirational study, but going above and beyond in addressing our concerns and questions as we built on our ideas. We extend our sincere gratitude to the organizations and businesses that participated and contributed to our research, for they have given us the opportunity to not only build knowledge, but also promote and appreciate their efforts towards sustainable development.

### References

- Banerjee, S., & Arjalies, D. (2021). Celebrating the end of enlightenment: Organization theory in the age of the anthropocene and gaia (and why neither is the solution to our ecological crisis) <https://doi.org/10.1177/26317877211036714>
- Blonkowski, N., Jones, D., Naik, S. & Raman, S. (2014). The value of the sustainable supply chain: what do consumers think? Retrieved from <http://www.accenture.com/SiteCollectionDocuments/PDF/Accenture-The-Value-of-the-Sustainable-Supply-Chain.pdf>
- Bradshaw, C., Ehrlich, P., Beattie, A., Ceballos, G. Crist, E., Diamond, J., & Blumstein, D. (2020). Underestimating the challenges of avoiding a ghastly future. *Frontiers in Conservation Science*. 1. 615419. 10.3389/fcosc.2020.615419
- Carpenter, S. (2002). Ecological futures: Building an ecology of the long now. [https://doi.org/10.1890/0012-9658\(2002\)083\[2069:EFBAEO\]2.0.CO;2](https://doi.org/10.1890/0012-9658(2002)083[2069:EFBAEO]2.0.CO;2)
- Deng, X., Kang, J.K., & Low, B.S., (2013). Corporate social responsibility and stakeholder value maximization: Evidence from mergers. *J. Financ. Econ.* 110 (1), 87e109.
- Dentoni, D., Pinkse, J., & Lubberink, R. (2020). Linking sustainable business models to socio-ecological resilience through cross-sector partnerships: a complex adaptive systems view. *Business & Society*. <https://doi.org/10.1177/0007650320935015>.
- Dyck, B., & Greidanus, N. (2016). Quantum sustainable organizing theory: A study of organization theory as if matter mattered.

- Journal of Management Inquiry*, 1-15. DOI: 10.1177/1056492616656407
- Francis, P. (2015). On care for our common home. Rome: Vatican Press. [http://w2.vatican.va/content/dam/fran-cesco/pdf/encyclicals/documents/papa-fran-cesco\\_20150524\\_enciclica-laudato-si\\_en.pdf](http://w2.vatican.va/content/dam/fran-cesco/pdf/encyclicals/documents/papa-fran-cesco_20150524_enciclica-laudato-si_en.pdf)
- Iver, J. (2007). Organizational ecology: A theoretical framework for examining collaborative partnerships. *31*(4), 7-19. [https://doi.org/10.1300/J147v31n04\\_03](https://doi.org/10.1300/J147v31n04_03)
- Kiron, D., Kruschwitz, N., Rubel, H.; Reeves, M., & Fuisz-Kehrbach, S.K. (2014). Sustainability's next frontier: Walking the talk on the sustainability issues that matter most. <http://sloanreview.mit.edu/projects/sustainabilitys-next-frontier/>
- Lewis, K. V., Cassells, S., & Roxas, H. (2015). SMEs and the potential for collaborative path to environmental responsibility. *Business Strategy And the Environment*, *24*(8), 750-764. <https://doi.org/10.1002/bse.1843>
- Meima, R., & Welford, R. (2016). The ecological challenge in organization theory and organizational behavior. *6*(2), 3-8. <https://doi.org/10.4324/9781315825113>
- Nguyen, D. K., & Slater, S. F. (2010). Hitting the sustainability sweet spot: having it all. *Journal of Business Strategy*, *31*(3), 5-11. doi 10.1108/02756661011036655
- Osterwalder, A., and Y. Pigneur. (2010). *Business Model Generation: A Handbook for Visionaries, Game Changers, and Challengers*. Hoboken, New Jersey: John Wiley & Sons.
- Popper, K. (1982). *The Open Universe: An argument for indeterminism*. Routledge. ISBN 0-415-07865-2
- Roxas, B., & Chadee, D. (2012). Environmental sustainability orientation and financial resources of small manufacturing firms in the Philippines. *Social Responsibility Journal*, *8*(2), 208-226. <https://doi.org/10.1108/17471111211211234842>
- Roxas, H., Ashill, N., & Chadee, D. (2015). Effects of entrepreneurial and environmental sustainability orientations on firm performance: A study of small businesses in the Philippines. *Journal of Small Business Management*. Forthcoming. 10.1111/jsbm.12259.
- Savitz, A.W. & Weber, K. (2006), The triple bottom line: How today's best-run companies are achieving economic, social, and environmental success – and how you can too, Jossey-Bass, Hoboken, NJ.
- Schrödinger, E. (1935). Discussion of probability relations between separated systems. *Mathematical Proceedings of the Cambridge Philosophical Society*, *31*(4), 555-563. doi:10.1017/S0305004100013554
- Shepherd, D. A. & Patzelt, H. (2011). The new field of sustainable entrepreneurship: Studying entrepreneurial action linking “what is to be sustained” with “what is to be developed. *Entrepreneurship Theory and Practice*, January, *35*(1), 137-163. doi 10.1111/j.1540-6520.2010.00426.x
- Sparviero, S. (2019). The Case for a Socially Oriented Business Model Canvas: The Social Enterprise Model Canvas, *Journal of Social Entrepreneurship*, DOI: 10.1080/19420676.2018.1541011.
- Tsalis, T. A., Nikolaou, I. E., Grigoroudis, E., & Tsagarakis, K. P. (2013). A framework development to evaluate the needs of SMEs in order to adopt a sustainability-balanced scorecard. *Journal of Integrative Environmental Sciences*, *10*(3-4), 179-197. <https://doi.org/10.1080/1943815X.2013.858751>
- Why brands and retailers are running with the 'slow fashion' movement. (2020). Forbes. <http://www.forbes.com/sites/aliciaadamczyk/2014/11/20/why-brands-and-retailers-are-running-with-the-slow-fashion-movement/#1b1266906505>
- Yin, R. K. (2009). *Case study research: Design and methods* (4th Ed.). California: SAGE Publications, Inc. ISBN 978-1-4129-6099-1
- Young, C. & Tilley, Fiona. (2006). Can businesses move beyond efficiency? The shift towards effectiveness and equity in the corporate sustainability debate. *Business Strategy and the Environment*. 15. 402-415. 10.1002/bse.510.

## Appendices

### Interview Questionnaire

Thank you for agreeing to participate in this study on Philippine Sustainable Enterprises Aligned with the Quantum Sustainable Organizing Theory (QSOT).

For this interview, I will be asking you questions about the different aspects of your business. Please feel free to take as much time as you like to elaborate on your responses. However, before going into the interview proper, I would like to introduce and discuss the topic so you may understand the concept better.

The authors Dyck and Greidanus published a study in 2016 about the Quantum Sustainable Organizing Theory, also known as QSOT, called "Quantum Sustainable Organizing Theory: A Study of Organization Theory as if Matter Mattered." In this paper, the authors discuss two main concepts, entanglement and indeterminism, and how these quantum ideas challenge conventional organizing theorizing.

Quantum entanglement refers to the interconnectedness of matter in ways that defy Newtonian physics and common sense assumptions. Quantum indeterminism suggests that uncertainty is an inherent feature of reality, not a lack of information that hinders rational decision making. Together, entanglement and indeterminism challenge conventional organizing theorizing with regards to (1) the boundaries between a business entity and its natural and social environment, (2) the importance of self-interested individualism and (sociomaterial) financial measures of performance, (3) the emphasis on competitiveness, and (4) the hallmarks of rational theory and practice. Ultimately, the authors highlight how QSOT, or a quantum worldview, should be a considered approach by businesses such that businesses embrace this way of thinking of entanglement and indeterminism in achieving their economic, social, and environmental objectives.

To put it in simpler words, consider the case study the authors presented in the paper, Wiens Family Farm. The Wiens Family Farm, part of the Community Supported Agriculture movement, is a firm that enhances both ecological and social wellbeing, has porous boundaries, and challenges norms of instrumental self-interests while embodying humility. In terms of ecological wellbeing, they use organic practices to grow produce on their small farm, enhancing the quality of the soil and reducing the need for fertilizers and pesticides, as well as negative ecological externalities. Secondly, being part of the Community Supported Agriculture movement enhances social wellbeing. They have a practice where their customers would pay upfront for the farm's produce over a period of time and farmers would provide these customers with a box every week filled with their produce. The money upfront, called a "share," allows them to purchase seeds and other supplies, and somewhat ensures that they have income. Customers then take the risk of uncertainty of what and how much they would receive every week. However, the sense of community between consumers and farmers allows them to see the exchange of value regardless of this risk. Third, the boundaries are porous in the sense that the Weins family encourages their customers to also start their own backyard gardens. They also opened the decision of the share price to be dictated by the community, and because of this strategy, the community voluntarily raised it by over 25% as they wanted the farm to be financially viable and for the farmers to earn a living wage. Lastly, humility is evident in the recognition of the uncertainty surrounding weather and other factors related to growing vegetables. Indeterminism is best seen here in how decisions are made regarding what to plant and how to irrigate and even in how much sharers pay. Additionally, entanglement is seen in the way the Weins family sees and values their farmers and their customers, seeing everyone as part of the community, with everyone having a role in and value to the business.

At the end of the day, QSOT can be seen in countless ways, and we want to try to specify and summarize these in the context of Philippine sustainable enterprises.

With that very quick run through of the theory, we will now proceed with the questions. Do you have any questions for me before we proceed?

Feel free to stop me at any point during the interview if you need more information or have questions.

1. Please tell me a little bit about yourself. Please describe your work experience prior to working at [name of business].
2. What position do you hold at [name of business]? How long have you been at [name of business]?

### **Overview**

1. Please tell me about [name of business]. Describe the key product(s) and/or service(s) that you provide.
2. Is your product/service innovative? How so?
  - a. How do you decide on which products/services to offer?
3. Would you describe the products/services offered by [name of business] as meeting customers' needs, or their wants?
  - a. What would you say is the value your products/services offer customers?
  - b. Do your products/services enhance customers' well being?
4. Has [name of business] ever developed a mission and/or vision statement? (If yes) What is it? (If no) What might it be if you had to make these statements?

### **Founding**

1. How did your business start? Who were the founders and what opportunity did they recognize?
2. What were the key factors or resources that enabled starting [name of business]?
3. Financial
  - a. Where did the founders get financial resources/funding from? How was the process?
  - b. How did they raise money to grow the business?
  - c. [With investors] Why do you think investors choose to invest in [name of business]?
    - i. Do they have expectations that go beyond financial returns? Please elaborate.
    - ii. Do you think the investors are willing to compromise their financial returns in order to meet these other expectations?
4. Skills/experience
  - a. What skills or prior experiences of the founders enabled and encouraged them to start [name of business]?
5. Contacts/network
  - a. Did the founders have contacts with other organizations that helped them to get started (including the government or LGU)?
  - b. Is [name of business] part of any formal/informal association/network/alliance?
6. What do you think is the business' most valuable resource? How is that resource managed?
7. How would you describe the structure of the business? Is it a family business? Is it privately owned or a public corporation?
8. Covid-19
  - a. Please briefly describe the effect Covid-19 has had on [name of business].
  - b. What were the key changes or pivots you had to make due to Covid-19?
  - c. How do you think it will affect [name of business] moving forward?

### **Customers/Marketing**

1. Please tell me about your customers. What are the demographic characteristics of your target market and/or customers?
2. How does [name of business] relate to its customers? What kind of marketing strategies do you use?
3. Price
  - a. How do you set the prices for the products/services you offer?
  - b. How would you say your prices compare to other businesses offering similar products/services?
  - c. Why do you think your customers purchase from you or avail of your services?
    - i. What do you offer customers that other businesses don't?
  - d. Who would you say are your main "competitors"?
    - i. Are there organizations or businesses that you collaborate with?
4. Place
  - a. Please tell me about your location and what it means to your business.
5. Promotion
  - a. Businesses tend to promote some things more than others. What does your business promote? How does it promote this?

### **Suppliers/Supply Chain**

1. Who are your key suppliers? Please describe your working relationship with your suppliers.
2. What criteria have you used to select suppliers? (e.g., price, quality, reputation, location, sustainability practices, working relationships)
3. Do you know anything about how your suppliers treat their employees or the environment?

### **Employees/HRM**

1. Please tell me about your company's employees. How many employees do you have?
2. How and where do you recruit employees?
  - a. What are some key factors your company looks for when hiring an employee? (e.g. past work experience, salary expectations, education, need)
  - b. Do you ever give consideration to hiring people who have characteristics that may make it difficult for them to get a job elsewhere? Please elaborate.
3. Does your company provide training for employees? Please describe briefly.
4. Does your company provide employees with regular performance appraisals? Is it related to their pay?
  - a. How are employees' pay/salaries determined?
  - b. What factors go into deciding how much to pay employees?
5. Overall, how would you describe the nature or quality of relationships between managers and other employees? (e.g. emphasis on participative management)

### **Finance/Accounting**

1. Please tell me about the performance of [name of business]. In what ways, or by what criteria, would you say it has been a success, and in what ways has it not been a success?
2. How would you describe its performance in terms of financial wellbeing?
  - a. What measures do you use to assess financial performance?
  - b. What financial reports are most useful to you? How often do you create financial reports?
3. Do you consider or measure its performance in terms of its social and ecological wellbeing? If yes:
  - a. How would you describe its performance in terms of its social wellbeing/impact?
    - i. What measures do you use to assess social performance?
    - ii. Do you create social reports?

- b. How would you describe its performance in terms of its ecological wellbeing/impact?
  - i. What measures do you use to assess ecological performance?
  - ii. Do you create ecological reports?
4. How important is it for your organization to grow?
5. What is the key to success for your organization?

### Management

1. [Leadership Behavior] What percentage of leaders' attention, time and energy goes into managing: tasks and structure vs people and relationships vs change and the future?
  - *Task-oriented behavior* refers to leaders placing emphasis on designing, implementing, and explaining organizational structures and systems that enable and motivate members to perform their tasks.
  - *Relationship-oriented behavior* refers to leaders placing emphasis on showing concern and respect for group members, being friendly and approachable, treating other members as equals and being open to their input.
  - *Change-oriented behavior* refers to leaders placing emphasis on monitoring and understanding the work unit's larger environment, discovering innovative ways of working within it, and promoting the implementation of major changes in strategy, structures and systems, or in the array of goods and services that are offered.
2. [Management Style] Which of the following best describes how your business operates?
  - *Financial Bottom Line (FBL) management* focuses on maximizing the organization's financial well-being, and leaves the care for social and ecological well-being to other stakeholders (e.g., government).
  - *Triple Bottom Line (TBL) management* seeks to maximize the organization's financial well-being by focusing on reducing its social and ecological externalities (e.g., this approach would reduce the use of packaging and fossil fuels in order to save money while reducing the firm's ecological footprint).
  - *Social and Ecological Thought (SET) management* seeks to optimize social and ecological well-being while remaining financially viable (e.g., this approach seeks to make enough money, but not necessarily to maximize profits).
3. Has there ever been tension between short-term and long-term objectives?
4. Has there ever been a time when the business dealt with tension between the interests of owners and the interests of other stakeholders (e.g. return on investment vs good jobs vs environmental concerns)?

### Personal

1. What does [name of business] mean to you, what aspect are you most passionate about?
2. If there is one thing you hope [name of business] inspires others to do, what would that be?

### COVID-19

1. Please describe how the Covid-19 pandemic has impacted your business. What happened during the start of the pandemic?
2. How did your business adapt to the circumstances? What changes did you have to make?
3. Who were affected by these changes? (e.g. employees, customers, investors, etc.) How did you take your stakeholders into consideration?
4. Are you still able to fulfil your mission despite the shift in your operations and the changes in the economy?