Sustainable Development Practices Implemented by the Community Partners of San Beda University (SBU)

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Abstract

Sustainable development is a flagship subject of the stewardship ideology, an advocacy principle and challenge in the business implementation across the enterprises, big or small, all over the world. With the dynamic global scenario, the HEIs in the Philippines need to teach and support these sustainable development not just through its academic programs but to its community extension actions. To be able for San Beda University to do its responsibility in teaching and implementing sustainability, there is an immediate need to assess the current sustainability practices of the community partners of Community Engagement Center (CEC).The main objective of this research study is to identify the sustainability practices of the five community partners of CEC-SBU based on Elkington's model of sustainability wherein it is three pillar model namely, environmental, economic and social sustainability requires equal attention. This study also aimed to determine the best practices of these community partners. The data collected are based on semi-structured interviews and field visits to the community partners. The results showed that the common SD practices identified are water utilization (under environmental dimension); maintain good quality of products (under economic dimension); and generation of employment and income, product safety, safety standard of work, organizational ethics and social interaction (under social dimension). The best SD practices were also evaluated. The study

confirms the proposition that community partners of CEC-SBU shows low level of implementation in the environmental sustainability dimension. The results of this research can serve as a reference and guide in the community engagement agenda and activities of all SBU faculties, administrators, service personnel and students towards sustainability. The researchers recommend that CEC-SBU should conduct activities and other interventions for the community partners that enable adoption of SD practices especially those under environmental sustainability dimension. Future researchers must undertake further studies that describe, evaluate and measure the sustainable practices of community partners of CEC and SMEs in specific industries.

Keywords: community partners, economic, environment, social, sustainable development,

Background of the Study

Stewardship and Sustainability

Efforts to mitigate the harmful impacts of modern manufacturing practices to human health, prevailing climate change in the global environment and the diminishing limited resources have initiated the mankind to consider the stewardship ideology and principles. One topic area of stewardship pertains to the never ending debate on issues on sustainability and its implementation. The basic sustainability concept refers to meeting the needs of the present without compromising the ability of future generations to meet their needs (Heizer, etal. 2017). This includes topics such as green products or "going green," recycling, pollution control, global warming, and saving rainforests are all certainly part of sustainability. True sustainability involves thinking not only about environments but also concern on employees, customers, knowledge, beliefs, enterprise resources, community, and the enterprise's reputation. It seems that the corporate sector is increasingly becoming aware of the sustainability and environmental aspects of their business operations. However, while this is the case among larger companies, much research indicates that sustainability practices of small and medium enterprises (SMEs) are lagging behind (Jansson et al. 2015). Also, the degree of sustainability adaptation of SMEsto thenew manufacturing systems, business practices and technologies are not well established.

HEI's Extension Programs on Sustainability Advocacy

The Higher Education Institutions (HEIs) in Philippines are mandated by Commission on Higher Education(CHED) to conduct its own extension programs as reflected in CHED Memorandum Order 52 (CMO 52), series of 2016. The new extension policy of this CMO indicates that HEIs are in a strategic position to work in partnership with citizens, communities, business, and industry in facilitating the transfer of knowledge or technology on specific developmental areas. The trending HEI projects on knowledge transfer or technology are directed towards promoting the principles and implementation of sustainability for the society (CMO 52, Series 2016). Whether small or large sized, all the private and public HEIs can do its role to encourage, teach and help the community to adopt sustainability.

The San Beda University (SBU) carries the significant tasks on providing meaningful opportunities for community engagements and volunteerism. In the SBU 10-year strategic vision, the extension programs contribute to the human development of partner communities, and their emancipation from various societal ills. To operationalize CMO 52,SBU faculty members and students, through SBU's official university extension arm - Community Engagement Center or CEC (formerly Institutional Community Involvement Center or ICIC), do their contributions in fostering sustainable economic developments in marginalized communities. Currently, in the sustainability interventions, CEC uses traditional structure in its planning especially in the documentation of assessment. There is a need for systematic assessment of the status, existing practices and degree of adaptation to sustainability of these community partners being a small organization. However, there are limited literatures, assessment tools and specific models on sustainability adaptation that are applicable for small and medium enterprises. As such, it is vital for SBU to conduct studies pertaining to simplified and direct assessment of the sustainability practices that tackles different aspect of the organization as well as unifying the business and management processes. The qualitative assessment must be initially conducted to community partners.

Sustainable Development (SD)

The business community faces a major challenge due to a deteriorating global environment and the aspirations of the global population for a high quality of life. Concerns and aspirations on the environment are always the concern of people. The earliest significant global effort was the World Commission on Environment and Development. This is a global conference initiated by the General Assembly of the UN in 1982. This commission is headed by Gro Harlem Burndtland (president of Norway), wherein they publish the report *Our Common Future* in 1987. The Brundtland Commission's brief definition of sustainable development as the "ability to make development sustainable—to ensure that it meets the needs of the present without compromising the ability of future generations to meet their own needs" is surely the standard definition when judged by its widespread use and frequency of citation (Kates, et al, 2005). Although environment is the flagship aspiration in the sustainability domain, the commission argued that the word development is what we all do in attempting to improve

within their territory. On development, the report states that human needs are basic and essential. It says that economic growth must be in equity to share resources with the poor, is required to sustain them. Equity is encouraged by effective citizen participation. Hence, sustainability and development are inseparable. These two domains are always the two factors consideration in sustainability direction of the company.

With these dual concerns, there is a critical need for ensuring that all future development efforts are sustainable. Yet manufacturing consumes natural resources and produces by-products and waste, often detrimental to the environment. The global research community has to come together to develop approaches and policy guidance for sustainable manufacturing (Kibira, et al, 2008). In the book "Sustainable Development in the Process Industries" by Jan Harmsen and Joseph Powell, the concept of sustainability is transformed into the *triple bottom line* (TBL) of people, planet, and profit. As attributed to a well-known corporate social responsibility and sustainable development name John Elkington, these components of TBL are based on three essential dimensions of sustainable development: the social, ecological and economic sustainability which are adopted by financial and business world (Harmsen & Powell, 2010). Environmental sustainability relates to the prudent utilization of natural resources and the constant monitoring of the impact of business on such resources. Economic sustainability aims at initiatives that provide economic support to the business to operate indefinitely. Social sustainability measures are those that add value to the community in which the businesses operate in. Sustainable development is possible with the fine balancing of these three pillars. (Slaper & Hall, 2011)

Small and Medium Enterprises (SMEs) and Sustainability

In the Philippines, there are 924,721 business enterprises in which 99.56% are categorized as SMEs. (DTI, 2017, as cited by PSA, 2017). The SMEs generate more than 70% of employment and contribute 30% to the country's gross domestic product (Roxas, et al., 2009; Aldaba, 2008).These SMEs, by definition, relatively have minimal asset size and operate on small scale, and their individual levels of waste and energy usage are extremely small (Natarahan et al, 2011) as is their environmental overall impact. While these SMEs are often considered as the engine of economic growth (Roxas, et al., 2009), their aggregate business activities may have

potential negative impact on the environment as they consume energy and produce wastes and other by-products of their core business operations. On a global scale, there are rough estimates that small firms contribute to over 70% of all pollution and 60% of carbon emissions (Roxas, et al. 2012, as cited by Martin-Tapia et al., 2010; Walker et al., 2008).According to Dir. Arancha Gonzalez of the International Trade Centre (ITC), a subsidiary organization of the World Trade Organization (WTO), these SMEs in the developing world face difficulties in understanding and implementing sustainable practices, primarily due to the proliferation of various standards, codes of conduct, and other sustainability initiatives around the world (Orosa, 2014).

Most of the work dealing with SD has been focused on large corporations and not on the SMEs. The impact of larger firms on the environment tends to be more noticeable and quantifiable. As a result, it is easier to see, measure, understand and evaluate the impact of such large firms. In addition, larger firms tend to have more experience in dealing with multiple pressures from the government, NGOs and consumers, and have become capable at handling the need for a "greener" business perspective.

The researchers believe that the said SMEs including all the CEC-SBU community partners need to redirect their common positioning from a traditional livelihood business to an enterprise that embraces sustainability framework. Adopting sustainability standards is now no longer just an option for small producers but "a critical part of the business plan of any SME" (Orosa, 2014). These necessities a preliminary need to assess the sustainability practices based on a structured framework. Using an appropriate sustainability framework and methodology it would become easier to construct system dynamics models tailored to specific problems in different industries and geographies with model components acting as the building blocks (Kibira, et al, 2008).

The results of this study have important implications for the SBU's administrators, faculty, service personnel and students. The findings of this investigation serve as inputs in formulating and conducting projects and activities for SBU stakeholders that are directly in charge of challenges related to sustainable development implementation. This approach may enable the CEC-SBU to provide appropriate intervention in the form of training, demonstration, and application of sustainable practices.

The procedures and results from the publicize assessment of community partners of CEC-SBU apply as well in the assessment of all SMEs in the Philippines. In addition, the policy makers can use this evidence to develop comprehensive frameworks and regulations that would stipulate more rigorous implementation of policy frameworks to ensure sustainability. As most of the SMEs undertake similar initiatives, they could benefit by studying the best sustainability practices. This research is significant in such a way that it will appropriately address the bottom line challenge on encouraging the community partners on completely pushing them to implement sustainable development in their livelihood. Also, the results of this assessment will be used as basis in modifying and intensifying the CEC's projects and programs concerning sustainability and stewardship in general.

Statement of Research Problem

What are the sustainable development practices that can be implemented by CEC-SBU based on the 3-pillar model?

Statement of Specific Objectives

Specifically, we aimed to achieve the following objectives:

1. To identify the common sustainability practices that are implemented by the CEC-SBU community partners in terms of the 3 pillar model, namely: Environment, Economics, and Social

2. To determine the best practices of each community partners of CEC performances based on the three pillar

Conceptual Framework

The Elkington's triple bottom line (TBL) helped make the concept of sustainable development more applicable and acceptable to government, academic institution and other business organizations (Harmsen& Powell, 2010). TBL reporting can be an important tool to support sustainability goals. This model goes beyond the traditional measures of profits, return on investment, and shareholder value since it includes environmental and

social dimensions. It focuses on comprehensive results with respect to performance along the interrelated dimensions of profits, people and the planet. The corresponding three essential dimensions of sustainable development framework namely: environmental sustainability, economic sustainability and social sustainability are all requiring actual practice in its implementation. Each component must be given equal attention in order to ensure a long term sustainable outcome. This balance becomes obvious when each component is examined distinctively (Rogers, Jalal, & Boyd, 2008).

Figure 1

Theoretical Framework Diagram of Elkington's model of Sustainable Development

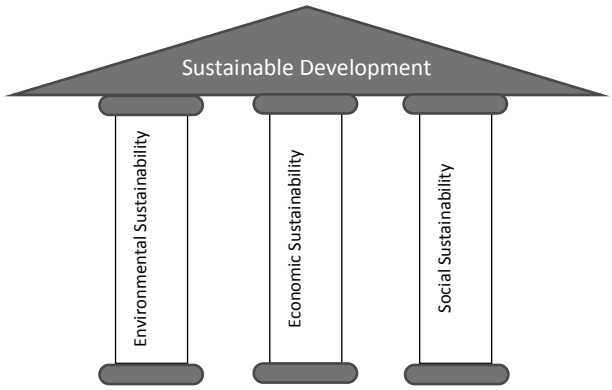

Figure 1 describes the visual representation of the theoretical framework of this study. This figure shows that environment, economic and social dimension are the three pillars which represent distinct goals that support the top and overall sustainable development achievement of the organization. These three pillars represent the domain variables that were investigated in this research study. Although there is a prevailing lack of universal quantitative metrics available for use in decision making, it is still a challenge for an organization to move from beyond definition to actual implementation of TBL business activities (Harmsen & Powell, 2010). This explains that the manifestation of the sustainable development in an organization is the presence of specific sustainable development (SD) practices under each pillar category of sustainability. Still, TBL concept is

increasingly being used as a tool guide or device for ease of reporting and monitoring these business activities as SD practices (Majid & Koe, 2012).

The adaptation of these sustainability factors as triple bottom line requires actual practice. This approach has also been referred to as the practical framework in implementing sustainability (Rogers & Hudson, 2011). As such, the actions and methodologies applies to attain those sustainable goals of the TBL.

Operational Framework

Figure 2.

Operational Framework in Evaluating the Sustainability Factors of CEC-SBU Community Partners

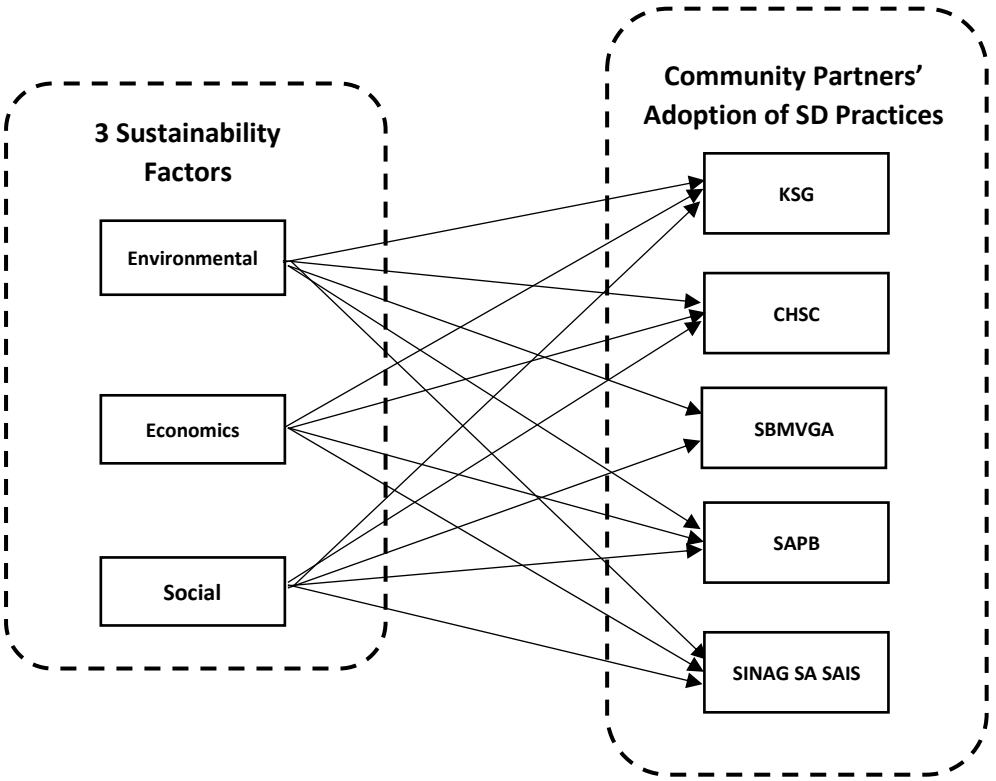

Table 1

SD Practices based on each of the Three Pillar

3 Pillars	SD Practices
1. Environmental Sustainability Practices	1.1. Recycling
	1.2. Waste reduction
	1.3. Energy conservation
	1.4. Training and education of employees in areas related to the environment
	1.5. Water utilization
	1.6. Money and in kind contributions to environmental organizations and activities in the community
	1.7. Toxic waste reduction
	1.8. Do not get involved in processes resulting in environmental violations
	1.9. Reduction in environmental risks
2. Economic Sustainability Practices	2.1. Maintain good quality of products
	2.2. Improvement in sales
	2.3. Periodic audit
	2.4. Improve profitability
	2.5. Spending on health and other benefits of employees
	2.6. Ethical investment
	2.7. Wealth maximization
3. Social Sustainability Practices	3.1. Generation of employment and income
	3.2. Product safety
	3.3. Safety standard of work
	3.4. Employability
	3.5. Organizational ethics
	3.6. Aid in education and training
	3.7. Legal contracts
	3.8. Social interaction

The evaluation used a matrix which served as checklist to assess systematically the presence of SD practice of the community partners of CEC - SBU. The matrix was derived in the sustainability research by Uma Maheswari et al (2018). The paper indicates the list of SD practices in accordance to the three-pillar model of sustainability as proposed by Elkington. Table 1 presents the matrix of sustainability development (SD) practices which is patterned on the operational framework of this study.

Although sustainability research studies and projects on TBL takes several form,the priority of the stakeholders focuses on the firm's responsibility towards the ecological or natural environment (Roxas & Chadee, 2012). Considering that there are notable reports that these SMEs may not generate large quantities of pollution per individual operating site, however, due to their large number, limited knowledge and resources, they may have a significant collective environmental impact especially in the urban areas, where they often are located (Roxas, et al. 2012, as cited by Organisation for Economic Co-operation and Development, 2008). With this situation of the prevailing weak environmental sustainability compliance of the SMEs in the Philippines, the researchers of this study saw the necessity to investigate a proposition.

Propositions

The CEC-SBU community partners have low level of SD practices on the environmental sustainability dimension.

Limitation of the study

The scope of the research focuses on assessment by identifying the SD practices only. Only five community partners specific to SBU were sampled. Motivations, factors and hindrances in the implementation of sustainability are not included in this research. Levels of awareness of issues relating to sustainability and degree of application of a certain SD practice are not included in the study.

Methodology

Research Design

The researchers conducted semi-structured in-depth interviews and field visits in the area sites of the community partners of CEC-SBU from January to February 2019.The evaluation is specific to each community partner as an organizational entity, its member beneficiary, nature of their livelihood and their resources. Social workers of CEC office were also interviewed in order to validate the information gathered. The choice of SD best practices is according to CEC's criteria wherein it should provide large benefits for the members and other beneficiaries in the community. Social workers from CEC and head leader of each community partners were consulted on the choice of

best practice based on its contribution in the attainment of sustainable development in the community.

As a qualitative research, the study focused on identification of SD practices based on three pillar model. A checklist table of SD practices (as shown in Table 1) was utilize as a tool assessment to identify the presence and absence of SD practices in each pillar. This approach enabled the researchers to systematically and clearly determine the sustainability practices that are being implemented and not implemented.

In the end, a consolidated table matrix in order to show overall assessment that will tally the SD practices per sustainability dimension and answer the proposition of the study. This also enables the identification of the common SD practices based on its presence in all five community partners.

Table 2

Community Partners of CEC-SBU

Community Partner	Products/Services	Location	Year of Partnership with SBU
1. Cannosa Health and Social Center (CHSC)	Turmeric, Calamansi Juice Concentrate	Brgy. Silang, Cavite	2018
2. SikapAngat ng PulilanBulacan (SAPB)	Pastillas and Pulvoron	Brgy. Pulilan, Bulacan	2015
3. St. Bede Mushroom and Vegetable Growers Association (SBMVGA)	Fresh Vegetables, Potato Chips and fresh mushroom	Brgy. Monamon Sur, Mountain Province	2010
4. Kababaihan ng San Gabriel (KSG)	Doormat and Mood Mat	Brgy. Dolores, Taytay, Rizal	2015
5. Sinag Sa Sais	Variety of Livelihoods (processed meats)	Brgy Pandacan, Manila City	2016

CEC and Community Partners of San Beda University

CEC-SBU has established operational plan in exercising its extension programs and social responsibilities for its community partners. The participants of this study consisted of leaders, heads, president and/or managers of each of five community partners of SBU, namely: Cannosa Health and Social Center, SikapAngat ng Pulilan Bulacan, St. Bede Mushroom, Sinagsa Sais, and Vegetable Growers Association and Kababaihan ng San Gabriel as presented in Table 2.

CEC currently manages five (5) community partners that are involve in the different goods and services for a common cause for its beneficiaries. SBU continuously provides varieties of interventions connected to business clinic including health, environment and spirituality programs for the villagers of these communities. Projects connected to large scale sustainability intervention in general are not provided. The increasing advocacy, practice, and pressure of the society on sustainability initiates the necessity of assessment of business activities of this community partners.

Research Ethics Approaches

This research will secure approval of the managers and owners of the five community partners. Depending on their decision, confidential presentation of results can be attained also.

Results and Discussions

The following are the results of the assessment of the community partners of SBU in terms of the aforementioned objectives regarding sustainability development (SD) practices. For each of the 5 community partners, the basic profile is presented first followed by a checklist table summary of their SD practices based on Table 1.The information gathered are all based on field visits and interviews conducted by the researchers. In each community partner, three to five participants which are managers, group leaders and/or selected member were asked if each SD practice is being practiced. If a particular SD practice is present the check mark "□/" appeared in the table, however if it is lacking, partially or just minimally practiced, then it is marked cross " X ". The checklist table are proceeded

by supporting paragraphs that further explains the presence or absence of the SD practices based on the 3 pillars. The best practice per community partner are presented at the end of the discussions.

Kababaihan ng San Gabriel (KSG).

KSG is an informal community group intended for the residents ofSitio San Gabriel,Barangay Dolores in the Municipality of Taytay under Rizal Province. Taytay is considered as the *Garment Capital of the Philippines*, hence excess scrap fabrics are normally generated and gathered by the local traders. The underprivileged residents of Barangay Dolores especially those in Sitio San Gabriel regularly purchase these scrap fabrics which are raw material inputs for the doormat production as their main livelihood. The study described that the members of KSG in Taytay, Rizal have low levels of SD practices as presented in Table 3.

Table 3

Sustainability Practices Checklist Table of KSG

	KSG
1. Environmental Sustainability Practices	
1.1. Recycling	X
1.2. Waste reduction	✓
1.3. Energy conservation	X
1.4. Training and education of employees in areas related to the environment	X
1.5. Water utilization	X
1.6. Money and in kind contributions to environmental organizations and activities in the community	X
1.7. Toxic waste reduction	X
1.8. Do not get involved in processes resulting in environmental violations	X
1.9. Reduction in environmental risks	X
2. Economic Sustainability Practices	
2.1. Maintain good quality of products	✓
2.2. Improvement in sales	X
2.3. Periodic audit	✓
2.4. Improve profitability	X
2.5. Spending on health and other benefits of employees	X
2.6. Ethical investment	X
2.7. Wealth maximization	X

Table 3

Continued

3. Social Sustainability Practices	
3.1. Generation of employment and income	X
3.2. Product safety	✓
3.3. Safety standard of work	✓
3.4. Employability	X
3.5. Organizational ethics	✓
3.6. Aid in education and training	X
3.7. Legal contracts	X
3.8. Social interaction	✓

Environmental Sustainability Practices. The members of KSG exhibit low levels of environment literacy and lack implementation in their environmental management. Only *1.2.Waste reduction* as one environmental practice is being implemented. The other practices are absent as evident on how they manage and dispose the excess scrap fabrics. Right after the delivery of scrap fabrics from supplier/traders of raw materials in their doormat manufacturing, sorted cottons are separated from non-cotton. The non-cotton fabrics are made of primarily polyester materials and discarded. This are not returned to the supplier nor disposed properly. These are all burned in their respective house backyards in Sitio Gabriel. The residents are not aware of the harmful emissions released in the air and also the negative health implications. However, the small scrap cotton fabrics are not disposed rather they are turned into small rugs. Hence, this is classified as waste reduction.

One respondent from KSG mentioned that the responsibility for the environment is ascribed to the government, large garment manufacturers and scrap fabric traders. The individual effort was seen as more or less meaningless in the face of their situational barriers. One of the major potential barriers to the adoption of environmental best practice is that environmental measures are perceived to be a drain on profits. Because of the perceived burden of environment concern, the villagers felt that only government regulation could provide the level playing field necessary to take action on environmental issues.

Economic Sustainability Practices. Among the economic sustainability practices, *2.1. Maintaining good quality of products* and *2.3.Periodic audit* are being undertaken by KSG. The president of KSG ensure quality of doormats by checking the fine and even tightness of cotton strands during the weaving process. As part of periodic audit, the president of KSG monitors the sales and frequently reminds the women locals to maintain the quality tight weaving as requested by their clients.

According to KSG, the main obstacle that hinders the practice of economic sustainability pertains to lack of capitalization for the purchasing of big volumes of scrap fabrics. This barrier prevents the large production of doormat and hence the sales and profitability are minimal. Training on entrepreneurial behavior and financial literacy including provision of loan assistance program were raised during the research interview.

Social Sustainability Practices. In the interview conducted, among the social sustainability practices, *3.2. Product safety*, *3.3. Safety standard of work*, *3.5. Organizational ethics* and *3.8. Social interaction* are being implemented by the members of KSG. Concerns of the villagers regarding violations and misbehaving in their sitio are immediately settled during their regular monthly meeting. With an estimated population of 40 families, Sitio San Gabriel has residents that have built strong family and neighbor ties. KSG president believes their socially sustainability practices earn the reputation of 'good corporate citizens' which is possibly a big motivation to become more socially responsible in their community.

Best practice. Maintaining quality of doormat classified under *2.1.Maintaining good quality of products.* The even tightness in weaving and quality of cotton materials of their doormats enable the KSG to differentiate their doormats in the market. This practice enables the KSG to sustain their doormat livelihoods.

Canossa Health and Social Center (CHSC).

CHSC is a catholic religious institution managed by Canossian Sisters located in Barangay Anahaw II in Silang, Cavite. As a community partner of CEC-SBU, this institution builds community that is human and divine in the spirit of fellowship that promotes health and life. They focus on various health services such as medical and dental consultations, TB-

DOTS treatment, feeding program, nutrition and mental health programs. Currently, the regular activities, projects, and memorandum of agreements are being done through the College of Medicine of SBU in their internship subjects of their medicine students. They have started their educational assistance to its nearby residents as beneficiary through scholarship and skills training. Table 4 shows the SD practices that CHSC implements.

Table 4

Sustainability Practices Checklist of CHSC

	CHSC
1. Environmental Sustainability Practices	
1.1. Recycling	X
1.2. Waste reduction	X
1.3. Energy conservation	✓
1.4. Training and education of employees in areas related to the environment	X
1.5. Water utilization	X
1.6. Money and in kind contributions to environmental organizations and activities in the community	X
1.7. Toxic waste reduction	X
1.8. Do not get involved in processes resulting in environmental violations	X
1.9. Reduction in environmental risks	X
2. Economic Sustainability Practices	
2.1. Maintain good quality of products	X
2.2. Improvement in sales	X
2.3. Periodic audit	X
2.4. Improve profitability	X
2.5. Spending on health and other benefits of employees	✓
2.6. Ethical investment	✓
2.7. Wealth maximization	✓
3. Social Sustainability Practices	
3.1.Generation of employment and income	X
3.2. Product safety	X
3.3. Safety standard of work	X
3.4. Employability	X
3.5. Organizational ethics	✓
3.6. Aid in education and training	✓
3.7. Legal contracts	X
3.8. Social interaction	✓

Environmental Sustainability Practices. Since CSHC direct itself as a health service oriented organization, the concern on environmental management is not yet a priority concern in their sustainable development effort. With the simplicity of their office building and health care facilities, it is notable that they practice basic greening and other elements that you can do that have no additional cost, which will have a positive impact on the environment and reduce running costs. They only practice *1.3. Energy conservation* such as use of natural ventilation and maximization of daylight penetration. As a religious institution, the nuns of CHSC showed willingness to learn and adopt the environmental management.

Economic Sustainability Practices. Based on the visit and interview, it is determined that CHSC practices caring within its internal staff and members hence they implement *2.5. Spending on health and other benefits of employees*. Also, to support their health advocacies, CHSC started other income generating activities. As such they practice*2.6. Ethical investment* since they started expanding their revenue streams through livelihood on food processed products like peanut butter and citrus beverage juice. The2.7. wealth maximization efforts are implemented with their professional finance officers, as such this item is also reflected in Table 4.

Social Sustainability Practices. The study has verified that CHSC provides high level of social sustainability practices not just to its employees but also to its villagers in Anahaw II in Silang, Cavite. The nuns of CSHC have strong personal belief on the importance of social sustainability, as such they always attempt to promote health with their community. They practice *3.5. Organizational ethics, 3.6. Aid in education and training* and *3.8. Social interaction*.

Best practice. As a core advocacy of nuns of CHSC, the specialized SD practice is *2.5. Spending on health and other benefits of employees* both for its internal staff and residential beneficiaries in nearby CHSC compound. This practice attracts volunteers, doctors, nurse and other medical staff to support the endeavor of the nuns of CHSC.

Saint Bede Mushroom and Vegetable Growers Association (SBMVGA)

The establishment of the St. Bede Mushroom and Vegetable Growers Association (SBMVGA) is a joint effort of CEC and San Beda

University Benedictine Educational Foundation, Inc. (SBUBEFI). SBMVGA is a group of indigenous Igorot ethnic farmers in Sitio Pactil in Barangay Monamon Sur within the town of Bauko, Mountain Province. This is a special partner community of SBU for their apostolic mission and various livelihood and business clinic interventions. The notable interventions of SBU through CEC and SBUBEFI is the establishment of St. Bede Church, oyster mushroom growing and potato chips production. The study has revealed that the SBMVGA has low levels of implementation in the environment and economic pillar especially for their agricultural livelihood, but several social sustainability practices are being implemented already as presented in Table 5.

Table 5

Sustainability Practices Checklist of SBMVGA

	SBMVGA
1. Environmental Sustainability Practices	
1.1. Recycling	X
1.2. Waste reduction	X
1.3. Energy conservation	X
1.4. Training and education of employees in areas related to the environment	✓
1.5. Water utilization	✓
1.6. Money and in kind contributions to environmental organizations and activities in the community	X
1.7. Toxic waste reduction	X
1.8. Do not get involved in processes resulting in environmental violations	✓
1.9. Reduction in environmental risks	X
2. Economic Sustainability Practices	
2.1. Maintain good quality of products	✓
2.2. Improvement in sales	✓
2.3. Periodic audit	X
2.4. Improve profitability	✓
2.5. Spending on health and other benefits of employees	X
2.6. Ethical investment	X
2.7. Wealth maximization	X

Table 5

Continued

3. Social Sustainability Practices	
3.1.Generation of employment and income	✓
3.2. Product safety	✓
3.3. Safety standard of work	✓
3.4. Employability	X
3.5. Organizational ethics	✓
3.6. Aid in education and training	X
3.7. Legal contracts	X
3.8. Social interaction	✓

Environmental Sustainability Practices. The SBMVGA, its farmers and the villagers in Sitio Pactil lack knowledge and practice in the environmental management in their agricultural livelihood. Likewise, most farmers do not recognize the complete livelihood benefits in improving their firm's environmental performance. Within the agricultural industry at large, it is evident that the supply chain market dynamics has limited environmental management amongst the farmers. This is evident in the continuous use of commercial fertilizer and pesticides and no crop rotation. Farmers in Sitio Pactil express that the good environment farm practice is not a strong particular requirement of the customers, traders, and therefore any costs that can be incurred would be difficult to pass on to them. One villager mentioned that no consumers or government representatives are coming to inquire on farming manner and waste disposal system. Instead, the quality of the fresh produce in terms of right size, absence of bruises, on time supply and the affordable price are the immediate need of customers and traders in the Trading post in La Trinidad, Benguet. However, they are aware of the environmental management trends in farm as serious issues based on the trainings provided by LGU, however, most interviewee claimed that these trends had yet to be converted into farming actions that can affect their livelihood. For the water irrigation, they conserve water since they are in high land farming.

Middlemen and customers apparently rarely asked whether the vegetables were organic. Although the LGU of Bauko claimed that organic food has markets in Metro Manila, members of SBMVGA felt that there was limited demand for profitable organic menu options, especially when

there are high quality non-organic ingredients available at much lower prices.

Some farmers see the inconsistent demand of organic produce as there are so few organic farms in the other Sitios in Benguet and Mountain Province. Hence, the only environmental sustainability practices are *1.4. Training and education of employee in areas related to the environment*, *1.5. Water utilization* and *1.8. Do not get involved in process resulting in environmental violations*.

Economic Sustainability Practice. The SBMVGA and its villager farmer follows two economic sustainability practices pertaining to their agricultural livelihood. These includes *2.1. Maintaining good quality of products*, *2.2. Improvement in sales* and *2.4. Improve profitability*. They ensure that they supply quality vegetables namely potatoes, carrots and cabbage. With the good relationship of each villagers they assist in each other's livelihood in terms of planting, harvesting and delivering the fresh vegetable to Trading Post in La Trinidad.

For their alternative livelihood on mushroom growing and potato chips production, the attempts to consistently increase the sales revenue and profit are not significantly implemented.

Social Sustainability Practices. SBMVGA practices social sustainability since they are well organized. They follow the *3.1. Generation of employment and income*, *3.2. Product safety*, *3.3 Safety standard of work*, *3.5. Organizational ethics* and *3.8. Social interaction*

Best Practice. The notable SD practices of SBMVGA are *3.5. Organizational ethics* and *3.8. Social interaction*. Pactil villagers, elders and members of SBMVGA together with their officers, are all regularly gathered for important meetings at the office of the St. Bede Church. They also conduct cultural activities intended for villagers of Sitio Pactil such as Igorot dance and other *Kankanais* indigenous rituals. Cultural activities are also intended for fresh produce harvest celebration, marriages and other community accomplishments in the local level. All these social interaction practices create sense of social bond, solve conflicts immediately and develop lasting relationship within the community for their future generation.

SikapAngat ng Pulilan Bulacan (SAPB)

SAPBis a livelihood-based community group in Brgy.Tinejeros in Pulilan, Bulacan. The members are residents that are mostly housewives and mothers of their respective families. As a respond to their underprivileged situation in a semi-rural environment, they venture into different livelihood products such as pastillas and pulvoron. The study has described that SAPB have low levels of literacy and implementation in terms of sustainable development as presented in Table 6.

Table 6

Sustainability Practices Checklist of SAPB

	SAPB
1. Environmental Sustainability Practices	
1.1. Recycling	✓
1.2. Waste reduction	X
1.3. Energy conservation	X
1.4. Training and education of employees in areas related to the environment	X
1.5. Water utilization	✓
1.6. Money and in kind contributions to environmental organizations and activities in the community	X
1.7. Toxic waste reduction	X
1.8. Do not get involved in processes resulting in environmental violations	X
1.9. Reduction in environmental risks	X
2. Economic Sustainability Practices	
2.1. Maintain good quality of products	✓
2.2. Improvement in sales	X
2.3. Periodic audit	X
2.4. Improve profitability	X
2.5. Spending on health and other benefits of employees	X
2.6. Ethical investment	X
2.7. Wealth maximization	X
3. Social Sustainability Practices	
3.1.Generation of employment and income	✓
3.2. Product safety	✓
3.3. Safety standard of work	✓
3.4. Employability	X
3.5. Organizational ethics	✓
3.6. Aid in education and training	X
3.7. Legal contracts	X
3.8. Social interaction	✓

Environmental Sustainability Practices. The members of SAPB shows low levels of literacy and minimum implementation in the environmental management, however, they have several residential household environmental sustainability practices namely *1.1 .Recycling*, and *1.5. Water utilization*. SAPB mentioned that these are attributed to the strong support and encouragement of their LGU in waste recycling and efficient use of resources. Trash drums are commonly distributed to streets that separates biodegradable and non-biodegradable waste.

Economic Sustainability Practices. Among the economic sustainability practices, *2.1.Maintaining good quality of products* is the only identified SD practice as observed in the pulvoron and pastillas livelihood products. As food product, they maintain the quality so that it is marketable at least within their barangay. Attempt to improve the sales revenue of their livelihoods are not implemented since products are limited to nearby barangay only. Several interventions from SBU were already provided in order to increase marketability of their product.

Social Sustainability Practices. In the interview conducted, among the social sustainability practices, *3.1. Generation of employment and income*, *3.2. Product safety*, *3.3. Safety standard of work*, *3.5. Organizational ethics* and *3.8.Social Interaction* are implemented for the members of SAPB.

The common employment opportunities and source of income are embroidery, rice farming and selling of vegetables in wet market and driving in public transportation such as tricycle and jeep. Their association SAPB also helps implement the creation of harmonious relationships of the members of the community. Association monthly meetings are held in barangay office to solve challenges in livelihood and solve barangay violations.

Best Practice. The implementation of *3.1. Generation of employment and income* and *3.8. Social Interaction* under the social sustainability dimension ensure the community barangay issues and daily needs of household members of SAPB are catered.

Sinagsa Sais

Sinagsa Sais is a center that caters the need of the urban underprivileged community including families and residenceso f those barangays in Pandacan, Metro Manila. Overall, there is also low level of SD practices in each three pillars as presented in Table 7.

Table 7
Sustainability Practices Checklist of Sinagsa Sais

	Sinagsa Sais
1. Environmental Sustainability Practices	
1.1. Recycling	X
1.2. Waste reduction	X
1.3. Energy conservation	X
1.4. Training and education of employees in areas related to the environment	X
1.5. Water utilization	✓
1.6. Money and in kind contributions to environmental organizations and activities in the community	X
1.7. Toxic waste reduction	X
1.8. Do not get involved in processes resulting in environmental violations	X
1.9. Reduction in environmental risks	X
2. Economic Sustainability Practices	
2.1. Maintain good quality of products	X
2.2. Improvement in sales	X
2.3. Periodic audit	X
2.4. Improve profitability	X
2.5. Spending on health and other benefits of employees	✓
2.6. Ethical investment	X
2.7. Wealth maximization	X
3. Social Sustainability Practices	
3.1.Generation of employment and income	✓
3.2. Product safety	X
3.3. Safety standard of work	X
3.4. Employability	✓
3.5. Organizational ethics	✓
3.6. Aid in education and training	✓
3.7. Legal contracts	X
3.8. Social interaction	✓

Environmental Sustainability Practices. Being in urban scenario, the residents within Sinagsa Sais lack implementation of the environmental management practices. These are highly observed on how each household family manages waste disposal. Among environmental sustainability practices only *1.5.Water utilization* is identified. Based on the interview conducted, the kagawad and family representative admit that they are not aware of impact of climate change, proper segregation of solid waste packaging materials, etc. Energy conservation are not being practice as well. The illegal connection of electricity supply is common in the barangay residents. Selected barangay officials receive training from the LGU of Manila, nonetheless, these not being echoed to residents. Sometimes, the residents of Pandacan conserve and recycle water especially laundry water for cleaning their bathrooms.Even reusing old material was considered more expensive than buying new, once the labor and storage costs were factored in. During the meeting interview, the barangay officials requested for an orientation on the environmental and waste management including the impact of climate change.

Economic Sustainability Practices. Among the economic sustainability practices, onlythe *2.5.Spending on health and other benefits of employees* is being implemented. Existing livelihoods are primarily sari sari stores and steamed dumpling processed seafoods snack stall.The health expenses came from government programs on free medicines and vaccines. They have other health concerns and challenges, as such, beneficiaries of SinagSa Sais are requesting for training on health sciences, mental health awareness, illness management and first aid procedures for fracture and other accidents. They also need update on the impact on the growth development on the use of too much gadget for the children.

Social Sustainability Practices. In the interview conducted, among the social sustainability practices, *3.1. Generation of employment and income*, *3.4. Employability*, *3.5. Organizational Ethics*, *3.6. Aid in Education and training* and *3.8. Social interaction*for the residents of Sinagsa Sais. There are existing livelihoods on sari-sari stores and selling of dumpling processed seafoods snack stand (i.e. shomai, kikyam, etc.). For the employment, trainings were provided through the initiative of Sinagsa Sais Center but not sufficient to match the job requirements. The technical vocational trainings that were provided by the officials includes welding, aircon maintenance, carpentry vocation. Other sideline jobs are being construction worker, electrical technician, and street sweepers of DPWH. However, actual employment is lacking. In terms of the legal

contracts, these are not practiced as well. The residents lack awareness of the basic laws and rights as a common citizen of Manila. During the interview and visit of the researcher, barangay officials requested an immediate update on laws connected to illegal gambling, penalty on improper waste disposal, illegal drugs and surveillance *(tokhang).* The social interaction efforts include basketball league, barangay singing contest, fiesta and regular meetings.

Best Practice. The 3.6.Aid in education and training is the main SD practice that creates big impact. With their high urban population, the free education programs from the Office of Manila City Mayor is a worthy assistance for the residential families.

Overall Assessment

The results of SD practice assessment of the 5 community partners of CEC were consolidated in a single matrix as presented in Table 8.

The data revealed that for the environmental sustainability dimension across all community partners, only eight (8) SD practices were identified. The common SD practice is *1.5. Water utilization*, since it has high frequency count of check mark. For the economic sustainability dimension, ten (10) SD practices were identified. The common SD practice is *2.1. Maintain good quality of products*, since it has high frequency. Last, the social sustainability dimension has the highest number of frequency of SD practices. There are twenty-two (22) SD practices identified. The common SD practices are *3.1. Generation of employment and income, 3.2. Product safety, 3.3 .Safety standard of work, 3.5. Organizational ethics* and *3.8. Social interaction.*

Among the three dimensions of sustainable development, environmental sustainability obtained the least frequency count of SD practices as compared with that of economic and social sustainability. This confirms the proposition of this research that sampled community partners of CEC-SBU have low level of implementation of environmental sustainability dimension. This finding is consistent with literature review that SMEs face difficulties in understanding and implementing sustainable development. The results of this research can serve as a reference and guide in the community engagement agenda and activities of all SBU faculties, administrators, service personnel and students towards sustainability.

Table 8

Overall Identification of SD Practices of CEC-SBU Community Partners

	CEC-SBU Community Partners				
	KSG	CHSC	SBMVGA	SAPB	SINAG SA SAIS
1. Environmental Sustainability Practice					
1.1. Recycling	X	X	X	✓	X
1.2. Waste reduction	✓	X	X	X	X
1.3. Energy conservation	X	✓	X	X	X
1.4. Training and education of employees in areas related to the environment	X	X	✓	X	X
1.5. Water utilization	X	X	✓	✓	✓
1.6. Money and in kind contributions to environmental organizations and activities in the community	X	X	X	X	X
1.7. Toxic waste reduction	X	X	X	X	X
1.8. Do not get involved in processes resulting in environmental violations	X	X	✓	X	X
1.9. Reduction in environmental risks	X	X	X	X	X
2. Economic Sustainability Practices					
2.1. Maintain good quality of products	✓	X	✓	✓	X
2.2. Improvement in sales	X	X	✓	X	X
2.3. Periodic audit	✓	X	X	X	X
2.4. Improve profitability	X	X	✓	X	X
2.5. Spending on health and other benefits of employees	X	✓	X	X	✓
2.6. Ethical investment	X	✓	X	X	X
2.7. Wealth maximization	X	✓	X	X	X

Table 8

Continued

3. Social Sustainability Practices					
3.1. Generation of employment and income	X	X	✓	✓	✓
3.2. Product safety	✓	X	✓	✓	X
3.3. Safety standard of work	✓	X	✓	✓	X
3.4. Employability	X	X	X	X	✓
3.5. Organizational ethics	✓	✓	✓	✓	✓
3.6. Aid in education and training	X	✓	X	X	✓
3.7. Legal contracts	X	X	X	X	X
3.8. Social interaction	✓	✓	✓	✓	✓
Total	7	7	11	8	7

Likewise, the findings show that SBMVGA is the community partner of CEC that has the highest number of adoption of SD practices which is evident by eleven (11) check marks(□⁄ s). This is followed by SAPB with eight check marks (8 □⁄s). Then KSB, CHSC and Sinagsa Sais have seven check marks (7 □⁄ s).Note that SBMVGA is the community partner that has the formal partnership since year 2010.

Conclusions

Upon employing Elkington's model of three pillars of sustainable development, namely: environmental, economic and social sustainability measures, this study effectively reveals the SD practices of the five community partners of CEC-SBU. The common SD practices identified are water utilization (under environmental dimension); maintain good quality of products (under economic dimension); and generation of employment and income, product safety, safety standard of work, organizational ethics and social interaction (under social dimension). The best practices were also evaluated. The study also confirms the proposition that community partners of CEC-SBU shows low level of implementation in the environmental sustainability dimension. Furthermore, the data

revealed that SBMVGA is the community partner that has highest number of adoptions of SD practices.

The researchers recommend that CEC-SBU should require administrators, faculties, students, and service personnel to conduct activities and other interventions for the community partners that enable adoption of SD practices especially those under environmental sustainability dimension. Future researchers must undertake further studies that describes, evaluates and measure the sustainable practices of community partners of CEC and SMEs in specific industries.

References

Aldaba, R. (2008). SMEs in the Philippine manufacturing industry and globalisation: Meeting the development challenges. *Philippine Institute for Development Studies Discussion Paper Series 2008-15.* https://dirp3.pids.gov.ph/ris/dps/pidsdps0815.pdf

Commission on Higher Education (2016). *Pathways to equity, relevance and advancement in research, innovation, and extension in Philippine Higher Education.* (Commission on Higher Education Memorandum Order 52 Series 2016). https://ched.gov.ph/wp-content/uploads/2017/10/CMO-52-s.-2016.pdf

Heizer, J., & Render, B. (2017). *Operations management: Sustainability and supply chain management*(12th edition). Pearson Education, Inc.

Harmsen, J., & Powell, J. (Eds). (2010). *Sustainable development in the process industries: Cases and impact.* Wiley & Sons, Inc.

Jansson, J., Nilsson, J., Modig F., Vall, G., (2015). Commitment to sustainability in small and medium-sized enterprises: The influence of strategic orientations and management values. *Business Strategy and the Environment, 26*, 69–83. https://www.doi.org/ 10.1002/bse.1901

Kates, R., Parris, T., and Leiserowitz, A. (2005). *What Is Sustainable Development? Goals, Indicators, Values, and Practice*. http://www.heldref.org/env.php

Kibira, D., Jain, S., and McLean, C., (2008). A system dynamics modeling framework for sustainable manufacturing. *Proceedings of the 27th Annual System Dynamics Society Conference*. https://www.nist.gov/publications/system-dynamics-modeling-framework-sustainable-manufacturing

Majid, Izaidin Abdul &Koe, Wei-Loon. (2012). Sustainable entrepreneurship (SE): A revised model based on triple bottom line (TBL). *International Journal of Academic Research in Business and Social Sciences, 2*(6), 293-210. http://hrmars.com/admin/pics/855.pdf

Natarajan, G., and Wyrick, D. (2011). Framework for implementing sustainable practices in SMEs in the United States. *Proceedings of the World Congress on Engineering, 1*, 750–754. http://www.iaeng.org/publication/WCE2011/WCE2011_pp750-754.pdf

Orosa, Rosalinda, L. (2014). SMEs need gov't support to implement sustainability standards. *The Philippine Star*. https://www.philstar.com/business/business-as-usual/2014/10/06/1376839/smes-need-govt-support-implement-sustainability-standards

Rogers, Peter, P., Jalal, Kazi, F., & Boyd, John, A. (2008). *An introduction to sustainable development*. Earthscan Publishing.

Roxas, B. &Chadee, D. (2012). Environmental sustainability orientation and financial resources of small manufacturing firms in the Philippines. *Social ResponsibilityJournal*, *8*(2), 202–226. https://doi.org/ 10.1108/17471111211234842

Roxas, H., Lindsay, V., Ashill, N.,&Victorio, A. (2009). Economic accountability in the context of local governance in the Philippines: A structural equation modelling approach.*Asia Pacific Journal of Public Administration*, *31*(1), 17-37. https://www.doi.org/ 10.1080/23276665.2009.10779354

San Beda University (2020). *Community Engagement Center Home Page*. https://www.sanbeda. edu.ph/ CEC/210/community-engagement-center-homepage

Slaper, T. F. & Hall, T. J. (2011).The triple bottom line: What is it and how does it work?*Indiana Business Review*,*86*(1), 4–8 https://www.ibrc.indiana.edu/ibr/2011/spring/pdfs/ article2.pdf