

Impact assessment of community engagement programs of San Beda University in Pactil, Bauko, Mountain Province

<https://doi.org/10.58870/berj.v8i1.46>

Neil Angelo C. Halcon

College of Arts and Sciences
San Beda University, Manila, Philippines
nhalcon@sanbeda.edu.ph

Rulina B. Viloría

College of Arts and Sciences
San Beda University, Manila, Philippines
rviloría@sanbeda.edu.ph

Abstract

The study is a follow-through analysis of past research among St. Bede Mushroom and Vegetable Growers Association (SBMVGA) stakeholders which seeks to determine the impact of the Community Engagement Programs initiated by San Beda University concerning its economic, social, educational, spiritual, and psychological dimensions. It was guided by an “ex-post” impact assessment framework conceptualized by the Organization for Economic Cooperation and Development (OECD) and anchored on the theory of change provided by UNDG-UNDAF (United Nations Development Group – United Nations Development Assistance Framework). The research aims to: (1) analyze past studies on SBU community engagement programs via documentary analysis; (2) conduct an impact assessment survey and analysis among SBMVGA beneficiaries and analyze using Excel Data Analysis and Jamovi; and (3) generate recommendations for the CEC-SBU to further strengthen community engagements and partnerships moving forward. Upon completion, the key findings include the following: (1) the beneficiaries are willing and able to implement the SBU-CEC initiated programs on their own; and (2) spiritual dimensions had the highest and strongly significant value in terms of impact while economic dimensions had the lowest yet still significant value in terms of impact. Based on the findings obtained the recommendations for

SBU as an institution to consider include the following: (1) a gradual and phase-based turnover of the SBU-CEC programs to the local government unit in Pactil, Bauko, Mountain Province is encouraged; and (2) a targeted and comprehensive agreement and undertaking should still be done by the CEC-SBU concerning its service assistance, monitoring and evaluation – capitalizing on SBU’s various clusters and colleges towards its partner communities.

Keywords: community engagement, impact evaluation, Mountain Province, change theory

Background of the Study

Through a variety of community involvement initiatives started by the Community Engagement Center (CEC), San Beda University has actively participated in the task of community development and nation-building as a Catholic educational institution. A glance at the university's community involvement initiatives reveals that over the past few years, the various departments, working in tandem with CEC, provided the target communities with the following services: research, formal and informal education, leadership development, livelihood assistance, social services, legal services, medical assistance, and spiritual formation. The sectoral representation of the target groups and recipients varies. These include the underprivileged urban population, the uneducated youth, farmers, the ill, the elderly, orphans, tribal groups, and fishing communities. One of the strategies used by the University for meaningful community involvement is through community organizing/building. This requires that the University must identify a partner community where capability-building and other forms of development will be at work together with the people. This may be in the form of the following areas or aspects of development: economic, social, educational, spiritual, and psychological.

Since 2011, Pactil, Bauko, Mountain Province has seen significant community development programs and initiatives implemented by San Beda University through CEC. Pactil, Bauko, Mountain Province's association with San Beda University began in the 1960s when a Belgian Sister and Fr. When building the chapel, Pablo Bilog of Pacdal Parish requested assistance from St. Benedict Crusade at San Beda College in Manila. Finally built in Pactil in 1967, the chapel was given the name St. Benedict Chapel. During the academic year, it served as a classroom as well (Sitio Pactil Profile, CEC Document). Since then, the monks of the Benedictine order, led by Bro. Felipe Bautista began to frequent the location and acted as its community, venue, and apostolate.

The Benedictine monks in the community, however, abruptly disappeared in the 1990s. The San Beda College Benedictine Educational Foundation, Inc. (SBCBEFI) and the CEC successfully reconnected in July 2011. Organizations like the Pactil Youth Organization and the St. Bede Mushroom and Vegetable Growers Association (SBMVGA) were established six years after the start of the reconnection. SBU-CEC and SBCBEFI also provided aid to other community members who were not affiliated with these groups, including members of the Basic Ecclesial

Community, the Knights of Columbus, Pactil Elementary School pupils, and the Barangay Council of Monamon Sur. The CEC decided it was important to take a break and review its work in the region during its eleventh year of service (2011-2022). It is expected that at this stage, the community people have already been aware of the progressive nature of their working relationship with San Beda University through CEC.

Based primarily on the same Pactil study of 2017 by Vilorio, Mendoza, Deri, and Viray --- It highlights the effects of sociocultural variables, as well as how important community involvement and participation are to the growth of one's livelihood and spirituality. Otherwise, the effects on the responders' skill improvement are rather minimal. Due to a lack of information or their exclusion from the questionnaire, the consequences of the various facets of community life (social, health, political, etc.) were not fully addressed. For instance, a thorough community profile might have been completed at the outset of ICIC's community organizing efforts to determine the influence on the neighborhood's socioeconomic standing. To genuinely ascertain changes or development in the socioeconomic position, more profiling may have been conducted in conjunction with this study. The impacts of sociocultural elements on community development in the following areas: skills, livelihood, and spiritual –give an implication for the need to emphasize grassroots work. The SBC-ICIC's community development initiatives aim to enhance social fairness, economic opportunity, living standards, and sustainability in general. The SBC-CIC partner communities are significantly more involved in community development, as seen by the outcomes. Community engagement is one of the communities' assets. The study's findings showed that to build stronger, more sustainable communities for the future, community development can draw on the strengths of already-existing local communities by leveraging the ability of local associations to organize themselves and carry out supportive functions.

Based on the background, the authors intend to determine which impact dimensions the SBU-CEC programs have on the same SBMVGA stakeholders in Pactil, Bauko Mountain Province.

Statement of Research Problem

This paper seeks to find the answer to our research question: “How significant are the economic, social, educational, spiritual, and psychological impacts of the programs implemented and instituted by the Community Engagement Center of SBU in Pactil, Bauko, Mountain Province?”

Statement of Specific Objectives

Specifically, this paper is aimed to achieve the following objectives:

1. Analyze past results of the programs of CEC to their beneficiaries in Pactil, Bauko, Mountain Province;
2. Determine the various significant impacts of the CEC-instituted programs on the family and community life of the beneficiaries as indicated in the following aspects of development:
 - a. Economic
 - b. Social
 - c. Educational
 - d. Spiritual
 - e. Psychological
3. The study aims to generate recommendations and suggestions that San Beda University can consider for strengthening the unity engagement as an important pillar of Bedan Educational mission and vision.

Conceptual Model and Operational Framework

By definition, impact assessment involves the assessment of long-term and/or significant changes brought about through a development intervention or series of interventions. It can be carried out through a confluence of different tools, methodologies, and approaches. Impact assessment is always focused on change, and pathways towards change, rather than on activities or deliverables (Rogers, 2012).

Edwards (2012) investigated the potential impacts of growth and development on neighborhood communities throughout Wisconsin. Communities have historically viewed expansion as positive and advantageous. However, communities are becoming increasingly aware that growth may have negative effects. Furthermore, decisions about

growth are occasionally made without a clear understanding of how those choices will impact the community's overall well-being. Because changes brought on by expansion in a community are not always positive, development must be carefully planned to guarantee that growth is consistent with the community's long-term goals.

Impact assessment is typically done when a particular project is planned and anticipated for a specific community. Further, it can, in theory, inform decision-makers about which interventions are effective, be used to track the outcomes of ongoing projects, and again, in theory, assist implementers in ensuring that their operations do not adversely affect development (Montalbo, 2016). Where appropriate, it can also be used for particular projects (Edwards, 2012).

Impact assessment offers a framework for addressing community development, according to Bornstein (2010). It is intended to help local planners and decision-makers comprehend in advance the potential effects that a specific development may have on a community. It gives time for any negative impacts of a proposed development to be avoided or mitigated.

The phrase "social impacts" also refers to the effects on human populations of any governmental or private actions that change how people interact with one another, go about their daily lives, organize to meet their needs, and generally function in society. The phrase also refers to cultural effects that involve modifications to the norms, values, and beliefs that direct and explain how people think about themselves and their society. Therefore, the meanings, perceptions, or social significance of these shifts, rather than the actual physical migration of human populations, are the most crucial parts of social repercussions (Inter-organizational Committee on Guidelines and Principles for Social Impact Assessment, May 1994)

The attitudes of the community's residents toward development and the specific measures being proposed, as well as their perceptions of the community and their own well-being, are important factors in determining the social consequences of a proposed action. It may be possible to spot changes in a community's social well-being by asking local inhabitants and leaders of organizations or neighborhoods about their thoughts and attitudes concerning the anticipated changes in the social environment. Leaders in the community may be able to shed light on the overall sentiments of the populace if they are aware of and attentive to local concerns and interests. Therefore, community leaders should be consulted for information on

attitudes and perceptions. (Inter-organizational Committee on Guidelines and Principles for Social Impact Assessment, May 1994)

A phenomenological definition of community development work would place the primary emphasis on how people and community institutions behave in terms of building communities, which would lead to normative theories about the local conditions required to promote resident engagement and skill-building as well as the collective action required of community institutions (Dorius, 2011).

The behavioral aims of measuring the impacts of programs in the community include bringing people together, making decisions with dignity, altering attitudes, creating shared objectives, fostering self-confidence, and achieving economic self-sufficiency. Additionally, implementers' or practitioners' empowerment themes cover such things as fostering interpersonal relationships, speaking with decency and respect, altering perceptions and removing obstacles, realizing shared objectives and forging a vision, boosting individual confidence, and achieving economic independence (Dorius, 2011).

Delfino (2017) attempted to triangulate interviews, case studies, and baseline data in order to measure the perceived social impact of the KALAHYAN CIDSS project on community development in the East Coastal Area of Lagonoy, Camarines Sur, Philippines. Findings show that despite the project's shortcomings, it has received widespread recognition as a successful strategy for reducing poverty thanks to the employment possibilities it created, particularly in the East Coastal Area of Lagonoy. Significantly, it aided the stakeholders in the community in developing a sense of mutual trust, understanding, and cooperation. Its implementation supports community accountability and transparency while advancing gender equality and stakeholder empowerment.

University-community engagement facilitates the exchange of skills, knowledge, values, and experiences that benefit both the giver and the receiver (stakeholders of the community), according to research made by Alday-Bersoto (2019) using the triangulation method of reflection reports, focus group discussions, and interviews on stakeholder beneficiaries. Additionally, the staff and student volunteers recognized throughout the focus group discussion that their contributions improve the community and the lives of the stakeholders of the community, and in exchange they receive priceless and invaluable advantages. According to

faculty and student volunteers, involvement in the university's community helped them: (1) improve their communication and social skills through interactions with a variety of people and making new friends; (2) boost their self-esteem and self-efficacy by promoting and advocating for the welfare of others; (3) become better self-advocates; (4) develop their sense of gratitude and compassion to people; (5) boost morale and enthusiasm; and (6) relearn important skills, (7) experience different cultures, and (8) improve life prospects.

Based on the survey made by Llenares and Deocarís (2018), which was conducted 1.5 years after the extension programs were finished, there had been a modest improvement in community knowledge, attitude, and lifestyle. Based on the findings, only people who participated regularly and occasionally showed superior long-term outcomes. As students use their discipline knowledge to assist solve problems in the real world, there is a growing understanding of the contribution that higher education extension makes to the teaching and learning process. Higher education institutions (HEIs) developing community extension programs with the best societal effects may find this work of interest.

Impact assessment is based on the theory of change. A theory of change outlines how actions are thought to result in a series of outcomes that help achieve the intended outcomes in the end. It can be created for any level of intervention, including an organization, a project, a program, a policy, or an event. A theory of change can help determine the data that must be gathered and how they should be assessed in an effective study. It may also offer a structure for reporting. (Rogers, 2014)

In essence, a theory of change is a thorough explanation and demonstration of how and why a desired change is anticipated to occur in a specific setting. It primarily focuses on outlining or "filling in" what has been referred to as the "missing middle" between what a program or change initiative performs (its activities or interventions) and how these contribute to the achievement of desired goals. To do this, it first identifies the desired long-term goals, then works backward from these to determine all the necessary conditions (outcomes), together with their causal relationships, in order for the goals to materialize.

A theory of change for the UNDAF must be supported by thorough studies, dialogue with important stakeholders, and knowledge gained from the UN and its partners' experiences about what works and what doesn't in

various circumstances. A theory of change aids in the identification of solutions to successfully address the root causes of issues that impede progress and serves as a decision-making tool for the best course of action, taking into account comparative advantages of the UN, effectiveness, practicality, and uncertainties inherent in any change process. A theory of change also aids in identifying the underlying presumptions and risks that are essential to comprehend and review at various stages of the process to make sure the strategy will support the intended transformation. To ensure that the analysis is sound and the key assumptions, including assumptions about the roles that will be played by partners and other key actors, are plausible, it is necessary to validate the various steps while developing the theory of change against the evidence that is currently available and the perspectives of other stakeholders. The theory of change must also be in line with the UNDAF's overarching goals and guiding principles (Theory of Change Companion Guidance for UNDG-UNDAF, June 2017).

Figure 1.

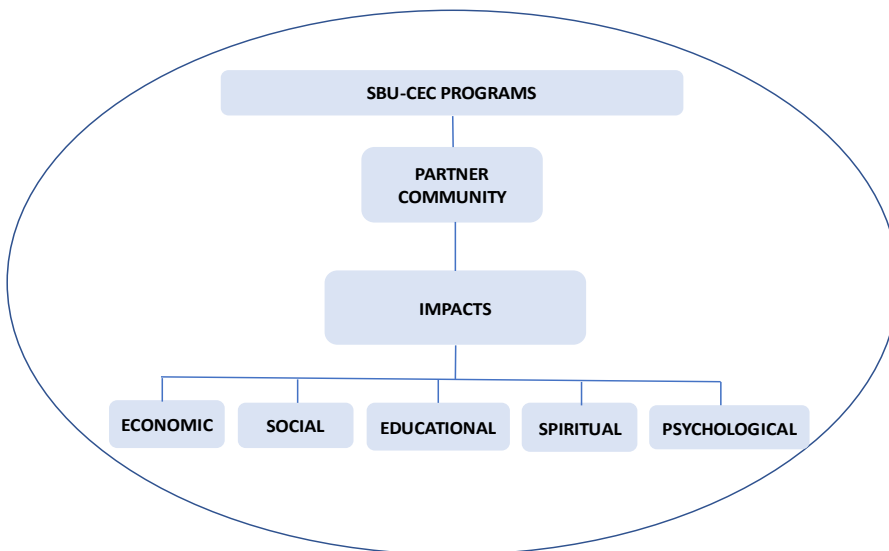
UNDG-UNDAF Process Model on Theory of Change



A theory of change clarifies how actions are thought to result in a string of outcomes that help achieve the intended outcomes in the end. Any degree of intervention, including an event, a project, a program, a policy, a strategy, or an organization. It is possible to create a theory of change for an intervention: (1) where goals and activities can be determined meticulously prepared in advance, or (2) that evolves and modifies in response to new concerns made by partners and other stakeholders. The term is generally used to refer to a version of a schematic depiction of theory of change as shown in Figure 1, which serves as the conceptual framework of this paper:

Figure 2.*Conceptual Framework*

With the theory and the literature reviewed, the operational framework was constructed as seen in Figure 2 below. It reveals that the Community Engagement Center of SBU has developed and crafted its programs for its partner communities. This also implies the implementation of strategies and activities in line with its different programs in economic, social, educational, spiritual and psychological dimensions. This is consistent with the hypothesis that members of the community have advanced to a higher level of consciousness, commitment to, and proficiency in participatory development.

Figure 3.*Operational Framework*

The following set of null hypotheses was observed throughout the study based on discussions established from the concept and operational framework used in this study:

- Ho₁: The programs implemented by SBU-CEC in Pactil, Bauko, Mountain Province **has no significant impacts** on the **economic dimensions** of the family and community life of its beneficiaries.
- Ho₂: The programs implemented by SBU-CEC in Pactil, Bauko, Mountain Province **has no significant impacts** on the **social dimensions** of the family and community life of its beneficiaries.
- Ho₃: The programs implemented by SBU-CEC in Pactil, Bauko, Mountain Province **has no significant impacts** on the **educational dimensions** of the family and community life of its beneficiaries.
- Ho₄: The programs implemented by SBU-CEC in Pactil, Bauko, Mountain Province **has no significant impacts** on the **spiritual dimensions** of the family and community life of its beneficiaries.
- Ho₅: The programs implemented by SBU-CEC in Pactil, Bauko, Mountain Province **has no significant impacts** on the **psychological dimensions** on the family and community life of its beneficiaries.

Methodology

This study is essentially a type of quantitative research. As a result, this study's techniques include gathering and examining numerical data from the viewpoint of CEC recipients in Pactil, Bauko, and Mountain provinces. In addition, this study used a variety of research approaches and techniques to achieve its goal.

Descriptive

In order to ascertain how CEC programs in Pactil, Bauko, and Mountain province affected the family and community lives of its recipients, the study used the descriptive research approach. In addition, the study uses data to evaluate, analyze, and interpret the survey results using a variety of statistical methodologies.

Explanatory

The phrase "explanatory research" denotes that the goal of the study is to explain the phenomena under examination, as opposed to merely describing them. Therefore, the study used explanatory research to identify

and evaluate the effects of CEC programs on beneficiaries' families and community lives in Pactil, Bauko, Mountain Province.

Survey

A survey is a quantitative and qualitative procedure that can be identified by two key features. First, self-reports are used to quantify the relevant factors. In essence, a questionnaire will be used by the researchers to collect data from the responder. The questionnaire asks respondents about their perceptions of the effects of the given variables.

Deductive

This study's hypothesis was created by the researchers in response to the hypotheses. Therefore, the researchers will use appropriate statistical techniques to gather and analyze the data to test the hypothesis. Additionally, all statistical analyses were done at a 95% significance level to find evidence supporting the acceptance or rejection of each hypothesis.

Research Approaches

Triangulation Method

When two or more approaches are utilized in research, this is known as mixed methods and is referred to as triangulation. A specific research question may be answered using a combination of quantitative and qualitative methods in one of three ways: (1) the results may agree and lead to the same conclusions; (2) the results may relate to different things or phenomena but may be complementary to one another and used to support the individual results; or (3) the results may differ or be in conflict. Divergent discoveries may provide new and improved hypotheses for the phenomenon under inquiry. Converging results strive to boost the validity through verification; complementary results emphasize distinct elements of the phenomenon or demonstrate different phenomena (Tashakkori et.al. 2020).

According to the Director of the Community Engagement Center, Ms. Noriel Tabag, the data showed that 24 household heads are beneficiaries of the CEC programs in Pactil, Bauko, Mountain Province. All the beneficiaries then will form part of the sample where data will be collected. At the end of the survey, 41 respondents were gathered.

The questionnaire for determining the impacts of CEC programs on the different aspects of family and community life provided choices for the respondents. These choices, it has a corresponding Likert scale of 1 – 4. To further elaborate, the table below shows the measurement scale that the study utilized:

Table 1.

Measurement Scale

Variables	Scales			
	1 Strongly Disagree	2 Disagree	3 Agree	4 Strongly Agree
Economic Aspect				
Social Aspect				
Educational Aspect				
Spiritual Aspect				
Psychological Aspect				

The initial questionnaire was adopted from the one used in the unpublished study of Viloría, Mendoza and Ayonon in 2018. The current questionnaire now employs an impact assessment mechanism for the various CEC programs that SBU implemented and instituted at Pactil, Bauko, Mountain Province. The researchers were able to collect and administer the survey questionnaire to the respondents with assistance from Ms. Tabag of CEC. The researchers were also able to conduct face-to-face validation and in-depth interviews with the President, Vice-President, Treasurer and Secretary and the key members of the SBMVGA during their vegetable produce selling opportunity at San Beda University, Mendiola, Manila last 28 January 2023 during the Pista ng Sto. Nino festivities at the university campus.

The fundamental aim of this study, concerning the research problem, is to characterize the features and quantify the influence of independent factors on the dependent variables. The table below provides a summary of the statistical analyses the study carried out to examine the information gathered from the respondents. Additionally, Microsoft Excel and Jamovi were used in the study to present the data and statistical results, respectively.

Table 2.*Summary of Statistical Treatments of the Study*

Objectives	Statistical Treatment
1. To analyze past results or outcomes of programs of CEC to their beneficiaries in Pactil, Bauko, Mountain Province	Summary Descriptive Statistics Microsoft Excel
2. To determine the impacts of CEC programs to the family and community life of the beneficiaries as indicated in the following aspects of development: (a) economic; (b) social; (c) educational; (d) spiritual; and (e) psychological	Binary and Multinomial Logistic Regression Jamovi
3. To generate recommendations and suggestions that San Beda University can consider in order to concretize community engagement as an important pillar of Bedan Educational mission and vision	Descriptive Statistical Results Logistic Regression Results Interview Results

Results and Discussion

This section presents the results and interpretation of data gathered from the survey and interview with the officers of SBMVGA. Initially, a detailed description of the social, economic, political, and cultural conditions will be presented for a general overview and background of Pactil, Bauko, Mountain, Province.

Profile of Pactil, Bauko, Mountain Province

One of the 22 barangays in the Municipality of Bauko, Mountain Province, is Monamon Sur. The 2020 Census of Population and Housing conducted by the Philippine Statistics Authority determined that Barangay Monamon Sur had a total population of 3,877. This made-up 12.11 percent of Bauko's entire population. Among its ten sitios are Pactil, Monamon Proper, Bebe, Binaka, Lukib, Boga, Sengyew, Asbiagan, Dodoan, and Mt. Data Cliff (CEC Document, n.d.)

The largest of the ten (10) sitios in Barangay Monamon Sur is Sitio Pactil, which is situated on the summit of Mount Data Cliff or on the western side of the Mount Data Plateau Agricultural Land of Gardeners. The locals have a natural affinity towards agriculture. Common upland vegetables include cabbage, potatoes, carrots, bell pepper, Chinese cabbage, broccoli, beans, and sweet peas. Some were employed as storekeepers at the

La Trinidad Trading Post in Benguet, while others were vegetable buyers and sellers (CEC Document, n.d.).

The majority of the residents of Sitio Pactil are from the Kankanaey tribe, but there are also indigenous residents here from other parts of the Cordillera, including the Ibaloi from Benguet, the Kalanguya from Ifugao, the Kalingas from Kalinga, and various areas of the province. Ilocanos and Tagalogs who came to Pactil for intermarriage and economic reasons are among the additional residents.

Sitio Pactil has access to primary health care, basic education, potable water, power, and sanitary facilities. The MOM (Mobile Obstetrics Monitoring) for Moms project of San Beda University-College of Medicine in collaboration with Philips Inc. offers Lumify ultrasonography – a Philipps brand of ultrasound technology – to expectant moms.

Most of the residents of Sitio Pactil work as vegetable farmers. As a source of food and a means of subsistence, they plant various kinds of vegetables. The Saint Bede Mushroom and Vegetable Growers Association, which was formally established in August 2012, provided the place with additional sources of income including the production of potato chips and mushrooms.

The barangay officials, which include the captain, councilors, public safety officers, and health workers, oversee the affairs inside Sitio Pactil. Authorities are entrusted with issues, occurrences, affairs, and crimes that may or will require more intensive intervention.

Some of Sitio Pactil's elderly still follow indigenous customs, traditions, and beliefs. However, as time passed and the population grew, people began to adopt Christian values and practices.

Demographic Profile of Respondents

The respondents were all members of the SBMVGA in Pactil, Bauko, Mountain Province. In terms of gender, all respondents were female. While for age, the majority is within the range of 39-48 years old with 10 respondents. As for civil status, 30 of 41 were married. Women outnumber men in this organization (SBMVGA). As can be seen, these women participate in the farming and vegetable growing of their respective families, rather than leaving it entirely to the male members of the families.

During the SBMVGA's formation period, led by CEC staff, only the women actively participated in scheduled meetings and discussions, while their husbands or any male member of the family were left on the farm or at home to attend to the needs of the family, particularly their children.

Table 3.

Demographic Profile of Respondents

Gender	Frequency (n = 41)	% Share
Male	0	0
Female	41	100
Age Range		
19-28 years old	4	9.8
29-38 years old	7	17.1
39-48 years old	10	24.4
49-58 years old	8	19.5
59-68 years old	9	22.0
69-78 years old	3	7.3
Civil Status		
Single	5	12.2
Married	30	73.2
Widowed	5	12.2
No Answer	1	2.4
Monthly Income		
Below ₱10,000	36	87.8
₱10,001-20,000	2	4.9
₱20,001-30,000	3	7.3
Work/Employment		
Farmer	24	58.5
Vegetable farming	2	4.9
Laborer	6	14.6
Wage earner	4	9.8
Teacher	3	7.3
Child Development Worker	1	2.4
Housewife	1	2.4

In terms of income ranges, 36 out of 41 respondents are only earning a monthly income of 10,000 pesos and below. In terms of work and employment, 24 out of 41 respondents were farmers, given that Bauko is basically an agricultural area where vegetable growing is obviously the source of income for the majority of the people. It is surprising to learn that members have such low monthly incomes. Unfortunately, this is not enough to meet their requirements. To meet the needs of the family, members borrow money from community lenders, who are usually middlemen or

businessmen who buy vegetables wholesale. The other way they do it is to trade or buy rice that will last them a month or two.

In relation to how many of its members have participated in various programs instituted by the CEC, the highest frequency was the livelihood program with 36 responses, while the least frequency was the educational program with only 10 responses. Interestingly, programs of Social Awareness and Leadership have more than 20 responses – indicating sustained interest in the programs of CEC. Activities, in which the members participated, include the following: (a) Livelihood Program – seminar/workshops related to business conceptualization, operations, marketing, product labelling, packaging, etc. These were mostly initiated by CEC with the participation of faculty members in the business department of CAS, the Local Government Unit (LGU) and, government agencies like DTI; (b) Educational Program – scholarship or financial assistance to qualified beneficiaries; (c) Values Formation Program – catechism, basic ecclesial community, lecture on church sacraments; (d) Health Program – “Mom for Moms” a medical assistance provided by the College of Medicine for mothers especially pregnant mothers; (e) Social Awareness Program – seminars related to care for environment; (f) Leadership and Capability Building – leadership seminars and workshops.

Table 4.

*Memberships in CEC Programs**

CEC PROGRAMS	FREQUENCY
Livelihood Program	36
Educational Program	10
Values Formation Program	18
Health Program	18
Social Awareness Program	21
Leadership and Capability Building	22

**Multiple responses*

As to the degree of participation in these CEC programs, Values formation programs obtained the highest weighted mean of 3.24 – showing the level of enthusiasm that was displayed. Interestingly, Livelihood programs obtained the lowest weighted mean of 3.03, with the Leadership programs not far above at a weighted mean of 3.05. The low level of participation in Livelihood programs indicates that members are losing interest in program-related activities in an interview, the President and

Treasurer revealed that they have seen no tangible changes in their potato chip business or mushroom production since the organization's inception. Potato chip production is seasonal and is determined by the quantity and quality of potatoes harvested. The obsolescence of equipment and machines used in the production of potato chips is one of the reasons for the business entity's inability to survive. Because the building is also in poor condition, the mushrooms that were supposed to be profitable are no longer of high quality and thus cannot be sold in the market. Overall, the level of participation of respondents remains at a high level.

Table 5.

Degree of Participation in CEC Programs (Weighted Means)

CEC PROGRAMS	WEIGHTED MEAN	INTERPRETATION
Livelihood Program	3.03	High Degree
Educational Program	3.18	High Degree
Values Formation Program	3.24	High Degree
Health Program	3.21	High Degree
Social Awareness Program	3.11	High Degree
Leadership and Capability Building	3.05	High Degree

*Legend: 3.26 – 4.00 Very High Degree
 2.51 – 3.25 High Degree
 1.76 – 2.50 Low Degree
 1.00 – 1.75 Very Low Degree

These results indicate that the farmers and laborers from the SBMVGA are highly engaged and participative in the programs and activities implemented and instituted by the CEC. The sustainability of handling such programs – as well as the coordination and cooperation of key stakeholders in the CEC programs, would be the key challenges moving forward. Table 4 --- refers to the physical count or frequency of how many members have joined the CEC programs while Table 5 --- refers to the level of interest in joining the program. With 36 joining the livelihood programs of the CEC, the members have figured that by joining this program they can find a skill or knowledge that can improve their economic situation. Even though only 18 members joined the values formation program – these breaches have the most interest because of their connection to the Benedictine brand of spiritual formation embedded in SBU for many years already.

Weighted Means of Perceived Impacts of CEC Programs

Based on the weighted means gathered from the impact dimensions, it is the spiritual dimension that had the most impact among the various programs offered by the CEC with 3.24 while the economic dimension had the least impact among the various programs offered by the CEC with 3.01 (cf. Table 6). Looking further at the different component factors for each dimension the lowest component was "the program increased my income" with a weighted mean of 2.98 but is still interpreted as "agree". Interestingly, the spiritual sub-components such as "faith in God", "respect for parents", "Christian fellowship" and "growing spiritually" have all garnered weighted means of 3.24 but are still interpreted as "agree". There was no weighted mean that went past the interpretation of "strongly agree" in every impact component.

From the other impact dimensions, the psychological component has a weighted mean of 3.12 interpreted as "agree", the social component has a weighted mean score of 3.07 interpreted as "agree", and the educational component has a weighted means score of 3.03 still interpreted as "agree". The social impact dimension seems to align quantitatively with the perceived social implications of the KALAH-CIDSS project of community development programs in Camarines Sur by Delfino.

Table 6.

Weighted Means of Impact Dimensions

Impact Dimensions	Weighted Mean	Interpretation
A. Economic Dimension		
1. The program increased my income	2.98	Agree
2. The program improved my savings capacity	3.00	Agree
3. The program made me appreciate the value of money	3.03	Agree
4. The program aided me to purchase basic needs	3.00	Agree
5. The program made me appreciate income opportunities	3.00	Agree
6. The program made me spend more money	3.00	Agree
7. The program benefits me economically	3.03	Agree
8. The program gave me ideas about saving/investment	3.03	Agree
OVERALL WEIGHTED MEAN	3.01	Agree

Table 6.*Continued.*

	Impact Dimensions	Weighted Mean	Interpretation
B. Social Dimension			
1.	The program strengthened family ties and bonds	3.15	Agree
2.	The program realized my worth in my community	3.02	Agree
3.	The program established need to communicate as family	3.12	Agree
4.	The program improved my capabilities as a person	3.02	Agree
5.	The program improved my relations with neighbors	3.05	Agree
6.	The program improved my well-being	3.07	Agree
7.	The program improved my dealings with relatives	3.05	Agree
8.	The program enhanced my social stature	3.05	Agree
	OVERALL WEIGHTED MEAN	3.07	Agree
C. Educational Dimension			
1.	The program made me realize the value of learning	3.03	Agree
2.	The program made me more skillful	3.03	Agree
3.	The program helped me acquire more knowledge	3.03	Agree
4.	The program gave me reason to believe in my talent	3.03	Agree
5.	The program helped me gain knowledge/information	3.03	Agree
6.	The program made me learn more	3.03	Agree
7.	The program is relevant to further my education	3.03	Agree
8.	The program supplemented our educational attainment	3.03	Agree
	OVERALL WEIGHTED MEAN	3.03	Agree
D. Spiritual Dimension			
1.	The program made me realize the value of prayer	3.24	Agree
2.	The program taught us to do good deeds	3.20	Agree
3.	The program made me respect my parents and elders	3.24	Agree
4.	The program strengthens my faith to God our creator	3.24	Agree
5.	The program helped me grow spiritually	3.24	Agree

Table 6.*Continued.*

	Impact Dimensions	Weighted Mean	Interpretation
6.	The program involved Christian fellowships	3.24	Agree
7.	The program was aligned with our beliefs/traditions	3.22	Agree
8.	The program built my relation to God	3.30	Agree
	OVERALL WEIGHTED MEAN	3.24	Agree
E. Psychological Dimension			
1.	The program improved my work-life-balance	3.15	Agree
2.	The program kept me motivated everyday	3.05	Agree
3.	The program helped me reduce my level of stress	3.10	Agree
4.	The program helped me establish my well-being	3.10	Agree
5.	The program did not make me more anxious	3.13	Agree
6.	The program made me feel that I am not an outcast/loner	3.21	Agree
7.	The program did not make me overthink on many aspects	3.10	Agree
8.	The program uplifts my personal wellness	3.08	Agree
	OVERALL WEIGHTED MEAN	3.12	Agree

*Legend: 3.26 – 4.00 Strongly Agree
 2.51 – 3.25 Agree
 1.76 – 2.50 Disagree
 1.00 – 1.75 Strongly Disagree

Statistical Results and Analysis

The overall reliability of the responses was highly acceptable as reflected in the overall Cronbach Alpha of 0.825 from the Jamovi computations (cf. Table 7). Table 7 also presents the reliability for each impact dimension component that is generally acceptable. Also, the Shapiro-Wilk test (Table 8) for small sample data indicates that responses are not normally distributed. The result thus allows the use of logistic regression, a non-parametric statistical test, to analyze the results of the survey.

Table 7.*Reliability Analysis and Cronbach Alpha*

Scale Reliability Statistics		Item Reliability Statistics	
	Cronbach's α		If item dropped
			Cronbach's α
Scale	0.825	Economic Impact	0.825
		Social Impact	0.694
		Education Impact	0.793
		Spiritual Impact	0.840
		Psychological Impact	0.664

Table 8.*Shapiro-Wilk's Test for Normality for Small Sample Data*

Normality Test		
Shapiro-Wilk Test		
W stat	0.399129	
W table	0.941	Non-parametric statistics
p-value	P<0.05	Not normally distributed

Binomial Logistic Regression results from the livelihood programs of the CEC indicate a p-value of 0.011 – which already indicates a highly statistical impact relationship as to its economic impact and its social impact (cf. Table 9). This also validates the weighted mean score of 3.01 for economic impact dimensions and 3.07 for social impact dimensions.

From the validation interview, the respondents specified that the income they get from vegetable growing and farming is better than nothing but is not enough. One of the things that has encouraged them to continue their farming is the community's resilience. This is the life they have grown accustomed to, and as a result, it has provided them with contentment, and their simple life has made them perfect. Statistics simply show that the respondents value their traditional way of life or culture. The SBU's entry into the community reinforced this appreciation that, despite not earning much money from growing vegetables, the SBU has demonstrated and proven the importance of culture in their economic development, particularly in items that say, "*The program made me appreciate the value of money.*" In terms of the social dimension, the SBU program has improved members' relationships with their families, neighbors, and other community sectors. The program has allowed them to work with members of the community from various sectors such as politics, industry, government, and other entrepreneurs. This has increased their knowledge

and skills in various areas of their lives, as well as giving them a greater appreciation for social life. They were able to “*establish the need for the family to communicate well*” based on their responses.

Table 9.

Livelihood Program’s Economic and Social Impact

Binomial Logistic Regression Results							
Model Fit Measures							
Model	Deviance	AIC	R^2McF	R^2N	Overall Model Test		
					X^2	df	p
1	5.20e-10	6.00	1.000	1.000	8.96	2	0.011
Model Coefficients – DegP Livelihood							
Predictor	Estimate	SE	Z	P			
Intercept	435	2.05e+6	2.12e -4	1.000			
Econ Impact	-136	831163	-1.64e -4	1.000			
Social Impact	-3.27e-6	235219	-1.39e -11	1.000			

Note: Estimates represent the log odds of “DegP Livelihood = High” vs. “DegP Livelihood = Very High”

As for the educational programs implemented by CEC, the multinomial logistic regression result indicates an overall p-value of 0.033 – which is considered statistically significant concerning its educational impact and social impact, respectively (cf. Table 10). This also validates the weighted mean of 3.03 and 3.07, respectively. Pactil's educational program provides financial assistance to young individuals in their studies. The St. Benedict Foundation, according to the CEC, is currently only providing financial assistance to one individual. Respondents, on the other hand, believe that the program has helped them grow as individuals, families, and members of the community. Although financial assistance is limited and selective, it inspires them to help young people learn well and learn in a dignified manner, particularly in social interaction. The results were widely consistent with the outcomes provided by Alday-Bersoto (2019) that community extension programs indeed help in uplifting an individual’s economic and social status.

Table 10.*Education Programs' Social and Educational Impact*

Multinomial Logistic Regression Results						
Model Fit Measures						
Model	Deviance	AIC	$R^2 McF$	Overall Model Test		
				X^2	df	p
1	5.55	17.5	0.654	10.5	4	0.033
Model Coefficients – DegP Education						
DegP Education	Predictor	Estimate	SE	Z	p	
High – Very High	Intercept	59.9	294.73	0.203	0.839	
	Educ Impact	-59.1	41.57	-1.423	0.155	
	Soc Impact	42.1	43.44	0.969	0.333	
Low-Very High	Intercept	83.1	2.57	32.380	<.001	
	Educ Impact	16.1	8.07	2.001	0.045	
	Social Impact	-40.9	9.76	-4.193	<.001	

As for the Values Formation program implemented by the CEC, the p-value from the binomial logistic regression is less than 0.001 – thus indicating that the spiritual and psychological impact was at an all-time high as compared to the other variables and indicators measured (cf. Table 11). It also validates the weighted means of these impact dimensions, with spiritual impact getting 3.24 and the psychological impact getting 3.12 respectively. San Beda University plays a critical role in shaping people's values by fostering their spiritual development. Many people have benefited from the SBU program in realizing the importance of prayer and strengthening their relationship with God. Even their families actively participate in church activities and affirm the Catholic Church's sacraments. One of the most important outcomes of this SBU program is the formation of the Basic Ecclesial Community, in which almost all members of the SBMVG actively participate. According to the interview, the people are very accepting of their different personalities and feel good whenever there is a meeting to discuss God. The new infrastructure, or chapel, is being built to strengthen Pactil's spiritual formation program.

Table 11.*Values Formation Programs' Spiritual and Psychological Impact*

Binomial Logistic Regression Results							
Model Fit Measures							
Model	Deviance	AIC	R^2McF	R^2N	Overall Model Test		
					X^2	df	p
1	2.25e-10	6.00	1.000	1.000	18.6	2	<.0001
Model Coefficients – DegP Livelihood							
Predictor	Estimate	SE	Z	p			
Intercept	271.7	727011	3.74e-4	1.000			
Spiritl Impact	45.2	235238	1.92e-4	1.000			
Psycl Impact	-127.0	341282	-3.72e-4	1.000			

Note: Estimates represent the log odds of “DegP Values = High” vs. “DegP Values = Very High”

As for the Health programs implemented by the CEC, the binomial logistic regression results in a p-value of less than 0.001 – indicating that the impact towards spiritual and psychological impact is very highly statistically significant and high (cf. Table 12). The result also validates the weighted means which were 3.24 and 3.12 respectively. The SBU College of Medicine (COM) is actively collaborating with the CEC to address citizens' health-related needs. Moms for Moms is a continuous COM activity that monitors the health of women, particularly pregnant women. They accomplish this by regularly checking their health status, holding health and nutrition seminars, proand viding medicines for common diseases, vitamins, and other bodbody-strengtheningpplements.

Table 12.*Health Programs' Spiritual and Psychological Impact*

Binomial Logistic Regression Results							
Model Fit Measures							
Model	Deviance	AIC	R^2McF	R^2N	Overall Model Test		
					X^2	df	p
1	1.32e-9	6.00	1.000	1.000	15.0	2	<.001
Model Coefficients – DegP Health							
Predictor	Estimate	SE	Z	p			
Intercept	271.7	727011	4.93e-4	1.000			
Spiritl Impact	45.2	235238	7.48e-4	0.999			
Psycl Impact	-127.0	341282	-9.10e-4	0.999			

Note: Estimates represent the log odds of “DegP Health = High” vs. “DegP Health = Very High”

As for the Social Awareness programs implemented by the CEC, the overall p-value generated by the binomial logistic regression indicate 0.002 which is highly statistically significant pertaining to its social and spiritual impacts (cf. Table 13). This further validates the weighted means of 3.07 and 3.24 respectively. Pactil's SBU program also aims to increase people's knowledge and understanding of the issues they face as citizens and members of the organization. To address this, the CEC allows members to participate in barangay and municipal programs on the importance of environmental awareness, health, and skill development seminars sponsored by the LGU and the DTI. This enables them to broaden their network, meet experts in various fields, and apply what they have learned to their families and the community.

Table 13.

Social Awareness Programs' Social and Spiritual Impact

Binomial Logistic Regression Results							
Model Fit Measures							
Model	Deviance	AIC	R^2McF	R^2N	Overall Model Test		
					X^2	df	p
1	4.64e-10	6.00	1.000	1.000	12.8	2	0.002
Model Coefficients – DegP Social							
Predictor	Estimate	SE	Z	p			
Intercept	312.7	628321	4.98e-4	1.000			
Spiritl Impact	-184.2	345159	-5.34e-4	1.000			
Psycl Impact	88.7	241377	3.67e-4	1.000			

Note: Estimates represent the log odds of “DegP Social = High” vs. “DegP Social = Very High”

As for the Leadership and capacity-building programs implemented by the CEC, the multinomial logistic regression results generated a p-value of 0.005 which is highly statistically significant on the spiritual and psychological impact dimensions (cf. Table 14). This also validates the weighted means of 3.24 and 3.12 respectively.

One of the goals that the CEC should achieve is to form individuals who will continue to carry out the tasks that they have started. From the very beginning, potential leaders in the organization must be identified. There are numerous opportunities for members to receive training and seminars on how to lead and become good leaders. The CEC observes that today's set of leaders are responsible, trustworthy, and respected by the

other members of their organization. Although these leaders have areas for improvement in their performance, the CEC believes they are open to learning and dare to hurdle the challenges that their organization faces. According to our interview, one of the things the leaders noticed was a gradual loss of interest among members in participating in SBMVGA activities. It is difficult to motivate them, especially when they are aware that their participation is meaningless. Others simply attend and participate only in activities that require their attendance especially if CEC requires them to do so. Their reason for being a member of the SBMVGA is not fully understood. The current leaders are adamant about continuing the Organization's activities, and they are open about the fact that they still have a lot to learn and experience in order to be good leaders.

Table 14.

Leadership and Capacity Building Programs' Spiritual and Psychological Impact

Multinomial Logistic Regression Results						
Model Fit Measures						
Model	Deviance	AIC	$R^2 McF$	Overall Model Test		
				X^2	df	p
1	6.04	18.0	0.709	14.7	4	0.005
Model Coefficients – DegP Leaders						
DegP Leaders	Predictor	Estimate	SE	Z	p	
High – Very High	Intercept	57.53	172	0.33394	0.738	
	Spirit Impact	87.73	41.57	0.37320	0.709	
	Psyc Impact	-103.8	43.44	-0.42396	0.672	
Low-Very High	Intercept	64.91	785	0.08264	0.934	
	Spirit Impact	-20.40	130	-0.15684	0.875	
	Psyc Impact	1.22	129	0.00947	0.992	

Conclusion and Recommendations

Based on the results, it is concluded that all CEC-SBU programs have a strong and significant impact on the spiritual, educational, psychological, social, and economic dimensions. Looking at the significant effects (p-values) of the various programs, it can be concluded that Values Education programs and Health programs had the strongest impact among all programs initiated by CEC-SBU, while the livelihood programs have the least but modest impact factor or a p-value of 0.033. Since all have significant impacts, we reject the null hypotheses and conclude that the CEC-SBU programs have varying but highly significant impacts on the economic, social, educational, spiritual, and psychological dimensions.

Furthermore, given the utmost willingness of stakeholders to implement the engagement programs on their own as indicated in the previous 2017 Pactil study, CEC-SBU should still take the lead in relation to the “gradual and phase-based” turnover of these programs to the local government of Pactil, Bauko, Mountain Province. Livelihood programs should be given priority due to its high responsiveness of the respondents. Education and health should be targeted for mothers and their children. Leadership and Social Awareness should be targeted to the male participants and key members. Values formation should be targeted to the whole community as part of the Benedictine tradition and its spirituality for community development.

It is recommended that the CEC should lead an intensified college-led type of contributions and connections toward its partner communities. For instance, the Business cluster from the College of Arts and Sciences (CAS) can possibly spearhead the Livelihood programs. The Social Science and Humanities cluster of the CAS can possibly spearhead the Education program along with the IBED. The College of Medicine and/or College of Nursing can possibly spearhead the Health and Social Awareness programs. The Graduate School of Liturgy can possibly spearhead the Values Formation program and then the College of Law and Alumni Foundation can possibly spearhead the Leadership and Capacity Building program.

A targeted agreement with a realistic timeframe can be done by these departments along with CEC-SBU and its partner communities. In this way, the element of sustainability and accountability as a Catholic institution is achieved. As for the CEC's future engagement or identification of a partner community, CEC should come up with a comprehensive community profile in which the SBU management can assess, together with the people and stakeholders, a well-articulated plan of programs and actions with measurable or expected outcomes. For future areas of research, impact assessments could possibly be conducted with other CEC-SBU partner communities as part of its continued evaluation and monitoring mechanism.

References

- Bersoto, M. (2019). The impact of University-Community Engagement: An interpretative phenomenological analysis. *Diversity in Unity: Perspectives from Psychology and Behavioral Sciences*, 183-191. <https://doi.org/10.1201/9781315225302-23>
- Bornstein, L. (2010). Peace and conflict impact assessment (PCIA) in community development: A case study from Mozambique. *Evaluation*, 16(2), 165-176. <https://doi.org/10.1177/1356389009360471>
- Community Engagement Center Document: *Community Profile of Sitio Pactil, Barangay Monamon Sur, Bauko, Mountain Province (n.d.)*
- Data Privacy Act of 2012 in URL: <https://www.privacy.com.ph/data-privacy-act-of-2012/>
- Delfino, A. N. (2017). Social services impact on community development in the Philippines: Case of Kapit-Bisig Sa Kahirapan Project in Camarines Sur. *International Journal of Community Development & Management Studies*, 1, 103-115, <http://ijcdms.org/Volume01/v1p103-115Delfino4154.pdf>
- Dorius, N. (2011). *Measuring community development outcomes: In search of an analytical framework*. *Economic Development Quarterly*, 25:267, Sage Publishing.
- Edwards Mary, Impact Analysis in URL: http://www.lic.wisc.edu/shapingdane/facilitation/all_resources/impacts/analysis_intro.htm
- Fox, J., & Weisberg, S. (2020). *Car: Companion to Applied Regression*. [R package]. <https://cran.r-project.org/package=car>.
- Guidelines and principles for social impact assessment. (May 1994), Inter-organizational Committee on Guidelines and Principles for Social Impact Assessment, http://www.lic.wisc.edu/shapingdane/facilitation/all_resources/impacts/analysis_socio.htm
- Llenares, I. I., & Deocaris, C. C. (2018). Measuring the impact of a community extension program in the Philippines. *Malaysian Journal of Learning and Instruction*, 15(1), 35-55. <https://doi.org/10.32890/mjli2018.15.1.2>

- Monamon Sur, Bauko, Mountain Province. Accessed from Monamon Sur, Bauko, Mountain Province Profile – PhilAtlas.
- Montalbo, E.E. (2016). Impact assessment of the community extension programs of AB mass communication and paralegal studies towards community development. *International Journal of Applied Business and Economic Research*. 14(5), 3397-3441
- OECD Directorate for Science, Technology and Innovation (2014), “Assessing the Impact of State Interventions in Research – Techniques, Issues and Solutions”, unpublished manuscript.
- Project Impact Assessment: Systems and Procedure*. (1999, November). Project Impact Assessment Division Foreign Assisted & Special Projects Office
- R Core Team (2021). *R: A Language and environment for statistical computing*. (Ver. 4.1) [Computer software]. <https://cran.r-project.org>. (R packages retrieved from MRAN snapshot 2022-01-01).
- Ripley, B., Venables, W. (2016). *Nnet: Feed-Forward Neural Networks and Multinomial Log-Linear Model*. [R Package]. <https://cran.r-project.org/package=nnet>.
- Rogers, P.J. (2012). *Introduction to Impact Evaluation*. <http://www.betterevaluation.org/en/node/1543>, retrieved on 15th June 2017.
- Rogers, P. J. (2014). Theory of change. *Methodological briefs: Impact evaluation*, 2(16), 1-14.
- Tashakkori, A., Johnson, R. B., & Teddlie, C. (2020). *Foundations of mixed methods research: Integrating quantitative and qualitative approaches in the social and behavioral sciences*. SAGE Publications.
- The jamovi project (2022). *jamovi*. (Ver. 2.3) [Computer Software]. <https://www.jamovi.org>.
- UNDG-UNDAF Companion Guidance on Theory of Change, June 2017. <https://unsdg.un.org/resources/theory-change-undaf-companion-guidance>

Viloría, Mendoza & Ayonon (2018). *An Evaluation of the Social Action Programs of Integrated Basic Education Department of San Beda University* (unpublished manuscript).

Walliman, N. (2011). *Your research project: Designing and planning your work*. Sage Publications.