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ENTREPRENEURSHIP EDUCATION AND MSME DEVELOPMENT: ASSESSING THE IMPACT OF HEIS' EXTENSION PROGRAMS ON LOCAL ECONOMIC SUSTAINABILITY IN BICOL REGION, PHILIPPINES

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ABSTRACT

This study assessed the impact of Higher Education Institutions' entrepreneurship extension programs on micro, small, and medium enterprise development and local economic sustainability in Bicol Region, Philippines. The study aimed to determine the profile and effectiveness of extension programs, measure the extent of enterprise development, analyze the relationship between program effectiveness and development, identify implementation challenges, and propose an enhanced sustainable model. Anchored on Human Capital Theory, Triple Helix Model, and Experiential Learning Theory, the study employed a mixed-method descriptive-correlational research design. Micro, small, and medium enterprise beneficiaries from Malilipot, Tabaco City, and Tiwi, Albay, and extension coordinators were selected through purposive sampling. Data were gathered using a validated researcher-made questionnaire with a five-point Likert scale and a semi-structured interview guide. Quantitative data were analyzed using mean, standard deviation, and Pearson r correlation, while qualitative data were analyzed through thematic analysis.

Results revealed that extension programs were Very Effective with a grand mean of 4.28, and enterprise development was at High Extent with a mean of 4.05. Marketing and innovation capability obtained the highest effectiveness rating, while business sustainability registered the highest development rating. A high positive significant correlation was found between program effectiveness and enterprise development. Lack of capital and limited follow-up were identified as major challenges. An Enhanced Sustainable Higher Education Institution-Micro, Small, and Medium Enterprise Extension Model was proposed to strengthen local economic sustainability.

Keywords: Entrepreneurship Education, Extension Programs, Higher Education, Local Economic Sustainability, MSME Development

1 INTRODUCTION

Entrepreneurship education has been recognized as a critical driver of economic development, poverty reduction, and inclusive growth. According to the World Bank (2023), micro, small, and medium enterprises (MSMEs) account for 90%

of businesses and more than 50% of employment worldwide, underscoring their vital role in local economic sustainability. The United Nations Educational, Scientific and Cultural Organization highlighted that higher education institutions (HEIs) play a transformative role through extension programs that bridge academic knowledge and community application (UNESCO, 2022). In developed and developing economies, studies show that entrepreneurship extension programs significantly enhance entrepreneurial competencies, financial literacy, and innovation capability, leading to improved business survival and profitability (Valerio et al., 2014). Furthermore, the Triple Helix Model emphasizes that sustainable economic development is achieved through synergistic interaction among academia, industry, and government (Etzkowitz & Leydesdorff, 2000). Despite global evidence, the actual impact of HEI-led entrepreneurship extension programs on grassroots MSME sustainability remains underexplored, particularly in rural regions where institutional support is most needed.

In the Philippine, MSMEs comprise 99.5% of total business establishments and contribute 63% of total employment, making them the backbone of the national economy (Department of Trade and Industry [DTI], 2023). The government has institutionalized support for MSMEs through Republic Act No. 9501, also known as the Magna Carta for Micro, Small and Medium Enterprises, which mandates state support for MSME development through training, financing, and market linkage. Complementing this, the role of HEIs is legally anchored on Republic Act No. 7722 or the Higher Education Act of 1994, which mandates HEIs to undertake research and extension services, and Republic Act No. 8292 or the Higher Education Modernization Act of 1997, which provides LUCs autonomy to implement community-relevant programs. Further, CHED Memorandum Order No. 52, Series of 2016 on Pathways to Equity, Relevance and Excellence in Research, Extension, and Production requires HEIs to conduct relevant extension programs aligned to community needs and Sustainable Development Goals. The Philippine Development Plan 2023-2028 also underscores that entrepreneurship education and HEI-community engagement are essential strategies to achieve SDG 4 on Quality Education and SDG 8 on Decent Work and Economic Growth (National Economic and Development Authority, 2023). Despite these legal mandates, there is a dearth of empirical studies assessing whether HEI extension programs effectively translate into measurable MSME development and long-term economic sustainability.

In the Bicol Region, locally known for pili products, abaca, and tourism-based MSMEs, entrepreneurship remains both an opportunity and a challenge. The Philippine Statistics Authority (2023) reported that Bicol Region has over 45,000 MSMEs, majority of which are micro-enterprises operating in rural municipalities such as Tabaco City, Tiwi, and Malilipot in Albay. These enterprises face persistent challenges including limited access to capital, low financial literacy, weak marketing capability, and vulnerability to natural disasters such as Mayon Volcano eruptions and typhoons. HEIs in the region, particularly Local Universities and Colleges, have responded through entrepreneurship extension programs covering business planning, bookkeeping, product development, and digital marketing. However, preliminary observations reveal that many extension initiatives are short-term, lack systematic monitoring, and are not evaluated for their long-term impact on MSME income, employment generation, and market expansion. This localized reality necessitates evidence-based assessment to ensure that HEI extension programs are not merely compliance-driven activities but genuine catalysts for local economic resilience.

The interplay between entrepreneurship education and MSME development has been theoretically explained by Human Capital Theory which posits that investment in education and training increases individual productivity and economic returns (Becker, 1964), and Experiential Learning Theory which emphasizes learning through concrete experience and active experimentation, principles embedded in extension pedagogy (Kolb, 1984). While international literature affirms the positive correlation between entrepreneurship training and business performance, Philippine studies remain limited and often focus on student entrepreneurship rather than community-based MSME beneficiaries of HEI extension programs. Moreover, existing local studies in Bicol predominantly describe extension activities without measuring their impact on business sustainability indicators such as survival rate, profitability growth, and employment generation. This gap limits the ability of CHED, DTI, and LGUs to craft sustainable HEI-MSME linkage models grounded on local realities.

Given this context, this study aims to assess the impact of HEIs' entrepreneurship extension programs on MSME development and local economic sustainability in Bicol Region, Philippines. Specifically, it seeks to determine the profile and effectiveness of extension programs, measure the extent of MSME development, analyze the relationship between program effectiveness and development, identify implementation challenges, and propose an enhanced sustainable extension model. The findings of this study are expected to benefit MSME entrepreneurs through improved extension services, HEIs through evidence-based program enhancement, policymakers such as CHED and DTI through data-driven policy formulation, and future researchers through a validated framework for assessing extension impact on local economic sustainability.

2 METHODOLOGY

This study employed a mixed-method research design, specifically a sequential explanatory design combining quantitative descriptive-correlational and qualitative approaches (Creswell & Creswell, 2023). The quantitative phase determined the effectiveness of HEI entrepreneurship extension programs and extent of MSME development using a 5-point Likert scale survey. The qualitative phase explored challenges and insights through focus group discussion (FGD) and key informant interviews (KII) with MSME beneficiaries and HEI extension coordinators. The descriptive-correlational method was appropriate to measure levels of effectiveness and development and to test significant relationship between variables (Bougie & Sekaran, 2020). The qualitative data supplemented quantitative findings to propose an enhanced sustainable model.

3 RESULTS AND DISCUSSION

This section presented the results and discussion of the data gathered on the impact of Higher Education Institutions' entrepreneurship extension programs on micro, small, and medium enterprise development and local economic sustainability in Bicol Region, Philippines. Data were presented according to the sequence of the research questions.

3.1 Profile of HEI Entrepreneurship Extension Programs

In terms of type of program, results showed that marketing and branding was the most availed at 68%, followed by financial literacy and bookkeeping at 62%, and digital marketing at 55%. This indicated that micro, small, and medium enterprises prioritized market-related skills to increase sales of local products such as pili and abaca. In terms of duration, 56% of programs lasted for three to five days, which was perceived as sufficient for skills acquisition. The average number of beneficiaries per program ranged from 30 to 50, while resources utilized included HEI faculty extensionists, training modules, and local government unit counterpart funds. This affirmed the Triple Helix collaboration among academe, industry, and government in delivering extension services.

3.2 Profile of MSME Respondents

Results revealed that majority of respondents were female at 66%, aged 36 to 45 years old at 42%, and at college level at 38%. In terms of type of enterprise, 72% were engaged in food processing, particularly pili products, while others were in handicrafts and retail. In terms of years in operation, 48% operated for two to five years, classified as micro-enterprises with one to three employees at 68%. The profile indicated that extension programs in Bicol benefited women-led micro-enterprises in their early growth stage, which were vulnerable yet critical to local economic sustainability.

3.3 Level of Effectiveness of HEI Entrepreneurship Extension Programs

Results showed that marketing and innovation capability obtained the highest mean of 4.31 described as Very Effective, followed by entrepreneurial competencies at 4.26, financial literacy at 4.25, and business management skills at 4.23, all described as Very Effective, with a grand mean of 4.28. This meant that HEI programs significantly improved product packaging, social media promotion, and costing, which supported Human Capital Theory that education enhances productivity. The focus group discussion confirmed that beneficiaries applied social media marketing immediately after training, which resulted in increased online inquiries and customer engagement.

3.4 Extent of MSME Development After Availing the Extension Program

Findings indicated that business sustainability obtained the highest mean of 4.15 described as High Extent, followed by product innovation and market expansion at 4.08, income and profitability growth at 4.02, and employment generation at 3.95, all described as High Extent, with an overall mean of 4.05. This indicated that after availing extension programs, enterprises sustained operations despite pandemic challenges, introduced new product variants, and increased income by 10% to 20%. However, employment generation was the lowest, as micro-enterprises tended to retain family labor rather than hire additional employees due to limited capital.

3.5 Significant Relationship Between Effectiveness of HEI Entrepreneurship Extension Programs and MSME Development

The Pearson r correlation results yielded $r=0.78$ with $p=0.000$, significant at 0.05 level. Therefore, the null hypothesis was rejected. There was a high positive significant relationship between effectiveness of extension programs and MSME development. This implied that the more effective the extension programs, the higher the development of enterprises. This validated the Experiential Learning Theory where hands-on training translated to business performance and long-term enterprise growth.

3.6 Challenges Encountered by MSMEs and HEIs in Implementing Extension Programs

Results revealed that top challenges encountered were lack of capital to apply learnings at 65.5%, lack of follow-up and monitoring from HEI at 50.5%, and lack of market linkage at 42%. Key informant interviews with extension coordinators revealed limited extension budget, heavy teaching load, and lack of transport to monitor remote barangays in Tiwi and Malilipot. This indicated that training alone was insufficient without capital and continuous mentoring to ensure application of acquired competencies.

3.7 Enhanced Sustainable HEI-MSME Extension Model Based on Findings

Based on findings, the Enhanced Sustainable HEI-MSME Extension Model was developed. The model addressed gaps on capital and monitoring through five phases: needs assessment, capacity building, capital and market linkage, continuous mentoring, and sustainability and impact assessment. The model emphasized convergence of HEI as knowledge provider, DTI as enabler for financing, and LGU as facilitator for market linkage, which created a feedback loop for local economic sustainability aligned with Sustainable Development Goal 8 on decent work and economic growth. The results confirmed that HEI extension programs were effective mechanisms for MSME development, but sustainability required institutionalized mentoring and financial linkage.

4 CONCLUSION

The study concluded that HEI entrepreneurship extension programs in Bicol were very effective and significantly contributed to MSME development and local economic sustainability. The programs, which focused on marketing and financial literacy, benefited mostly women-led micro-enterprises and resulted in high business sustainability and product innovation. A high positive significant relationship was found between program effectiveness and MSME development. However, lack of capital, limited follow-up, and weak market linkage hindered full impact. Thus, the Enhanced Sustainable HEI-MSME Extension Model was proposed to ensure continuous mentoring, capital and market linkage, and inter-agency convergence for long-term sustainability.

STATEMENTS ON COMPLIANCE WITH ETHICAL STANDARDS

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Disclosure of conflict of interest

The author declares that there is no conflict of interest to disclose.

Statement of ethical approval

The research was conducted in accordance with the ethical standards of the institution and the research committee.

Statement of informed consent

Informed consent was obtained from all participants, and their confidentiality was maintained throughout the study.

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