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Financial Performance and Socio-Economic Contributions of Income-Generating Projects of State Universities and Colleges

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Income-generating projects have been introduced, played a crucial role in education, and improved public universities' financial performance. The full realization of their potential was impossible due to several bottlenecks. This research employed the descriptive design using a survey questionnaire and secondary data using total population sampling to assess the financial performance of income-generating projects of SUCs based on their profitability, liquidity, and solvency.

The results revealed that the financial performance of Income-Generating Projects (IGPs) among State Universities and Colleges (SUCs) is satisfactory. Based on the results, although the profitability ratios yielded positive revenue figures, it needs to be more consistent, particularly in maintaining its profit. Nevertheless, the positive results indicate that these SUCs have an excellent financial position regarding liquidity and solvency. These IGPs play a pivotal role in diversifying revenue streams for SUCs in accumulating additional income. By generating income through innovative initiatives, these institutions can reduce their reliance on traditional funding sources, creating a more sustainable financial foundation. Thus, the socio-economic contributions of IGPs depend on the financial performance of the IGPs.
Ultimately, the findings strongly suggested improving the IGP's financial performance. Therefore, crafting an action plan for IGPs to enhance their financial performance further is sought.

Keywords: Financial Performance, Socio-Economic, Contributions, Income-Generating Projects, State Universities and Colleges, Philippines

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Background of the Study

State Colleges and Universities (SUCs) worldwide face tremendous challenges that test their resilience, stability, and relevance to meet their mandated functions. Among these challenges is low or insufficient government funding, which is a detrimental problem that universities cope with by generating additional funds and introducing income-generating projects (IGPs) to help mitigate and supplement the budget allocation (Muange, 2017) and to "bridge the gap between budgetary allocations and expenditures" (Besing & Saan, 2023, p. 14).

In countries such as the US, income-generating projects have played a key role in education. IGPs have improved public universities' financial performance, for these can be profitable ventures to raise extra funds for financing educational programs (Nyamwega, 2016). Many universities have determined that IGPs can provide funds for the operation.

In Africa, the potentials for income generation exist but need to be more adequately utilized due to several bottlenecks (Tsuma & Mugambi, 2014). Similarly, income generation has gained popularity in Malaysian public higher education institutions (HEIs). Insufficient funding due to various factors has compelled HEIs to seek additional income to support their operating expenses. Thus, the generated revenue is vital to the institution's development and sustainability (Ahmad et al., 2015).

Income generation projects are gaining ground globally. Cognizant of the importance of funding support, the Philippine government, through the Commission on Higher Education (CHED), legislated Republic Act (RA) 8292, otherwise known as the "Higher Education Modernization Act of 1997," CHED Memorandum Order No. 20, series of 2011, and "Public Higher Education Reform Framework" granting state universities and colleges (SUCs) the right to corporatize, manage their incomes (Manasan & Revilla, 2015), and use their income at their discretion (Adora & Ultra, 2021).

Since implementing these legislations, the effectiveness of IGPs in the country has been recognized. To cite, Bicol University (BU) considers IGPs an effective intervention program to generate financial resources and augment recurrent budgetary requirements for performing the institutional functions of instruction, research, and extension (Payonga & Cabredo, 2015). In Negros Occidental, the financial report of the operation of IGPs yielded a positive figure, illustrating their effectiveness and efficiency (Berbano, 2015). Moreover, Apondi et al.'s (2014) study has shown a strong relationship between IGPs and human resource performance and the physical development of public universities. IGPs can significantly impact a university's human resource and physical development performance.

Furthermore, the many years of operation of IGPs in an SUC has dramatically created employment and improved its income-generating capacity. Consequently, the IGPs have provided more income to the personnel through more significant incentives, thereby improving their economic conditions. Indeed, the additional revenue could ease a SUC's burden for its multifarious expenditures to carry out its programs or functions. The income generated is of great importance to augment the meager resources of the SUC; thus, encouraging people to venture into IGPs will mean bigger pay for the workers in terms of additional income (Miranda et al., 2016; Adora & Ultra, 2021).

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However, despite these contributions, there is a dearth of studies on the IGPs of SUCs, particularly in Negros Occidental. Recommendations for further research include IGPs' financial profitability and economic and social contributions to institutions (Miranda et al., 2016), incurred net losses, lack of significant earnings, hampered monitoring and analysis of individual IGP operations (Manasan & Rivera, 2015), and evaluation of college-wide IGPs operation as the basis for profitability and institutional profitability (Berbano, 2015). These highlight the literature gaps that must be addressed to maximize the implementation of IGPs by examining the financial performance of the IGPs. Accordingly, this study assessed the financial performance of the IGPs and their contributions to the selected SUCs in Negros Occidental province. The results were used to craft the proposed comprehensive IGP action plan purposely designed for SUCs.

Statement of the Problem

This study assessed the financial performance of income-generating projects (IGPs) of State Universities and Colleges (SUCs) in Negros Occidental as evaluated by the persons involved in the IGPs. Further, it determined the challenges encountered in implementing IGPs.

Specifically, the study answered the following questions:

1. What are the income-generating projects of state universities and colleges according to categories?
2. What is the financial performance of income-generating projects in terms of profitability, liquidity, and solvency for the period 2016-2018?
3. What is the financial projection of income-generating projects for the period of five years from 2021 to 2025?

Theoretical Framework

This paper theorized that the good financial performance of income-generating projects in state universities and colleges could contribute to the socio-economic development of the educational institutions and the members of the community. The study assumed that additional revenue from IGPs is likely to ease the SUCs' burden for its multifarious expenditures to carry out its programs or functions. This assumption is based on the belief that IGPs are believed to create employment opportunities and improve the income-generating capacity of SUCs. As a result, they enable SUCs to grant significant incentives that subsequently increase the personnel's income and improve their economic conditions.

This study is anchored on the Resource Dependency Theory (RDT) of Pfeiffer and Salancik (1978) and the Stakeholder Theory of R. Edward Freeman (1984).

Firstly, the Resource Dependency Theory (1978) is founded on the open system theory principles. It advocates that organizations depend on external resources to support their operations and aspirations because most are not self-sufficient despite their internal resources. It must be open to surrounding organizations by engaging in transactions with them to acquire, generate, and access more resources. As they become dependent on the power and resources of other organizations, they face greater risks of uncertainty and bankruptcy. Thus, they must develop strategies to minimize or eliminate subsistence for survival. In relation to RDT's principle, an organization or business firm must transact with other actors and organizations in its environment to acquire resources. In this case, educational institutions can minimize reliance on the government by engaging in many other

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external sources, such as income-generating projects, to provide additional revenue and contribute to these academic institutions' socio-economic development. Organizations can develop strategies and internal structures to avoid dependencies and enhance their bargaining position in resource-related transactions. Such plans include taking political action, increasing the organization's production scale, diversifying, and developing links with other organizations. SUCs could undertake initiatives that would help raise their revenues due to the yearly reduction in government subsidies. Instead of over-relying on the government, universities should innovate by initiating activities that would be profitable.

Secondly, the Stakeholder Theory (1984) provides a perspective on capitalism that emphasizes the connections between a company's stakeholders, including its clients, vendors, workers, investors, communities, and other stakeholders. It emphasizes that a company should provide value for all parties involved, referring to the stakeholders, not just shareholders. Further, the Stakeholder Theory of organizational management and business ethics addresses morals and values in managing an organization. As Freeman initially detailed in the book *Strategic Management: A Stakeholder Approach*, this theory identifies and models the groups of stakeholders of an organization. It also outlines and suggests ways management might consider those groups' interests, addressing the principle of who or what counts.

In the context of this study, these two theories consider the socio-economic contributions of the revenues generated from several income-generating projects of SUCs. These projects help SUCs diversify their revenue sources, reduce their reliance on external sources (government), enhance their negotiating power, manage uncertainty, foster sustainability, and reduce external constraints. These contributions may be in the form of programs and projects to augment state institutions' significant functions on capital outlay, maintenance, other operating expenses, and incentives to students, faculty, staff, and other school officials. Thus, the study shows Income Generating Projects (IGPs) contributions to public universities' human resources and physical development as means of gaining or increasing income for SUCs and as a livelihood in organizations and community development areas. It also gives everyone in the organization higher income through more significant incentives, thereby boosting economic conditions of different stakeholders.

Conceptual Framework

As mandated by RA 8292 and Circular Memorandum Order No. 20, series 2011, SUCs engage in income-generating business activities to contribute to the socio-economic development of educational institutions and community members. Assessing their financial performance to gauge their contributions and gain foresight into their sustainability is essential. Thus, the conceptual framework shows that this study assessed the financial performance of the income-generating projects of State Universities and Colleges (SUCs) in Negros Occidental.

In such context, this study intended to evaluate the financial performance of IGPs in terms of profitability, liquidity, and solvency from the period 2016 to 2018 based on the income statement of the SUCs. Consequently, the data derived from the preceding analyses were used as the basis for the financial projection of IGPs in the following five years, 2021 to 2025. Finally, this study identified the different challenges encountered by the SUCS in implementing income-generating projects.

The study's findings were used to form the basis of an action plan to maximize the IGPs implementation among SUCs. Furthermore, this shall be provided to the participating SUCs to improve their IGPs operation, specifically to boost the financial performance and

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socio-economic contributions as well. The Figure 1 illustrates the conceptual model that summarizes the flow of this study.

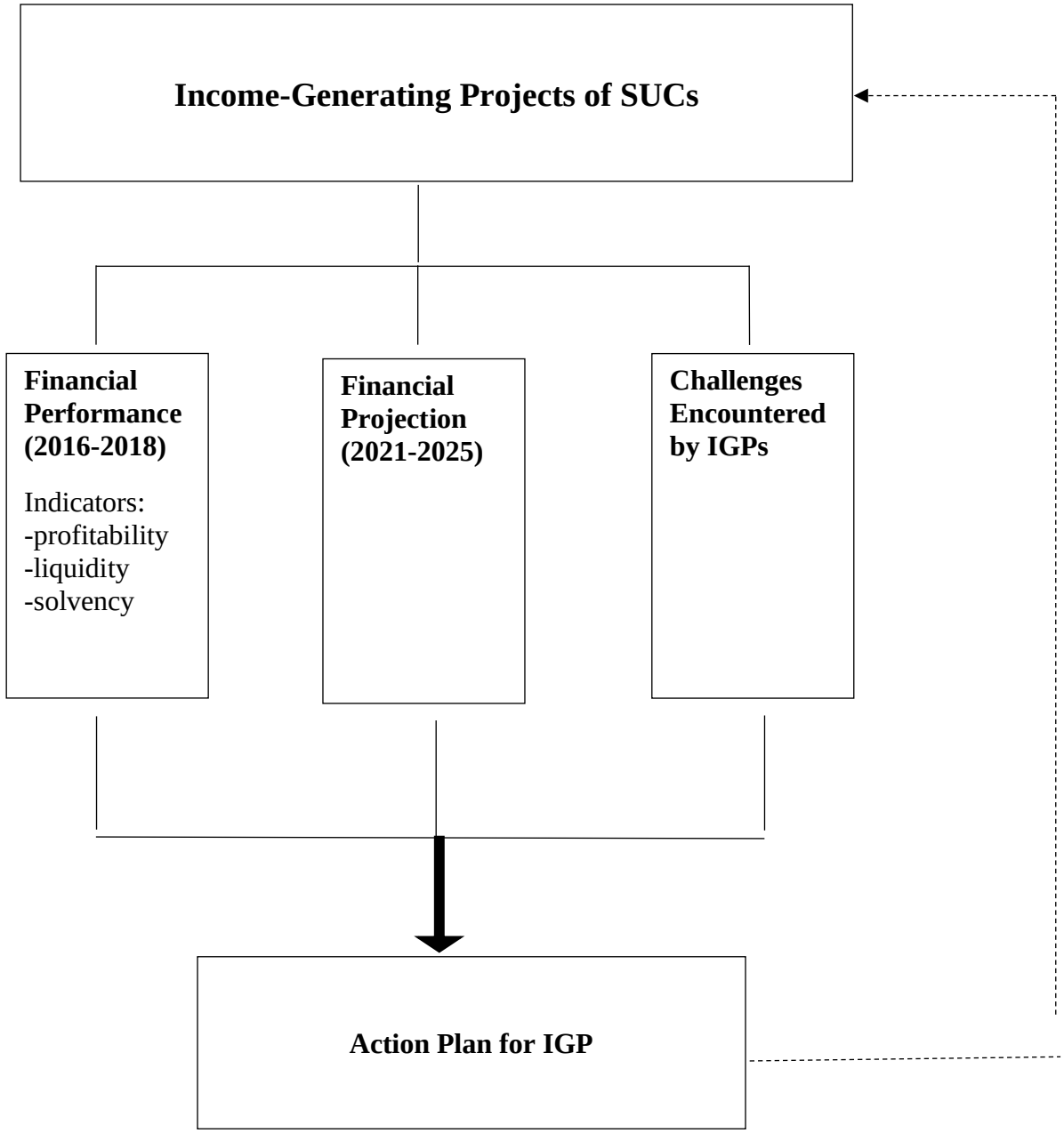

Figure 1. Conceptual Model

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Methodology

Research design. The present study used a descriptive research design utilizing a survey questionnaire and secondary data (Siedlecki, 2020). The descriptive research design is considered appropriate in this study because it reports, describes, and assesses the income-generating projects of SUCs, their financial performance based on their profitability, liquidity, and solvency, their financial projection for 2021-2025, and the challenges they faced in the implementation of IGPs.

Respondents. The respondents were 42 designees, faculty, and staff involved in the income-generating projects of the three SUCs in Negros Occidental. The study utilized total population sampling or total enumeration. Table 1 presents the distribution of respondents.

RESULTS AND DISCUSSION

Income-Generating Projects by Categories

Table 2 shows that the Income-Generating Projects (IGPs) of the three SUCs in Negros Occidental from 2016-2018 belonged to the following categories: food production projects, manufacturing projects, services projects, and income-generating assets.

For food production projects, the two SUCs, particularly SUC 1 and SUC 2, had similar fish production projects. SUC 1 had Bangus, and SUC 2 had Grouper, Bangus, and Hito fish projects. Meanwhile, SUC 3 had food production projects on crops, livestock, and poultry, which are inherent to their mandate as an agricultural university. For manufacturing projects, SUC 1 offered auto repair and maintenance, metal craft electricity and electronics, refrigeration and air-conditioning, and information and communication technology. On the other hand, SUC 3 had woodcraft and foods trade. Unfortunately, SUC 2 had no manufacturing projects.

The three SUCs had the following common projects on services: canteen/catering/cafeteria/meal station; hometel/dormitory/guest house; printing facility/binding; and photocopying. Likewise, other service projects like automatic vendo machines; modules/books/instructional guide production; business centers/techno bazaars; bookstores; training centers; and recreational centers are available.

On income-generating assets, the three SUCs showcased common projects on the following: gym/activity center; field/court; commercial space/kiosk/arcade/ stalls; function rooms/pavilion/classroom; bus/vehicles; and sale of a newspaper, firewood, fruits, among others, beds & foam, and gate vehicle pass/locker. Other income-generating assets included the use or rent of swimming pools, farm lots, and cultural and sports facilities.

The findings revealed that the nature and categories of IGPs of the three SUCs depend on their mandate, thrust, location, and resources. SUC 1 is mandated to provide technical courses; thus, they offer manufacturing projects. Although SUC 2 had substantial aqua resources, it also engaged in various fishery projects under IGPs food production projects. Similarly, SUC 3, an agricultural college, offered IGPs involving crops and other agricultural projects to utilize its vast land resources. Further, all SUCs have land grants; their IGPs typically

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involve agri-based production such as piggery, poultry, fishery, seed production, fruit farms, rice farms, food processing, and others. Moreover, non-agricultural-based IGPs are available, such as rental of facilities, operation of hostels, cafeterias, catering services, review centers, printing shops, internet shops, souvenir shops, photocopying, and provision of training and seminars.

The results concur with the study of Manasan and Revilla (2015), stating that Income-Generating Projects of SUCs were dependent on their land area, location, mandate, and thrusts. Further, Urquia (2015) identified IGP categories parallel to those in Negros Occidental SUCs; as cited, Surigao del Sur State University has three types of IGPs - food production, manufacturing, and services. The said SUC started its income-generating projects using some of its resources and facilities, such as the training center, conference room, canteen, and computer center. It expanded its business by making bluebooks, making student uniforms, merchandising, crop production, fishpond culture, and even livelihood assistance with minimal interest to the faculty and employees. Its other campuses ventured into services, production, and short-term courses, eventually increasing their school income.

Table 2. Income-Generating Projects by Categories

Categories	SUC 1	SUC 2	SUC 3
Food Production Projects	Fish Projects (Bangus)	Fishery Projects (Grouper, Bangus, Hito)	Crop Projects Livestock Projects Poultry Projects
Manufacturing Projects	Auto Repair & Maintenance Metal Craft Electricity & Electronics Refrigeration & Air-conditioning Information & Communication Technology	N/A	Wood Craft Foods Trade
Services Projects	Canteen/Catering/ Cafeteria/Meal Station Hometel/Dormitory/ Guest House Automatic Vendo Machine Printing Facility/Binding Photocopying Modules/Books/Instructional Guide Productions Business Centers/Techno Bazars	Canteen/ Catering/ Cafeteria/ Meal Station Printing Facility/Binding Photocopying Bookstore	Canteen/Catering/ Cafeteria/Meal Station Hometel/Dormitory/Guest House Training Center Photocopying Recreational Center
Income Generating Assets	Gym/Activity Center Field/Court Tables/Chairs Etc. Commercial Space/Kiosk/ Arcade/ Stalls Function Rooms/Pavilion/ Classroom	Gym/Activity Center Commercial Space/ Kiosk/Arcade/ Stalls	Gym/Activity Center Swimming Pool Field/Court Tables/Chairs Etc. Cultural and Sports Facilities Farm Lots

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	Bus/Vehicles Sale of Newspaper, Firewood, Fruits, Etc. Beds and Foam Gate Vehicle Pass/Locker	Commercial Space/ Kiosk/Arcade/ Stalls Function Rooms/Pavilion/ Classroom Bus/Vehicles Sale of Newspaper, Firewood, Fruits, Etc. Beds and Foam Gate Vehicle Pass/Locker

Financial Performance of IGPs in Terms of Profitability

Table 3 shows that the three SUCs were moderately gaining income based on results indicating positive figures. Using the data derived from audited financial statements of the three SUCs in Negros Occidental, the researcher assessed the financial performance of the income-generating projects in terms of profitability based on the following financial ratios: return on assets (ROA), return on equity (ROE), and return on sales (ROS) for 2016-2018.

The analysis of the data using the profitability ratios on profitability in terms of return on assets (ROA) of SUC 1 for the period 2016 -2018 disclosed a decline over the past three years at 87.52% in 2016, 56.95% in 2017, and 35.86% 2018. This decline entailed that the asset was not efficiently utilized to generate income. These findings might likewise mean that the incremental investment made on assets, which doubled and even tripled compared to 2016, did not contribute to the income-generating activities of the University. Also noted is the declining trend of ROE, from a high of 88.83% in 2016 to 57.74% in 2017, finally settling to a low of 36.22% in 2018. This decline further vouched for the ROA's downward trend, and while net profit has remained almost constant, only the additional acquisition of assets resulted in increasing equity; that is, a basic accounting equation where an asset is equal to liabilities and equity. On return on sales (ROS), an increasing trend was noted from 23.36% in 2016 to 29.35% in 2017 and 31.16% in 2018. In terms of profits, these percentages mean that for every peso sale, ₱0.23, ₱0.29, and ₱0.31 profits were earned, respectively. Such an increase shows an increasing profit yearly from 2016 to 2018 based on sales. This rising return indicates an improvement in the operating efficiency and control of expenses of SUC 1.

On the other hand, SUC 2 return on assets (ROA) increased from 9.19% to 18.74% but suddenly decreased to 0.70% in the past three years. In other words, every peso invested in assets produced a ₱0.09, ₱0.19, and ₱0.01 net income from 2016 to 2018, respectively. The total asset had a minimal increase for the past three years; thus, the ROA trend proves the decline of asset utilization for IGP activities and the material occurrence of expenses in 2018. Similarly, an increase in return on equity (ROE) from 10.46% to 19.50% and a decrease to 0.73% was noted. In other words, the IGPs earnings for every peso capital invested in the projects were ₱0.10, ₱0.19, and ₱0.01, from 2016 to 2018, respectively. The sudden decrease in ROE shows the inability or failure to invest in projects with high and growing returns on equity and the inability to control operating expenses. On return on sales (ROS), there was an increase from 16.18% to 47.04% and a sudden decrease to 1.69%. These figures mean that for every peso sale, ₱0.16, ₱0.47, and ₱0.02 profits were earned, respectively. The decreasing return indicates a strong indicator of impending financial distress or ballooning expenses like repairs. The figure only implies that IGP ventures were not making income and might be incurring losses in the long run.

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Lastly, SUC 3 return on assets (ROA) increased from 13.46% to 52.38% and decreased to 20.17%. In other words, every peso invested in assets produced ₱0.13, ₱0.52, and ₱0.21 net income from 2016 to 2018, respectively. These data revealed that SUC 3 effectively managed its assets to make relatively positive net income amounts between 2016 to 2017. However, it failed to consistently do so in 2018 based on the continuous additional investment on assets. Likewise, the return on equity (ROE) indicated an increase from 13.95% to 53.68% but decreased to 20.61%. These returns mean that the IGPs earnings for every peso capital invested in the projects were ₱0.14, ₱0.54, and ₱0.21, from 2016 to 2018, respectively. Meanwhile, the return on sales (ROS) of SUC 3 increased from 11.80% in 2016 to 42.79% in 2017 and eventually decreased to 24.91% in 2018. In simple terms, every peso sale earned profits of ₱0.12, ₱0.43, and ₱0.25, respectively. Thus, based on the positive results of ROS, SUC 3 was still gaining profit from the sales.

The analysis of profitability ratios for income-generating projects at state universities and colleges provides valuable insights into projects' financial health and sustainability. Positive ratios indicate financial viability and efficient resource utilization, while negative ratios call for corrective actions or potential project discontinuation. Proper financial analysis can help optimize resource allocation, enhance revenue streams, and support the institution's overall financial health and educational mission. In sum, the assessment of the profitability ratios showed positive figures indicating that the three SUCs were moderately gaining income. These findings show that the three SUCs gained positive figures on their income, specifically in 2016 and 2017, but drastically decreased in 2018, mainly for SUC 2. Further, it is also noted that these SUCs were not consistent with their incomes because of the sudden decrease in their profit, specifically SUC 2, which got only 1% in ROA and ROE and only 2% in ROS. As per the assessment, the sudden decrease in revenues was due to a lack of planning prior to the impending problems in the IGP implementation. With the results of this study, it showed that SUCs IGPs are not maximizing its full profit potentials. The financial implications are IGPs are not generating enough revenue to cover its cost, and it may need to be reevaluated or modified to become profitable; it implies inefficiencies in cost control or a need to increase revenue stream; and inefficiencies in managing the equity and suggest a need for improved financial management. Thus, these three SUCs can take the necessary steps to improve the sales and profit of their IGPs.

In corroboration to the findings, the IGP director of SUC 2 stated that the repair of the dike in 2018 drastically impacted their fish culture projects resulting in a sudden decrease in profit. Thus, the implementation of IGPs remained modest; however, it could not sustain and maintain its income every succeeding year. Another reason for the decreasing profit was that the IGP activities were almost the same each year; there were no diverse and innovative ventures into other project collaborations with other partners. However, based on the positive figures presented above, the fact remains that the IGPs have contributed to the SUC's development and other stakeholders, specifically those involved in IGPs. Therefore, these findings corroborate the theory that good financial performance of income-generating projects of State Universities and Colleges could contribute to the socioeconomic development of the institutions and the members of the educational community. In addition, Mohamed and Muturi (2017) validate income-generating activities as means of gaining or increasing the income of SUCs and a mechanism for livelihood in organizations and community development areas. Conversely, COA Audit Reports of 2012 state that the IGPs of several SUCs have incurred net losses and that some SUCs are not extensive and have no significant earnings. Contrary to the expectations that IGPs would make a significant

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contribution towards making SUCs more self-reliant financially, the participation of IGPs in the total SUCs receipts has remained modest and has dwindled from 2003 to 2012.

Table 3. Financial Performance of IGPs in Terms of Profitability

PROFITABILITY RATIOS	SUC 1	SUC 2	SUC 3
CY 2016			
Net Profit	₱2,386,318.02	₱293,204.79	₱226,105.01
Total Assets	2,726,518.00	3,190,512.37	1,680,204.96
Total Equity	2,686,318.00	2,803,056.97	1,620,361.96
Total Sales	10,213,690.16	1,812,262.55	1,916,326.01
Return on Assets[1]	87.52%	9.19%	13.46%
Return on Equity[2]	88.83%	10.46%	13.95%
Return on Sales[3]	23.36%	16.18%	11.80%
CY 2017			
Net Profit	3,670,541.70	678,826.15	1,870,209.13
Total Assets	6,445,659.00	3,622,383.92	3,570,448.09
Total Equity	6,356,859.00	3,481,883.12	3,484,161.09
Total Sales	12,504,405.10	1,443,160.72	4,370,244.13
Return on Assets[1]	56.95%	18.74%	52.38%
Return on Equity[2]	57.74%	19.50%	53.68%
Return on Sales[3]	29.35%	47.04%	42.79%
CY 2018			
Net Profit	3,663,757.75	27,580.20	901,199.70
Total Assets	10,217,400.70	3,915,588.71	4,467,141.79
Total Equity	10,116,200.70	3,775,087.91	4,372,262.79
Total Sales	11,756,344.44	1,628,533.50	3,617,773.70
Return on Assets[1]	35.86%	0.70%	20.17%
Return on Equity[2]	36.22%	0.73%	20.61%
Return on Sales[3]	31.16%	1.69%	24.91%

[1] *ROA = Net Profit / Total Assets*
[2] *ROE = Net Profit / Total Equity*
[3] *ROS = Net Profit / Total Sales*

Financial Performance of IGPs in Terms of Liquidity

Table 4 shows that the financial performance of Income-Generating Projects of the three SUCs in Negros Occidental in terms of liquidity for 2016-2018 revealed positive results. Using the data drawn from the financial statements of the three SUCs, the researcher analyzed the SUCs' liquidity based on the financial ratios: Current Ratio (CR) and Working Capital Ratio (WCR).

Based on the findings, the three SUCs had the following current and working capital ratios in three years: SUC 1 had current ratios of 61.11, 69.88, and 98.89, respectively. These numbers mean that SUC 1 could pay its every peso liability 61.11 times, 69.88 times, and 98.89 times, respectively. It had working capital ratios of 60.11, 68.88, and 97.89 indicating the ability to pay obligations 60.11 times, 68.88 times, and 97.89 times after deducting the current liabilities. Meanwhile, SUC 2 had current ratios of 5.17, 17.82, and 20.40, meaning it could pay its every peso liabilities 5.17 times, 17.82 times, and 20.40 times, respectively. Its

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WC ratios were 4.17, 16.82, and 19.40, indicating its ability to pay obligations 4.17 times, 16.82 times, and 19.40 times after deducting the current liabilities. Lastly, SUC 3 had the current ratios of 22.09, 37.88, and 44.62, which mean that it could pay its every peso liability 22.09 times, 37.88 times, and 44.62 times, respectively. Its working capital ratios of 21.09, 36.88, and 43.62 indicate its ability to pay obligations 21.09 times, 36.88 times, and 43.62 times, respectively, after deducting its current liabilities.

The current ratio, the most popular method for calculating liquidity, also determines how institutions can pay off short-term debts. Moreover, the current ratio shows how often the firm can pay its current debt obligations based on its current, most liquid assets. Hence, a higher current ratio is typically better than a lower current ratio for maintaining liquidity. Based on the data presented, the three SUCs had more current assets than their current liability, resulting in a very efficient current ratio. This current ratio implied an excellent financial position for these SUCs because they could meet their short-term debt obligations. Another measure of both a company's operational efficiency and its short-term financial health is the working capital. It is more reliable than almost any other financial ratio or balance sheet calculation because it tells what would remain if a company took all its short-term resources and used them to pay off all short-term liabilities. In this study, the analysis of the working capital of the three SUCs revealed positive results, indicating sufficient cash flow to satisfy the short-term debt and operating expenses and, thus, the ability to pay obligations. The higher number of times it could pay its every peso liability after deducting the current liabilities and the ability to expand its operation are reasonable implications that the SUCs could pay their short-term debt. Thus, a representation of sufficient cash flow could satisfy the short-term debt and operating expenses.

The overall assessment of the liquidity ratios of the three SUCs implies an excellent financial position, as indicated in the positive results presented. Therefore, these SUCs had no problem settling their short-term obligations since they could pay their current dues. Moreover, SUCs can mitigate the risk of defaulting on short-term obligations, provide more flexibility in managing day-to-day expenses and investing in new opportunities without the immediate need to raise funds or rely on external financing, enhance investor and stakeholder confidence potentially attracting more investment or support, influence strategic decisions regarding expansion, diversification, or other initiatives. Ultimately, the financial implications of the positive liquidity ratios for income-generating projects of SUCs revolve around their ability to ensure financial sustainability, manage risks, and make informed decisions to support their ongoing operations and growth.

About the positive results of the liquidity ratios of the three SUCs, the study by Muange (2017) stated that IGPs in public universities should maintain adequate liquidity levels to meet the current needs and due dates. Similarly, the current study's findings implied an excellent financial position for these SUCs because of their capacity to pay their current due. Thus, a representation of sufficient cash flow to satisfy their short-term debt and operating expenses. Furthermore, Nuhu (2014) emphasized that liquidity is the ability of a business to meet its financial obligations as they fall due, or liquidity is a company's ability to pay bills when they are due and meet unexpected cash needs. Thus, the firm can meet or pay its current or short-term maturing obligations (Urquia, 2015). Indeed, liquidity affects a company’s financial performance positively and significantly (Awino, 2015).

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Table 4. Financial Performance of IGPs in Terms of Liquidity

LIQUIDITY RATIOS	SUC 1	SUC 2	SUC 3
CY 2016			
Current Assets	₱2,456,518.00	₱2,002,057.65	₱1,322,215.96
Current Liabilities	40,200.00	387,455.40	59,843.00
Working Capital[1]	2,416,318.00	1,614,602.25	1,262,372.96
Current Ratio[2]	61.11: 1	5.17: 1	22.09: 1
Working Capital Ratio[3]	60.11: 1	4.17: 1	21.09: 1
CY 2017			
Current Assets	6,205,659.70	2,503,349.93	3,268,870.09
Current Liabilities	88,800.00	140,500.80	86,287.00
Working Capital[1]	6,116,859.70	2,362,849.13	3,182,583.09
Current Ratio[2]	69.88: 1	17.82: 1	37.88: 1
Working Capital Ratio[3]	68.88: 1	16.82: 1	36.88: 1
CY 2018			
Current Assets	10,007,400.70	2,865,975.45	4,233,336.79
Current Liabilities	101,200.00	140,500.80	94,879.00
Working Capital[1]	9,906,200.70	2,725,474.65	4,138,457.79
Current Ratio[2]	98.89: 1	20.40: 1	44.62: 1
Working Capital Ratio[3]	97.89: 1	19.40: 1	43.62: 1

[1] Current Assets – Current Liabilities.
[2] CR = Current Assets / Current Liabilities. Ability to pay off current liabilities.
[3] WCR = Working Capital / Current Liabilities

Financial Performance of IGPs in Terms of Solvency

Table 5 also shows positive results about the financial performance of the three SUCs in Negros Occidental. Based on the data provided by the financial statements of the three SUCs, the financial performance of the IGPs in terms of solvency based on the financial ratios: debt to assets, and debt to equity for 2016-2018 was stable.

Specifically, results show that the three SUCs in Negros Occidental have the following solvency ratios in three years: Regarding the debt-to-assets of SUC 1, only 1.47%, 1.38%, and 0.99% of its assets were financed by debt, either by creditors, suppliers, or a loan. Moreover, 98.53%, 98.62%, and 99.01% of its assets were self-funded for the past three years. This declining debt-to-asset ratio indicates a lower degree of financial risk since SUC 1 does not rely too much on financing and has a minimal to nil interest risk. Regarding debt-to-equity, the values were 1.50%, 1.40%, and 1.00%, respectively, indicating the declining risk of exposure to debt, which further supports the declining debt-to-assets ratio and a breather to the SUC as it has a majority or even almost full claim in the venture. Meanwhile, for SUC 2 debt to assets, 12.14%, 3.88%, and 3.59% were financed by debt, while 87.86%, 96.12%, and 96.41% of its assets were self-financed in the past three years. Its equity debt was 13.82%, 4.04%, and 3.72%, indicating that SUC 2 had a ₱0.13 debt in 2016 and ₱0.04 debt for every ₱1.00 equity for the two succeeding years. This declining trend shows no dependency on financing. Lastly, an analysis of the SUC 3 debt to assets showed that only 3.56%, 2.42%, and

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2.12% were financed by debt for the past three years. These debts mean that 96.44%, 97.58%, and 97.88% were self-financed, respectively. In addition, its debt to equity of 3.69%, 2.48%, and 2.17% means that SUC 3 had ₱0.04 debt in 2016 and ₱0.02 debt for every ₱1.00 equity for the two succeeding years. The equity debt is a strong indicator that it still had ample buffer to pay off a loan should the SUC decide.

The debt-to-assets ratio measures a company's total debt to its total assets. It measures a company's leverage and indicates how much of the company is funded by debt versus assets and its ability to pay off its debt with its available assets. In relation to the findings of this study, the three SUCs had substantial assets to pay off their debts and relied on only a meager amount from a creditor. The lower debt-to-asset ratio of these SUCs suggested a more robust financial structure.

On the other hand, the debt-to-equity ratio is a financial liquidity ratio that compares a company's total debt to total equity and shows the percentage of company financing from creditors and investors. A higher debt-to-equity ratio indicates that more creditor financing, such as bank loans, is used than investor financing, such as shareholders. Applied to this study, the findings indicated that the three SUCs could meet their debts since the figures showed a lower debt-to-equity ratio, which usually implies a more financially stable business. Further, these SUCs had a shallow risk of defaulting on loans, which can be beneficial if the organization seeks further crediting for remodeling, expanding, growing product inventory, or other expenses the company may need to take care of. Thus, the assessment showed that these SUCs had sound financial health in terms of their capacity to pay off their debts and did not rely on creditors since SUCs have substantial resources subsidized by the state government. In summary, maintaining appropriate solvency levels is essential for ensuring their long-term success and ability to fulfill their financial commitments. Thus, a sound solvency ratio plays a critical role in assessing the financial health and sustainability of income-generating projects of SUCs. The following financial implications of a good solvency ratios: ensures long-term financial stability of the projects, reducing risk of insolvency and bankruptcy, advantage of growth opportunities, ability to meet long-term obligations, ensuring their continued existence and ability to fulfill their missions.

The good result of the solvency ratios of the three SUCs is aligned with the study of Bisogno et al. (2014), which focused on short-term solvency. They stated that the Italian public universities had the ability to generate enough money to pay their debts. This result is in consonance with the findings that SUCs had substantial assets to pay off their debts and had a very low risk of defaulting on loans. According to Kenton (2020), a solvency ratio indicates whether a company's cash flow is sufficient to meet its long-term liabilities and is, thus, a measure of its financial health. This ratio measures the ability of the enterprise to survive over a long period (Urquia, 2015). Moreover, solvency indicates the company's reliance on debt to finance its activities (Undral, 2018). Further, the debt financing decision is among the key financial decisions taken by firms since debt financing affects financial performance (Sabay, 2019). Thus, the solvency ratio is one indicator used in this study to measure the financial performance of IGPs of SUCs.

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Table 5. Financial Performance of IGPs in Terms of Solvency

SOLVENCY RATIOS	SUC 1	SUC 2	SUC 3
CY 2016			
Total Assets	2,726,518.00	3,190,512.37	1,680,204.96
Total Liabilities	40,200.00	387,455.40	59,843.00
Total Equity	2,686,318.00	2,803,056.97	1,620,361.96
Solvency Rate to Assets[1]	1.47%	12.14%	3.56%
Solvency Rate to Equity[2]	1.50%	13.82%	3.69%
CY 2017			
Total Assets	6,445,659.00	3,622,383.92	3,570,448.09
Total Liabilities	88,800.00	140,500.80	86,287.00
Total Equity	6,356,859.00	3,481,883.12	3,484,161.09
Solvency Rate to Assets[1]	1.38%	3.88%	2.42%
Solvency Rate to Equity[2]	1.40%	4.04%	2.48%
CY 2018			
Total Assets	10,217,400.70	3,915,588.71	4,467,141.79
Total Liabilities	101,200.00	140,500.80	94,879.00
Total Equity	10,116,200.70	3,775,087.91	4,372,262.79
Solvency Rate to Assets[1]	0.99%	3.59%	2.12%
Solvency Rate to Equity[2]	1.00%	3.72%	2.17%

1 Total Liabilities / Total Assets. Also Debt-to-Assets. Percentage of assets financed by debt.
2 Total Liabilities / Total Equity. Debt-to-Equity. Indicates the degree of financial leverage.

Financial Projection of IGPs for 2021-2025

As shown in Table 6, the three SUCs have forecasted their IGP income for the next five years (2021-2025):

SUC 1 has P5,500,000 in 2021, P6,000,000 in 2022 with an increase of 15.38%, P6,500,000 in 2023 with an increase of 23.33%, P7,000,000 in 2024 with an increase of 35.14, and P7,500,000 in 2025 with an increase of 42.00%. On the other hand, SUC 2 has P1,000,000 in 2021, P1,100,000 in 2022 with an increase of 14.29%, P1,320,000 in 2023 with an increase of 25.00%, P1,584,000 in 2024 with an increase of 30.00%, and P1,900,800 in 2025 with an increase of 35.38%. Lastly, SUC 3 has P1,000,000 in 2021, P1,500,000 in 2022 with an increase of 10.71%, P2,000,000 in 2023 with an increase of 19.40%, P3,000,000 in 2024 with an increase of 27.50%, and P4,000,000 in 2025 with an increase of 37.25%.

In the case of these SUCs, they have eventually adopted the historical data of past sales to determine their revenue in the next five years. It is noted that SUC 1 had an average of 28% return on sales (ROS), SUC 2 had an average of 22% return on sales (ROS), and SUC 3 had an average of 27% return on sales (ROS). Based on the following table, these SUCs predicted their financial projections based on the nearest average of their return on sales (ROS). However, due to the recent pandemic, the forecasted income projections will eventually be affected and will not even materialize as explicitly expected in 2021 and 2022. The data or figures given by the SUCs under study were explicitly indicated in the instrument accomplished by the IGP director and supported by the projected financial statement.

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According to Dubey (2019), forecasting is a vital mechanism widely used to make financial and management decisions. Financial forecasting is used to make future projections about the business's expenses and revenue and, thus, predict the company's profit potential. In this study, the financial forecasting process involved using historical data on sales, revenue, and influence factors to make future projections. Specifically, the three SUCs used financial projections based on the historical data from their previous sales as an indicator for profit forecasting, which is consonance with Dubey's study.

Additionally, companies manage cash flows effectively to overcome their financial challenges and improve their financial position indicators and ratios; they employ target financial planning and forecasting (Krylov, 2018). Thus, organizations with effective financial management strategies can contain the factors that diminish business failure by adopting proper strategies and financial decisions that drive growth to achieve organizational objectives. Many of these causes of failure can be successfully managed if organizations develop and implement sound management strategies like financial planning and projections (Momanyi, 2018), which SUCs adopt in their IGPs operations.

Table 6. Financial Projections of IGPs for 2021 to 2025

SUCs	Account Name	2021	2022	2023	2024	2025
SUC 1	Revenue	₱13,000,000	₱15,000,000	₱18,500,000	₱25,000,000	₱35,500,000
	Operating Expenses	7,500,000	9,000,000	12,000,000	18,000,000	28,000,000
	Net Profit	5,500,000	6,000,000	6,500,000	7,000,000	7,500,000
	% Increase		15.38%	23.33%	35.14%	42.00%
SUC 2	Revenue	3,500,000	4,000,000	5,000,000	6,500,000	8,800,000
	Operating Expenses	2,500,000	2,900,000	3,680,000	4,916,000	6,899,200
	Net Profit	1,000,000	1,100,000	1.320,000	1,584,000	1,900,800
	% Increase		14.29%	25.00%	30.00%	35.38%
SUC 3	Revenue	5,600,000	6,700,000	8,000,000	10,200,000	14,000,000
	Operating Expenses	4,600,000	5,200,000	6,000,000	7,200,000	10,000,000
	Net Profit	1,000,000	1,500,000	2,000,000	3,000,000	4,000,000
	% Increase		10.71%	19.40%	27.50%	37.25%

Challenges Encountered in Implementing IGPs

Table 7 shows that numerous prevailing challenges were encountered in implementing Income-Generating Projects of SUCs.

Based on the survey, two challenges topped the list. The top challenges the three SUCs' IGPs face were poor internal control and monitoring and the lack of participation among personnel, at 66.7% (f=28). Moreover, the delayed processing of papers for procurement of supplies/inputs for IGPs ranked second-highest (64.3 %; f=27). Unfortunately, the IGPs being

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not fully developed marketing strategies were the third-highest (59.5%; f=25). Furthermore, the following predicaments revealed that IGPs have suffered from inadequate equipment, machinery, transportation, and other facilities (54.8%; f=23); inadequate implementation of the profit-sharing/incentive scheme and limited market for products and services (52.4%; f=22); inadequate operational capital and the lack of collaborative partnership with industries/institutions (50%; f=21). Three challenges tied at 47.6% (f=20) - lack of awareness of the presence of IGPs, inadequate funds for further expansion, and the non-implementation of operating guidelines - were also encountered by IGPs. The rest of the challenges were unsustained involvement with professional membership/partnerships with industries and institutions (45.2%; f=19), lack of internal autonomy due to centralized management systems with 42.9 % (f=18); lack of qualified personnel/technical skills (40.5%; f=17); and lastly, the absence of full support from the top management and the unskilled management/lack of entrepreneurship skills (31%; f=13).

These three (3) SUCs have encountered five (5) major challenges in implementing IGPs: First, the poor internal control and monitoring which can cause to various issues and risks; like financial mismanagement, fraudulent activities, inaccurate financial reporting, operational inefficiencies, missed revenue opportunities and lack of accountability among project personnel and stakeholders; second on the list is the lack of participation among personnel which can lead to a range of negative outcomes such as limited ownership and commitment, resistance to change, inefficient execution and diminished quality of work and deliverables; third, delayed processing of papers for procurement of supplies/inputs which can result to a range of negative consequences like project delays, disruption of operations, and operational inefficiencies; fourth, not fully developed marketing strategies which can lead to a range of difficulties like low awareness, making it challenging for potentials customer affecting revenue generation. By addressing this challenge of not fully developed marketing strategies, it can enhance their project's market visibility, attract customers and maximize the revenue potential of their income-generating initiatives; and fifth is having inadequate equipment, machinery, transportation, and other facilities which can lead to a range of obstacles and limitations such as: reduced operational efficiency, lower quality output, limited production capacity, and missed opportunities. If addressed properly, it can enhance the operational efficiency, productivity, and overall success of IGPs

The income generation options exist but have yet to be exploited. The delayed processing of papers for procurement of supplies/inputs for IGP has resulted in the delay of supplies/inputs needed by IGPs and inadequate equipment, machinery, transportation, and other facilities. Marketing is done by the project manager or production coordinator, while marketing strategies are not fully developed. There is a limited market for products, and the size of some projects is not economical. These imply that real problems hinder the complete realization of the goal of IGPs. From the evaluation, it can be deduced that some institutions have huge pieces of land, but still, they are not performing so well in any specific activity. Thus, by incorporating participatory planning and innovative technologies, faculty will be able to overcome most of the challenges faced in implementing and managing school-based income-generating initiatives.

A review of previous studies revealed similar results indicating that implementing IGPs in SUCs has encountered many challenges. This study shows that the topmost predicament of IGPs implementation in SUCs is poor internal control. This finding is further supported by the study of Manasan and Revilla (2015), which suggested that internal control in IGPs should

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be strengthened to boost its function in providing and augmenting resources to SUCs. As disclosed by Kamwana and Muturi (2014), among the main constraints facing income-generating projects attributed to the existing management structure of public universities was a lack of financial planning, monitoring, evaluation, and control. Moreover, the result of the survey that, among other drawbacks, the lack of awareness of the presence of IGPs, and the lack of full support from the top management have hampered the progress of running the IGPs is similar to Apondi, Okelo, and Oginda's (2014) study. Moreover, parallel to the findings of Blas (2018), the administration does not motivate people to work on their respective projects. Moreover, the continuous occurrence of the identified problems in IGPs operation, if not properly addressed, would inevitably result in the decline of the productivity of the IGPs (Blas, 2018).

Table 7. Challenges Encountered in Implementing IGPs

Challenges	F	%
Poor internal control and monitoring	28	66.7
Lack of participation among personnel	28	66.7
Delayed processing of papers for procurement of supplies/inputs	27	64.3
Not fully developed marketing strategies	25	59.5
Inadequate equipment, machinery, transportation, and other facilities	23	54.8
Inadequate implementation of the profit-sharing/incentive scheme	22	52.4
Limited market for products and services	22	52.4
Inadequate operational capital	21	50.0
Lack of collaborative partnership with industries/institutions	21	50.0
Lack of awareness of the presence of IGPs	20	47.6
Inadequate funds for further expansion	20	47.6
Non-implementation of operating guidelines	20	47.6
Unsustained involvement with professional membership/partnerships with industries and institutions	19	45.2
Lack of internal autonomy due to centralized management systems	18	42.9
Lack of qualified personnel / technical skills	17	40.5
Absence of full support from the top management	13	31.0
Unskilled management/lack of entrepreneurship skills	13	31.0

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Conclusion

From a financial standpoint, these IGPs play a pivotal role in diversifying revenue streams for SUCs. By generating income through innovative initiatives, these institutions can reduce their reliance on traditional funding sources, creating a more sustainable financial foundation. Robust financial performance, as evidenced by prudent management of liquidity and solvency ratios, contributes to the institutions' overall stability, enhancing their capacity to fulfill their educational missions and weather economic fluctuations. In essence, the financial performance and socio-economic contributions of income-generating projects represents a harmonious convergence of academia, entrepreneurship, and societal advancement. As these projects continue to evolve, SUCs have the opportunity to create a lasting impact that resonates not only within their campuses but also across the regions they serve, ultimately shaping the future of educations, innovation, and economic progress.

The financial performance and socio-economic contributions of IGPs undertaken by SUCs holds a significant implication for both the institutions and the broader society. These projects serve as multifaceted endeavors that intersect academia, finance, and community development, impacting various aspects of the educational landscape and the economy at large. Socioeconomic contributions of IGPs depend on the financial performance of the IGPs. Based on the findings, the financial performance of IGPs is satisfactory, specifically in its profitability, and most likely to contribute satisfactorily to the socioeconomic development of the SUCs. Thus, the study concluded that the contributions of IGPs to the socioeconomic development of human resources and the physical development of SUCs are limited and need to be fully maximized to their full potential. These IGPs were expected to provide additional sources of funds to SUCs, but it seems that IGP's potential was not maximized to the fullest. Thus, the evaluation revealed that income generation exists among SUCs but has not been exploited

By effectively managing their resource dependencies through income-generating projects, SUCs can improve their financial performance and increase their resilience and effectiveness as educational institutions. Ultimately, the findings strongly suggested improving the IGP's financial performance through diversifying innovative business ventures and maximizing potential resources for additional funds and contributions to the socioeconomic of SUCs. Therefore, crafting an action plan for IGPs to further improve their financial performance is sought.

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