

Organizational Practices of Income-Generating Projects: Basis for IGP Model Development

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Abstract

This research attempted to develop a proposed model for income-generating projects (IGPs) through their organizational practices to ensure their performance as expected. The study determined the level of performance of the IGPs operated; the status of organizational practices in terms of unit/organization structure, internal control, financial management, strategic planning, human resource management, and the marketing mix; the differences between means when grouped according to IGPs categories; and the predictor variables of IGP performance. The descriptive and causal design was assisted by the validated and reliability-tested researcher-made survey questionnaire. Data gathered from the 320 respondents participated by the IGP employees of the 13 State Universities and Colleges in Central Luzon were statistically interpreted using descriptive analysis, one-way analysis of variance, and multinomial logistic regression. The results show that in terms of individual IGPs, the non-agri-based projects are performing well compared with agri-based projects; however, both of them are not performing excellently. The IGPs were not practicing the organizational practices in their operation at all times but occasionally. The test of difference of the organizational practices between IGPs operated shows that formalization, risk assessment, information & communication system, financial reporting & analysis, vision and mission, business plan/planning, motivation, price, and promotion are statistically significant in operating agri-based IGPs; while all of the organizational practices are statistically significant in operating non-agri-based IGPs. Multinomial logistic regression indicated that there was a combination of organizational practices fit in operating agri-based and non-agri-based IGPs to achieve a low, average, and high performance.

Keywords: *Income-generating projects; performance; organizational practices; SUCs; descriptive and causal design*



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INTRODUCTION

Income-generating projects (IGPs) consist of projects that are a means for gaining or increasing income; they are likewise considered as the source of revenue in organizations. IGP is not only a means of livelihood in an organization but is also a means of livelihood in the development of society (Tsuma & Mugambi, 2014).

On the other hand, IGPs were also undertaken by public organizations such as schools to raise revenue and enhance the project or enhance school finances (Nyamwega, 2016). Likewise, establishing an active IGPs empowered the government higher education institutions, which promoted the institutions' economic resources managed successfully (Miranda et al., 2016).

The study of (Murage & Onyuma, 2015) also states that income-generating activities in Public Universities were created to alleviate financial difficulties in these institutions. The income generated by

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these IGPs is of utmost importance to the development and sustainability of the universities (Ahmad et al., 2015). However, engaging in IGPs also needs to be well-managed to ensure that the operation will continue, as well as, its performance. Hence, to ensure IGPs performance, there should be a growing concern to embrace the idea of organizational practices in all IGPs undertaken. Therefore, the study develops a proposed model for IGPs through their organizational practices to ensure their performance as expected. The study determined the level of performance of the IGPs operated, the status of organizational practices in terms of unit/organization structure, internal control, financial management, strategic planning, human resource management, and the marketing mix, the differences between means when grouped according to IGPs categories; and the predictor variables of IGP performance.

LITERATURE REVIEW

The government could not fully subsidize all the needs of State Universities and Colleges (SUCs), hence the need to do its share to strengthen fiscal capability. The government encourages SUCs to venture into IGPs to generate more income, enhance limited resources, and to somehow augment the declining resources of the government, even before the creation of Republic Act 10931, which is an act providing free tuition and other school fees in SUCs and state-owned tertiary-level institutions that took effect in the school year 2018.

The IGPs of Philippine higher education institutions depend on their land area, location, mandate, and thrusts. According to (Manasan et al., 2015), IGPs in higher education institutions typically involve agricultural-based and non-agricultural-based projects. The revenue from these IGPs is constituted into the revolving fund which is treated as a self-liquidating fund and the collections are being used for the operation of the IGPs, respectively.

On the contrary, (Manasan et al., 2015) averred in their research on the Assessment of Sources and Utilization of Funding of SUCs in the Philippines that the expectations that IGPs will make a significant contribution towards making SUCs more self-reliant financially, the contribution of IGPs in total SUCs receipts have remained modest and dropped in 2003-2012. It is stated that on the average, close to 23% was contributed by income from the income-generating projects and other self-sustaining activities. Moreover, the share of SUCs receipts from their IGPs and other self-sustaining activities was decreasing from 24% in 2003 and 20% in 2012. Even though the IGPs of some SUCs are not extensive and have no significant earnings, the IGPs are still considered to be very important sources of income by many of the SUCs (Manasan et al., 2015).

Furthermore, (Manasan et al., 2015) also noted that mismanagement such as weak financial management and lack of internal control which are evident and hampers the monitoring and analysis of the results of operations of each IGPs which is important in evaluating whether said IGPs are making a positive net contribution to the SUCs' coffers. The same authors likewise found out that in the 2012 COA Audit Reports for SUCs, the IGPs of some SUCs in the Philippines who suffered from mismanagement have incurred net losses.

This was confirmed on the COA Annual Audit Report of the IGPs in Central Luzon in the last five years covering the period 2014-2018, which shows that the common findings in the IGPs operated is the improper implementation of internal control, financial management, strategic planning, and marketing, which are evident. The deficiency of these practices allowed the opportunities for possible errors and irregularities in the operations, raised doubts on the accuracy of the reported results of operations, which further resulted in losses.

There is a compelling argument that creating an entrepreneurial climate where all kinds of entrepreneurs can succeed lays the foundation of the groundwork for SUCs' IGPs. This was supported by [6, 3] stating that IGP operation should be treated in the same manner of an economic enterprise; for profitable management of their available economic tangible and intangible resources within their premises, together with the innovation and creation of new opportunities and ventures within their scope.

It is therefore, the ability of the IGP unit to use its resources and perform excellently where agents act and make decisions in the principal's interest, to generate revenue in excess of its expenditures to have a positive contribution to the SUCs' funds. This study comes up with a framework to test, whether or not, the organizational practices and its combination are factors in driving IGPs performance.

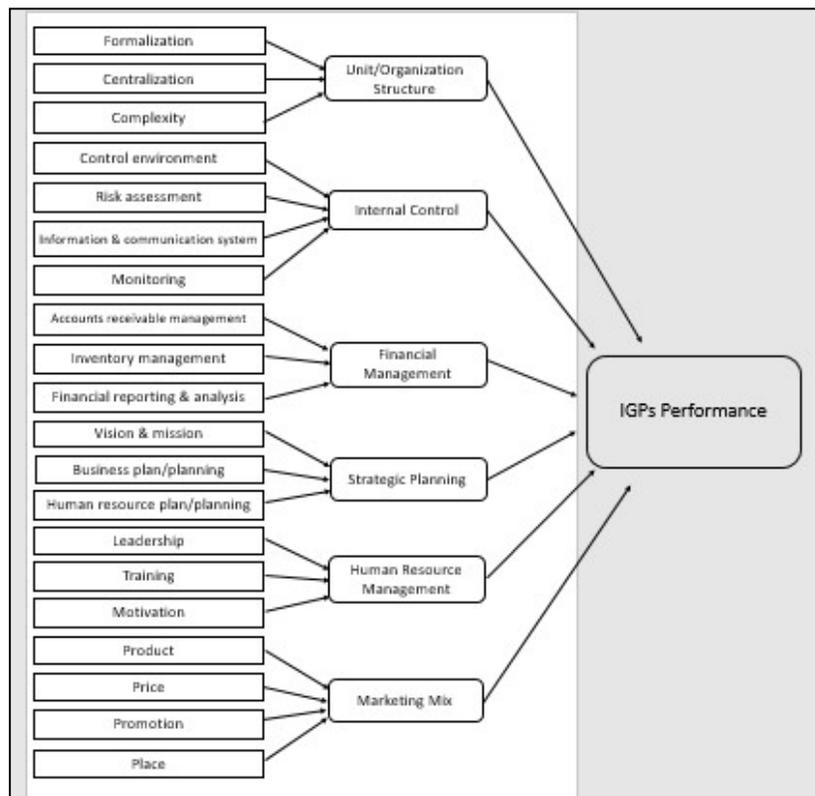


Figure 1. *Conceptual Framework*

It was assumed that the combination of the 20 organizational practices variables are determinants and will have a significant effect on the performance.

RESEARCH METHOD

This study is a descriptive and causal research that determined the effect of the organizational practices on IGPs performance.

The respondents were taken from the total population of the IGP employees operated by the 13 SUCs in Central Luzon containing 320 IGPs employees, composed of IGP director, project manager, project supervisor, and project staff with a response rate of 88.88%.

A survey questionnaire method was conducted in collecting the data using a validated and reliability-tested researcher-made questionnaire with closed-ended questions. Cronbach's α coefficient at 0.939 for agri-based projects and 0.866 for non-agri-based projects. The status of the organizational practices Cronbach's α coefficient are: (1) Unit/Organization Structure – formalization 0.784, centralization 0.867, complexity 0.811. (2) Internal Control – control environment 0.738, risk assessment 0.736, information and communication system 0.872, monitoring 0.776. (3) Financial Management – accounts receivable management 0.908, inventory management 0.726, financial reporting and analysis 0.960. (4) Human Resource Management – leadership 0.867, training 0.972, motivation 0.942. (5) Strategic Planning – vision and mission 0.960, business plan/planning 0.945, human resource plan/planning 0.814. (6) Marketing Mix containing – product 0.801, price 0.803, promotion 0.822, place 0.934.

Descriptive analysis was performed to measure the level of performance of the individual IGPs and the status of their organizational practices, with summated scale of the 5-point Likert was used as base scores. The mean scores of the agri-based were summed to come up with the average mean, the same was done to non-agri-based.

One-way Analysis of Variance, also known as one-way ANOVA was used to test the equality of the population means of the organizational practices, significant at 0.05 level, where: reject the null hypothesis if $p < 0.05$.

Multinomial logistic regression analysis was done to test whether or not status of formalization, centralization, complexity, control environment, risk assessment, information and communication system, monitoring, accounts receivable and inventory management, financial reporting and analysis, vision and mission, business and human resource plan/planning, leadership, training, motivation, product, price, promotion, and place are predictors of IGPs performance. The agri-based IGPs (Wald test $\chi^2 = 174.92$, $p = \text{value } 0.000 < 0.05$) and non-agri-based IGPs (Wald test $\chi^2 = 24177.05$, $p = \text{value } 0.000 < 0.05$) shows that the model containing the full set of organizational practices represents a significant improvement in the fit of the model. Furthermore, agri-based IGPs (McFadden's pseudo- $r^2 = 0.4322$) and non-agri-based IGPs (McFadden's pseudo- $r^2 = 0.5671$) indicates predictive ability in which 43% and 57% of the variability is explained by these variables used in the model.

The response variable, level of performance, was treated as categorical under the assumption that the levels of performance have no natural ordering. After obtaining the frequency of performance, it was categorized and coded as low=1, average=2, and high=3. These variables were used as the dependent variable, while the average means of the organizational practices were used as independent variables. Using Stata, by default, sets average performance as the baseline category and estimates a model for low performance relative to average performance, and a model for high performance relative to average performance.

FINDINGS AND DISCUSSION

Determine the level of performance of the agri-based and non-agri-based income-generating projects operated

Results show that among the individual agri-based projects operated, the following have a satisfactory performance are fruit farms ($\mu = 3.24$), poultry ($\mu = 3.12$), rice farms ($\mu = 3.10$), seed production

($\mu=3.00$), piggery ($\mu=3.03$), food processing ($\mu=2.96$), small ruminants ($\mu=2.73$), and fishery ($\mu=2.60$); while, the agri-based projects with poor performance are large ruminants ($\mu=2.31$), ornamentals ($\mu=2.43$), and vegetables ($\mu=2.49$).

On the contrary, the performances of the individual non-agri-based projects operated with very satisfactory performance includes cafeterias/canteen rentals ($\mu=3.93$), souvenir shops ($\mu=3.92$), hostels/dorms rentals ($\mu=3.90$), AVR/gymnasium rentals ($\mu=3.84$), and processed goods ($\mu=3.41$); while others have satisfactory performance such as internet shops rental ($\mu=3.24$), catering services ($\mu=3.01$), printing shops ($\mu=2.88$), review centers ($\mu=2.82$), and wellness and spa ($\mu=2.72$). The results indicate that the level of performance of the two groups of IGPs were more concentrated on satisfactory performance.

Determine the status of the organizational practices of participating income-generating projects

Results show that in terms of unit/organization structure, the IGPs operation always practiced centralization ($\mu=4.21$) while often practiced complexity ($\mu=4.14$) and formalization ($\mu=4.11$). In terms of internal control, they always practiced control environment ($\mu=4.45$), information & communication system ($\mu=4.44$), risk assessment ($\mu=4.38$), and monitoring ($\mu=4.32$). When it comes to financial management, they likewise always practiced financial reporting and analysis ($\mu=4.48$) and inventory management ($\mu=4.32$), while, often practiced accounts receivable management ($\mu=4.18$). In practicing strategic planning, they likewise always practiced formulating the vision and mission ($\mu=4.54$), business plan/planning ($\mu=4.36$), human resource plan/planning ($\mu=4.34$). In terms of human resource management, they likewise always practiced leadership ($\mu=4.51$) and motivation ($\mu=4.45$), while, often practiced training ($\mu=4.18$). Marketing mix practices, likewise always practiced pricing strategy ($\mu=4.38$), product development ($\mu=4.29$), and place ($\mu=4.27$), while often practiced promotion ($\mu=3.83$).

Determine the differences in the status of organizational practices between the income-generating projects operated

The test values of the agri-based IGPs at a confidence level of 95% show significant difference on the following organizational practices: formalization (p-value=0.018), risk assessment (p-value=0.000), information & communication system (p-value=0.002), financial reporting & analysis (p-value=0.002), vision and mission (p-value=0.000), business plan/planning (p-value=0.003), motivation (p-value=0.009), price (p-value=0.008), and promotion (p-value=0.001); suggesting that agri-based IGPs were not incorporating all the organizational practices in their operation.

On the other hand, the values of organizational practices in non-agri-based IGPs, at a confidence level of 95% show a p-value of 0.000 which indicates that the population means of all the organizational practices are not equal and therefore statistically different, which shows that all the organizational practices were incorporated in the operation of non-agri-based projects across SUCs.

Determining the effect of organizational practices on the performance of income-generating projects

Low performance relative to average performance (agri-based projects)

The predictive ability of the variable in agri-based projects. Negative and significant Predictors information & communication system ($\beta=-1.605$; $p=0.039$), inventory management ($\beta=-1.306$; $p=0.028$), price ($\beta=-1.324$; $p=0.014$), promotion ($\beta=-1.074$; $p=0.000$) collectively can predict performance which

states that these practices are significant predictors of average performance relative to low performance when sometimes practice.

On the other hand, positive and significant predictors complexity ($\beta=1.079$; $p=0.018$), risk assessment ($\beta=2.897$; $p=0.000$), human resource plan/planning ($\beta=0.769$; $p=0.036$), motivation ($\beta=1.432$; $p=0.046$) collectively can predict performance of agri-based projects which shows that these practices are significant predictors of low performance relative to average performance when sometimes practice.

High performance relative to average performance (agri-based projects)

The predictive ability of the variables in agri-based projects. Negative and significant predictors complexity ($\beta=-4.859$; $p=0.0020$), risk assessment ($\beta=-17.149$; $p=0.000$), inventory management ($\beta=-5.214$; $p=0.002$), leadership ($\beta=-20.199$; $p=0.001$), product ($\beta=-4.513$; $p=0.000$), place ($\beta=-27.781$, $p=0.004$) collectively can predict performance which shows that these practices are significant predictors of average performance relative to high performance when always practice.

On the other hand, positive and significant predictors centralization ($\beta= 9.047$; $p=0.006$), information & communication system ($\beta=13.502$; $p=0.000$), monitoring ($\beta=10.410$; $p=0.005$), financial reporting & analysis ($\beta=5.739$; $p=0.022$), training ($\beta=8.892$; $p=0.036$), price ($\beta=29.050$; $p=0.000$), promotion ($\beta=8.296$; $p=0.003$) collectively can predict performance of agri-based projects which shows that these practices are significant predictors of high performance relative to average performance when always practice.

Low performance relative to average performance (non-agri-based projects)

The predictive ability of the variables in non-agri-based projects. Negative and significant predictors formalization ($\beta=-72.480$; $p=0.000$), centralization ($\beta=-83.023$; $p=0.000$), information & communication system ($\beta=-135.344$; $p=0.000$), inventory management ($\beta=-156.737$, $p=0.000$), financial reporting and analysis ($\beta=-14.574$; $p=0.000$), leadership ($\beta=-27.979$; $p=0.000$), training ($\beta=-55.840$; $p=0.000$), motivation ($\beta=-5.918$; $p=0.002$), price ($\beta=-88.861$; $p=0.000$), promotion ($\beta=-54.781$; $p=0.000$), place ($\beta=-7.935$; $p=0.007$) collectively can predict performance which shows that these practices are significant predictors of average performance relative to low performance when sometimes practice.

On the other hand, positive and significant predictors complexity ($\beta=133.010$; $p=0.000$), risk assessment ($\beta=35.306$; $p=0.000$), monitoring ($\beta=57.872$; $p=0.000$), accounts receivable management ($\beta=103.195$; $p=0.000$), vision & mission ($\beta=15.461$; $p=0.000$), business plan/planning ($\beta=73.721$; $p=0.000$), human resource plan/planning ($\beta=25.061$; $p=0.000$), product ($\beta=155.315$; $p=0.000$) collectively can predict performance of non-agri-based projects which shows that these practices are significant predictors of low performance relative to average performance when sometimes practice.

High performance relative to average performance (non-agri-based projects)

The predictive ability of the variables in non-agri-based projects. Negative and significant predictors centralization ($\beta=-0.881$; $p=0.046$), control environment ($\beta=-2.519$; $p=0.006$), financial reporting and analysis ($\beta=-1.786$; $p=0.001$), promotion ($\beta=-1.107$; $p=0.001$) collectively can predict performance which shows that these practices are significant predictors of average performance when always practice.

On the other hand, positive and significant predictors complexity ($\beta= 1.492$; $p=0.006$), monitoring ($\beta=0.811$; $p=0.000$), accounts receivable management ($\beta=2.936$; $p=0.000$), place ($\beta=2.609$, $p=0.001$)

collectively can predict performance of non-agri-based projects which shows that these practices are significant predictors of high performance relative to average performance when always practice.

CONCLUSION

Based on the foregoing findings, a model was developed to assess the operation and performance of the IGPs to ensure that it generates viable revenue streams to the SUCs' funds. IGPs are operated in the same manner as an economic enterprise for profitable management of their tangible and intangible economic resources [6, 3], except for profit sharing and as per the COA rules and regulations.

Figure 2 shows the organizational practices-performance model for agri-based IGPs, suggesting that (1) to achieve high-performance agri-based projects, always practice and properly implement centralization, information & communication system, monitoring, financial reporting & analysis, training, price, and promotion practices; on the contrary, low performance is probable when sometimes practice complexity, risk assessment, human resource plan/planning, and motivation practices; (2) to achieve average performance, always practiced complexity, risk assessment, inventory management, leadership, product, and place practices; and sometimes practice information & communication system, inventory management, leadership, price, and promotion practices.

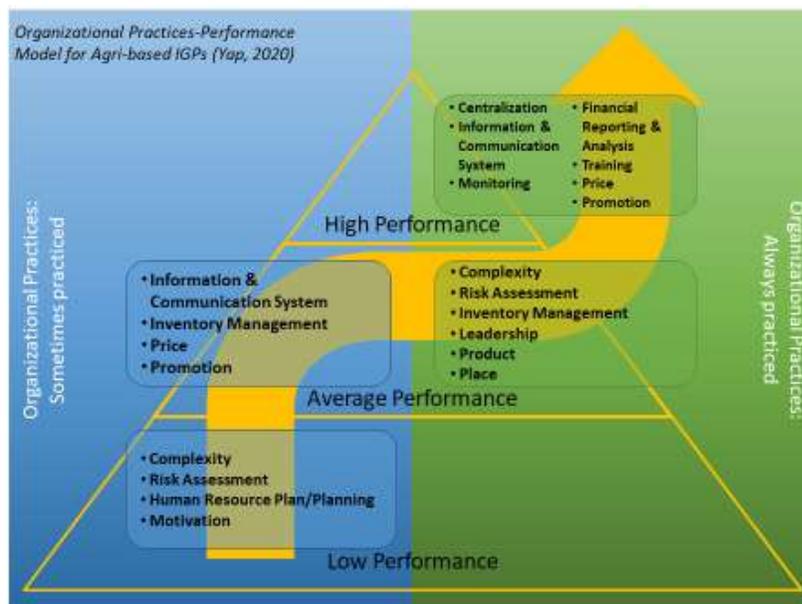


Figure 2. *Organizational Practices-Performance Model for Agri-based IGPs (Yap, 2020)*

Figure 3 shows the organizational practices-performance model for non-agri-based IGPs, suggesting that (1) to achieve high-performance, always practice and properly implement complexity, monitoring, accounts receivable management, place practices; on the contrary, low performance is probable when sometimes practice complexity, risk assessment, monitoring, accounts receivable management, vision & mission, business plan/planning, human resource plan/planning, and product practices; (2) to achieve average performance, always practice centralization, control environment, financial reporting and analysis, and promotion practices; and sometimes practice formalization,

centralization, information & communication system, inventory management, financial reporting and analysis, leadership, training, motivation, price, promotion, and place.

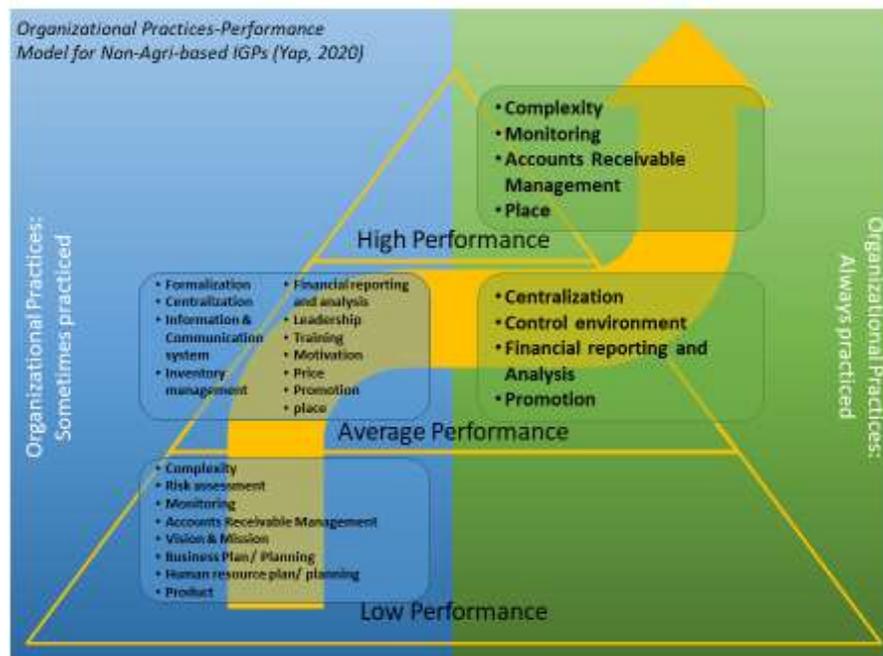


Figure 3. *Organizational Practices-Performance Model for Non-Agri-based IGPs (Yap, 2020)*

LIMITATION & FURTHER RESEARCH

The limitations of the study are those characteristics of design or methodology that impacted or influenced the interpretation of the findings. Further research should suggest the number of gaps in our knowledge that follow from our findings or to extend and further test the research.

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