

Performance of the Southern Tagalog Regional Consortium and Its Engagement with Local Colleges and Universities: Basis for Policy Enhancements

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Abstract

This study presents a comprehensive assessment of the performance of the Southern Tagalog Region regional consortium and its engagement with the local colleges and universities to provide policy enhancements towards improved operations particularly on capacity development programs, budget allocation & utilization, and consortium membership. Using descriptive quantitative research, results highlighted the need for improvement in the said key performance indicators; the need to increase awareness through IEC campaigns for a more collaborative R&D; and, to develop capabilities of member institutions and LCUs in the advanced technology areas such as the use of AI tools in various fields of R&D. The development of a standardized protocol was also presented for ease of the application process towards increased consortium membership. Benchmarking of best practices from selected member institutions was also presented in the study. In addition, the study determined the Top 3 most valuable topics from the consortium, funding agency, and member institution including, to wit: proposal writing, project development, and project management. From the LCUS, results were as follows: project development, policy formulation, and proposal writing. To push LCUs in joining the consortium, the motivating factors were financial support for capacity development, financial support for infrastructure, incentives, financial support for laboratory facilities, and policies. Institutional barriers and challenges must be overcome with plausible solutions which included: lack of financial support for capacity development, infrastructure, and laboratory facilities; confusing procedure for consortium membership, and lack of support mechanism coming from management. The development of accountability, evaluation and monitoring mechanisms were forwarded as possible interventions for a productive and inclusive regional consortium.

With the institutionalization of policy enhancements, it is recommended to replicate the study in another regional consortium to test whether the identified relationships and the proposed policy enhancements are generalizable beyond the Southern Tagalog context. Future research can conduct a longitudinal study two years after the policy enhancements are adopted.

Keywords: Performance Assessment, Regional Consortium, Local Colleges and Universities, Policy Enhancement

INTRODUCTION

Science, technology, and innovation (STI) are fuels to a progressive and advanced economy. Moreover, the crafting and issuance of policies in science and technology (S&T) in any country is essential for its socioeconomic development and growth (De La Peña, 2025). He emphasized that the provisions of the 1987 Constitution in the country reflect the state policy on prioritizing science and technology in areas such as human resource development, research and development, invention, innovation and their utilization, the provision of incentives for private participation, the protection of intellectual property, as well as the adaptation of technology.

Aligned with the R&D agenda of the Department of Science and Technology (DOST), the Philippine Council for Industry, Energy and Emerging Technology Research and Development (PCIEERD) is mandated to provide policy directions in coordinating and strengthening efforts in R&D, promotion and commercialization of research results that contribute significantly to national economic development goals. It is important to emphasize complementation and integration of efforts in the regions for the realization of the national goals. The mechanism of regional consortia is a fitting strategy to advance R&D by dispersing research funds throughout the country, thus encouraging more institutions to engage in meaningful R&D, including the local colleges and universities (LCUs).

The PCIEERD functions as a steward to establish, develop and maintain local and international technical cooperation linkages. This cooperation includes building partnerships in the regions through various schemes like a consortium. The creation of regional R&D consortia has been a PCIEERD initiative that aims to promote closer cooperation with the academe, private and other government agencies in key areas of different regions through and generate relevant research projects to address the needs of the regions. This include the Southern Tagalog Regional Consortium in the CALABARZON with member institutions from the Government Higher Education Institutions (GHEIs), Private Higher Education Institutions (PHEIs), and the National Government Agencies (NGAs).

Absence of LCUs in the concerned Regional Consortium is a challenge for the S&T community. Inclusive growth, community empowerment for S&T, and countryside development programs may be escalated and realized when researchers from this institution will get involved to maximize R&D initiatives specifically for capacity development, infrastructure development, institutional development and budget utilization. Unlike other higher education institutes (HEIs), LCUs have limited resources which hinder the efficient and effective implementation of priority programs and projects, particularly for research and development. PIDS (2025) posits that LCUs struggle due to the challenges of budget constraints and inadequate infrastructure.

Alabastro (2007) concluded that while the department has already put in place intervention programs to bring about improvements in S&T education, much work has yet to be done. Programs for developing human resources, maintaining and improving science lab facilities, and developing curricula and teaching materials must all be well coordinated.

Further, these assessments were strengthened by the recent study which was conducted to analyze the evolution of S&T policies in the country, to assess innovation & research outputs, and determine key growth areas to provide insights that can guide policymakers in enhancing the country's global competitiveness (Custodio, 2025). Unfortunately, the findings of the Custodio study showed that despite these efforts and progress, challenges such as inadequate infrastructure, limited funding support, and insufficient human resources were identified as barriers that hinder the sector's growth and global competitiveness.

In response to the identified inadequacies, the current study aimed to review and assess the performance of the regional consortium in the Southern Tagalog Region to create a better platform in achieving the target deliverables and key performance indicators (KPIs) focused on (1) capacity development, (2) budget allocation and utilization, and (3) consortium membership, ultimately targeting membership of the local colleges and universities (LCUs) in the regional consortium. This study is significant as it explored the underlying institutional barriers and proposed evidence-based policy enhancements to improve the regional consortium's strategic performance particularly in encouraging LCUs' increased participation by becoming new members of the regional consortium using the Theory of Performance (ToP) and Institutional Theory. The results of the study provided additional information to support the statement that the level of performance characterizes its effectiveness or quality (Elger, 2007) while postulating fact-based evidence in policymaking or policy formulation as mentioned by Kraft's Public Policy (2007). He expounded that Institutional Theory is "Policy-making that emphasizes the formal and legal aspects of government structures." Hence, evidence-based policy recommendations of the study supported the institutional theory. The government's policymaking process gives policy actors plenty of opportunities, albeit not always equal ones, to discuss issues, develop potential solutions, and advocate for formal adoption by national, state, and municipal legislatures (Kraft et.al., 2020).

The specific objectives of the study were as follows: 1) to determine the current level of performance using the identified KPIs; 2) to identify the factors involved in encouraging the local colleges and universities to join the DOST-PCIEERD Regional Consortium; 3) to recommend policy enhancements towards the improved performance of the regional consortium and increased consortium membership.

Materials & Methods

1. Research Design

The study used descriptive research approach supported by documentary analysis and surveys. Surveys were conducted to systematically collect data from the regional consortium, the funding agency, member institution, and the LCUs. The survey instrument was validated and pilot tested. Survey questionnaires also included open-ended questions to generate data for benchmarking and to identify most valuable topics for capacity development programs. Documentary analysis supported the results of the survey providing more reliable data and results on the current status of the regional performance in terms of the three KPIs: capacity development, budget allocation and utilization, and consortium membership.

2. Research Locale

The research was conducted in the CALABARZON area which was participated in by the representatives from the Southern Tagalog Regional Consortium, the funding agency (PCIEERD), the SUC member institution, and the local Colleges and universities in the provinces of Cavite, Laguna, Batangas, Rizal and Quezon.

3. Sampling

Convenience sampling was used for the respondents of STCIEERD, PCIEERD, and the selected member institution while total enumeration was used for LCUs. The selection of respondents prioritized top management and those who are directly involved in the operations and performance of the regional consortium. These respondents in the survey include the Vice Presidents for Academic Affairs, Vice President for Research and Development, researchers, and administrative / technical faculty staff. Some University Presidents and College Administrator also participated in the survey. A total of sixteen (16) LCUs, with a minimum of three (3) representatives per LCU from each province of the CALABARZON

area, were involved.

4. Research Instrument

The researcher used the 5-Point Likert Scale survey/questionnaires with open-ended questions as the major instrument for gathering data in descriptive research. The data gathering instrument is a researcher-made survey questionnaire validated and certified by experts. The contents of the survey included the researcher's personal information, brief overview and purpose of the study, the instructions on how to conduct the survey including the timeframe, ethical considerations, rights, risk, and the approval of the consent form.

5. Data Gathering Procedure

The research was conducted through documentary analysis and survey. Official communication letters requesting access to reliable data signed by the Dean of the Graduate School were forwarded to PCIEERD, STCIEERD, and the DOST CALABARZON addressed to the Head of Agencies and STCIEERD Chairperson. Actual data were obtained from the performance reports covering the period 2021-2025 such as annual accomplishments, progress reports with narratives and financial reports, minutes of meetings, updated Regional S&T Agenda, and other related documents signed by the Consortium Chairperson. These documents were reviewed and processed according to the identified KPIs to (1) determine the number of capacity development programs implemented and participated in by the member institutions and disseminated with the stakeholders concerned such as LCUs. This also provided additional information on the level of awareness / performance expectations of LCUs with regard to the STCIEERD; (2) the submitted documents such as financial reports provided evidence on the 2nd KPI which is on budget allocation and utilization; and (3) determine the number of approved and pending applications for consortium memberships. These documents were evaluated against the targeted deliverables per year. For the survey data, this was participated in by the STCIEERD, PCIEERD, selected member institutions, and the LCUs. Official requests were forwarded to Head of Agencies seeking approval for the conduct of the survey. Some institutions, like Batangas State University (BatSU), required ethical clearance prior to the conduct of the survey.

Results and Discussions

1. Current Level of Performance Using the Identified KPIs of the Consortium

Aside from the survey questionnaires, the data was sourced from the submitted STCIEERD accomplishment reports including executive summary for the annual progress reports, the Audited Financial Reports (AFRs) reflecting the approved budget, disbursements, and unexpended budgets or savings signed by the authorized signatories, manual of operation of the Regional Consortium, PCIEERD annual accomplishment reports, strategic plans, and R&D S&T agenda. These documents were reviewed and processed as reference for documentary analysis.

1.1 Capacity Development

In general, Table 1 presents the overall performance rating of the regional consortium as appraised by the respondents from STCIEERD, PCIEERD as the funding agency, and the selected member institution for the first KPI: Capacity Development. Generally, as shown in the tabulated data, it was rated 34.2%, which means that this KPI needs improvement.

Table 1: Overall Performance Rating: Capacity Development

ITEM	SCORES				
	1 (Unsatisfactory)	2 (Needs Improvement)	3 (Meets Expectations)	4 (Exceeds Expectations)	5 (Excellent)
	%	%	%	%	%
CAPACITY DEVELOPMENT	4.2%	34.2%	16.7%	28.3%	16.7%
1.1a: STCIEERD	2.5%	15.0%	30.0%	32.5%	20.0%
1.1b: PCIEERD	8.0%	70.0%	8.0%	14.0%	0.0%
1.1c: Member Institution	0.0%	0.0%	13.3%	46.7%	40.0%

This was supported by the documentary analysis showing the actual accomplishments of the regional consortium vis-à-vis the targeted outputs. It was noted that most of the accomplishments of STCIEERD covering the CY 2021-2025 are below targets and compared with the other regional consortium, needs improvement as shown in Table 2.

Table 2. Targets vs Accomplishments: Capacity Development

	2021	2022	2023	2024	2025
Targets	0	5	0	0	2
Accomplishments	3	3	3	0	1
% Accomplishments	100%	60%	100%	0%	50%

Alabastro (2007) posited that the success of the government’s support programs depends on the degree of effectiveness of the program which, on the other hand, requires the proper alignment of the visions and values of the people managing the system. Good leadership and management of the system, both at the macro (national and regional) and micro (schools) levels is a primary prerequisite.

1.2 Budget Allocation & Utilization

In general, Table 3 shows the overall summary of responses of the respondents from STCIEERD, PCIEERD, and the selected member institution in the conduct of the survey for the second KPI, budget allocation and utilization of the Regional Consortium. As shown in the tabulated data, it was rated with 30%, being the highest, which means that the budget allocation and utilization of the regional consortium need improvement. Cost effectiveness as one of the attributes of the ToP was measured in terms of the efficient financial management of budget allocation and utilization.

Table 3: Overall Summary of Responses: Budget Allocation and Utilization

ITEM	1 (Unsatisfactory)	2 (Needs Improvement)	3 (Meets Expectations)	4 (Exceeds Expectations)	5 (Excellent)
	%	%	%	%	%
BUDGET ALLOCATION & UTILIZATION	0.0%	30.0%	25.8%	20.0%	24.2%
a: STCIEERD	0.0%	5.0%	47.5%	7.5%	40.0%
b: PCIEERD	0.0%	68.0%	12.0%	18.0%	2.0%
c: Member Institution	0.0%	0.0%	20.0%	40.0%	40.0%

Table 4 shows the funding support for the operation of the Southern Tagalog Consortium covering the period CY 2021-2025. The data shows a fluctuating utilization rate with Year 3 was reported as the highest with 99.41% while Year 4 with 0% as the lowest utilization rate.

Table 4: Support for the Operation of the Southern Tagalog Consortium

Item	Year 1	Year 2	Year 3	Year 4	Year 5
	2021	2022	2023	2024	2025
Allocation	P928,575.00	P1M	P1M	P1M	P567,652
Utilization	P608,998.00	P506,454	P994,110	P0.00	P145, 643
% Utilization Rate	65.58%	50.64%	99.41%	0%	25.657%

The performance of STCIEERD, as appraised by the funding agency, PCIEERD averaged only 48.25% of operational expenditure. This appears to be a low percentage of budget utilization. The budget utilization failed to identify the specific activity to be implemented to facilitate the utilization of budget for consortium operations. The activities may be distributed to its member institutions to avoid further delays with the target deliverables. Other strategies would include early procurement planning, staggered project timelines, and training of staff in financial reporting.

Pulford, et.al. (2023) said that principles of equity, inclusiveness and transparency should underpin consortia’s approach to all aspects of research capacity strengthening.

1.3. Consortium Membership

Table 5 shows the summary of responses of the respondents in the conduct of the survey for the third KPI, consortium membership of the Regional Consortium. As shown in the tabulated data, it was rated 37.7%, being the highest, which means that the consortium membership of the regional consortium needs improvement. Increased consortium membership needs a collaborative approach and the need for collaborative research among institutions, including the LCUs.

Table 5: Summary of Responses: Consortium Membership

ITEM	1	2	3	4	5
	(Unsatisfactory)	(Needs Improvement)	(Meets Expectations)	(Exceeds Expectations)	(Excellent)
	%	%	%	%	%
CONSORTIUM MEMBERSHIP	1.6%	37.7%	16.4%	24.6%	19.7%
a: STCIEERD	5.0%	15.0%	30.0%	20.0%	30.0%
b: PCIEERD	0.0%	80.0%	4.0%	16.0%	0.0%
c: Member Institution	0.0%	0.0%	18.8%	43.8%	37.5%

A consortium model is one of a huge range of collaborative arrangements within the overall concept of partnership. Collaborative work has become increasingly common in the fields of international development and humanitarian aid, with all sectors forming partnerships to address complex development challenges and achieve common aims (Reid & Fransman, 2021).

Top 3 Most Valuable Topics for STCIEERD, PCIEERD, and Member Institution

Part of the study is to choose the top three (3) most valuable topics in the listed capacity development programs of the regional consortium. The respondents were also encouraged to add other topics which

might interest their institutions. As a result, some topics such as design thinking, training, and seminars were included for future consideration.

Based on the survey, the overall top 3 ranked most valuable topics for STCIEERD, PCIEERD, and selected member institution are the following: (1) proposal writing, (2) project development, and (3) project management. The results showed that researchers need more exposure in technical writing for proposal and project development and management as reported by the Regional Consortium.

2. The Factors Involved in Encouraging the Local Colleges and Universities to Join the DOST-PCIEERD Regional Consortium

2.1 Awareness of LCUs

The survey questions determined the assessment of regional performance by the local colleges and universities (LCUs) with the Key Performance Indicators (KPIs) in terms of the level of awareness/performance expectations in capacity development programs, consortium membership, and budget allocation of the Regional Consortium - STCIEERD. It was noted in Table 6 that the overall perceived awareness as determined by the performance expectations of the LCUs exceeds their expectations with a rating of 25.4%.

In terms of capacity development, the LCUs assessed both indicators, awareness of capacity development activities and participation in meetings and seminars, with a higher rating which exceeded their expectations. To validate the responses, the researcher recalled that during the personally administered survey, some member institutions of the regional consortium like LSPU and the DOST Regional Office of CALABARZON also invited the LCUs to attend the activities of STCIEERD in the region. Hence, the level of awareness is also high. However, there is a need for improvement for budget allocation & utilization particularly on understanding budget rules and compliance.

Same goes with consortium membership needing improvement. This would mean more IEC campaigns and conduct of an intensive pre-engagement with the LCUs in promoting the programs being offered by the regional consortium.

Table 6. Awareness of LCUs

ITEM	SCORES				
	1 (Unsatisfactory)	2 (Needs Improvement)	3 (Meets Expectations)	4 (Exceeds Expectations)	5 (Excellent)
	%	%	%	%	%
2.1A AWARENESS OF LCUs	17.8%	23.2%	24.4%	25.4%	9.2%
2.1.1 Capacity Development	15.1%	15.9%	28.6%	28.6%	11.9%
Q1: Awareness of capacity development activities	14.3%	15.9%	30.2%	30.2%	9.5%
Q2: Participation in training / seminars	15.9%	15.9%	27.0%	27.0%	14.3%
2.1.2 Budget Allocation and Utilization	18.3%	27.0%	19.0%	25.4%	10.3%
Q1: Awareness of budget allocation for LCUs	17.5%	27.0%	19.0%	27.0%	9.5%
Q2: Understanding budget rules and compliance	19.0%	27.0%	19.0%	23.8%	11.1%
2.1.3 Consortium Membership	22.2%	30.2%	27.0%	19.0%	1.6%
Q1: Awareness of STCIEERD membership protocols	22.2%	30.2%	27.0%	19.0%	1.6%

2.2 Institutional Readiness of LCUs

The survey questionnaire determined if the LCU is already compliant with the requirements for consortium membership or needs further preparation in terms of field of specialization, availability of R&D personnel, roadmap, infrastructure or laboratory facilities, with proposals drafted and projects implemented, with R&D priority plans and programs, and plans for R&D.

Table 7 shows that, in general, the institutional readiness of the LCUs meets the expectations of becoming a new member of the regional consortium, rated at 34.1%. As appraised by the LCUs, results showed that the R&D programs of LCUs are aligned with the regional S&T Agenda, have complementary field of specialization for R&D, have strong management support for R&D engagement, have R&D plans approved by leadership, and existence of an institutional R&D roadmap. Moreover, as shown in the results, there are also qualified R&D personnel in the LCUs that have the potential to do research as well.

Some LCUs are fortunate to have the support coming from the administration in the conduct of R&D. However, most LCUs do not have the availability of core facilities for R&D. That is why submission of research proposals to PCIEERD is not possible at the moment. It depends on the prioritization of the LGU governing the LCU. Although some LCUs have internally funded projects for the undergraduate/graduate students relative to their courses such as ICT, nursing, construction and management engineering, and education. There is also a need for R&D funding support for LCUs. This side of the story provided additional information on the challenges faced by the LCUs. To reiterate PIDS study in 2025 that LCUs struggle due to the challenges of budget constraints and inadequate infrastructure and unlike other higher education institutes, LCUs have limited resources which hinder the efficient and effective implementation of their R&D priority including the prioritization of the governing LGU and the current administration. To date, two out of 18 LCUs are members of the regional consortium with access to the R&D benefits and entitlements of PCIEERD through the STCIEERD.

Table 7: Institutional Readiness of LCUs

2.2 INSTITUTIONAL READINESS OF LCUs	1 (Unsatisfactory)	2 (Needs Improvement)	3 (Meets Expectations)	4 (Exceeds Expectations)	5 (Excellent)
	%	%	%	%	%
	4.4%	25.1%	34.1%	27.9%	8.4%
Q1: R&D programs aligned with regional S&T Agenda	6.3%	14.3%	42.9%	31.7%	4.8%
Q2: Complementary field of specialization for R&D	1.6%	22.2%	36.5%	33.3%	6.3%
Q3: Availability of core facilities for R&D	0.0%	33.3%	33.3%	28.6%	4.8%
Q4: Strong management support for R&D engagement	0.0%	19.0%	39.7%	33.3%	7.9%
Q5: Availability of qualified R&D personnel	3.2%	23.8%	38.1%	28.6%	6.3%
Q6: Researchers have submitted proposals to STCIERD	27.0%	30.2%	19.0%	17.5%	6.3%
Q7: Institution implements internally funded R&D project	3.2%	27.0%	33.3%	27.0%	9.5%
Q8: R&D plans approved by leadership	1.6%	19.0%	34.9%	28.6%	15.9%
Q9: Availability of R&D funding support	1.6%	33.3%	30.2%	23.8%	11.1%
Q10: Existence of an institutional R&D roadmap	0.0%	28.6%	33.3%	27.0%	11.1%

2.3 Motivating factors to join the Regional Consortium

Based on the results of the survey, the Top 5 motivators are the following: (1) Financial support for

capacity development, (2) Financial support for infrastructure, (3) Incentives, (4) Financial support for laboratory facilities, and (5) Policies.

This is to reiterate that the Council believes that harnessing the effective use of resources in the regions through the pursuit of R&D and other scientific activities responsive to the regional industry needs and anchored on PCIEERD's priority areas is essential and pivotal in the country's envisioned inclusive growth.

This study also supported the findings of the study conducted by Custodio (2025) that there is a need for financial support for capacity development and infrastructure, and funding support from the R&D government institutions is essential in response to the growing importance of Science, Technology, and Innovation (STI). In addition, incentives through the benefits and entitlements being offered by the funding agency should be maximized. Finally, support mechanism coming from the management also motivates the LCUs. Related studies have cited that the success of a research consortia would include top-down management commitment and empowering their people as their pillars of the organization.

2.4 Institutional barriers that hinder participation of LCUs

Results showed that the Top 5 barriers are the following: (1) Financial support for capacity development, (2) Financial support for infrastructure, (3) Financial support for laboratory facilities, (4) Established procedure for consortium membership, and (5) Support mechanism coming from management.

The lack of financial support for capacity development, infrastructure as well as laboratory facilities hinder the engagement of LCUs with the consortium. Moreover, lack of established procedure for consortium membership and support mechanism coming from management will also discourage them in joining the STCIEERD. LCUs are governed by the LGU and there is a need for those motivating factors to be considered when it comes to prioritization and decision making.

To overcome these institutional barriers, the institution should have a clear directive aligned with their mandate or develop a roadmap containing strategies on how to access financial support for capacity development, infrastructure, and laboratory facilities. It is also important to strengthen partnerships and linkages to be updated with the current trends and global perspectives. Streamlined membership procedure could be a challenge particularly in institutional readiness as one of the requirements, but the R&D government institutions offer financial support mechanisms which could be tapped by the LCUs. Most importantly, support mechanism coming from the management should be established for LCUs to have the opportunity to join the consortium and have an opportunity to access its benefits and entitlements as discussed in the previous chapter.

3. Policy Enhancements

In the review of science and technology policy making in the Philippines (De La Pena, 2025), he cited some administrative policies which could be used as reference for the proposed policy enhancements. These include the issuance of the DOST Administrative Orders and guidelines to implement S&T programs. Notable programs include Science for Change Program and Technology Innovation for Commercialization Program. Future directions were also cited such as the urgent need for policies to enhance public-private partnerships and support local innovations. It also covers integration of PAGTANAW 2050 into national planning as essential for sustainable development. Finally, to focus on strengthening national S&T governance and ensuring R&D funding sustainability.

In response to the abovementioned policies, this study would like to contribute in developing policyenhancements concerning capacity development, budget allocation & utilization, and consortium

membership as these will aid in the improved regional performance of the Southern Tagalog Regional consortium.

3.1 Capacity Development

Low-to-no submission and approval of proposals. In the evaluation of consortium proposals endorsed by the Region, it is recommended to establish a different set of criteria that is more suitable and fit for the consortium. Some criteria and requirements used for regular proposals cannot be complied with by the researchers in the region such as endorsement and letter of commitment from the industry. Contents in the e-proposal system may also be reviewed for ease of access by the researchers.

Another policy enhancement includes the plan to conduct a pre-engagement activity where a series of research productivity and proposal development sessions with expert member institutions will be conducted to cover the fundamentals of crafting strong project proposals, including framing of research problems, methodology development, budget planning, and the overall evaluation process employed by PCIEERD. The consortium has to undertake a more strategic and deliberate approach to improve the quality and competitiveness of proposals submitted for funding. Table 9 presents the summary of policy enhancements for capacity development.

3.2 Budget Allocation and Utilization

On issues of delayed release of funds and underutilized budgets, it is important to plan ahead of time during third quarter of the year to maximize use of funds by the consortium. Explore more creative ways to ensure timely and efficient disbursement of funds to support planned activities. The STCIEERD must submit a quarterly financial report to the DOST Regional Office for monitoring purposes and develop a mechanism to monitor the expenses online and real-time. Strict implementation of planned activities will result in an increase in budget utilization leading to increase in budget allocation. The strategic plan of STCIEERD for 2026-2028 does not include LCUs in its budget allocation. This study envisions that more LCUs will become new members of the regional consortium. In that way, sharing of resources will provide positive outcome for the consortium while also capacitating LCUs in terms of research and development. Pulford, et.al., (2023) said that consortia can facilitate sharing of expertise and have access to experts, equipment and other resources that could substantially improve the research environment in their member organizations.

3.3 Consortium Membership

One of the outputs of this research is to develop a standardized protocol for consortium membership as this could help the consortium in establishing a written procedure for an accessible and simpler process in joining the Regional Consortium, STCIEERD. The drafted guidelines will also be presented to the DOST-PCIEERD consortia program handler for their comments, suggestions, and possible implementation in the said consortium and on a wider scale, for adoption of the other regional consortia in the country funded and supported by the Council in the area of industry, energy, and emerging technology sectors. Based on experience, the approval of consortium membership does not have a standardized procedure following the ARTA law or Ease of Doing Business. Unlike the proposal evaluation process of PCIEERD, there is an established procedure where both proponents and the funding agency monitor the timeline and progress of each stage of evaluation. This process could also be applied for evaluating consortium proposals. This will build confidence and trust between the two institutions.

Summary of Findings

The first research objective of the study is to assess the performance of the regional consortium in terms of the three KPIS, namely: (1) capacity development, (2) budget allocation & utilization, and (3) consor-

tium membership. Based on the results of the survey and documentary analysis, in general, the overall performance of the Regional Consortium needs improvement. STCIEERD provided support for the operations of the consortium to strengthen public and private participation in R&D and Science, Technology and Innovation (STI) related activities and to encourage and motivate students from member agencies to conduct research.

The study conceded STCIEERD respondents on self-assessment on their performance for the last five (5) years to give justice and fairness of opinion. This only showed that the study followed one of the three core philosophical foundations of positivism for research i.e. axiology which advocates for value-free research, aiming to minimize the influence of researcher biases and values on the research process to produce knowledge that is free from personal or cultural biases, thus contributing to the cumulative advancement of science (Creswell, 2017).

For the second objective i.e. to assess the perceived level of awareness based on performance expectations of the LCUs with regard to the capacity S&T agenda, priority areas, support mechanisms like funding R&D initiatives, access to the capacity development programs including patent applications, publications, and other programs of the STCIEERD needs to be strengthened and intensified.

In the determination of the factors to encourage LCUs in joining the consortium, the top five motivating factors include (1) Financial support for capacity development, (2) Financial support for infrastructure, (3) Incentives, (4) Financial support for laboratory facilities, and (5) Policies.

The institutional barriers that hinder the LCU engagement were also determined, namely: (1) Financial support for capacity development, (2) Financial support for infrastructure, (3) Financial support for laboratory facilities, (4) Established procedure for consortium, and (5) Support mechanism coming from management.

Finally, this study was able to provide policy enhancements for the current policy gaps particularly in the implementation of standardized procedures in consortium membership that need to be addressed to foster better LCU participation and engagement. Furthermore, the findings of the study will provide basis for formulation and revision of specific policies at PCIEERD-DOST particularly in the implementation of capacity development programs, effective and efficient budget allocation and utilization, and approval of consortium membership. This will lead to changes in the guidelines of consortium membership and will suggest areas for legislative action related to regional consortia, R&D funding and partnerships including the LCUs in the CALABARZON.

The results of the study proved that decision-making in consortia is not always a straightforward process because leaders were often faced with challenges when determining management strategies as also demonstrated in selecting consortia partners, determining goals and activities, assigning roles and responsibilities, allocating resources, establishing governance and partner management systems, and coordinating and monitoring consortia activities. It could further be concluded that the study has highlighted the importance of flexibility in consortium management (Tagoe, et.al., 2022).

Conclusions

Based on the significant findings stated above, it could be concluded that the performance assessment of the regional consortium differs with respect to the sectoral perspectives among the implementing agency (STCIEERD) and funding agency (PCIEERD). The performance of STCIEERD is below targets compared with the other regional consortia, hence the need for improvement in terms of capacity development, budget allocation & utilization, and consortium membership.

The level of awareness of the LCUs in the programs and activities of the regional consortium is very low and its engagement with the regional consortium urgently needs to be strengthened and improved. Although there are motivating factors in joining the consortium, there are still institutional barriers that need to be urgently addressed including policies on financial support for capacity development, consortium membership, infrastructure and incentives.

The institutional readiness of the LCUs in the conduct of R&D needs to be abreast of increased membership.

Policies and support from the national government agencies should be made available on-line and dedicated websites to guide researchers, scientists, engineers in the conduct of research and capacity development programs. There is a need to expand opportunities for research and development among grassroots and community levels.

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