Strategy to Improve Regional Competitiveness Index Through Regional Innovation

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ABSTRACT

Increasing regional competitiveness is a crucial factor in supporting sustainable economic development. One key strategy for enhancing competitiveness is through regional innovation. This study aims to analyze strategies that can be implemented to improve the regional competitiveness index through innovation based on local potential. This study uniquely explores Denpasar's structured innovation policies as a driver of competitiveness, specifically examining the KIPRAH competition program and OPD innovation requirements as systematic approaches to regional development. The approach used in this study is a qualitative exploratory case study analyzing Denpasar City, which has successfully implemented regional innovation to enhance competitiveness. Data were collected from 12 informants, including BRIDA staff, OPD officials, and academics, through in-depth interviews. The results show that the implementation of regional innovation through the KIPRAH competition program, mandatory OPD innovation initiatives under Mayoral Regulation No. 63/2023, and systematic capacity building significantly increased regional competitiveness. Furthermore, collaboration between the government, the private sector, and the community also plays a crucial role in creating an innovation ecosystem that supports increased competitiveness. This study provides a theoretical contribution by applying strategic management frameworks to regional innovation governance and offers explicit policy recommendations, including infrastructure development, technology access enhancement, and human resource training programs that can be replicated in other cities. Thus, strategy to improve regional competitiveness index through regional innovation can be a key driver in increasing regional competitiveness and encouraging inclusive economic growth.

KEYWORDS	*regional competitiveness, regional innovation, local potential development, development strategy.*

INTRODUCTION

The authority to regulate self-government matters has been granted to regional governments with the enactment of Law Number 23 of 2014, which replaced Law Number 32 of 2004 concerning Regional Government (Fanani, 2023; Prastya et al., 2023; Saragih, 2023). Regional autonomy enables each region to manage its own development, tailored to local economic, geographic, and socio-cultural characteristics, with the primary goal of improving public welfare (Herlambang & Kurnia, 2022; Kusnadi, 2015; Ramli, 2020).

Regional disparities in infrastructure, geographic conditions, and natural resources are leveraged through regional autonomy to reduce prosperity gaps. By upholding democratic principles, equity, and justice while recognizing each region's unique potential, regions can increase their competitiveness. Developing regional competitiveness is essential for achieving greater public welfare (Bahrami et al., 2023; Macdonald et al., 2023; Moirangthem & Nag, 2020).

The prosperity of the population has consistently been a goal of regional autonomy, with the evolving needs and expectations of the population always taken into account. This prosperity is designed to be enhanced through the implementation of regional autonomy, which explores and utilizes potential sources of income in each region. Regional disparities in

infrastructure, geographic conditions, and natural resources are used as tools in regional autonomy, which is expected to reduce disparities in prosperity.

By upholding the principles of democracy, equity, and justice, and recognizing the unique potential of each region, it is hoped that each region will be able to increase its competitiveness. Understanding that regional variation is a blessing is the initial phase for improving public welfare. Developing regional competitiveness is considered an essential tool for achieving greater public welfare. Differences between regions, rather than being obstacles, should be viewed as modalities for achieving this goal. Increasing public demand for optimal regional government performance has triggered the need for a paradigm shift in governance. Improving regional competitiveness is considered essential to ensuring effective administrative governance and quality public services.

The Regional Competitiveness Index (IDSD) was developed by the government as an effective measuring tool for determining the level of productivity and competitiveness of a region. IDSD measurements at the provincial and district/city levels are conducted by the National Research and Innovation Agency (BRIN), a non-ministerial government entity with this specific task. The government's use of the IDSD aims to assess the extent to which regions are able to compete nationally and helps create an in-depth picture of the competitiveness and productivity of each region in Indonesia. Based on the results of the mapping conducted by the Ministry of Research and Technology in 2019, the innovation ecosystem is the most influential dimension.

Local governments improve the quality of public services through the use of strategic instruments, namely regional innovation. It is understood that innovation is an essential factor in driving regional economic growth and competitiveness in the changing global economy, shifting from an industrial-based to a knowledge-based one. Innovation is not merely the creation or renewal of products but also includes the use of new ideas to improve processes and provide superior services (Katelo et al., 2021; Konte & Vincent, 2021; López-Lemus, 2023; Taufiqurokhman et al., 2024; Utami & Widarjo, 2022). Provisions contained in Government Regulation (PP) Number 38 of 2017 concerning Regional Innovation define regional innovation as any type of reform in local administrative arrangements aimed at improving government effectiveness, population welfare, population empowerment, population participation, and regional competitiveness.

Innovation represents a paradigm shift from industrial-based to knowledge-based economic development, similar to successful models in Singapore's Smart Nation initiative and Seoul's Digital City transformation. According to Wheelen and Hunger (2015), strategic management is the art and science of formulating, implementing, and evaluating cross-functional decisions that enable an organization to achieve its long-term goals. In the context of local government, strategies to increase competitiveness through innovation must be based on internal and external environmental analysis, goal setting, strategy selection, and ongoing implementation and evaluation (David & David, 2016).

This study is driven by the need to examine how the Denpasar City Regional Research and Innovation Agency employs regional innovation as a strategy to improve regional competitiveness index through regional innovation. Consequently, the research is structured to first investigate the specific strategies and policies implemented by the agency to achieve this

goal. Furthermore, the study aims to extend its analysis by identifying the various supporting and inhibiting factors that influence the effectiveness of these regional innovation efforts. By answering these interconnected questions, the research ultimately seeks to provide a comprehensive understanding of the mechanisms and dynamics at play in boosting the regional competitiveness of the Denpasar City Government.

METHOD

The researcher employed a qualitative case study method to understand and explain the problem through active participation, aiming to discover defined relationship patterns (Sugiyono, 2017). The study involved 12 key informants, including 6 BRIDA staff members, 4 OPD officials from different agencies, and 2 academics specializing in regional innovation. The natural state of the subjects was observed based on a post-positivism philosophy, with the researcher acting as the primary instrument. Data collection used triangulation, and inductive analysis was conducted, emphasizing meaning over generalization (Sugiyono, 2019).

Both primary and secondary data sources were utilized. Primary data were obtained from interviews with informants from regional apparatuses. Secondary data consisted of regulatory documents related to regional innovation.

Direct observations were conducted at the Denpasar City Regional Research and Innovation Agency and the innovation implementation units to capture the implementation of innovation strategies, work culture, and stakeholder collaboration dynamics. These observations also validated interview data and documentation to enhance research validity (Sugiyono, 2019; Moleong, 2017). The study adhered to ethical principles, including informed consent and confidentiality.

Questionnaires with both open-ended and closed-ended questions were used to collect descriptive and short answers from respondents.

RESULT AND DISCUSSION

Formulating a Strategy to Increase Regional Competitiveness Through Regional Innovation

Strategy formulation is a crucial stage in strategic management, involving the development of a vision and mission, identification of external opportunities and threats, setting long-term goals, and selecting strategies to implement (David & David, 2016). This process is the foundation for all organizational activities, ensuring that every step taken has a clear and measurable direction. BRIDA Denpasar City, as the primary entity responsible for promoting regional innovation, has formulated its strategy based on the broader vision and mission of Denpasar City

This demonstrates a clear alignment between the organization's objectives and the broader direction of regional development, a crucial foundation within a strategic management framework. According to Norton and Kaplan (2000) (in Sumarsan, 2013:219), this alignment of vision and mission is a prerequisite for successful strategy implementation, as it ensures that all organizational efforts are focused on the same goal. In the context of strategy formulation, BRIDA Denpasar City identified the need to build a strong innovation ecosystem across all Regional Apparatus Organizations (OPD). This approach demonstrates an understanding of the

importance of systemic, not sporadic, innovation. One of the key strategies implemented is requiring each OPD to create innovations.

This policy is reinforced by Mayoral Regulation No. 63 of 2023 concerning Regional Innovation. According to a questionnaire, "The majority of respondents cited Mayoral Regulation 63/2023 as the legal basis for innovation." This regulation provides a strong legal basis and formal legitimacy to encourage innovation, transforming it from a voluntary initiative into an institutional obligation. This strategy formulation is also supported by the formation of innovation teams in each Regional Apparatus Organization (OPD).

The formation of this team demonstrates BRIDA's efforts to decentralize innovation responsibilities and empower operational-level work units. This team is tasked with exploring and documenting innovations that already exist but are often unnoticed or unrecorded. David (2016) emphasized that the effectiveness of strategy formulation depends heavily on the active involvement of human resources, and the formation of an innovation team is a manifestation of this involvement.

In addition to encouraging innovation within regional government agencies (OPD), the strategy formulation also includes planning for annual monitoring and evaluation of regional innovation. This demonstrates an awareness of the importance of measurement and accountability in the innovation process. Furthermore, the strategy formulation involves holding a regional government innovation competition known as KIPRAH. PM.

This competition is held annually as a form of appreciation and encouragement for OPDs to continue innovating. The questionnaire results also support this, stating, "BRIDA's support in the form of outreach, training, and competitions like KIPRAH is highly appreciated." The external opportunities identified in the strategy formulation are the characteristics of Denpasar City as an urban destination for urbanization, which gives rise to many social problems.

This provides significant capital in formulating an innovation strategy, as existing problems can serve as a stimulus for creating relevant and beneficial innovations. The questionnaire results also reinforce this finding by identifying "Collaboration and technology as the main drivers of innovation development," along with "policy" and "Human Resources" as supporting factors. However, the formulation of this strategy also faces a major external challenge in the form of a lack of uniform understanding among regional government agencies regarding innovation. Dr. Kadek Januarsa Adi Sudharma (Academic I1), a judge on the Denpasar City Regional Innovation Program.

The questionnaire results also highlighted that "differences in perception and low motivation among civil servants are challenges" related to innovation culture and human resources. This challenge indicates the need for more intensive communication and coaching strategies to align perceptions and ensure program continuity, especially in the face of changing leadership. Collaboration with stakeholders is also a crucial part of strategy formulation. BRIDA Denpasar City collaborates not only with regional officials but also involves academics, practitioners, and the community.

The involvement of various parties is in accordance with the concept of strategic management which emphasizes the importance of external and internal environmental analysis to formulate a comprehensive strategy. In fact, "We also routinely facilitate communities with

innovations every year to be able to participate in the competition," added I2. Academic I1 also emphasized the importance of benchmarking to other regions that have had impactful innovations as part of the formulation of an effective strategy, demonstrating that BRIDA adopts an external learning approach.

Implementation of Regional Competitiveness Enhancement Strategy Through Regional Innovation

Strategy implementation is the stage in which an organization implements its established strategy, including developing a supportive culture, establishing an efficient organizational structure, adjusting business direction, preparing budgets, developing information systems, and linking employee compensation to organizational performance (David & David, 2016). This stage serves as a bridge between the formulation of strategic ideas and concrete actions that produce impact. BRIDA Denpasar City implements its strategy through various priority programs.

This program serves as the foundation for efforts to increase regional innovation. Conceptually, it translates formulated strategies into concrete actions, demonstrating a focus on achieving measurable performance targets. The budgetary aspect is a significant challenge in implementing the strategy. This indicates limited financial resources that limit the reach of innovation implementation, which is not evenly distributed to the community. The questionnaire results support this, citing "minimal budget" as the primary obstacle to innovation and "budget adjustment" as a proposed solution.

Academic I1 also cited "limited human resources and budgeting" as common barriers to building an innovation ecosystem, relevant to the context of Denpasar City. David (2016) emphasized that budgeting is an integral part of strategy implementation, and inadequate resource allocation can hinder success. However, the questionnaire results also highlighted that "a culture of innovation has not yet been established" and there is still "low interest among civil servants," indicating that these efforts need to be strengthened to build a consistent and sustainable culture of innovation.

David (2016) emphasized that successful implementation requires effective management of organizational resources, structure, and culture. Without a deeply embedded culture of innovation, implementation efforts can become mere formalities without generating significant transformative impact. This indicates the need for a more holistic change management approach, such as Lewin's 1951 model (in Prastyani, 2020) of unfreeze-change-refreeze, to develop an organizational culture that embraces innovation as an integral part of core tasks, not merely as additional work.

Evaluation of Regional Competitiveness Enhancement Strategy Through Regional Innovation

Strategy evaluation is the final stage in the strategic management process, focusing on monitoring all organizational activities to ensure adherence to established strategic plans. This includes reviewing internal and external factors, measuring performance results, and taking corrective actions (David & David, 2016). Effective evaluation enables organizations to learn from experience, identify successes and failures, and make necessary adjustments to achieve

long-term goals. BRIDA Denpasar City measures and evaluates the effectiveness of regional innovation strategies and programs through monitoring and evaluating regional innovation itself.

Factors Supporting and Inhibiting Regional Innovation

Several main supporting factors for regional innovation in Denpasar City have been identified, which is in line with the analysis of the internal and external environment in strategic management (David & David, 2016).

Discussion

Analysis of the Formulation of Strategies to Increase Regional Competitiveness Through Regional Innovation

The strategy formulation at BRIDA Denpasar City has generally followed Fred R. David's (2016) strategic management stages, which begin with establishing a vision and mission. Aligning BRIDA's objectives with Denpasar City's vision and mission of increasing regional competitiveness through innovation is a solid first step. David (2016) emphasized that a clear vision and mission serve as the foundation for the entire strategic management process.

Document analysis shows that Denpasar City's missions, which serve as a reference for BRIDA, explicitly support increasing regional competitiveness through innovation. This is stated in the medium-term planning document, the Denpasar City Research and Development Agency's (BRIDA's) 2021-2026 Strategic Plan (RENSTRA), which outlines a five-year program and activity plan. The annual details of the targets and programs established in this Renstra are also outlined in the Regional Research and Innovation Agency's Work Plan (Renja). This demonstrates that the formulation of innovation strategies is not merely ad-hoc but integrated within a broader regional development planning framework, from the city's vision and mission to annual programs and activities. This integration ensures that innovation is an integral part of local government priorities and operations.

The main strategies formulated, such as requiring each Regional Apparatus Organization (OPD) to innovate and forming an innovation team, represent a proactive effort to build internal capacity. The PM emphasized, "I'm creating an ecosystem. First of all, we require each OPD to innovate." David (2016) emphasized the importance of mobilizing internal resources and creating a culture that supports the strategy. Regulations such as Mayoral Regulation No. 63 of 2023, which, according to the questionnaire, "The majority of respondents cited Mayoral Regulation 63/2023 as the legal basis for innovation," provide formal legitimacy for innovation efforts, ensuring that strategy formulation has a strong and accepted legal basis. Academic I1 also mentioned "A supportive regulatory and policy framework" as a key element to consider.

The holding of the KIPRAH competition ("already held every year," according to PM) is also a good mechanism to encourage innovation and provide appreciation, in line with the concept of Saleh and Wang (in Ellitan and Anatan, 2009) regarding the importance of an organizational climate that facilitates innovation and an effective recognition system. This shows that strategy formulation is not only top-down but also seeks to stimulate innovation from the operational level through incentives and recognition. Academic I1 stated that "the

condition of the regional innovation ecosystem in Denpasar City is very good, this is proven by the continued holding of innovation competitions between regional agencies in Denpasar City every year and the number of innovations each year is increasing and diverse."

Collaboration with stakeholders, including academics, practitioners, and the community, is a significant strength in BRIDA's strategy formulation. I2 explained that KIPRAH judges come from diverse backgrounds, and BRIDA also facilitates the community in provincial innovation competitions. This inclusive approach is consistent with strategic management, which emphasizes the integration of various business aspects and stakeholders to achieve long-term goals (David & David, 2016). The involvement of external parties can enrich perspectives in strategy formulation and ensure that the resulting innovations are more relevant to community needs, while reducing the risk of innovation isolation. Academic I1 emphasized the importance of "the involvement of all stakeholders" in strategy formulation.

Overall, strategy formulation at BRIDA Denpasar City is on the right track according to Fred R. David's theory, with a clear vision, opportunity identification, and concrete initiatives. However, challenges related to shared perceptions, human resource dynamics, and leadership changes require further attention through a more comprehensive communication and coaching strategy. Given that "the effectiveness of strategy formulation and implementation depends heavily on the active involvement of human resources" (David, 2016:87), further investment in the understanding and capacity of civil servants will further optimize the formulation stage, ensuring that the strategy is not only formulated but also understood and internalized by all stakeholders.

Analysis of the Implementation of Regional Competitiveness Enhancement Strategies Through Regional Innovation

The strategy implementation at BRIDA Denpasar City demonstrates a strong commitment to achieving the goal of increasing regional competitiveness through innovation, but faces substantial obstacles that could impact its effectiveness. Fred R. David (2016) explains that implementation includes developing a supportive culture, establishing an efficient organizational structure, adjusting business direction, budgeting, developing information systems, and linking employee compensation to organizational performance. BRIDA's priority program, research and development, is at the core of this implementation, with I2 mentioning a focus on "regional innovation-related activities related to Brida Denpasar City's Key Performance Indicators (IKU). This indicates that BRIDA has identified key programs to implement its strategy. Academic I1 also identified "Adaptive innovation governance, leadership commitment, and stakeholder engagement" as factors necessary for the successful implementation of the regional innovation strategy.

Analysis of the Implementation of Regional Competitiveness Enhancement Strategies Through Regional Innovation

Strategy evaluation is a crucial stage in the strategic management cycle, focusing on monitoring all organizational activities to ensure adherence to established strategic plans. This includes reviewing internal and external factors, measuring performance results, and implementing corrective actions (David & David, 2016). BRIDA Denpasar City measures and

evaluates the effectiveness of regional innovation strategies and programs through monitoring and evaluating regional innovation itself.

This indicates that monitoring results serve as a basis for determining whether the strategy is running as expected and triggering further action. David (2016) emphasized the importance of taking corrective action when necessary, meaning there must be a clear process for identifying deviations and formulating solutions proactively and systematically, rather than simply reactively. Academic I1 also suggested "Continue implementing money related to ongoing innovations" as a suggestion for BRIDA, emphasizing the importance of ongoing monitoring.

Analysis of Supporting and Inhibiting Factors of Regional Innovation

Analysis of the factors supporting and inhibiting regional innovation in Denpasar City is crucial in understanding the dynamics of the innovation ecosystem and formulating future improvement strategies, in line with the stages of internal and external environmental analysis in Fred R. David's (2016) strategic management. This section will systematically outline the various elements that support and inhibit innovation development in Denpasar City.

CONCLUSION

BRIDA Denpasar City implemented a three-stage strategy to enhance the Regional Competitiveness Index through regional innovation: formulating strategies aligned with the regional vision and reinforced by Mayoral Regulation No. 63 of 2023, which mandated innovation across all OPDs and established innovation teams; implementing research and development programs focused on KPIs despite budget constraints and the absence of integrated information systems; and regularly evaluating progress by monitoring innovation impacts on performance efficiency and public benefits. The strategy benefited from strong leadership, stakeholder collaboration, clear regulations, and team enthusiasm, but faced challenges such as limited HR quality, budgetary restrictions, a constrained innovation mindset, and heavy civil servant workloads. Future research could explore how to overcome these inhibiting factors, particularly strategies to enhance human resource capacity and foster a more robust innovation culture within regional governments.

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