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Strategic Development Analysis of the Universitas Widyatama Business Incubator for Supporting Micro, Small and Medium Enterprise (MSME) Development

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Abstract: University-based business incubators play an important role in supporting Micro, Small, and Medium Enterprise (MSME) development through mentoring, training, innovation, financing, and business networks. This study examines the strategic development of the Universitas Widyatama Business Incubator (WIBI) in supporting MSME tenant development. A qualitative case study approach was employed using interviews, observations, questionnaires, and documentation involving WIBI managers and tenants. Data were analyzed using Design Thinking, Business Model Canvas (BMC), Internal Factor Evaluation (IFE), External Factor Evaluation (EFE), Internal-External (IE) Matrix, Strengths-Weaknesses-Opportunities-Threats (SWOT), and Quantitative Strategic Planning Matrix (QSPM). The findings indicate that WIBI has a moderate internal position with an IFE score of 2.72. Its main strength is the ability to enhance tenant branding and business image, while institutional credibility and accreditation are also important strengths. The EFE score of 3.30 indicates a strong external position, with digital technology and online marketing as the main opportunity, followed by university research and technology resources. Key challenges include limited operational human resources, external mentors, industry and international partnerships, and an unclear profit-sharing mechanism. The IE Matrix places WIBI in Cell II (Grow and Build). SWOT generated twelve strategic alternatives, while QSPM identified external mentor and industry practitioner recruitment through a strategic partnership information system as the highest priority (TAS 5.86), followed by research and innovation commercialization (TAS 4.96) and digital technology mentoring for MSME tenants (TAS 4.37). These strategies provide directions for strengthening university-based MSME incubation.

Keyword: Business Incubator, MSME Development, Strategic Development, SWOT, QSPM

INTRODUCTION

Micro, Small, and Medium Enterprises (MSMEs) constitute an important component of the Indonesian economy, contributing to employment creation, income generation, economic equity, and regional economic development. Their strategic position is reflected in their substantial contribution to national economic activity. According to the Badan Pusat

Statistik (BPS, 2023), the MSME sector contributes approximately 61.97% to Indonesia's Gross Domestic Product (GDP) and absorbs more than 97% of the national workforce. Beyond their economic contribution, MSMEs also support innovation and economic diversification by producing various products and services that respond to local market needs (World Bank, 2020). These conditions demonstrate that strengthening MSMEs is not only relevant to individual business development but also to broader economic development.

Despite their strategic role, MSMEs continue to face various challenges that constrain their ability to grow and compete in an increasingly dynamic business environment. Changes in technology, consumer preferences, and market competition require MSMEs to continuously adapt their business practices. However, many MSMEs still encounter limitations in access to financing, managerial capabilities, human resource quality, marketing, product innovation, and technology utilization. The Ministry of Cooperatives and SMEs (2022) identifies limited access to financing and the quality of human resources as among the important constraints in MSME development. Consequently, the growth of the MSME sector cannot be measured merely by the increasing number of business units, but also by the extent to which these businesses can develop sustainable capabilities, respond to market changes, and improve their competitiveness.

The challenges faced by MSMEs indicate the need for institutional support that goes beyond conventional financial assistance. Business development requires continuous education, training, mentoring, access to markets, networking, and support for innovation. Previous discussions of MSME development emphasize the importance of developing new entrepreneurs and strengthening entrepreneurial skills so that business activities can contribute to household income, employment creation, and community economic development (Wahyudi in Ananda, 2017). In this context, business incubators have emerged as one of the institutional mechanisms that can support the development of new and existing businesses by providing an integrated environment for business assistance and development.

Business incubators are designed to support entrepreneurs through various forms of assistance, including business mentoring, training, consultation, networking, infrastructure, and access to financing. The development of business incubators is particularly relevant in an environment where technological advancement and changing consumer needs require entrepreneurs to shift from a product-oriented approach toward a more market-oriented approach (Mulyadi & Susanti, 2018). Through structured incubation activities, entrepreneurs can obtain opportunities to strengthen business capabilities, develop products, improve marketing strategies, and respond to changing market requirements. Mubaraki (2011) emphasizes the importance of developing incubation activities to produce entrepreneurs with stronger competitiveness, while Angkasa, Hubeis, and Pandjaitan (2012) highlight the importance of institutional support, innovation, and technology in developing competitive MSMEs in an increasingly globalized business environment.

The role of business incubators is also reflected in the range of services provided to tenants. Kementerian KUKM (2012). identifies seven important components of business incubation services, commonly referred to as the 7S framework: *space*, *shared office facilities*, *service*, *support*, *skill development*, *seed capital*, and *synergy*. These components encompass the provision of business space and shared facilities, management consultation, research and technology support, human resource development, access to initial capital and financial institutions, and business networking. The integration of these services positions business incubators not merely as providers of training but as institutional mechanisms for developing entrepreneurial capabilities and strengthening the competitiveness of supported businesses.

The role of business incubators becomes increasingly relevant within higher education institutions. Universities possess academic knowledge, human resources, infrastructure, research capabilities, and networks that can support entrepreneurial development. Therefore, university-based business incubators can function as a bridge between academic resources and

practical business development by providing students, alumni, and broader communities with opportunities to develop entrepreneurial activities. Such an institutional role is particularly important because MSME development requires not only access to business resources but also continuous learning, innovation, managerial development, and access to broader business networks.

In the context of Indonesia, the importance of business incubation has also been reflected in government policy. Law Number 20 of 2008 and Presidential Regulation Number 27 of 2013 recognize the importance of business incubators in creating new entrepreneurs and developing MSMEs that are competitive, resilient, creative, innovative, and professional. This policy context reinforces the position of business incubation as an institutional instrument for entrepreneurship and MSME development. Nevertheless, the existence of an incubator does not automatically ensure that its programs and services are effective. The development of an incubator requires an appropriate strategy that considers its internal capabilities, external environment, available resources, and the changing needs of its tenants.

This issue is particularly relevant in West Java, where the MSME sector represents a substantial component of regional economic activity. Data from Open Data Jawa Barat indicate that the number of MSMEs in West Java reached 7,055,660 business units in 2023, increasing by 5.83% compared with the previous year. At the city level, Bandung also experienced changes in the proportion of MSMEs during the 2019–2023 period. The proportion increased from 3.06% in 2019 to 5.93% in 2023, following fluctuations during the preceding years. The development of MSMEs in Bandung indicates substantial entrepreneurial potential, but the increasing number of business units also creates a need for stronger institutional support to ensure that businesses can develop their capabilities, access markets, improve legality and management, and sustain their operations.

Against this background, the Universitas Widyatama Business Incubator (WIBI) represents an important institutional context for examining the strategic development of a university-based business incubator. WIBI was established through Rector's Decree Number SK: 005/SK/G.02.02/Rektor/I/2020 concerning the establishment of the Universitas Widyatama Business Incubator. Its incubation activities cover the pre-incubation, incubation, and post-incubation stages, with programs directed toward business development, product development, marketing, business legality, and business networking. These activities position WIBI as a platform for developing entrepreneurial capabilities among students, alumni, and MSME actors.

Institutional records show that WIBI registered 44 tenants during the 2021–2025 period. Most tenants consisted of Universitas Widyatama students and alumni, while a smaller proportion consisted of MSME actors from outside the university. The tenants also represented diverse business sectors, including fashion and handicrafts, food and culinary businesses, manufacturing, technology, and cultivation. This diversity indicates that WIBI has considerable potential to support different forms of entrepreneurial activity. At the same time, the heterogeneity of tenants creates a strategic challenge because their business characteristics, development stages, resource requirements, and market needs may differ substantially.

The development of WIBI, however, continues to face several challenges. These include limitations in human resources, supporting facilities, access to capital, tenant marketing, and business network development. Such conditions indicate that strengthening WIBI cannot rely solely on increasing the number of incubation programs. Instead, the incubator requires a systematic development strategy that identifies its internal strengths and weaknesses while simultaneously considering opportunities and threats arising from the external environment. A strategic perspective is therefore necessary to determine how WIBI can improve its institutional capacity and optimize its role in supporting tenant and MSME development.

Previous studies have examined the role and development of business incubators in supporting MSMEs. Sitorus et al. (2021), for example, emphasize the importance of developing business incubator strategies through the identification of internal and external factors using SWOT and QSPM approaches. Hasbullah et al. (2015) also demonstrate the role of university business incubators in supporting tenant business performance, particularly through increased turnover, access to financing, and market expansion. These studies indicate that business incubators can contribute to business development through various forms of support. However, the existing discussion does not fully address the strategic development of a university-based business incubator within a specific institutional and regional context.

The research gap therefore lies not in the absence of studies concerning business incubation, but in the limited attention given to the formulation of development strategies for university-based incubators that simultaneously consider internal organizational conditions and external environmental factors. Previous studies have tended to emphasize the role of incubators, tenant performance, or incubation services, while the strategic development of the incubator as an institution remains relatively less explored. This gap is particularly relevant to WIBI because its tenants consist of students, alumni, and MSME actors with diverse business sectors and development needs. Consequently, a context-specific analysis is required to identify the strategic priorities that can strengthen WIBI's capacity to support MSME development.

To address this gap, this study examines the strategic development of the Universitas Widyatama Business Incubator through an analysis of its entrepreneurial process, *design thinking*, and internal and external strategic factors. The study uses SWOT analysis to identify strategic alternatives based on the relationship between internal strengths and weaknesses and external opportunities and threats. Subsequently, the Quantitative Strategic Planning Matrix (QSPM) is used to determine strategic priorities among the identified alternatives. This approach enables the study to move beyond describing the existing condition of WIBI toward formulating strategic directions that can be considered in its future institutional development.

The contribution of this study is twofold. Theoretically, the study contributes to the discussion of university-based business incubation by examining the development of an incubator from a strategic organizational perspective and by connecting incubation activities with the broader objective of MSME development. The study also provides a context-specific perspective on how internal and external strategic factors can be incorporated into the formulation of development strategies for a university business incubator. Practically, the findings are expected to provide strategic input for WIBI in strengthening its human resources, supporting facilities, access to financing, marketing assistance, business networking, and incubation services according to the needs of its tenants. The findings may also provide a reference for higher education institutions seeking to strengthen the role of business incubators in supporting entrepreneurship and MSME development.

Accordingly, this study addresses the following research question: How can the development strategy of the Universitas Widyatama Business Incubator be formulated to strengthen its role in supporting the development of Micro, Small, and Medium Enterprises (MSMEs)?

To answer this question, the study examines the *design thinking* and entrepreneurial processes implemented within WIBI, identifies the internal and external strategic factors affecting its development, and formulates strategic alternatives and priorities using SWOT and QSPM analysis. Through this approach, the study seeks to provide a structured strategic framework for strengthening the role of WIBI as a university-based business incubator in supporting sustainable MSME development.

Literature Review

Business Incubation and MSME Development

Business incubators are institutions that provide facilities and support services to assist business development through training, consulting, skill development, access to financing, marketing, and business networking (Kementerian KUKM, 2012; Marzaman & Hasan, 2020). In MSME development, such support is important because entrepreneurs face not only financial constraints but also challenges related to management, marketing, technology, and business capabilities (Kementerian KUKM, 2012). Kementerian KUKM (2012) identifies seven key incubation services through the 7S framework: *space, shared office facilities, service, support, skill development, seed capital,* and *synergy*. This framework indicates that effective incubation requires integrated support. However, a mismatch between incubator services and tenant needs may limit the effectiveness of incubation programs (Arini, 2018).

University Business Incubators and Tenant Development

University business incubators have an important role in utilizing university resources, including knowledge, facilities, research, technology, and networks to support business development (Hasan; Agustina). Their functions include mentoring, training, innovation development, knowledge and technology transfer, and market access. Previous studies demonstrate the contribution of university business incubators to tenant development. Hasbullah et al. found improvements in employment, turnover, market coverage, and access to financing among businesses assisted by university incubators. Hurriati et al. also found that incubation mentoring supported creativity and innovation among assisted entrepreneurs. Meanwhile, Wajdi et al. identified the need to strengthen tenant selection, incubation, post-incubation, and institutional collaboration. Management capacity, qualified human resources, planning, and dependence on government support have also been identified as challenges in incubator development (Akcomak, 2009).

Strategic Management and Business Incubator Development

Strategic management involves the formulation, implementation, and evaluation of strategies by considering an organization's internal and external conditions. Strategy is viewed as a continuous process that should respond to environmental changes and organizational needs (Yatminiwati, 2019). Hill et al. (2019) emphasize the importance of managing organizational resources to achieve strategic objectives and create competitive advantage. In the context of business incubators, internal factors may include human resources, facilities, programs, funding, organizational capabilities, and networks. External factors may include government policies, technological developments, economic conditions, competition, funding opportunities, and partnerships (Wispandono, 2010; Buchory & Saladin, 2010; Worthington & Britton, 2000). Analyzing these factors enables organizations to identify internal strengths and weaknesses as well as external opportunities and threats.

SWOT and QSPM in Business Incubator Development

SWOT analysis integrates internal strengths and weaknesses with external opportunities and threats as a basis for strategy formulation. The IFE and EFE matrices can be used to assess internal and external strategic factors, respectively, while the results can be further developed into strategic alternatives through the SWOT matrix. This approach has been applied in previous business incubator studies. Sitorus et al. used IFE, EFE, SWOT, and QSPM to formulate development strategies for the IPB Business Incubator. Soba et al. also applied IFE, EFE, SWOT, and QSPM to identify and prioritize business incubator development strategies. These studies demonstrate the relevance of systematic internal and external analysis for developing business incubators.

Research Gap and Conceptual Positioning

Previous studies have examined business incubators from several perspectives, including tenant development, incubation services, university incubator roles, and strategic development. Research by Hasbullah et al., Hurriati et al., and Agustina emphasizes the role of incubation services and mentoring in developing tenants, while Sitorus et al. and Soba et al. demonstrate the use of IFE, EFE, SWOT, and QSPM for incubator strategy development.

However, the existing studies provide limited attention to the strategic development of a specific university business incubator by integrating its internal organizational conditions, external environment, and tenant development needs. This study addresses this gap by examining the Inkubator Bisnis Universitas Widyatama (WIBI) through internal and external environmental analysis. IFE and EFE are used to evaluate strategic factors, SWOT is used to formulate development alternatives, and QSPM is used to determine strategic priorities. This approach positions WIBI's institutional development as an important mechanism for strengthening incubation services and supporting MSME development.

Table 1. Selected Previous Studies and Research Gap

Author(s)	Focus	Main Finding	Relevance to This Study
Sitorus et al.	Incubator development strategy	IFE, EFE, SWOT, and QSPM can formulate incubator development strategies	Basis for the strategic analysis of WIBI
Marzaman & Hasan	Incubation model	*Out Wall* model and 7S services support MSME capacity	Basis for understanding incubation services
Hasbullah et al.	University incubator performance	Incubation improves tenant employment, turnover, market access, and financing	Supports the role of university incubators
Wajdi et al.	Incubator strengthening	Tenant selection, incubation, post-incubation, and collaboration require strengthening	Identifies institutional development issues
Hurriati et al.	Incubator role	Mentoring supports creativity, innovation, and business development	Supports the importance of tenant assistance
Soba et al.	Incubator development strategy	SWOT and QSPM identify and prioritize development strategies	Supports the IFE–EFE–SWOT–QSPM approach
Agustina	University incubator services	Services include support, skill development, seed capital, and synergy	Supports analysis of WIBI services
Akcomak	Incubator development	Management, qualified personnel, planning, and government dependence are key challenges	Supports internal-external analysis

Overall, the literature indicates that effective business incubator development requires the integration of tenant-oriented services and institutional strategic capacity. Therefore, the present study focuses on identifying the internal and external factors affecting WIBI and translating them into prioritized strategies for strengthening its role in MSME development.

METHODS

Research Design

This study adopts a qualitative case study design to examine the development strategy of the Business Incubator of Universitas Widyatama (WIBI) in supporting the development of Micro, Small, and Medium Enterprises (MSMEs). A qualitative approach was selected because the study seeks to obtain an in-depth understanding of the implementation of incubation

activities, organizational conditions, and factors influencing the development of WIBI. Qualitative research emphasizes understanding phenomena in their natural context through data obtained from interviews, observations, and relevant documents (Sugiyono, 2018; Moleong, 2017; Hendryadi et al., 2019). The study is analytical in nature, combining qualitative findings with strategic analysis tools to identify internal and external factors, formulate alternative strategies, and determine strategic priorities. The analytical sequence consists of Internal Factor Evaluation (IFE), External Factor Evaluation (EFE), Internal-External (IE) Matrix, Strengths-Weaknesses-Opportunities-Threats (SWOT), and Quantitative Strategic Planning Matrix (QSPM).

Case Profile and Unit of Analysis

The empirical setting of this study is the Business Incubator of Universitas Widyatama (WIBI), which provides incubation services to support the development of MSMEs. WIBI implements business development activities through incubation and mentoring programs intended to strengthen the capabilities of its tenants. The unit of analysis is WIBI as a university-based business incubator, with particular attention to its incubation implementation, organizational capabilities, resources, services, networks, and external environmental conditions. The analysis also considers the experiences and perspectives of WIBI tenants as users of incubation services.

Case Selection and Participants

WIBI was selected purposively because it represents a university-based business incubator that provides structured support for MSME development. The selection of participants was based on their relevance, competence, experience, and involvement in WIBI activities. The participants consisted of seven respondents representing internal and external perspectives. The internal respondents comprised three WIBI managers with relevant competence and experience. The external respondents consisted of four WIBI tenants, comprising two *in-wall* tenants and two *out-wall* tenants.

Data Sources and Data Collection

This study uses primary and secondary data. Primary data were obtained through interviews, observations, questionnaires, and documentation involving WIBI managers and tenants. Interviews were conducted to obtain in-depth information regarding WIBI's implementation, strengths, weaknesses, opportunities, threats, and development needs. Observations were used to examine the implementation of incubation activities, while questionnaires supported the assessment of strategic factors. Documentation was used to obtain information concerning WIBI programs, tenants, activities, and organizational conditions. Secondary data were obtained from relevant documents, literature, journals, articles, and publicly available information related to business incubation and MSME development. The use of multiple data sources supports data triangulation and provides a broader basis for identifying strategic factors (Mukhyi, 2023).

Table 2. Data Sources and Analytical Focus

Data Source	Description	Analytical Purpose
WIBI managers	Interviews and questionnaires with three internal respondents	To identify internal strengths and weaknesses and assess WIBI's organizational conditions
WIBI tenants	Interviews and questionnaires with four *in-wall* and *out-wall* tenants	To identify tenant experiences, service needs, and external perspectives
Observation	Direct observation of WIBI activities and incubation implementation	To examine the implementation of incubation programs and supporting conditions

Documentation	WIBI documents, tenant data, program records, and related materials	To support identification and verification of strategic factors
Literature and secondary sources	Journals, articles, institutional documents, and relevant publications	To provide contextual and theoretical support for the analysis

Data Analysis

Data analysis was conducted using a sequential strategic analysis consisting of IFE, EFE, IE Matrix, SWOT, and QSPM. IFE and EFE were used to identify and evaluate internal and external strategic factors. The IE Matrix determined WIBI's strategic position, while SWOT generated alternative strategies by matching strengths, weaknesses, opportunities, and threats. QSPM was then used to prioritize the alternative strategies based on their relative attractiveness. The strategy with the highest Total Attractiveness Score (TAS) was identified as the priority strategy.

Research Rigor

Research rigor was supported through triangulation of interviews, questionnaires, observations, and documentation, as well as the involvement of both WIBI managers and tenants. The resulting strategic factors were subsequently integrated into the IFE–EFE–IE–SWOT–QSPM analysis to formulate and prioritize WIBI development strategies.

RESULTS AND DISCUSSION

Results

This section presents the key findings from the case-based analysis of the Business Incubator of Universitas Widyatama (WIBI) in supporting the development of Micro, Small, and Medium Enterprises (MSMEs). The findings are organized into five analytical themes covering WIBI's internal capabilities, external environment, organizational constraints, strategic alternatives, and strategic priorities. The analysis integrates the Internal Factor Evaluation (IFE), External Factor Evaluation (EFE), Internal-External (IE), SWOT, and Quantitative Strategic Planning Matrix (QSPM) matrices, supported by evidence from interviews, observations, and institutional documentation.

Table 3. Summary of Key Findings and Analytical Themes

Analytical Theme	Empirical Evidence (Case-Based)	Analytical Interpretation
Institutional credibility and internal capability	IFE score: 2.72. The highest internal strength was the ability to improve tenant branding and business image (0.44), followed by institutional credibility and accreditation (0.40).	WIBI has a relatively strong internal foundation supported by institutional credibility, facilities, human resources, and incubation programs.
External opportunities	EFE score: 3.30. The highest opportunity was digital technology and online marketing (0.44), followed by university research and technology resources (0.40).	Digital development and the university research ecosystem provide important opportunities for tenant development.
Organizational constraints	Key weaknesses included limited operational staff, insufficient external mentors, limited industry and international partnerships, and an unclear profit-sharing mechanism.	Limited external mentoring and partnerships remain major constraints to WIBI's development.
SWOT strategic alternatives	12 strategies were formulated through SO, WO, ST, and WT combinations.	WIBI requires strategies that utilize its strengths and opportunities while addressing

		internal weaknesses and external threats.
QSPM strategic priorities	The highest STAS was 5.86 for WO1, followed by SO1 (4.96) and SO2 (4.37).	The priorities are external mentor recruitment, research commercialization, and digital technology mentoring.

As summarized in Table 3, The IFE score of 2.72 indicates a moderate internal position, while the EFE score of 3.30 indicates a strong external position. Accordingly, the IE Matrix places WIBI in Cell II (Grow and Build). The SWOT analysis generated 12 strategic alternatives, with the QSPM identifying WO1 recruiting and involving external mentors/practitioners through a strategic partnership information system as the highest-priority strategy (STAS 5.86). The next priorities were SO1, focusing on research and innovation commercialization (STAS 4.96), and SO2, focusing on digital technology mentoring for tenants (STAS 4.37).

Institutional Credibility and Internal Capability

The IFE analysis produced a total weighted score of 2.72, which is above the average reference value of 2.50. This result indicates that WIBI has a relatively favorable internal position in utilizing its strengths and addressing its weaknesses. The factor receiving the highest weighted score was WIBI's ability to improve tenant branding and business image, with a score of 0.44, followed by institutional credibility and accreditation with a score of 0.40. These findings indicate that WIBI possesses internal capabilities that can support the development and strengthening of its incubation services.

Institutional credibility and accreditation represent an important organizational resource for WIBI. As a university-based business incubator, WIBI benefits from its position within Universitas Widyatama and its institutional recognition as a business incubator. This condition provides an institutional foundation for developing relationships with tenants, business partners, investors, and other stakeholders. The finding indicates that credibility is not merely an administrative attribute but also contributes to stakeholder trust and WIBI's capacity to establish external relationships and provide incubation services.

The ability to improve tenant branding and business image also represents an important internal strength. WIBI facilitates activities such as business matching, industry gatherings, and product exhibitions that provide opportunities for tenants to introduce and promote their products to broader stakeholders. Such activities can strengthen tenant visibility and business image while supporting the development of market relationships. This finding is consistent with the role of business incubators in facilitating product and business promotion through cooperation and collaboration, which can become an important competitive advantage for incubated businesses (Nawawi, 2022).

Another important internal capability is the availability of structured training and mentoring programs. WIBI's incubation process includes *business coaching*, mentoring, business consulting, and training or workshops. These mechanisms address different aspects of tenant development, ranging from business problem identification and strategic planning to technical skills, financial management, quality management, leadership, marketing, and business development.

The case evidence indicates that *business coaching* is used to develop tenant knowledge and skills through guidance, questioning, alternative perspectives, problem-solving, and strategic planning. Mentoring provides tenants with experience-based advice from individuals with relevant expertise, while business consulting focuses on addressing specific business problems and developing business and operational strategies. Training and workshops complement these mechanisms by providing practical knowledge and skills required for business management.

The combination of institutional credibility, tenant branding capabilities, and structured incubation programs therefore constitutes an important internal capability of WIBI. Rather than relying solely on its institutional identity, WIBI already possesses a service structure that can be utilized as a foundation for further development. However, the internal analysis also indicates that these capabilities need to be supported by stronger operational resources and external partnerships to increase their effectiveness and sustainability.

University-Based Research and Innovation as a Strategic Opportunity

The EFE analysis resulted in a total weighted score of 3.30, exceeding the average reference value of 2.50. This indicates that WIBI has a relatively strong capacity to respond to external opportunities while managing potential threats. The highest-rated opportunity was the development of digital technology and online marketing, with a weighted score of 0.44, followed by the availability of research and technology resources within Universitas Widyatama, with a weighted score of 0.40.

The finding reflects the strategic position of WIBI within a university environment. Universitas Widyatama provides access to academic knowledge, research activities, technological resources, and expertise that can potentially be connected to tenant development. These resources create opportunities for WIBI to facilitate the transformation of knowledge and innovation into business applications. The availability of research and technology resources is particularly relevant to WIBI's role as a technology-based business incubator that develops creative and innovative tenants.

The opportunity is also consistent with WIBI's incubation stages, which provide mechanisms for connecting research, technology, product development, production trials, and market development with entrepreneurial activities. Through these mechanisms, university-based research and technological innovation can potentially be directed toward product improvement, process development, business model development, and market-oriented commercialization.

The case analysis further indicates that university-based research can provide an important input for tenant product and business development. Research outputs and technological innovations can be utilized to improve product quality, develop production processes, strengthen business models, and create opportunities for commercialization. Thus, the university ecosystem represents not only a source of academic knowledge but also a strategic resource for strengthening the competitiveness of WIBI tenants.

In addition to research and technology resources, the development of digital technology and online marketing provides a significant opportunity for WIBI and its tenants. Digital platforms can expand market reach, facilitate customer interaction, increase product exposure, and strengthen tenant branding beyond geographical limitations. Accordingly, WIBI can utilize this opportunity by strengthening digital marketing training and mentoring, including the use of social media, marketplaces, and other digital platforms in tenant business development.

Other opportunities identified through the EFE analysis include government support for the development of new entrepreneurs, opportunities for international networking and partnerships, employment absorption and local economic development, and the large population of potential MSME actors among students and the wider community in Bandung and West Java. These opportunities broaden the potential resource, partnership, and market base available to WIBI.

Organizational and Mentoring Constraints

Despite its internal strengths, the analysis identifies several organizational constraints that may limit WIBI's ability to expand its incubation services. The main weaknesses include limited operational human resources, insufficient external mentors, limited industry and international partnerships, and the absence of a clear profit-sharing mechanism. Among these

factors, limited industry and international partnerships obtained the highest weighted score of 0.44, followed by insufficient external mentors with 0.40.

The case findings indicate that limited operational personnel creates additional workload for the existing management team. This condition may affect WIBI's ability to expand its activities, maintain intensive tenant monitoring, and develop external partnerships. The limitation becomes increasingly relevant when WIBI seeks to increase the number and diversity of tenants while maintaining the quality of incubation services. Strengthening operational human resources is therefore important to ensure that WIBI's existing programs can be implemented effectively.

Another important constraint concerns the availability of external mentors. The case evidence indicates that mentoring and training activities are supported primarily by internal university resources, while the availability of external practitioners and mentors remains limited. Consequently, some aspects of business mentoring may not fully reflect the practical needs and current conditions of the business environment. External practitioners can provide experience-based perspectives, industry knowledge, market insights, and practical business experience that complement the academic expertise available within the university.

The analysis also identifies limited industry and international partnerships as a significant internal weakness. This limitation restricts opportunities for broader market access, business networking, knowledge exchange, technology transfer, and collaboration. Stronger relationships with industry, business associations, professional networks, alumni, and international partners could expand the resources available to WIBI and its tenants. Such partnerships are also important for providing access to practitioners who can contribute to mentoring and business development activities.

A further weakness is the absence of a clear and standardized profit-sharing mechanism. The current condition does not provide a transparent framework governing the distribution of benefits arising from commercialization or cooperation involving WIBI and its tenants. This may create uncertainty concerning the rights and responsibilities of the parties involved and potentially affect the development of sustainable commercialization partnerships. Establishing a flexible and transparent mechanism could therefore support future cooperation and commercialization activities.

These findings indicate that WIBI's principal challenge is not the absence of basic incubation capabilities, but the need to strengthen its operational capacity, external mentoring resources, industry and international partnerships, and commercialization mechanisms. Addressing these constraints is important to ensure that WIBI can more effectively utilize its institutional strengths and respond to the opportunities identified in the external environment.

Strategic Alternatives from SWOT Integration

The SWOT analysis was conducted by matching WIBI's internal strengths and weaknesses with external opportunities and threats. The analysis generated twelve strategic alternatives consisting of three SO strategies, three WO strategies, three ST strategies, and three WT strategies.

Table 4. SWOT-Based Strategic Alternatives

Strategic Orientation	Alternative Strategies
SO – Strengths–Opportunities	1. Utilize WIBI's competitiveness and credibility to commercialize research and innovation produced by the Universitas Widyatama academic community. 2. Utilize WIBI's facilities and human resource capabilities to optimize mentoring for digital technology adoption among MSME tenants. 3. Access government grants and programs by leveraging WIBI's training programs and tenant branding track record.

Strategic Orientation	Alternative Strategies
WO – Weaknesses–Opportunities	1. Recruit and involve external mentors and industry practitioners through a strategic partnership information system. 2. Develop a flexible profit-sharing mechanism to attract commercialization-oriented research tenants. 3. Develop cooperation with industry and international networks to address limitations in internal resources.
ST – Strengths–Threats	1. Utilize WIBI's credibility and human resource capabilities to strengthen its position amid competition among business incubators. 2. Expand marketing and promotion of WIBI's programs beyond academic networks. 3. Optimize internal and independent funding networks to reduce dependence on fluctuating government grants.
WT – Weaknesses–Threats	1. Increase or optimize the allocation of operational human resources to respond to internal regulations and competitive dynamics. 2. Propose improvements to internal university regulations concerning operational support and profit-sharing mechanisms. 3. Strengthen multi-stakeholder (*pentahelix*) collaboration to reinforce WIBI's position amid competition among incubators.

The SWOT formulation demonstrates that WIBI's strategic alternatives extend beyond strengthening existing incubation programs. The SO strategies emphasize the utilization of institutional credibility, facilities, human resources, and training capabilities to capture opportunities related to research commercialization, digital technology, and government programs. The WO strategies focus on using external opportunities to address internal limitations, particularly through external mentoring, profit-sharing mechanisms, and industry and international partnerships. The ST strategies emphasize the use of WIBI's existing strengths to respond to competition, limited promotional reach, and funding uncertainty. Meanwhile, the WT strategies focus on reducing internal vulnerabilities through operational human resource strengthening, improvements to internal regulations, and multi-stakeholder collaboration. The resulting strategic alternatives therefore combine the strengthening of WIBI's internal capabilities with the expansion of external resources, partnerships, and market access.

Strategic Prioritization through QSPM

The twelve strategic alternatives were subsequently evaluated using the Quantitative Strategic Planning Matrix (QSPM) to determine their relative strategic attractiveness. The QSPM results indicate differences in the attractiveness of each alternative based on the internal and external strategic factors identified in the previous analyses.

Table 5. Priority Strategies Based on QSPM

Priority	Strategic Alternative	STAS
1	Recruit and involve external mentors and industry practitioners through a strategic partnership information system	**5.86**
2	Utilize WIBI's competitiveness and credibility to commercialize research and innovation produced by the Universitas Widyatama academic community	**4.96**
3	Utilize WIBI's facilities and human resource capabilities to optimize mentoring for digital technology adoption among MSME tenants	**4.37**

The QSPM analysis identifies the recruitment and involvement of external mentors and industry practitioners through a strategic partnership information system as the highest-priority strategy, with a STAS of 5.86. This strategy addresses WIBI's internal limitations in external mentoring and industry partnerships while utilizing opportunities for broader collaboration. The result indicates that strengthening access to external expertise is considered the most

attractive strategic direction when the identified internal and external factors are evaluated simultaneously.

The strategic rationale lies in the importance of external expertise for complementing WIBI's existing internal capabilities. External mentors from industry, government, business communities, professional networks, and other universities can provide practical knowledge, industry experience, market perspectives, and specialized expertise that complement academic resources. A strategic partnership information system can further support the identification, recruitment, coordination, and monitoring of potential mentors according to the specific needs of WIBI tenants.

The second-priority strategy is utilizing WIBI's competitiveness and credibility to commercialize research and innovation produced by the Universitas Widyatama academic community, with a STAS of 4.96. This strategy connects WIBI's institutional capabilities with the university's research and technological resources. Through its incubation functions, WIBI can facilitate the transformation of research outputs and technological innovations into business applications by supporting business model development, product development, market identification, industry partnerships, and commercialization.

The third-priority strategy is utilizing WIBI's facilities and human resource capabilities to optimize mentoring for digital technology adoption among MSME tenants, with a STAS of 4.37. This strategy responds to the growing opportunity provided by digital technology and online marketing while utilizing WIBI's existing facilities and human resources. Digital mentoring can support tenants in adopting social media, marketplaces, digital marketing platforms, and other technologies relevant to business operations and market development.

The QSPM results therefore show that the three priority strategies address interconnected dimensions of WIBI's development: strengthening external mentoring capacity, commercializing university-based research and innovation, and enhancing digital technology adoption among tenants. These priorities indicate that WIBI's future development requires both the strengthening of existing internal capabilities and the expansion of external resources and networks.

Synthesis of Findings

Taken together, the findings indicate that WIBI has a relatively favorable strategic position, reflected in an IFE score of 2.72 and an EFE score of 3.30. The internal analysis highlights tenant branding capabilities, institutional credibility and accreditation, structured training and mentoring programs, facilities, and human resource capabilities as important internal strengths. The external analysis identifies digital technology and online marketing, as well as university-based research and technology resources, as prominent opportunities.

At the same time, the findings reveal organizational constraints related to limited operational human resources, insufficient external mentors, limited industry and international partnerships, and the absence of a clear profit-sharing mechanism. These conditions indicate that further development requires more than maintaining existing incubation activities. WIBI needs to strengthen its operational capacity while expanding access to external expertise, partnerships, technology, and commercialization opportunities.

The SWOT analysis translated these conditions into twelve strategic alternatives across SO, WO, ST, and WT orientations. The subsequent QSPM analysis prioritized three strategies: recruiting and involving external mentors and industry practitioners through a strategic partnership information system (STAS 5.86), utilizing WIBI's competitiveness and credibility to commercialize university research and innovation (STAS 4.96), and utilizing WIBI's facilities and human resources to optimize digital technology mentoring for tenants (STAS 4.37).

Overall, the findings portray WIBI's development as a process of leveraging existing institutional capabilities while strengthening access to external expertise, research

commercialization, digital technology, and strategic partnerships. The combination of institutional credibility, structured incubation services, university-based innovation, external mentoring, and digital capabilities provides a strategic basis for strengthening WIBI's contribution to MSME development.

Discussion

The findings indicate that WIBI has a relatively favorable strategic position, supported by institutional credibility, tenant branding capabilities, structured incubation programs, and access to university-based research, technology, and digital development opportunities. The IFE score of 2.72 indicates a relatively stable internal position, while the EFE score of 3.30 indicates a strong response to external opportunities and threats. However, WIBI's development remains constrained by limited operational human resources, insufficient external mentors, limited industry and international partnerships, and the absence of a clear profit-sharing mechanism. These findings are consistent with previous studies emphasizing that effective business incubation requires integrated support, including mentoring, financing, infrastructure, networking, and institutional support.

Institutional Capability and Incubation Services

WIBI's institutional credibility, tenant branding capabilities, and structured training and mentoring programs represent important internal capabilities. The finding is consistent with Hasbullah et al. (2015), who found that university business incubators can contribute to tenant development through support related to workforce development, turnover, marketing, and financing access. Similarly, Agustina highlights the importance of services, support, skill development, seed capital, and synergy in business incubation. The finding also corresponds with the 7S incubation concept proposed by Kementerian KUKM (2012), particularly in terms of service, support, skill development, and synergy.

WIBI's existing incubation mechanisms, including *business coaching*, mentoring, business consulting, and training or workshops, provide a structured basis for tenant development. These services enable tenants to obtain support in business problem identification, strategic planning, financial management, marketing, and business development. The ability to improve tenant branding and business image further strengthens this capability by providing opportunities for product promotion, business matching, industry gatherings, and product exhibitions.

However, the limitations identified in external mentoring and industry partnerships indicate that WIBI's existing capabilities have not yet been fully supported by a sufficiently broad external ecosystem. Thus, further development should focus on strengthening the existing incubation system by expanding external expertise and partnerships rather than establishing an entirely new incubation structure.

University Research and External Ecosystem

University-based research and technology resources emerged as one of the most important external opportunities for WIBI, while digital technology and online marketing represented the highest-rated opportunity. This finding reflects the distinctive potential of university-based incubators to connect academic knowledge, research, technology, and entrepreneurial activities. Hassan emphasizes the role of university business incubators in linking university knowledge, students, researchers, and entrepreneurs, while Zotov et al. highlight the integration of education and business through student incubation.

The university ecosystem provides WIBI with access to academic expertise, research outputs, technological resources, and potential innovations that can be directed toward tenant development. Through the incubation process, these resources can potentially be translated into product development, process improvement, business model development, and

commercialization. The QSPM result, which places research and innovation commercialization as the second-priority strategy (STAS 4.96), further supports the strategic importance of this opportunity. At the same time, the development of digital technology and online marketing provides additional opportunities for tenants to expand market reach, strengthen branding, and improve customer interaction. WIBI can therefore strengthen its role as an intermediary between university resources, digital technology, and tenant business development. This approach allows university-based resources to be transformed into practical opportunities that can improve tenant competitiveness.

Organizational Constraints and External Mentoring

The limited availability of operational staff and external mentors indicates that WIBI's development is influenced not only by its internal capabilities but also by the strength of its external ecosystem. Wajdi, Mangifera, and Isa emphasize the importance of strengthening incubation and collaboration, while Akcomak identifies qualified management, planning, and integrated support as important factors in incubator development.

The QSPM result provides further support for addressing this constraint, as the strategy of recruiting and involving external mentors and industry practitioners through a strategic partnership information system obtained the highest STAS of 5.86. This strategy directly addresses the limitations in external mentoring and industry partnerships while utilizing opportunities for broader collaboration.

External practitioners can complement academic expertise by providing practical knowledge concerning markets, operations, finance, technology, and business development. A structured partnership information system can facilitate the identification, recruitment, matching, coordination, and evaluation of mentors according to tenant needs and areas of expertise. Such an approach can also broaden WIBI's access to industry, government, business communities, professional networks, alumni, and other universities.

Strategic Priorities for WIBI Development

The IE analysis places WIBI in Cell II (Grow and Build), reflecting a moderate internal position and a strong external position. This position indicates that WIBI should pursue development-oriented strategies by strengthening existing capabilities while actively utilizing external opportunities. This finding is consistent with the SWOT and QSPM results, which emphasize the utilization of institutional strengths, university resources, digital technology, and external partnerships while addressing organizational weaknesses.

The three highest-priority strategies identified through the QSPM are: (1) recruiting and involving external mentors and industry practitioners through a strategic partnership information system, with a STAS of 5.86; (2) utilizing WIBI's competitiveness and credibility to commercialize research and innovation produced by the Universitas Widyatama academic community, with a STAS of 4.96; and (3) utilizing WIBI's facilities and human resource capabilities to optimize mentoring for digital technology adoption among MSME tenants, with a STAS of 4.37.

These strategies address three interconnected dimensions of incubation development: external mentoring capacity, research commercialization, and digital technology adoption. The first strategy is particularly important because the availability of external mentors and industry partnerships remains a major organizational constraint. The second strategy utilizes WIBI's institutional position to bridge university research and business commercialization, while the third strengthens tenant capabilities in responding to digital transformation. Together, these priorities provide a development direction that combines internal capability strengthening with external resource mobilization.

Implications for WIBI

The findings suggest that WIBI's development should focus on strengthening existing incubation services while expanding its connections with industry, government, practitioners, researchers, investors, and the wider MSME ecosystem. Arini notes that a mismatch between incubator services and tenant needs may reduce the effectiveness of incubation. Therefore, WIBI should align mentoring and support with tenant needs, particularly by expanding external mentor networks and establishing a structured mechanism for managing strategic partnerships. WIBI should also strengthen the commercialization pathway for university research and innovation by connecting researchers and tenants with industry partners, investors, markets, and other relevant stakeholders. In parallel, digital technology mentoring should be strengthened to help tenants utilize social media, marketplaces, and other digital platforms for marketing and business development. Overall, the study shows that the development of a university-based business incubator depends not only on institutional resources but also on its ability to connect knowledge, mentoring, technology, commercialization, and external networks. For WIBI, strengthening these connections provides a strategic basis for improving its contribution to MSME development while reinforcing its role within the university entrepreneurial ecosystem.

CONCLUSION

This study examined the development strategy of the Widyatama Business Incubator (WIBI) in supporting Micro, Small, and Medium Enterprises (MSMEs) through a case-based analysis integrating Design Thinking, the Business Model Canvas (BMC), IFE, EFE, IE, SWOT, and QSPM. The findings indicate that WIBI has an established internal foundation supported by institutional credibility, accreditation, tenant branding capabilities, structured training and mentoring programs, adequate facilities, and competent human resources. The IFE analysis resulted in a score of 2.72, with the ability to improve tenant branding and business image identified as the highest-scoring internal strength. Meanwhile, the EFE analysis resulted in a score of 3.30, with digital technology and online marketing identified as the most prominent opportunity, followed by university-based research and technology resources.

The analysis also identified several organizational constraints, particularly limited operational human resources, insufficient external mentors, limited industry and international partnerships, and the absence of a clear profit-sharing mechanism. The IE Matrix positioned WIBI in Cell II (Grow and Build), indicating the need to strengthen existing capabilities while actively utilizing external opportunities. Through the SWOT analysis, twelve strategic alternatives were formulated across SO, WO, ST, and WT strategies. These alternatives emphasize research commercialization, digital technology mentoring, government programs, external mentoring, industry and international partnerships, funding diversification, operational human resources, internal regulations, and multi-stakeholder collaboration.

The QSPM analysis identified recruiting and involving external mentors and industry practitioners through a strategic partnership information system as the highest-priority strategy, with a STAS of 5.86. This strategy directly addresses the limitations in external mentoring and industry partnerships while expanding WIBI's access to practical expertise and external networks. The second priority is utilizing WIBI's competitiveness and credibility to commercialize research and innovation produced by the Universitas Widyatama academic community, with a STAS of 4.96, followed by utilizing WIBI's facilities and human resource capabilities to optimize digital technology mentoring for MSME tenants, with a STAS of 4.37.

The study contributes theoretically by demonstrating how strategic analysis can be integrated with a university-based business incubation perspective to identify and prioritize MSME development strategies. The integration of Design Thinking and BMC provides an understanding of tenant needs, value propositions, resources, activities, partnerships, and commercialization, while the IFE, EFE, IE, SWOT, and QSPM analyses provide a structured approach for translating these conditions into strategic alternatives and priorities.

From a practical perspective, the findings suggest that WIBI should prioritize the development of an external mentor and strategic partnership system, strengthen the commercialization of university research and innovation, and enhance digital technology mentoring for tenants. These strategies can be supported by expanding partnerships with industry, government, professional networks, researchers, investors, and other relevant stakeholders. WIBI should also consider benchmarking its incubation practices against other business incubators to identify opportunities for improving partnerships, funding access, government programs, and tenant development services.

This study is subject to limitations inherent in a case-based approach and its focus on a single university business incubator. Therefore, the findings provide contextual strategic insights rather than statistical generalization. Future research may employ comparative or multi-case approaches by benchmarking WIBI with other university business incubators to examine differences in institutional strategies, government and industry partnerships, funding mechanisms, external mentoring systems, and incubation practices.

In conclusion, WIBI's development requires the strengthening of existing institutional capabilities while expanding access to external expertise, research commercialization, digital technology, funding, and strategic partnerships. Prioritizing external mentor development, research commercialization, and digital technology mentoring provides a strategic direction for strengthening WIBI's incubation capacity and its contribution to the development and competitiveness of MSME tenants.

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