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LEVERAGING BUSINESS ANALYTICS FOR STRATEGIC GROWTH: THE ROLE OF MARKETING INTELLIGENCE AND MARKETING AGILITY IN HIGHER EDUCATION

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Abstract: The higher education landscape in Indonesia is facing increasing competitive pressures, requiring institutions to transform operational and student data into actionable strategies for sustainable growth. Although business analytics has been widely adopted in the corporate sector, its integration with marketing intelligence and marketing agility in higher education governance remains underexplored. This study aims to examine how Indonesian higher education institutions utilize business analytics to strengthen marketing intelligence and enhance marketing agility in responding to dynamic market conditions. A qualitative phenomenological approach was employed, involving in-depth interviews with 15 key informants, including faculty deans, marketing and admissions directors, and data analysts from selected public and private universities in Indonesia. The collected data were analyzed using Braun and Clarke's thematic analysis. The findings reveal that business analytics plays a fundamental role in transforming raw institutional data into actionable marketing intelligence, enabling higher education institutions to improve decision-making and respond more adaptively to changing market dynamics. Furthermore, the integration of marketing intelligence and marketing agility facilitates institutional responsiveness and supports strategic growth. This study contributes to Dynamic Capabilities Theory by explaining how data-driven capabilities operate within the bureaucratic structures and organizational cultures of Indonesian higher education institutions. The study recommends strengthening adaptive data infrastructure, establishing cross-functional analytics units, and enhancing staff data literacy to support institutional adaptability and sustainable strategic growth.

Keyword: Business analytics; marketing intelligence; marketing agility; higher education; dynamic capabilities; organizational culture; strategic growth; Indonesia.

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INTRODUCTION

Over the past decade, the higher education sector in Indonesia has undergone significant transformation driven by technological advancements, demographic shifts, and evolving labor market demands. Higher education institutions are increasingly operating in a competitive environment characterized by domestic and regional competition for student recruitment, institutional reputation, and academic excellence. These developments require universities to continuously adapt their management strategies to respond to changing market dynamics and prospective students' expectations (Fayyad, 2024). However, many institutions remain constrained by conventional management practices and limited capabilities in processing and utilizing institutional data. The growing volume of information generated through student interactions, enrollment activities, academic services, social media, and alumni engagement presents both opportunities and challenges for university management. Without adequate analytical capabilities, institutions may struggle to identify emerging market trends, anticipate changes in student preferences, and formulate timely strategic decisions (Syamsir et al., 2025). Consequently, strengthening data-driven management has become increasingly relevant to the development of adaptive and sustainable higher education institutions in Indonesia.

One of the fundamental challenges facing Indonesian higher education institutions is their limited ability to transform extensive institutional data into meaningful strategic insights and competitive advantages. Universities generate substantial amounts of data through learning management systems, academic information systems, admission portals, digital marketing platforms, and social media interactions. However, these data are often managed separately across organizational departments, limiting their integration and strategic utilization (Almelhes, 2025). The absence of an integrated business analytics framework can undermine the effectiveness of institutional marketing strategies and restrict evidence-based decision-making. In such circumstances, university leaders may rely heavily on managerial intuition and historical practices rather than systematically interpreting market information. This condition can reduce marketing agility, particularly when institutions need to respond to changing student recruitment patterns, emerging educational preferences, and evolving labor market requirements. Therefore, understanding how business analytics can facilitate the integration of institutional information and support more responsive marketing strategies is essential for strengthening the strategic growth of Indonesian higher education institutions (Moschogianni, 2024).

Previous studies have extensively examined the role of business analytics in improving organizational performance, particularly in the corporate sector, where data-driven decision-making supports market forecasting, operational efficiency, and strategic adaptation (Malawani et al., 2025). In contrast, research on educational marketing has traditionally emphasized promotional activities, institutional branding, and conventional communication strategies, with comparatively

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limited attention to the analytical foundations of marketing decisions. Although recent studies have increasingly explored the application of big data in higher education, much of this research has concentrated on learning analytics, student performance, academic monitoring, and student retention. Meanwhile, marketing intelligence and marketing agility have predominantly been investigated in corporate and manufacturing environments. These studies have highlighted the importance of integrating market information into organizational decision-making and developing the capacity to respond to environmental changes (Probojakti et al., 2025).

Despite the growing body of literature on business analytics, marketing intelligence, and marketing agility, the relationships among these three concepts remain insufficiently explored in the context of Indonesian higher education. In particular, limited empirical attention has been given to the processes through which institutional data are transformed into actionable marketing intelligence and subsequently translated into adaptive marketing strategies. Existing research has also provided limited insight into how organizational culture, administrative structures, and institutional characteristics influence the adoption of analytics-driven decision-making in universities. Furthermore, the predominance of quantitative approaches in analytics research may not fully capture the managerial interpretations, organizational dynamics, and cultural challenges associated with implementing data-driven strategies (Tenggono et al., 2025).

The novelty of this study lies in its integration of business analytics, marketing intelligence, marketing agility, and organizational culture within the context of Indonesian higher education. Rather than treating business analytics solely as a technical instrument for data processing, this study conceptualizes it as an organizational capability that shapes managerial interpretation, strategic decision-making, and institutional adaptation. Theoretically, the study contributes to Dynamic Capabilities Theory by examining how data-driven capabilities support the development of marketing intelligence and institutional agility within the distinctive bureaucratic and cultural conditions of higher education institutions (Rani et al., 2025).

METHODOLOGY

This study employed a qualitative research design using a phenomenological approach to explore the experiences, perceptions, and interpretations of key decision-makers regarding the integration of business analytics into higher education governance in Indonesia. The phenomenological approach was selected to obtain an in-depth understanding of how institutional actors utilize analytical capabilities to develop marketing intelligence and enhance marketing agility (Goh et al., 2025). This approach also enabled the study to examine the organizational and cultural factors influencing data-driven decision-making within universities. By focusing on the lived experiences of institutional stakeholders, the research sought to capture both the technical processes and managerial considerations involved in adopting business analytics in higher education.

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The research was conducted at selected public and private universities located in major academic centers in Indonesia, particularly the Greater Jakarta area (Jabodetabek) and surrounding metropolitan regions in Java. These locations were selected because of their competitive higher education environments, where institutions face increasing demands to strengthen student recruitment, institutional reputation, and academic competitiveness. The diverse institutional characteristics of public and private universities also provided an opportunity to examine variations in organizational structures, governance practices, and approaches to implementing data-driven marketing strategies.

The study involved 15 key informants selected through purposive sampling based on their strategic responsibilities and direct involvement in institutional marketing, data management, and academic governance (Nurhasan et al., 2025). The informants consisted of five faculty deans, five marketing and admissions directors, and five data analysts or heads of information technology systems from selected public and private universities. This selection enabled the study to capture perspectives from different managerial and operational levels, providing a comprehensive understanding of how business analytics is integrated into institutional decision-making and marketing practices.
Primary data were collected through semi-structured, in-depth interviews lasting approximately 60 to 90 minutes with each informant. The interviews explored participants' experiences in using analytical tools, integrating institutional databases, interpreting market information, addressing organizational resistance, and implementing adaptive marketing strategies. In addition to interviews, data triangulation was conducted through non-participant observation of institutional analytics dashboards and the examination of relevant secondary documents. These documents included university strategic plans, annual student recruitment reports, and marketing campaign performance evaluations. The combination of interviews, observations, and document analysis enabled the researchers to examine the research phenomenon from multiple perspectives and strengthen the credibility of the findings (Latukismo et al., 2024).

Data analysis began with familiarization with interview transcripts and supporting documents to understand the overall dataset. Initial codes were then generated, followed by identification of patterns and development of preliminary themes aligned with the research objectives. These themes were reviewed and refined to ensure consistency with the coded data and research questions. The final analysis involved defining and naming themes and developing an interpretive narrative connecting empirical findings with the theoretical framework. NVivo 12 supported data organization and coding throughout the process. A comparative analysis of public and private universities was also conducted to examine similarities and differences in institutional practices, organizational cultures, and the adoption of business analytics (Utami et al., 2025).

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Ethical considerations were incorporated throughout the research process to protect the rights, privacy, and confidentiality of all participants. Before the interviews, each informant provided informed consent after receiving an explanation of the research objectives, voluntary participation, data protection procedures, and confidentiality assurances (Prakasa et al., 2025). Participants were informed of their right to withdraw from the study without adverse consequences. To maintain confidentiality and minimize potential professional repercussions, the identities of individual informants and their institutions were anonymized using identification codes, such as Informant 1 and University A. All collected data were handled in accordance with the principles of research confidentiality and responsible academic practice.

RESULT AND DISCUSSION

Business Analytics, Marketing Intelligence, and Institutional Agility in Higher Education

The findings demonstrate that business analytics has developed beyond a technical mechanism for collecting and processing institutional data and has become an organizational capability that supports strategic decision-making in Indonesian higher education. Universities increasingly employ digital dashboards, integrated information systems, and analytical applications to monitor student behavior, enrollment patterns, digital engagement, and marketing performance. Nevertheless, technological availability alone does not guarantee effective institutional decisions. The strategic value of analytics depends on the capacity of university leaders and marketing personnel to interpret analytical outputs and connect them with institutional priorities, student expectations, and changing market conditions. This finding highlights the importance of integrating technological capability with managerial judgment and organizational knowledge.

A central finding concerns the role of marketing intelligence as an interpretive mechanism between institutional data and strategic action. Indicators such as website traffic, prospective student inquiries, enrollment trends, and campaign performance provide empirical information about market behavior. However, these indicators require contextual interpretation, particularly in relation to students' socioeconomic characteristics, educational expectations, and decision-making preferences. Marketing intelligence therefore transforms analytical evidence into meaningful institutional knowledge. From an interdisciplinary perspective, this process illustrates the interaction between technology, organizational practices, managerial interpretation, and the social characteristics of higher education communities. Business analytics provides evidence, while marketing intelligence provides contextual meaning that enables institutions to formulate more relevant and responsive strategies.

The findings further indicate that marketing agility emerges when analytical insights are converted into institutional action. Universities adapt promotional channels, recruitment strategies, academic program communication, and educational offerings in response to changing student preferences and labor-market conditions. However, institutional responsiveness is mediated by governance

structures, including formal approval mechanisms, hierarchical authority, and collegial decision-making. Consequently, marketing agility in higher education should not be interpreted as the unrestricted acceleration of managerial decisions. Rather, it represents the capacity to respond to environmental changes while preserving academic quality, institutional accountability, and regulatory compliance.

The comparison between public and private universities also reveals the importance of organizational and cultural context. Public institutions tend to operate through more formal and collegial decision-making arrangements, while private institutions in the study demonstrated relatively greater managerial centralization and competitive pressure related to student recruitment and institutional sustainability. These differences suggest that analytics-driven transformation cannot be implemented through a uniform organizational model. Instead, institutional strategies need to reflect governance structures, organizational culture, leadership practices, and competitive environments.

Overall, the findings establish an interconnected process involving analytical information acquisition, managerial interpretation, and strategic execution. Business analytics identifies relevant information, marketing intelligence transforms information into contextual understanding, and marketing agility facilitates institutional responses. The study therefore contributes to interdisciplinary higher education research by demonstrating that sustainable strategic growth depends not on technology alone, but on the alignment of digital capabilities with human interpretation, organizational culture, institutional governance, and academic values. This perspective reinforces the relevance of Dynamic Capabilities Theory while highlighting the contextual importance of institutional agility within higher education.

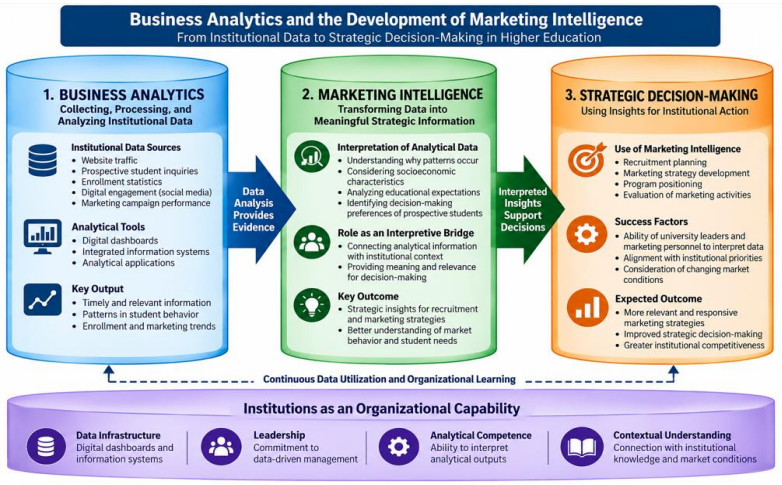
Business Analytics and the Development of Marketing Intelligence

The findings demonstrate that business analytics has evolved from a technical information-management tool into an important organizational capability within Indonesian higher education institutions. The participating universities increasingly utilize digital dashboards, integrated information systems, and analytical applications to monitor student behavior, enrollment patterns, digital engagement, and marketing performance. These technologies provide institutional actors with timely information that can support recruitment planning and marketing evaluation. However, the findings indicate that the availability of analytical infrastructure does not automatically result in improved strategic decision-making. The effectiveness of business analytics depends on the ability of university leaders and marketing personnel to interpret analytical outputs and connect them with institutional priorities and changing market conditions.

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A particularly important finding is the role of marketing intelligence in transforming institutional data into meaningful strategic information. Indicators such as website traffic, prospective student inquiries, enrollment statistics, and campaign performance provide empirical signals regarding market behavior. Nevertheless, these indicators cannot be interpreted effectively without considering the socioeconomic characteristics, educational expectations, and decision-making preferences of prospective students. Marketing intelligence therefore functions as an interpretive bridge between raw analytical information and institutional decision-making. Business analytics provides the evidence, while marketing intelligence enables institutional actors to understand the implications of that evidence for recruitment and marketing strategies.

The findings suggest that effective data-driven management requires an appropriate combination of technological resources and managerial judgment. Universities that possess analytical systems but lack the organizational capacity to interpret their outputs may not obtain significant strategic benefits. Consequently, business analytics should be regarded not simply as an investment in technology but as a broader institutional capability involving data infrastructure, leadership, analytical competence, and contextual understanding. This finding emphasizes that the transformation of data into strategic value depends on how effectively universities connect analytical information with institutional knowledge and managerial decision-making.



Source: Compiled by the author based on field observations, 2026.

The figure: Business analytics develops into marketing intelligence and supports strategic decision-making in higher education. Institutional data are collected through digital dashboards and integrated information systems, then analysed to identify student behavior, enrollment patterns, and marketing trends. These analytical outputs are interpreted through contextual knowledge and managerial judgment. Marketing intelligence subsequently supports recruitment planning, marketing strategy, and program positioning, while leadership, analytical competence, and organizational understanding ensure that data are transformed into meaningful institutional actions.

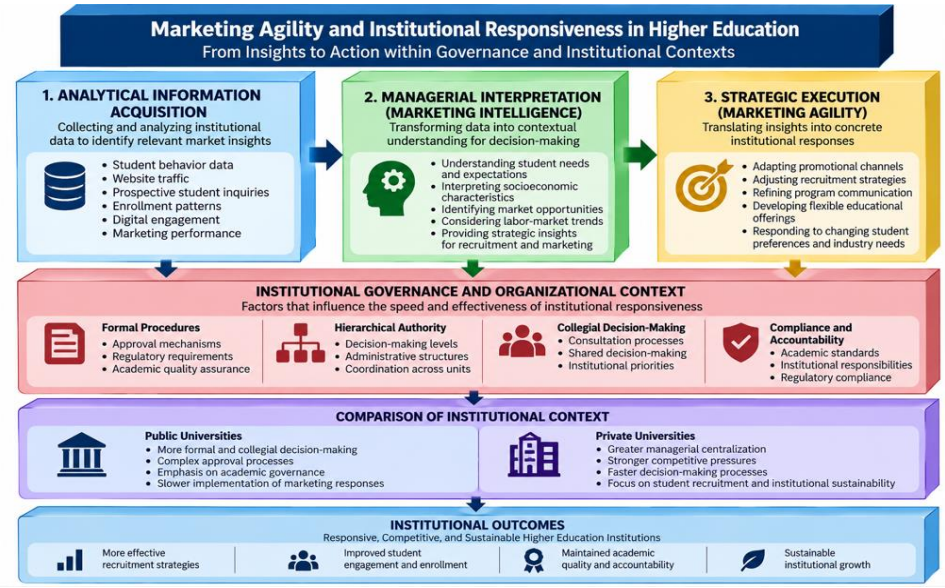
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Marketing Agility and Institutional Responsiveness in Higher Education

The marketing agility enables higher education institutions to transform analytical information into strategic and responsive institutional action. The process consists of three interconnected stages: analytical information acquisition, managerial interpretation, and strategic execution. The first stage involves obtaining relevant information from institutional and market data, allowing universities to recognize changing student preferences, competitive conditions, and emerging opportunities. The second stage focuses on managerial interpretation, in which analytical information is converted into meaningful insights that can support institutional decision-making. The quality of this interpretation is important because data become strategically valuable only when managers understand their relevance to institutional objectives and conditions.

The third stage involves strategic execution, where interpreted insights are translated into appropriate institutional responses, including adjustments to strategies, programs, communication, and organizational priorities. However, marketing agility does not operate independently. Institutional governance, organizational culture, leadership, and decision-making structures influence the speed and effectiveness with which analytical insights can be implemented. Public and private universities may demonstrate different implementation patterns because of variations in governance arrangements, organizational structures, and institutional priorities.

Overall, the figure emphasizes that effective marketing agility depends on alignment among data, managerial interpretation, organizational capabilities, and governance. Such alignment enables institutions to respond to changing environments while maintaining academic quality and institutional accountability. Consequently, marketing agility can contribute to sustainable institutional growth when strategic responses remain consistent with academic objectives, organizational values, and long-term institutional development.



Source: Compiled by the author based on field observations, 2026.

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The figure how marketing agility enables higher education institutions to transform analytical information into strategic action. The process involves three stages: analytical information acquisition, managerial interpretation, and strategic execution. Institutional governance, organizational culture, and decision-making structures influence responsiveness. Public and private universities may differ in implementation, while effective alignment among data, leadership, governance, and capabilities supports academic quality, institutional accountability, and sustainable growth.

DISCUSSION

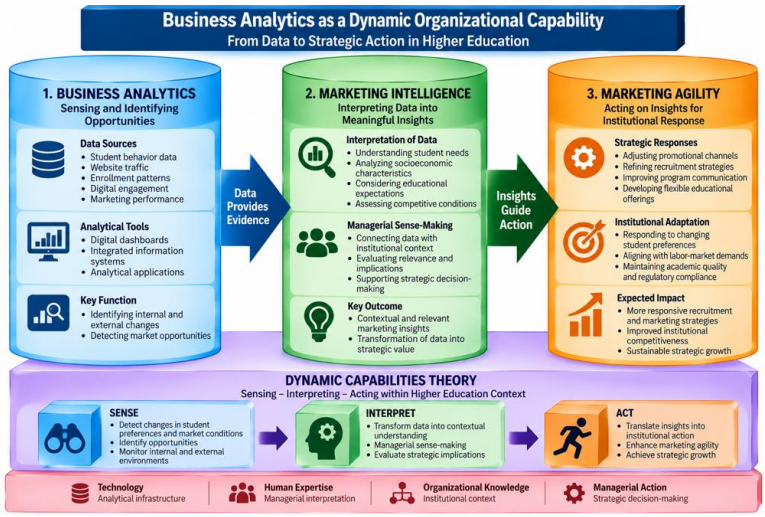
Business Analytics as a Dynamic Organizational Capability

The findings demonstrate that business analytics should be understood as an organizational capability rather than simply as a technological instrument. The participating universities increasingly use digital dashboards, integrated information systems, and analytical applications to examine student behavior, enrollment patterns, digital engagement, and marketing performance. However, the strategic contribution of these technologies depends on how institutional actors interpret and use the information generated. This finding extends the conventional understanding of digital transformation by showing that analytical infrastructure becomes strategically meaningful only when it is embedded within managerial routines and institutional decision-making. Business analytics therefore represents the initial capability through which universities identify changes in their external and internal environments.

This finding is consistent with the logic of Dynamic Capabilities Theory, particularly the capacity to sense changes, identify opportunities, and mobilize organizational resources. In the present study, analytics strengthens the sensing function by enabling universities to detect shifts in student preferences, recruitment patterns, and market conditions. However, sensing does not automatically lead to organizational adaptation. Analytical outputs must first be interpreted through marketing intelligence, which provides contextual meaning to quantitative information. Website traffic, student inquiries, enrollment statistics, and campaign performance, for example, become strategically useful only when institutional actors understand their relationship with student expectations, socioeconomic characteristics, and competitive conditions. The findings therefore suggest that the transition from data to strategic value is mediated by managerial sense-making.

This interpretation contributes to the literature by positioning marketing intelligence as an intermediate organizational capability. Business analytics generates evidence, whereas marketing intelligence enables decision-makers to evaluate the relevance and implications of that evidence. Marketing agility subsequently completes the process by translating interpreted information into institutional responses. The resulting relationship can be conceptualized as a sequence of sensing, interpreting, and acting. Such a process demonstrates that dynamic capabilities in higher education emerge through the interaction of technology, human expertise, organizational knowledge, and managerial action rather than through technological adoption alone.

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Source: Compiled by the author based on field observations, 2026.

The figure: Business Analytics as a dynamic organizational capability that transforms data into strategic action. Business Analytics supports sensing opportunities, Marketing Intelligence enables interpretation and contextual understanding, while Marketing Agility facilitates responsive institutional action. Grounded in Dynamic Capabilities Theory, the process integrates technology, human expertise, organizational knowledge, and managerial action to strengthen institutional competitiveness.

Bureaucratic Agility and the Governance of Institutional Responsiveness

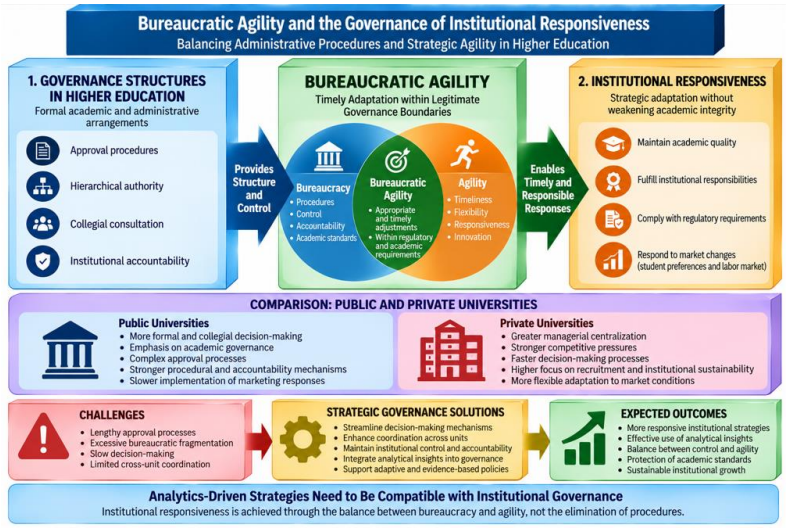
A second important finding concerns the influence of governance structures on the speed and effectiveness of marketing agility. The participating universities operate within formal academic and administrative arrangements that include approval procedures, hierarchical authority, collegial consultation, and institutional accountability. These arrangements distinguish higher education from commercial organizations, where marketing decisions may often be implemented through more centralized and immediate managerial processes. In universities, strategic responsiveness must operate within boundaries established by academic quality, institutional responsibilities, and regulatory requirements. The findings therefore suggest that agility should not be interpreted as the elimination or weakening of bureaucracy.

Instead, the study proposes Bureaucratic Agility as a context-specific perspective for understanding responsiveness within higher education. Bureaucratic agility refers to the institutional capacity to make appropriate and timely adjustments while maintaining legitimate administrative procedures and academic governance. This concept provides a more nuanced interpretation of organizational agility because it recognizes that formal structures may simultaneously constrain and support institutional adaptation. Procedures can slow decision-

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making when they become excessively fragmented, but they can also provide coordination, accountability, and protection of academic standards. The strategic challenge is therefore to develop governance arrangements that preserve institutional control while reducing unnecessary delays in responding to relevant market information.

The comparison between public and private universities reinforces this interpretation. The findings indicate that public institutions generally demonstrate more formal and collegial decision-making patterns, whereas the private institutions examined show relatively greater managerial centralization and stronger competitive pressures related to recruitment and institutional sustainability. These differences influence how quickly analytical insights are transformed into marketing responses. However, the findings should be interpreted within the boundaries of the participating institutions rather than generalized to the entire Indonesian higher education sector. The key implication is that analytics-driven strategies need to be compatible with institutional governance rather than imposed through a standardized organizational model.



Source: Compiled by the author based on field observations, 2026.

The figure: how bureaucratic agility enables higher education institutions to balance administrative control with strategic responsiveness. Governance structures provide procedures, accountability, and academic standards, while agility supports timely adaptation. Differences between public and private universities influence decision-making speed. Effective governance therefore requires streamlined processes, cross-unit coordination, and analytics integration to achieve responsive and sustainable institutional outcomes.

Organizational Culture, Strategic Integration, and Sustainable Growth

The third major finding highlights the importance of organizational culture and cross-functional integration in determining whether analytical capabilities generate sustainable strategic value. The

results show that technological infrastructure alone is insufficient when employees have limited analytical competence, managers are reluctant to rely on evidence, or institutional units operate independently. Business analytics therefore requires complementary organizational resources, including leadership commitment, staff data literacy, communication across departments, and decision-making arrangements that allow relevant information to influence institutional action. The findings indicate that organizational culture is not merely a background condition; it actively shapes how data are interpreted, accepted, and incorporated into strategic management.

From an interdisciplinary perspective, this finding is particularly relevant because higher education institutions combine technological systems with professional cultures, academic values, administrative structures, and diverse stakeholder interests. Marketing intelligence should consequently not be restricted to marketing or admissions departments. Its strategic value increases when information is shared among information technology units, marketing personnel, academic leaders, admissions teams, and institutional planners. Such cross-functional integration can create organizational routines through which data are continuously collected, interpreted, discussed, and incorporated into planning and quality improvement. The results therefore support a broader understanding of digital transformation as an organizational and cultural process rather than a purely technological transition.

The findings also suggest that sustainable strategic growth should be assessed through multidimensional outcomes. Enrollment remains an important indicator, but it should be considered alongside student quality, institutional reputation, academic relevance, retention, and organizational sustainability. This broader perspective prevents marketing agility from becoming a narrow mechanism for short-term recruitment. Instead, agility can contribute to long-term institutional development when strategic responses remain consistent with academic mission and institutional values. In this sense, the relationship among business analytics, marketing intelligence, and marketing agility represents a mediated pathway toward strategic growth: analytics identifies relevant signals, intelligence provides interpretation, and agility enables institutional action.

Taken together, the three dimensions demonstrate that higher education institutions develop strategic responsiveness through the alignment of digital capabilities, managerial interpretation, organizational culture, and governance. The study therefore extends Dynamic Capabilities Theory by showing how sensing and responding mechanisms operate within the distinctive bureaucratic and cultural environment of Indonesian higher education. The concept of Bureaucratic Agility further contributes a contextual explanation of how universities can remain responsive without compromising academic integrity and institutional accountability. Future research should test this framework across a larger population of Indonesian universities and examine whether

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organizational culture, leadership, digital readiness, and Bureaucratic Agility strengthen or constrain the relationship between business analytics and sustainable strategic growth.



Source: Compiled by the author based on field observations, 2026.

The figure: how organizational culture, strategic integration, and digital capabilities collectively support sustainable growth in higher education. Business analytics identifies relevant signals, marketing intelligence interprets information, and marketing agility enables strategic action. Cross-functional collaboration, governance, human resources, and organizational culture strengthen this process, producing responsive, competitive, and sustainable institutional outcomes.

CONCLUSION

This study concludes that business analytics, marketing intelligence, and marketing agility operate as interconnected capabilities that enhance the strategic responsiveness of higher education institutions in Indonesia. The findings show that digital data generate strategic value only when institutions are able to interpret, integrate, and transform information into actionable decisions. Business analytics supports the identification of enrollment trends, prospective student behavior, and marketing performance, while marketing intelligence converts these analytical outputs into contextual understanding of student expectations and competitive conditions. Marketing agility then enables institutions to translate such intelligence into timely adjustments in recruitment strategies, promotional activities, communication channels, and academic program positioning. The findings therefore support the proposed relationship among Technology Absorption, Intelligence Conversion, and Execution Agility.

The study also demonstrates that the effectiveness of data-driven decision-making is influenced by organizational culture and institutional governance. Differences between public and private universities indicate that formal procedures, collegial decision-making, leadership practices, and competitive pressures shape the speed and manner in which analytical insights are implemented.

Consequently, marketing agility in higher education cannot be treated simply as a technological or commercial capability. Institutions must balance responsiveness with academic standards, accountability, and institutional legitimacy. In this context, the study proposes Bureaucratic Agility as a contextual concept describing the ability of universities to respond to environmental changes while remaining within appropriate administrative and academic governance arrangements.

Overall, sustainable strategic growth should extend beyond short-term enrollment increases to include student quality, institutional reputation, academic relevance, and organizational sustainability. The study contributes to Dynamic Capabilities Theory by demonstrating that analytics-based capabilities are mediated by managerial interpretation, organizational culture, and governance structures. However, the conclusions remain bounded by the qualitative design and the purposive sample of 15 informants. Future research should test the proposed relationships using larger samples and quantitative approaches, particularly Structural Equation Modeling, to further examine the relationships among business analytics, marketing intelligence, marketing agility, and sustainable

RECOMMENDATIONS

Based on the findings, Indonesian higher education institutions should strengthen the integration of business analytics with institutional strategy, managerial processes, and marketing functions. Universities should move from fragmented information systems toward integrated data environments that allow relevant information to be accessed, interpreted, and shared across academic, marketing, admissions, information technology, and planning units. Establishing cross-functional analytics teams can facilitate the conversion of institutional data into actionable marketing intelligence. At the same time, universities should improve staff data literacy so that academic and administrative personnel are able to evaluate analytical information critically and use evidence appropriately in decision-making.

Universities should also improve selected decision-making procedures to enhance responsiveness while preserving academic governance. Rather than eliminating formal procedures, institutions can streamline decisions that require rapid responses by establishing clear authority, evidence-based protocols, and appropriate delegation mechanisms. Public universities may integrate analytical evidence into collegial deliberation and consensus-building processes, whereas private universities should ensure that faster managerial responses remain consistent with academic quality and institutional mission. These measures can strengthen Bureaucratic Agility, enabling institutions to respond to market changes without compromising accountability, transparency, or academic standards.

At the strategic level, marketing intelligence should become part of institutional planning and quality improvement rather than remain an isolated marketing function. University leaders should establish regular mechanisms for reviewing recruitment data, prospective student behavior, digital campaign performance, competitor information, and program demand. The resulting insights should inform adjustments in recruitment, communication, and program positioning. Performance evaluation should also use balanced indicators encompassing enrollment, student quality, retention, reputation, academic relevance, and institutional sustainability. This approach can prevent excessive emphasis on short-term recruitment outcomes.

Finally, future studies should validate and extend the proposed qualitative model across a wider range of Indonesian higher education institutions. Quantitative research can examine the relationships among business analytics, marketing intelligence, marketing agility, and strategic growth, while longitudinal and comparative studies could investigate the influence of organizational culture, leadership, digital readiness, and Bureaucratic Agility. Such research would strengthen the empirical foundation of data-driven higher education governance and provide practical evidence for developing institutions that are adaptive, responsive, and sustainable.

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REFERENCE

1. Almelhes, S. A. (2025). *Big Data Analytical Capability and Strategic Agility; A Perspective of Online Academies Institutions Teaching Arabic as Second Language*. *SAGE Open*. https://doi.org/10.1177/21582440251381591
2. Anwar, K., & Nurrohman, R. (2025). *Strategic HR Agility In Southeast Asian MSMES: A Cross-Country Study Of Indonesia, Vietnam, And The Philippines Amidst Digital Transformation*. Journal of Management and Business. https://journal.utnd.ac.id/index.php/jmdb/article/view/1980
3. Ayatulloh, A., Maliki, B. I., & Komarudin, M. (2025). *The strategic role of digital innovation and agility in sustainable organizations through performance*. Jurnal Economic Resource. https://jurnal.feb-umi.id/index.php/JER/article/view/1819
4. Fayyad, S. (2024). *Digital leadership and creative performance in tourism and hotel enterprises: Leveraging strategic agility and organizational learning culture*. In *Geo Journal of Tourism and Geosites*. academia.edu. https://www.academia.edu/download/120644283/gtg.pdf
5. Goh, T. S., Martinez, S., Sitorus, S. L., & ... (2025). *Adaptive strategic approaches and*

their impact on economic growth in dynamic markets. Startupreneur Business https://journal.pandawan.id/sabda/article/view/898
6. Latukismo, T. H., Usman, I., Yulianti, P., & ... (2024). *Bibliometric Insights into Organizational Agility and Dynamic Capabilities: Analyzing SCOPUS Database*. https://openurl.ebsco.com/contentitem/gcd:177470537?sid=ebsco:plink:crawler-gcd&id=ebsco:gcd:177470537&crl=c&jrnl=15822559
7. Malawani, L., Sanguinoa, R., & Jiménez, J. L. T. (2025). *A systematic literature review on the impact of business intelligence on organization agility*. In *Administrative Sciences*. mdpi.com. https://www.mdpi.com/2076-3387/15/7/250
8. Moschogianni, G. (2024). *Interplay between digital marketing, business analytics and innovation capability: A case of Greece SMEs of Management Practices, Humanities and Social …*. https://global-jws.com/ojs/index.php/global-jws/article/view/249
9. Nareswari, F., & Astuti, R. J. (2025). *A scientometric review of the relationship between learning agility and work engagement in modern management context.* Asian Management and Business: https://journal.uii.ac.id/AMBR/article/view/36386
10. Nurhasan, A. K., Rizal, M., Rokhman, S., & ... (2025). *Agility in Islamic Education: Adapting to Social and Technological Changes in the VUCA Era.* Journal of Educational: http://serambi.org/index.php/managere/article/view/744
11. Panutur, S. S., Soehadi, A. W., & ... (2025). *The role of organizational agility and customer participation in enhancing company performance during digital transformation*. Journal of Business: irjbs.prasetiyamulya.ac.id. https://irjbs.prasetiyamulya.ac.id/jurnalirjbs/article/view/611
12. Prakasa, Y., Saenchaiyathon, K., & ... (2025). *Cultivating organizational agility and innovation performance in the emerging era: A bibliometrics investigation*. In *KnE Social:* knepublishing.com. https://knepublishing.com/index.php/KnE-Social/article/download/18966/29151
13. Probojakti, W., Utami, H. N., Prasetya, A., & ... (2025). *Driving sustainable competitive advantage in banking: The role of transformational leadership and digital transformation in organizational agility and corporate. Business Strategy and economic:* https://doi.org/10.1002/bse.4005
14. Purwanto, S. A., Kusumaningtyas, A., & Halik, A. (2025). *Strategic Agility, Environmental Innovation, and Digital Capability as Drivers of Sustainable Performance Evidence from Village-Owned Enterprises in Indonesia*. In *International Journal of* iieta.org. https://iieta.org/sites/default/files/pdf/2026-01/ijsdp_20.12_11.pdf
15. Putra, E. Y., Masnita, Y., Yusran, H. L., & ... (2025). *Leveraging digital transformation leadership and customer agility to enhance SME performance in the Riau Islands, Indonesia of Business Ecosystem:* https://bussecon.com/ojs/index.php/ijbes/article/view/844
16. Rani, I. H., Kasali, R., Kusumastuti, R. D., & ... (2024). Unlocking continuous organizational agility: proposing a model through the insight from the Indonesian banking context. *Cogent Business & …*. https://doi.org/10.1080/23311975.2024.2331633
17. Rani, I. H., Kasali, R., Kusumastuti, R. D., & ... (2025). *Continuous organizational agility in banking: Unveiling new pathways to competitive advantage*. Global Journal of Flexible: https://doi.org/10.1007/s40171-025-00452-0
18. Saeed, S., Díaz-Pichardo, R., & ... (2025). *A knowledge map of agility and innovation:*

Trends and insights using bibliometric analysis. https://doi.org/10.1108/SL-04-2025-0065/1304308

19. Saputra, M. H., Utomo, M. N., Ariansyah, K., & ... (2024). *Small and medium-sized enterprises dynamic capabilities and competitive advantage: The mediating effect of digitalization*. *Business and economic:* https://www.ceeol.com/search/article-detail?id=1268100

20. Syamsir, S., Saputra, N., & Mulia, R. A. (2025). *Leadership agility in a VUCA world: a systematic review, conceptual insights, and research directions*. Cogent Business & Management. https://doi.org/10.1080/23311975.2025.2482022

21. Tenggono, E., Soetjipto, B. W., & Sudhartio, L. (2025). D*ynamic managerial capabilities in action: advancing strategic agility and digital readiness in healthcare organizations*. *Journal of Organizational …*. https://www.emerald.com/jocm/article/38/3/548/1253793

22. Utami, H. N., Sasmita, E. E., & ... (2025). *Bridging Knowledge Management and Competitive Advantage: the Mediating Role of Leadership Agility and Ambidextrous Innovation in Coffee Shop Sme's. Foundations*. https://doi.org/10.2478/fman-2025-0022

23. Warsono, S., Ali, S., Handayani, W., Putritama, A., & ... (2025). *The role of innovation creation in diagnosing business acumen for empowering digital platforms and achieving business sustainability in Indonesia's micro, small*. Journal Business Process and economic. https://doi.org/10.1108/BPMJ-04-2025-0521/1309331