
How does organizational vigilance drive higher education performance? The mediating role of organizational ambidexterity

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Abstract

This study examines the effect of organizational vigilance on higher education performance, with organizational ambidexterity as a mediating variable. The research was conducted in universities within the LLDIKTI III region of Indonesia, using a quantitative, cross-sectional survey design. Data were collected from 42 decision-makers at “Unggul”-accredited universities using structured questionnaires and analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). The results indicate that organizational vigilance has a positive and significant effect on organizational performance. Furthermore, organizational ambidexterity partially mediates the relationship between organizational vigilance and performance, suggesting that vigilance enhances performance both directly and indirectly through the organization’s ability to balance exploration and exploitation activities. These findings highlight the importance of strengthening environmental awareness and adaptive capabilities to improve university performance. Future research is recommended to use larger samples and additional variables to enhance generalizability.

Keywords

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Introduction

Given the importance of quality education in producing competitive human resources, universities in Indonesia are required to demonstrate high organizational performance to produce graduates who can compete and adapt in a dynamic environment. However, current structural and performance indicators show that many higher education institutions still face serious challenges in achieving this expectation. According to national statistics, Indonesia has thousands of higher education institutions spread across various regions, yet only a relatively small proportion have achieved the highest accreditation status, which reflects performance and quality well above the minimum standards. Only 190 of these universities have the best accreditation. This indicates that there is still a significant gap in governance quality, academic processes, and research outputs among universities in Indonesia.

In terms of scientific publications, Indonesia's position in international rankings also remains less than optimal, lagging neighboring countries in Southeast Asia. This situation suggests that Indonesian universities' contributions to global knowledge production and innovation remain relatively limited, thereby affecting national competitiveness. The quality of human resources, especially lecturers, is a crucial determinant of university performance. Recent data from the ministry responsible for higher education show that the proportion of lecturers with doctoral degrees is still relatively low, while tens of thousands of lecturers are educated only to the bachelor's or master's level. This limitation has implications for universities' capacity to conduct high-quality research, develop innovative curricula, and build strong international collaborations.

Organizational ambidexterity, defined as the ability to simultaneously pursue exploitation (leveraging existing resources and capabilities) and exploration (seeking new opportunities and innovations), has been widely recognized as an important driver of performance and adaptability. Studies indicate that ambidexterity can enhance innovative outcomes and organizational performance across various sectors by enabling organizations to efficiently use current resources while also investing in new knowledge and technologies (Brix, 2019). In the higher education context, ambidexterity is increasingly viewed as a key capability that allows universities to balance routine academic activities with the development of new programs, research agendas, and collaboration schemes (Soares et al., 2018).

For Indonesian universities, being ambidextrous means not only making the best use of their current facilities, budgets, and staff, but also seeking new ways to work together, use digital technologies, and learn. Empirical research in Brazilian higher education institutions, for example, found that organizational ambidexterity significantly contributes to academic performance by mediating the effects of entrepreneurial and learning orientations (Soares et al., 2018). These findings suggest that similar mechanisms may be relevant for universities in emerging economies, including Indonesia.

Another important construct closely related to ambidexterity is organizational vigilance or strategic vigilance, which refers to the organization's capability to continuously monitor and interpret internal and external environmental changes. Empirical evidence indicates that strategic vigilance positively affects organizational ambidexterity and excellence, as vigilant organizations are better able to identify opportunities and threats and adjust their exploitation and exploration activities accordingly (Alshaer, 2020). For universities, high organizational vigilance is crucial for responding rapidly to technological advances, evolving labor-market

demands, and changing policy and funding landscapes. Despite the growing body of research on organizational ambidexterity and its outcomes, most empirical studies have focused on business organizations, manufacturing, and service firms in developed economies (Hamblin et al., 2024; Kassotaki, 2022). Research that specifically investigates the role of organizational ambidexterity in shaping higher education performance in developing countries, particularly Indonesia, remains scarce. Likewise, the mediating role of organizational vigilance in the relationship between ambidexterity and university performance has received limited empirical attention, even though theoretical arguments suggest that vigilance may strengthen the effectiveness of ambidextrous strategies (Alshaer, 2020; Van Lieshout et al., 2021).

Based on this research gap, the present study aims to: (1) analyze the direct effect of organizational vigilance on higher education performance; and (2) examine the mediating role of organizational ambidexterity in the relationship between organizational vigilance and higher education performance. By doing so, this study seeks to clarify how universities translate environmental awareness into improved performance through the development of ambidextrous capabilities.

Literature Review

Organizational performance

Strategic management is widely understood as a continuous process encompassing environmental analysis, strategy formulation, implementation, and evaluation to secure sustainable long-term organizational performance (Afonina, 2015). Through this process, organizations integrate a series of decisions and actions into a coherent strategic direction, thereby enhancing their chances of achieving superior performance relative to competitors (Afrianda, 2025; Kundu et al., 2020). Organizational performance itself is commonly assessed using a combination of financial and non-financial indicators, including sales growth, profitability, market share, service quality, innovation capability, and stakeholder satisfaction (Do et al., 2016). Recent literature emphasizes that reliance on a single financial metric is insufficient to capture the full impact of strategy on performance, so multidimensional performance measurement systems are increasingly adopted (Do et al., 2016). In this view, financial indicators are complemented by non-financial measures that reflect the quality of internal processes, learning and innovation, and stakeholder relationships, thereby providing a more holistic picture of organizational success. This broader understanding of performance is particularly relevant in knowledge-intensive and service-oriented sectors, where value creation extends beyond short-term financial outcomes (Aguilera et al., 2024; Afonina, 2015).

Universities differ from purely profit-oriented firms because they carry academic and social mandates that require a more comprehensive approach to performance measurement (Hazelkorn, 2023). The performance of higher education institutions is therefore evaluated using dimensions such as teaching and learning quality, research productivity and impact, community engagement, academic reputation, and the employability of graduates (Hazelkorn, 2023). Contemporary frameworks for assessing higher education performance also highlight indicators related to students' learning experiences, international partnerships, industry collaboration, and the internationalization of study programs, reflecting the growing expectation that universities contribute to global competitiveness and societal development (Hart & Rodgers, 2024).

Organizational ambidexterity

Organizational ambidexterity is increasingly recognized as a key requirement for achieving superior, sustainable business performance. Companies are expected not only to exploit their existing resources and capabilities as efficiently as possible, but also to continuously explore new opportunities to develop their businesses in dynamic, uncertain markets. By becoming ambidextrous, organizations that can combine exploitation and exploration simultaneously and over time can enhance their chances of attaining better performance and maintaining competitiveness (Popadić et al., 2015). An ambidextrous organization must therefore strike an effective balance between leveraging its current capabilities and competencies to capture existing opportunities and simultaneously using its resources to create new markets and avenues for growth (Ramachandran et al., 2019).

Organizational ambidexterity is typically described in terms of two main dimensions: exploration and exploitation (Kafetzopoulos, 2021). Exploration refers to organizational activities that involve searching for new ideas, experimenting with alternatives, taking risks, and initiating radical changes that can open new opportunities. Exploitation, by contrast, involves improving and developing the organization by refining and extending existing practices, activities, and production processes to enhance efficiency and reliability (Günzel et al., 2018). In line with this view, exploitation orientation is often associated with efforts to improve and control established processes through more mechanistic and standardized routines, whereas exploration orientation is linked to innovation and creative initiatives that seek new alternatives and are more organic in nature (Alcaide-Muñoz & Gutierrez-Gutierrez, 2017). A growing body of research confirms that balancing these two dimensions is critical for organizations operating in knowledge-intensive, turbulent environments (Kassotaki, 2022).

A substantial body of studies continues to conceptualize and measure organizational ambidexterity using these exploration and exploitation dimensions (Abazeed & Ahmad, 2020; Fu et al., 2016). In this literature, exploration is portrayed as a set of activities through which organizations search for new ideas and optimize emerging opportunities, thereby enabling innovation and supporting long-term performance. Exploitation, on the other hand, is described as the reconfiguration and utilization of existing organizational knowledge and resources to increase efficiency, deepen expertise, and expand the organization's presence into new markets based on what it already does well (Abazeed & Ahmad, 2020). This theoretical logic is highly relevant for higher education institutions, which are under growing pressure to improve performance while simultaneously innovating their educational and research offerings. Recent work on ambidextrous and entrepreneurial universities shows that balancing exploitative (e.g., improving teaching quality and administrative efficiency) with exploratory (e.g., developing new programs, research projects, and external partnerships) activities can enhance academic performance and institutional outcomes (Veneziani & Soares, 2025).

In higher education, ambidexterity has been linked to academic performance indicators, including research productivity, program innovation, and student outcomes. Empirical evidence from private higher education institutions indicates that organizational ambidexterity significantly mediates the relationships between entrepreneurial and learning orientations and academic performance, underscoring its strategic role in converting these orientations into tangible performance improvements (Soares et al., 2018; Veneziani & Soares, 2025). Conceptual analyses of ambidextrous universities likewise emphasize that universities need

integrated management approaches that enable them to leverage existing teaching processes while exploring new research and engagement activities, thereby fulfilling both their economic and social missions more effectively. For university leaders, the finding implies that managing exploration and exploitation is not only a theoretical issue but also a practical imperative for enhancing higher education performance in increasingly competitive and turbulent environments.

Organizational vigilance

Organizational vigilance can be understood as a continuous capability to scan, monitor, and analyze developments in the surrounding environment, enabling timely and well-informed strategic decisions (Schoemaker & Day, 2020). It reflects the institution's sustained alertness to market, technological, regulatory, and competitive signals, as well as its readiness to initiate innovation and change when required (Alshaer, 2020). In practice, vigilant organizations invest in information systems, boundary-spanning roles, and strategic dialogues to detect weak signals early and translate them into meaningful strategic responses (Jalod et al., 2021).

Recent literature often operationalizes organizational or strategic vigilance through several complementary dimensions that capture different domains of environmental scanning. These commonly include marketing vigilance (monitoring stakeholder needs and demand trends), technological vigilance (tracking digital technologies and pedagogical innovations), environmental or institutional vigilance (following regulatory, political, and socio-economic developments), and competitive vigilance (Jalod et al., 2021). These dimensions offer a structured framework for assessing an organization's ability to maintain a holistic, forward-looking comprehension of its strategic environment (Alshaer, 2020).

Within higher education management, organizational vigilance has direct implications for how universities design and implement their strategies. Vigilant universities pay close attention to changes in education policy, accreditation requirements, labor-market needs, societal expectations, and global trends in teaching and research (Veneziani & Soares, 2025). This alertness enables leaders to adjust academic programs, redesign curricula, and update governance and quality-assurance mechanisms before external pressures translate into performance decline. It also supports more informed decisions regarding resource allocation, investment in digital infrastructure, and development of new academic or professional programs (Schoemaker & Day, 2020).

Empirical work on universities in different regions shows that higher levels of strategic or organizational vigilance are associated with greater organizational excellence, adaptability, and improved performance indicators, such as service quality, stakeholder satisfaction, and innovation in academic offerings (Alshaer, 2020; Jalod et al., 2021). In vigilant institutions, information from environmental scanning does not stop at data collection but is actively used to shape strategic planning, risk management, and performance management systems, making vigilance a crucial lever for university leaders who must balance tradition and innovation while meeting demands for accountability and international competitiveness (Veneziani & Soares, 2025).

When connected to higher education performance, organizational vigilance can be considered a key capability that helps universities maintain alignment between their internal processes and rapidly evolving external conditions. By continuously interpreting environmental signals, vigilant institutions are better positioned to enhance student

achievement, improve research impact, build meaningful partnerships with industry and communities, and respond quickly to new opportunities such as emerging fields of study or international collaboration schemes (Veneziani & Soares, 2025). In this way, vigilance functions as an enabling mechanism that supports the effective implementation of strategic initiatives and the achievement of institutional performance goals (Schoemaker & Day, 2020).

However, existing studies have often examined organizational vigilance in isolation or focused primarily on its direct relationship with organizational excellence and performance, without systematically integrating it into broader models of strategic capability in higher education (Kassotaki, 2022). This creates a theoretical deadlock: vigilance is recognized as important, but its precise role in explaining how other strategic capabilities, such as organizational ambidexterity, are converted into higher education performance remains underspecified (Soares et al., 2018; Veneziani & Soares, 2025). Positioning organizational vigilance as a mediating mechanism within the relationship between ambidexterity and higher education performance is therefore theoretically significant, as it clarifies how universities' capacity to explore and exploit can be translated into concrete performance outcomes (Kassotaki, 2022).

From a managerial perspective, strengthening organizational vigilance offers a practical pathway for university leaders seeking to improve performance in complex, uncertain environments. Developing robust vigilance systems, such as structured environmental scanning units, early-warning mechanisms, stakeholder intelligence processes, and regular strategic review forums, can help institutions detect trends earlier and respond more coherently (Schoemaker & Day, 2020). These systems enable leaders to decide when to refine existing programs and processes and when to invest in new pedagogical models, research directions, or partnership strategies so that universities can remain agile and resilient (Alshaer, 2020).

In the Indonesian higher education context, where institutions simultaneously pursue academic excellence, wider access, and responsiveness to national development priorities, organizational vigilance becomes particularly valuable. Explicitly testing organizational ambidexterity as a mediator between organizational vigilance and higher education performance will not only address the theoretical deadlock identified in previous studies but also provide actionable insights for university management seeking to build more responsive, innovative, and high-performing campuses (Kassotaki, 2022; Veneziani & Soares, 2025).

Research framework

Organizations can choose to emphasize exploration activities and focus on the potential benefits they generate, even though such activities are inherently costly, uncertain, and often risky (Mehlhorn et al., 2015). Conversely, they may prioritize exploitation activities and still enjoy relatively stable, predictable returns in the short term, while becoming increasingly vulnerable because efficiency improvements are built on routines and processes that risk becoming obsolete (Kassotaki, 2022). This tension illustrates that the impact of organizational ambidexterity on organizational performance is not automatic but depends on the opportunity costs and trade-offs involved when organizational resources are allocated to balance exploration and exploitation in pursuit of performance outcomes (Li et al., 2023). A substantial body of previous research has shown that organizational ambidexterity can be beneficial because it enables organizations to manage this balance between exploration and exploitation

more effectively (Chen, 2017; O'Reilly & Tushman, 2011; Solís-Molina et al., 2018). When both types of activities are maintained at relatively high levels, organizations are better positioned to remain competitive in the short term through efficient exploitation while also securing their long-term viability through exploration (Kassotaki, 2022). In other words, organizations that manage to pursue exploration and exploitation simultaneously are more likely to achieve superior performance than those that focus on only one at the expense of the other (Katou et al., 2021; Popadić et al., 2015).

In this context, organizational vigilance emerges as an important complementary capability. Alshaer (2020) found a significant, positive influence of organizational vigilance on organizational ambidexterity, with both vigilance and ambidexterity reported at high levels in the organizations studied. This finding implies that organizations that are more vigilant, systematically monitoring their environment and remaining alert to opportunities and threats, are also more capable of sustaining a productive balance between exploration and exploitation and thus of translating ambidexterity into improved performance. Look at Figure 1.

Figure 1. *Research framework*



Based on the research framework above, there are two hypotheses: (H1) Organizational vigilance directly affects organizational performance, and (H2) Organizational vigilance affects organizational performance through organizational ambidexterity.

Methodology

Research design

This study is designed to examine the relationship between two or more variables using a quantitative approach. In quantitative research, the primary focus is on testing theoretically derived relationships among constructs by collecting numerical data and applying statistical analysis to evaluate their strength and direction (Creswell & Creswell, 2018; Saunders & Darabi, 2024). Quantitative designs are particularly appropriate when the goal is to explain how variations in one variable are associated with variations in another and to draw inferences that can be generalized to a wider population (Legate et al., 2023).

The time horizon adopted in this study is cross-sectional. In a cross-sectional design, data are collected at a single point in time (or within a relatively short, bounded period) from a sample drawn from the target population, with the aim of describing conditions as they exist, and testing hypothesized relationships between variables (Legate et al., 2023). Such a design is suitable when the research problem does not require tracking changes over time but rather seeks to capture a “snapshot” of the relationships among organizational ambidexterity, organizational vigilance, and higher education performance within a given period.

This study also employs a survey method using a structured questionnaire as the main data collection instrument. A survey questionnaire consists of a standardized set of written questions that respondents answer, typically using closed-ended response formats such as Likert scales, which facilitate comparability across cases and allow the use of multivariate statistical techniques (Creswell & Creswell, 2018; Legate et al., 2023). The survey method is widely recommended in management and higher education research when the objective is to gather data from a relatively large number of organizational units in a cost-effective manner and to test theoretically grounded models (Saunders & Darabi, 2024).

The unit of analysis in this study is higher education institutions across various provinces in Indonesia. In organizational research, defining the institution as the unit of analysis means that perceptions and assessments provided by key decision-makers are used to represent the organization's characteristics and behaviors (Saunders & Darabi, 2024). Accordingly, individuals occupying strategic decision-making roles, such as rectors, vice-rectors, deans, heads of study programs, or equivalent managerial positions, will serve as respondents because they are considered to have sufficient knowledge of their institution's strategic orientation, vigilance practices, and performance outcomes. This design allows the study to capture institution-level variations in organizational ambidexterity, organizational vigilance, and higher education performance across the Indonesian higher education landscape.

Population and sample

A sample is a subset of a population selected to represent the population and to possess the characteristics under investigation. In quantitative educational research, sampling is crucial because it determines the extent to which the findings can be generalized to the broader population (Charli et al., 2022). Sampling methods are commonly grouped into two major categories: probability sampling and non-probability sampling. In probability sampling, every element in the population has a known and non-zero chance of being selected, whereas in non-probability sampling, some elements of the population have no chance of being chosen as sample units (Creswell & Creswell, 2018). In this study, a non-probability sampling approach is adopted, specifically judgment (or purposive) sampling. Judgment sampling involves deliberately selecting respondents who are considered the most appropriate and well-positioned to provide the information required by the research objectives. This technique is frequently used in educational and organizational studies when the focus is on specific types of institutions or key informants who hold roles and knowledge, rather than on statistical representativeness alone (Charli et al., 2022; Saunders & Darabi, 2024).

The criteria for inclusion as respondents in this study are individuals responsible for strategic decision-making at universities holding “Unggul” (excellent) institutional accreditation status. In the context of Indonesian higher education, such decision-makers typically occupy positions such as rector, vice-rector, dean, or head of a study program and are therefore assumed to have comprehensive insight into their institution's strategic orientation, organizational vigilance, and performance. Focusing on “Unggul”-accredited universities allows the study to target institutions that have already met high-quality standards, consistent with purposive sampling logic, which prioritizes information-rich cases.

The population in this study consists of all universities under the coordination of LLDIKTI III, totaling 245 institutions. Among these, 41 universities have achieved “Unggul” accreditation status. Based on the purposive criterion of accreditation excellence, the study

selects one key decision-maker from each “Unggul”- accredited university as a respondent, yielding a sample of 42 respondents from 42 universities in the LLDIKTI III area. This sample size is acceptable for quantitative studies that use structural equation modeling or regression analysis when the focus is on institution-level data and the number of predictors is limited (Legate et al., 2023), and it aligns with recommendations that emphasize the importance of sampling information-rich cases in education research.

Data collection and analysis

Data collection methods are an integral component of coherent research design because they determine how evidence is obtained to answer the research questions and to test the proposed hypotheses (Creswell & Creswell, 2018). In this study, several complementary methods were employed to ensure that the data captured both the breadth of responses across institutions and the depth of contextual understanding. The primary method of data collection was a structured questionnaire survey distributed to 42 respondents, each representing a higher education institution that met the specified sampling criteria. Standardized, closed-ended items on survey questionnaires are highly recommended in quantitative educational and management research because they facilitate case comparison and the use of multivariate statistical techniques (Legate et al., 2023; Saunders & Darabi, 2024).

In addition to the survey, a literature study was conducted to build the theoretical foundation of the research model and to identify relevant constructs and measurement indicators from previous empirical studies. Systematic use of prior literature is essential to ensure construct validity and to adapt measurement scales developed in earlier studies of organizational ambidexterity, vigilance, and performance (Kassotaki, 2022; Veneziani & Soares, 2025). To enrich and clarify the survey findings, interviews were also conducted with selected key respondents. Such follow-up interviews are frequently used in higher education and management studies to provide contextual explanations for quantitative results and to explore how constructs are understood and implemented in organizational practice.

The quantitative data obtained from the questionnaires were then analyzed using Structural Equation Modeling with Partial Least Squares (SEM-PLS). SEM-PLS is particularly suitable for testing complex models involving multiple latent variables and mediating relationships, especially when the sample size is relatively modest, and the research objective is prediction and explanation rather than strict covariance-based model fit (Legate et al., 2023). In the fields of education and management, SEM-PLS has been widely applied to examine the effects of strategic and organizational variables, such as ambidexterity and vigilance, on performance outcomes because it effectively handles measurement error and non-normal data distributions (Katou et al., 2021; Veneziani & Soares, 2025). Using SEM-PLS, this study estimated the direct effect of organizational vigilance on higher education performance and tested, in a statistically rigorous manner, the mediating role of organizational ambidexterity in this relationship. PLS-SEM is particularly suitable for this study due to its ability to handle complex models with relatively small sample sizes and its focus on prediction-oriented analysis, making it appropriate for exploratory research in higher education contexts.

Findings and Discussion

Based on the quantitative process, we show Table 1 as the first findings.

Table 1. *Path coefficient and p-values*

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
SV → OP	0.291	0.289	0.135	2.154	0.032

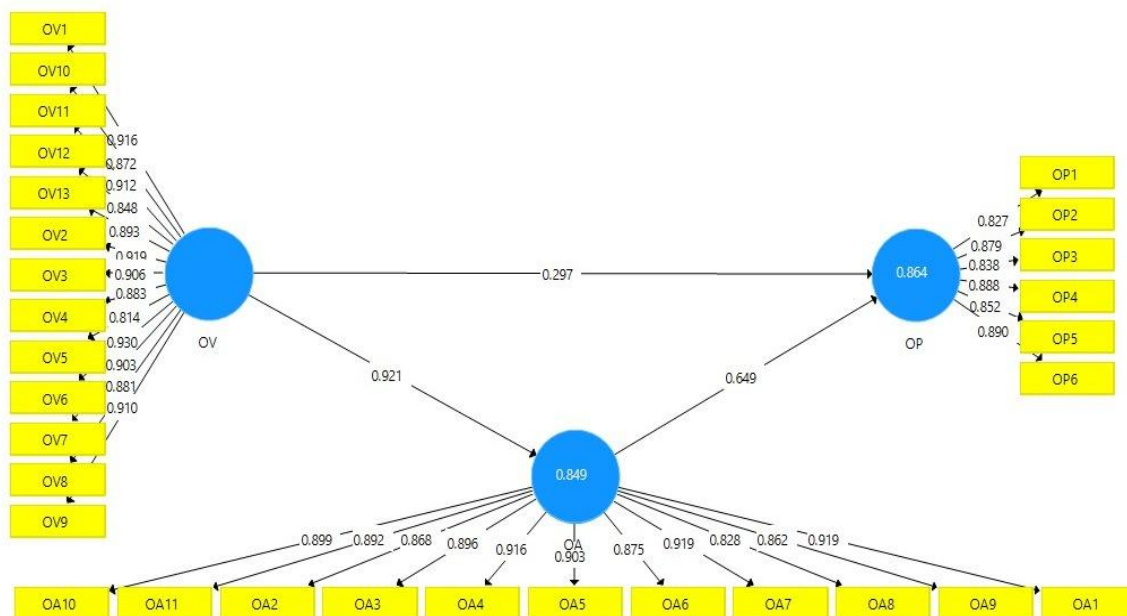
The organizational vigilance (OV) variable has a positive and significant effect on the organizational performance (OP) variable. This conclusion is indicated by the positive original sample value of 0.291 and a p-value of 0.032, which is less than 0.05 (the significance level used). This result is also supported by the t-statistic value of 2.154, which is greater than 1.67 (a one-tailed test with a significance level of 5%). Therefore, it can be concluded that hypothesis 1 is accepted. Then, please look at Table 2.

Table 2. *Specific indirect effect*

	Specific Indirect Effects
OV → OA → OP	0.182

Organizational Ambidexterity (OA) mediated the effect of organizational vigilance (OV) on organizational performance (OP). The specific indirect effect value is 0.182, indicating a positive mediating effect of organizational ambidexterity in the relationship between organizational vigilance and organizational performance. However, further confirmation using bootstrapping confidence intervals is recommended to strengthen the statistical validity of this mediation effect. Therefore, it can be concluded that hypothesis 2 is accepted.

Figure 2. *The result of PLS-SEM*



Based on the questionnaire results, the organizational vigilance variable showed that the ability to respond to customers' needs received the lowest score. This occurs because customer demands change rapidly, requiring universities to adapt accordingly. In addition, responding effectively to these changes requires greater effort, including training and development programs and the implementation of new technologies, which can be challenging for universities already struggling with limited resources and competing priorities. Some universities face budget constraints, which make it difficult for them to respond quickly to customer needs.

For organizational ambidexterity, organizational design and interdisciplinary collaboration are the indicators with the lowest scores. To support both exploration and exploitation, universities need to adjust their organizational design, which inevitably involves organizational change. Although such changes can improve performance, they also require significant time and effort. These adjustments may affect employees psychologically, making structural and design changes challenging to implement, as they may lead to resistance, anxiety, or uncertainty about their roles and responsibilities. Universities must also encourage lecturers to engage in interdisciplinary collaboration in research and other academic activities to enrich knowledge. Although such collaboration is an attractive prospect, it is not easy to implement, as lecturers tend to conduct research within their areas of expertise.

The direct effect of organizational ambidexterity on higher education performance

In this study, organizational ambidexterity is shown to have a positive direct effect on university performance; however, the strength of this effect is strongly determined by the readiness of organizational design and the collaborative culture within the institution. The finding that organizational design and interdisciplinary collaboration indicators receive the lowest scores indicates that the potential of ambidexterity in universities has not yet been fully translated into consistent performance improvements, for example, in teaching quality, research productivity, and stakeholder services.

The low scores on organizational design and interdisciplinary collaboration reflect structural and cultural barriers encountered when universities attempt to balance exploration activities (renewal, innovation) with exploitation (enhancing the efficiency and quality of existing processes). Structural changes are perceived as time-consuming and potentially undermining staff morale, while faculty members tend to feel more comfortable conducting research within their areas of expertise, thereby weakening cross-disciplinary collaboration. This situation prevents the full potential of ambidexterity's direct effect on performance from being realized because the ideas and innovations generated are not fully integrated into educational, research, and community engagement processes (Thomas et al., 2023).

At the same time, the limited organizational capacity to respond to students' and other stakeholders' needs weakens the pathway through which ambidexterity should accelerate performance. Rapid changes in user needs require training, competency development, and technology investment, whereas budget constraints and resistance to change slow universities' responses to the pace of environmental dynamics (Hedayatirad et al., 2025). Consequently, the direct effect of ambidexterity on performance tends to be reduced, as the organization's capacity to absorb and manage new opportunities is not yet fully aligned with existing structures and processes.

This pattern is consistent with the findings of [García-Hurtado et al. \(2024\)](#), which show that universities capable of balancing the exploration and exploitation of knowledge tend to achieve higher levels of entrepreneurial and innovation performance, as reflected in the intensity of industry collaboration, value creation for society, and strategic adaptation capacity. Studies on ambidexterity in entrepreneurial universities and on performance measurement systems also find that the ability to balance exploration and exploitation correlates positively with institutional reputation, research output, and stakeholder engagement, particularly when supporting structures and performance measurement systems are designed consistently.

In the context of private universities in Brazil, studies on the determinants of organizational ambidexterity show that ambidexterity contributes to academic performance, but its influence is mediated and moderated by market orientation, learning orientation, innovation capacity, and market turbulence. This pattern aligns with the findings of the present study, which places the ability to respond to customer needs in a weak position; thus, without strong organizational vigilance, the potential of ambidexterity is difficult to convert into superior performance.

More broadly, [Marginson \(2024, 2025\)](#) emphasizes that successfully managing the tension between their traditional missions (education and research) and emerging agendas such as innovation, entrepreneurship, and social engagement tends to be associated with greater adaptive capacity and better performance outcomes. This perspective positions ambidexterity as a core capability that enables universities to move flexibly and continuously between the demands of exploration and exploitation, consistent with the universities in this study that are still in a transitional phase toward becoming fully ambidextrous organizations.

Theoretically, these findings support [Kassotaki's \(2022\)](#) conclusion that the average effect of ambidexterity on performance is indeed positive but moderate, and this effect becomes stronger when organizations adopt a combination of structural and contextual mechanisms. The low scores for organizational design and interdisciplinary collaboration in this study indicate that such mechanisms have not yet been firmly established in the universities under investigation. In practice, universities need to redesign their structures and work processes to become more adaptive, for example, by establishing interdisciplinary research centers, implementing joint-teaching schemes across study programs, and developing collaborative forums that remain clearly linked to institutional performance targets. This recommendation aligns with [García-Hurtado et al. \(2024\)](#), who highlight the importance of coherent structural arrangements and incentive systems to support ambidextrous universities.

The mediating role of organizational vigilance in the relationship between organizational ambidexterity and higher education performance

The mediating role of organizational ambidexterity in the relationship between organizational vigilance and university performance appears crucial when universities operate in rapidly changing environments and face strong pressure to adapt. The survey findings indicate that strong ambidexterity does not automatically translate into high performance if organizational vigilance, particularly the ability to respond to “customer” needs, remains weak.

The SEM-PLS results and questionnaire descriptions indicate that organizational ambidexterity is already evident in exploration and exploitation activities, yet the two weakest indicators are organizational design and interdisciplinary collaboration. Universities encounter difficulties in adjusting their structures and organizational design because change is perceived

as time- and energy-consuming and is feared to lower employee morale. At the same time, academics are more comfortable conducting research within their areas of expertise, so cross-disciplinary collaboration is relatively rare, and the potential of ambidexterity has not been translated into curriculum innovations, joint research, or flagship cross-field programs.

These findings are consistent with literature, which positions ambidexterity as a capability that depends on systemic support rather than on individual effort alone. Fu et al. (2015), for example, show that in professional service firms in China, the relationship between high-performance work systems (HPWS) and firm performance operates through the strengthening of ambidexterity, supported by high-standard human resource management practices. In other words, without aligned structural arrangements and resources, ambidexterity struggles to develop into performance advantages. A similar pattern is evident in Gürlek's (2021) study of the hotel industry, where HPWS enhances intellectual capital and absorptive capacity, which, in turn, drive organizational ambidexterity and performance. Although the contexts differ (business vs. higher education), the overarching message is the same: ambidexterity has an impact only when the organization builds a strong systemic foundation.

The survey data show that within the organizational vigilance variable, the indicator “ability to respond to customer needs” has the lowest score. In the context of higher education, “customers” include not only students but also parents, employers, industry partners, and government bodies. Their demands are changing rapidly: digital learning models, curricula aligned with labor-market needs, career support, and agile administrative services. However, budget constraints, training needs, and the requirement for technology investment prevent many universities from responding as quickly as expected.

It is at this point that organizational vigilance functions as a mediator between ambidexterity and performance. Ambidexterity provides the “raw material” in the form of exploration and exploitation capabilities, but without vigilance and sensitivity to environmental signals, structural changes, program innovations, and research collaborations, these capabilities often miss the mark. Literature supports this view. Günsel et al. (2018) find that ambidexterity is shaped by a set of antecedents (including market orientation and networks) and, in turn, affects organizational outcomes; networks and external sensitivity act as bridges that make ambidexterity relevant to market needs. The university survey findings align with this view: when vigilance toward students' and stakeholders' needs is low, the mediating pathway from ambidexterity to performance becomes weaker.

When the findings from the business and professional service sectors, previous studies (Fu et al., 2015; Günsel et al., 2018; Gürlek, 2021) are placed side by side with the higher education data in this study, a consistent pattern emerges. First, ambidexterity requires support from high-performance work systems, networks, and intellectual capital to truly enhance performance. Second, organizations that are sensitive to their environments, quick to detect changes in customer needs, and able to absorb new knowledge are better positioned to leverage ambidexterity. Third, when indicators such as organizational design and cross-disciplinary collaboration remain weak, the positive effects of ambidexterity tend to be “held back” and do not fully materialize in final performance indicators, whether in business or in universities.

In the context of higher education, the findings become particularly compelling because the survey field spans a wide range of universities with varied characteristics, resources, and organizational cultures. This means that the resulting data are not merely a reflection of a single

institution, but a broader portrait of how universities, as knowledge organizations, struggle to balance exploration and exploitation under the pressure of change. The diversity of respondents strengthens the generalizability of the findings and indicates that problems of organizational design and vigilance toward stakeholder needs are not local issues but structural phenomena within the higher education ecosystem.

The strategic value of this study lies in its ability to explain a frequently overlooked “link in the chain” that organizational vigilance is the crucial bridge connecting ambidexterity to university performance. The survey across a broad higher education region provides empirical evidence that without sensitivity to the needs of students and stakeholders, investments in program innovation, restructuring, or the promotion of interdisciplinary research do not always yield the expected performance outcomes.

These findings provide an evidence base for university leaders to redirect their focus from merely encouraging numerous exploration-exploitation initiatives to building sharp organizational vigilance as the connector to tangible performance. In other words, it is not enough for universities to be “busy innovating”; they must also accurately read student and stakeholder needs and translate that information into strategic decisions, structural adjustments, and relevant service programs. As a result, this study offers three strategic directions for universities.

First, the findings signal the need to strengthen work systems and human resource management practices that support both ambidexterity and vigilance, in line with evidence that high-performance work systems can enhance ambidexterity and performance by strengthening human capital and organizational learning processes (Fu et al., 2015; Gürlek, 2021). Targeted training, student feedback mechanisms, and incentives for interdisciplinary collaboration can serve as concrete bridges that connect exploration-exploitation capabilities to improvements in the quality of academic services. Second, strong networks and external relationships need to be positioned as part of organizational vigilance, not merely as image-building tools. Research indicates that networks can enrich market information, open access to best practices, and reinforce the impact of ambidexterity on performance (Günsel et al., 2018). Therefore, universities should manage partnerships with industry, professional associations, and alumni communities more strategically, beyond ceremonial collaboration. Third, because this study is based on a survey of a broad higher education ecosystem, the recommendations it derives carry substantial empirical weight: they emerge from the voices of many academics, leaders, and internal stakeholders who directly experience the tensions among exploration, exploitation, and environmental demands. These results are valuable not only for a single campus but as a collective mirror for universities seeking to leap to a new level of performance by strengthening organizational ambidexterity that is genuinely “connected” to the real needs of students and society through the mediating role of organizational vigilance.

Conclusion

This study demonstrates that organizational ambidexterity exerts a positive direct effect on higher education performance, yet its impact remains constrained when organizational design, interdisciplinary collaboration, and vigilance toward stakeholder needs are weak. Ambidexterity in the form of exploration and exploitation is already present, but structural rigidity, cultural comfort with disciplinary silos, and limited responsiveness to rapidly changing expectations of students, employers, and society prevent innovations from being fully

translated into better teaching quality, research productivity, and stakeholder services. The research is particularly valuable because it reveals the often-overlooked link in the performance chain: organizational vigilance serves as a critical bridge, making ambidexterity genuinely consequential for institutional outcomes across diverse university contexts. By combining evidence from a broad higher education ecosystem with insights from business and service sectors, the study shows that ambidexterity alone is insufficient without supportive systems, human resource practices, and networks that sharpen environmental sensitivity and capacity to respond.

For universities in different countries, these findings imply that efforts to enhance performance should move beyond generic calls for innovation toward deliberate strengthening of organizational vigilance, adaptive structures, and cross-disciplinary collaboration. Institutions that invest in high-performance work systems, strategic partnerships, and feedback-rich relationships with stakeholders are better positioned to harness ambidexterity as a humane and sustainable pathway to improving learning, research, and societal impact. Future research is recommended to involve larger samples and to incorporate additional variables, such as institutional types, cultural contexts, and specific performance metrics, to better understand the factors influencing organizational effectiveness in higher education.

Disclosure Statement

No potential conflict of interest was reported by the authors.

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