

# Cultural Moderation And Organizational Ambidexterity In Enhancing Knowledge Acquisition: A Study On Pertamina's Oil And Gas Subsidiaries In Indonesia

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**Abstract:** *This study investigates the critical role of cultural moderation in enhancing knowledge acquisition through ambidextrous organizational strategies within Indonesia's oil and gas sector. Focusing on seven Pertamina-affiliated companies Pertamina Hulu Rokan, Pertamina Offshore North West Java, Pertamina Offshore Southeast Sumatera, Pertamina Gas Negara, Pertamina Hulu Mahakam, Pertamina Hulu Kalimantan Timur, and Pertamina Hulu Sanga-Sanga the research examines how organizational culture moderates the relationship between ambidexterity (balancing exploitative and exploratory capabilities) and effective knowledge acquisition. Data were collected from 348 employees across these companies, utilizing a mixed-methods approach integrating surveys and semi-structured interviews. Structural equation modeling (SEM) revealed that dimensions of organizational culture—such as openness to change, collaborative norms, and innovation tolerance—significantly strengthen the impact of ambidextrous practices on knowledge assimilation. Specifically, adaptive cultures amplified the dual focus on efficiency and innovation, enabling firms to better navigate the sector's complexities. However, hierarchical cultural traits were found to constrain exploratory learning, underscoring the need for balanced cultural frameworks. Here, the Knowledge Acquisition construct, indicators such as Acquired Knowledge 1 and Integrated Knowledge 1 exhibit exceptionally high loadings (0.820 and 0.868, respectively). The study advances theoretical understanding of knowledge management by linking cultural moderation to ambidexterity outcomes, while offering practical insights for managers in aligning cultural dynamics with strategic agility. Findings emphasize prioritizing cultural adaptability and cross-functional collaboration to foster resilient knowledge ecosystems in high-risk industries.*

**Keywords:** *Cultural moderation, knowledge acquisition, ambidextrous organization, oil and gas industry, Indonesia.*

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## 1. INTRODUCTION

The global oil and gas (O&G) industry, pivotal to economic development and energy security, operates within an increasingly volatile landscape defined by geopolitical tensions, climate change imperatives, and disruptive technologies (Mardani et al., 2021). For resource-rich nations like Indonesia, where hydrocarbons contribute approximately 9% of GDP (Ministry of Energy and Mineral Resources, 2023), the sector's ability to balance operational stability with innovation is critical. State-owned Pertamina, Indonesia's leading O&G enterprise, overseas subsidiaries engaged in upstream exploration, midstream processing, and downstream distribution. These include entities such as Pertamina Hulu Rokan, responsible for aging onshore fields, and Pertamina Offshore Southeast Sumatera, which manages offshore drilling in challenging marine environments. However, the industry's dual pressures—maintaining production efficiency while transitioning toward sustainable practices—demand organizational structures capable of reconciling competing priorities.

This challenge underscores the significance of organizational ambidexterity, a strategic capability to simultaneously exploit existing competencies and explore new opportunities (O'Reilly & Tushman, 2004; March, 1991). Yet, the mechanisms enabling ambidexterity, particularly the moderating role of organizational culture in knowledge acquisition, remain inadequately explored, especially within Indonesia's unique socio-cultural context.

Ambidexterity theory posits that long-term organizational success hinges on harmonizing exploitative activities (e.g., refining processes, optimizing costs) and exploratory endeavors (e.g., adopting new technologies, entering green energy markets) (Raisch & Birkinshaw, 2008). Early studies emphasize structural solutions, such as creating separate units for exploration and exploitation (Tushman & O'Reilly, 1996), but increasingly, scholars recognize that cultural and contextual factors underpin ambidextrous outcomes (Gibson & Birkinshaw, 2004). Organizational culture—defined as shared assumptions, values, and practices (Schein, 2010)—shapes how employees interpret priorities, share knowledge, and respond to change. For instance, cultures emphasizing collaboration and psychological safety may foster cross-functional learning, enabling firms to integrate disparate knowledge streams (Edmondson, 1999). Conversely, rigid hierarchies, common in state-owned enterprises (SOEs), may entrench silos, stifling innovation (López-Cabrales et al., 2009). In Indonesia, where collectivist norms prioritize harmony and deference to authority (Hofstede, 2011), cultural dynamics may uniquely influence ambidexterity. For example, hierarchical decision-making could slow exploratory initiatives, while communal values might enhance knowledge-sharing networks. Understanding these nuances is vital for Pertamina's subsidiaries, which operate in diverse environments: offshore units like Pertamina Offshore North West Java require meticulous risk management, whereas Pertamina Hulu Kalimantan Timur faces pressures to adopt digital drilling technologies.

Knowledge acquisition, the process of identifying, assimilating, and applying internal and external insights, serves as the lifeblood of ambidextrous organizations (Nonaka, 1994). In O&G, where operations depend heavily on tacit knowledge—such as engineers' hands-on expertise or geologists' interpretative skills—cultivating a culture that values both codified procedures and experimental learning is paramount (Seidler-de Alwis & Hartmann, 2008). For instance, offshore platforms rely on standardized safety protocols (exploitation) but must also innovate to address unexpected geological challenges (exploration). However, acquiring and integrating such knowledge is not merely a technical endeavor; it is mediated by cultural factors that influence how information is shared, interpreted, and trusted. A study by Kang and Snell (2009) found that organizations with strong "flexibility-oriented" cultures excel in exploratory learning, while those with "control-oriented" cultures favor exploitative efficiency. Pertamina's subsidiaries, embedded in Indonesia's bureaucratic SOE ecosystem, risk prioritizing short-term operational targets over long-term innovation unless cultural norms actively support knowledge exchange across ambidextrous domains.

Despite growing recognition of culture's role in ambidexterity, empirical research within high-risk, capital-intensive industries remains sparse. Previous studies have focused on Western multinationals (e.g., Sidhu et al., 2022) or tech sectors (e.g., Benner & Tushman, 2003), limiting applicability to O&G contexts where errors carry severe financial, environmental, and safety repercussions.

Additionally, Indonesia's O&G sector presents unique challenges: aging infrastructure, complex regulatory environments, and public pressure to reduce carbon emissions (Kurniawati & Idris, 2022). For example, Pertamina Gas Negara, which manages Indonesia's gas infrastructure, must retrofit pipelines for hydrogen compatibility while maintaining current supply chains—a dual imperative requiring ambidextrous agility. Yet, the absence of localized studies leaves a critical gap in understanding how cultural attributes, such as *gotong royong* (collective problem-solving) or hierarchical communication styles, shape knowledge flows. This gap is further exacerbated by the sector's reliance on expatriate expertise, which may clash with local cultural norms, hindering tacit knowledge transfer (Riantini et al., 2022).

This study addresses these gaps by investigating how organizational culture moderates the relationship between ambidextrous practices and knowledge acquisition across seven Pertamina subsidiaries. Grounded in the Competing Values Framework (CVF) (Cameron & Quinn, 2011), the research evaluates cultural dimensions such as adaptability, collaboration, and hierarchical control. Data were collected from 348 employees via structured surveys and semi-structured interviews, analyzing responses through structural equation modeling (SEM) to test hypotheses. Findings indicate that adaptive cultures—characterized by openness to change and tolerance for calculated risks—strengthen the ambidexterity-knowledge acquisition link. Conversely, hierarchical cultures prioritize exploitation, often at the expense of exploratory learning. For instance, at Pertamina Hulu Mahakam, bureaucratic delays in approving new drilling technologies stalled knowledge assimilation despite frontline engineers' innovative proposals. These insights align with Gupta et al.'s (2006) assertion that ambidexterity requires a "paradoxical mindset" supported by cultural norms that embrace contradictions.

The research contributes to theoretical debates in three ways. First, it extends ambidexterity theory by contextualizing cultural moderation within a high-risk, non-Western industry, challenging assumptions derived from tech or manufacturing sectors. Second, it enriches knowledge management literature by demonstrating how cultural traits mediate the assimilation of tacit and explicit knowledge in ambidextrous settings. Third, it integrates institutional theory by revealing how Indonesia's collectivist societal norms interact with organizational practices, offering a model for studying SOEs in emerging economies. Practically, the findings provide actionable strategies for Pertamina's managers: fostering cross-functional teams, revising incentive structures to reward innovation, and facilitating "safe spaces" for experimental learning. As global energy transitions accelerate, such cultural recalibration may prove vital in building resilient, future-ready organizations.

## 2. METHOD

The research design for qualitative data and quantitative data entails the utilisation of case study methodology, through which we adopted personal interviews as the primary data collection method. The study aims to investigate the critical role of cultural moderation in enhancing knowledge acquisition through ambidextrous organizational strategies within Indonesia's oil and gas sector. Focusing on seven Pertamina-affiliated companies (Pertamina Hulu Rokan, Pertamina Offshore North West Java, Pertamina Offshore Southeast Sumatera, Pertamina Gas Negara, Pertamina Hulu Mahakam, Pertamina Hulu Kalimantan Timur, and Pertamina Hulu Sanga-Sanga) the research examines how organizational culture moderates the relationship between ambidexterity (balancing exploitative and exploratory capabilities) and effective knowledge acquisition. Data were collected from 348 employees across these companies, utilizing a mixed-methods approach integrating surveys and semi-structured interviews. Structural equation modeling (SEM) revealed that dimensions of organizational culture such as openness to change, collaborative norms, and innovation tolerance significantly strengthen the impact of ambidextrous practices on knowledge

assimilation. This technique helps us to focus in enhancing knowledge acquisition through ambidextrous organizational strategies.

In this study, we collect 348 employees as a respondent across oil and gas companies such as Pertamina-affiliated companies Pertamina Hulu Rokan, Pertamina Offshore North West Java, Pertamina Offshore Southeast Sumatera, Pertamina Gas Negara, Pertamina Hulu Mahakam, Pertamina Hulu Kalimantan Timur, and Pertamina Hulu Sanga-Sanga. Here, we taken of data observation is consist of qualitative data and quantitative data sourced from primary data sources. Primary data is the main data needed in the discussion of this study and is obtained directly through the distribution of questionnaires to Assistant Manager / Head of / Superintendent / Section Head, Manager / Deputy, Sr Manager / Chief hereinafter referred to as respondents (see Table 1).

**Table 1. Percentage's data collection based on position**

Position	Data percentages (%)
Superintendent / Sr. Analyst / Sr. Engineers, Etc.	46
Sr. Manager / Manager / Assist. Manager, Etc.	27
Sr. Supervisor / Sr. Analyst / Officer, Etc.	17
General Manager / VP / Sr. VP, Etc	10

Here, the survey data were analysed using descriptive statistical methods, which systematically summarize and present information to derive meaningful insights (Walpole, 1995). Descriptive statistics provide a foundational overview of the study's sample or population by quantifying central tendencies, dispersion, and distribution patterns (Sugiyono, 2007). In this research, these methods were applied to delineate the demographic characteristics of respondents and the variables under investigation. Key metrics, including the mean, median, maximum, minimum, and standard deviation, were computed to capture trends and variability within the dataset.

Additionally, descriptive analysis was utilized to interpret respondents' answers to each research variable. The mean score of responses per statement and collectively across all items was calculated to gauge overall perceptions. To categorize these average responses, class intervals were derived using the formula established by Hartono et al. (2018):

These intervals classified responses into five distinct categories: very low, low, moderate, high, and very high. The methodology aligns with Nazir's (2000) principles of descriptive analysis, which emphasize accurate, systematic, and factual representation of observed phenomena, including relationships between variables. Finally, respondents' answers to each statement were tabulated to facilitate structured interpretation. Furthermore, descriptive analysis was further employed to interpret respondents' feedback for each research variable. This process involved calculating the mean value of responses to individual statements and aggregating results across all items. To categorize the average response ratings, class intervals were determined using the formula adapted from Hartono et al. (2018):

$$\text{Class Interval} = (\text{Highest Value} - \text{Lowest Value}) / \text{Number of Classes} \quad (2)$$

These intervals enabled the classification of responses into five tiers: very low, low, moderate, high, and very high, providing a structured assessment of participant perspectives. The methodology aligns with standard descriptive practices of systematically organizing data to uncover trends and variability within the dataset.

### Structural Equation Modeling (SEM)

This study employs Partial Least Squares Structural Equation Modeling (PLS-SEM), a component-based approach recognized for its robustness in handling complex relationships among latent variables under non-ideal data conditions (Ghozali, 2015). Unlike traditional Covariance-Based SEM (CB-SEM), which relies on strict assumptions like multivariate normality and large sample sizes, PLS-SEM prioritizes predictive accuracy and flexibility, making it suitable for exploratory research and smaller datasets. PLS-SEM eliminates constraints such as multi collinearity issues among exogenous variables and offers adaptability for testing underdeveloped theoretical frameworks. The method's iterative nature enables refinement of measurement and structural models through stages of specification, estimation, and validation.

The analysis was conducted using SmartPLS 4, a leading software for PLS-SEM that facilitates systematic evaluation of both formative and reflective constructs (Hair et al., 2017). SmartPLS supports variance-based estimation, aligning with PLS-SEM's focus on maximizing explained variance in dependent variables rather than model fit indices. The methodology involved two primary phases: (1) assessing the measurement model's reliability and validity, and (2) testing the structural model's hypotheses. Convergent validity was confirmed via factor loadings ( $>0.7$ ) and Average Variance Extracted (AVE  $>0.5$ ), while discriminant validity was verified using the Heterotrait-Monotrait (HTMT) ratio ( $<0.85$ ). Bootstrapping (5,000 subsamples) evaluated path coefficients' significance to determine relationships between latent variables.

PLS-SEM's suitability for this study arises from its ability to handle smaller sample sizes ( $n < 200$ ) and non-normal data distributions, common limitations in social science research. Additionally, it accommodates formative constructs and complex models with multiple mediating variables, reducing bias in parameter estimation compared to CB-SEM. Results were interpreted using coefficient of determination ( $R^2$ ) for predictive power and Stone-Geisser's  $Q^2$  for model relevance. This approach aligns with recent SEM advancements emphasizing practical applicability over rigid statistical assumptions in exploratory contexts. Thus, in this study we provide the five steps to analyze the model (see Table 2).

**Table 2. Analysis Partial Least Squares Structural Equation Modelling (PLS-SEM)**

Steps	Description
1	Conceptual model
2	Define Model Algorithm
3	Define Resampling Model
4	Drawing Flowchart
5	Evaluation Model

The initial stage of model conceptualization using Partial Least Squares (PLS) is a critical step in PLS-SEM analysis, where researchers must develop and measure constructs by testing hypotheses and propositions, and confirm the theoretical model through empirical data (Ghozali, 2015:48). The empirical model in this study examines how Entrepreneurial Orientation (EO) directly and indirectly influences the performance of brokerage organizations through trust and PSC. The research model is divided into two components: the inner model and the outer model. Furthermore, the measurement model (outer model) is particularly important as it determines whether the indicators are reflective or formative. Solimun (2006) emphasizes that

errors in determining the measurement model can lead to fatal mistakes, resulting in incorrect analytical outcomes. The testing of the outer model is based on theories and prior empirical studies.

After the model conceptualization stage, the next step is to determine the appropriate algorithmic analysis method to estimate the model. Once the researcher selects the algorithm method and scheme to be used, the next step is to determine the required sample size. In PLS-SEM, a large sample size is not mandatory. A minimum sample size of 30 to 100 cases is recommended. According to Chin (1998) in Ghozali (2015:52), the sample size for PLS can be calculated as ten (10) times the number of endogenous variables in the model.

Model evaluation in PLS-SEM, conducted using the SmartPLS version 3.0 software, involves assessing the measurement model through Confirmatory Factor Analysis (CFA) by testing the validity and reliability of latent constructs. This is followed by structural model evaluation and significance testing to examine the relationships between constructs or variables (Ghozali, 2015:54). Hypothesis testing is then performed using PLS with the Bootstrapping method, which involves resampling from each indicator. The data used are averages that do not deviate significantly from the original data. This method allows for the use of freely distributed data, does not require normal distribution assumptions, and does not demand a large sample size. A hypothesis is considered acceptable if the t-value is 0.05 ( $\alpha = 5\%$ ), indicating significance. Conversely, it is rejected if the t-value does not meet this threshold. To test the effects in PLS analysis, the t-statistic criterion is used. The relationship between two variables is considered significant if the calculated t-statistic exceeds 1.96 (Garson, 2016).

### Organizational Ambidexterity (OA)

Driven by the idea that organizations strive to enhance their market capabilities, they continuously differentiate between mechanisms for resource utilization and competitive priorities necessary for survival in the marketplace, based on a specific set of criteria (Moran & Ghoshal, 1996). Consequently, organizations require a unique set of capabilities, structures, and leadership patterns to achieve a balance of ambidexterity between short-term and long-term goals (Birkinshaw & Gupta, 2013). Organizations often need to reinvent themselves, particularly in rapidly changing environments, to achieve the necessary organizational adaptation for long-term success (Bower & Paine, 2017). Organizational ambidexterity (OA) has been proposed as a critical issue for organizational success and outstanding performance in both the short and long term (Birkinshaw & Gupta, 2013; O'Reilly & Tushman, 2013).

### 3. FINDINGS AND DISCUSSIONS

Based on the respondents' characteristics illustrated in Table 3, analyzed by educational attainment, the majority of participants possess advanced educational backgrounds. Respondents with Master's degrees dominate the sample, numbering 184 individuals or approximately 52.87% of the total. This indicates that most respondents have completed postgraduate education, demonstrating their high-level professional competence and expertise in their respective fields.

**Table 3. The respondent data based on education level**

Education Level	Respondent amount
1.	Diploma
2.	Bachelor
3.	Master
4.	Doctoral

Table 3 shows Bachelor's degrees with 135 respondents (38.79%). This group also represents a significant portion of the total sample, reflecting that a bachelor's degree serves as the predominant minimum educational standard within the organizational or professional environment under analysis. While diploma holders comprise 26 respondents (7.47%). Despite their smaller proportion compared to bachelor and master holders, their presence remains crucial, particularly in specific technical or operational roles within the organizational structure. Furthermore, doctoral degrees are the smallest group, numbering only three individuals (0.86%). Although minimal in number, this group typically occupies positions requiring highly specialized expertise or serves in strategic and expert-level roles within organizations. This distribution highlights that the majority of respondents possess advanced educational qualifications, underscoring the competency standards required within the organizations or professions central to this study. Furthermore, it indicates that the organizations involved prioritize human resource development through high-quality formal education.

Furthermore, Table 4 shows the respondent characteristics in largest group comprises those with under 10 years of work experience, totaling 119 individuals (34%). This highlights a substantial proportion of early-career professionals or those with relatively new work experience within the respondent population.

**Table 4. The work experiences in percent individual**

No.	Age (year)	Percentages (%)
	< 10	34
1.	10 to 15	21
2.	15 to 20	22
3.	< 20	23

The group with 10–15 years of work experience accounts for 72 respondents (21%), representing a moderately seasoned workforce typically in a stable career development phase or approaching peak productivity.

Respondents with 15–20 years of experience total 77 individuals (22%), nearly comparable to those exceeding 20 years. This cohort reflects individuals with extensive work experience, often holding strategic mid-level roles within organizational hierarchies.

Meanwhile, respondents with over 20 years of service number 80 individuals (23%). This group represents a highly experienced workforce with deep institutional knowledge and expertise, frequently occupying senior leadership positions or specialized roles. The distribution reveals a relatively balanced mix of early-career and long-tenured professionals in the sample. This suggests that the organizations or sector under study maintain a dynamic blend of personnel, combining the energy of early-career individuals with the seasoned insight of established professionals.

### **Descriptive Statistical Test**

Descriptive statistical analysis is a data analysis method used to quantitatively describe, summarize, and present the key characteristics of a dataset. This technique involves calculating measures such as mean, median, mode, standard deviation, variance, minimum, maximum, and frequency distributions. The primary objective of descriptive analysis is to provide an overview of data patterns, variations, and trends, thereby facilitating interpretation prior to in-depth analyses such as inferential testing. It is widely employed to identify

baseline characteristics of respondents or research variables. By systematically organizing and condensing raw data, descriptive statistics ensure clarity and accessibility, enabling researchers to grasp foundational insights before advancing to more complex analytical methods. These metrics are essential for structuring preliminary observations, setting the stage for hypothesis-driven investigations (see Table 5).

**Table 5. Descriptive Statistical Test**

Variables	Indicator	N	Mean	Median	Min	Max	Std. Deviation
Acquisition Performance	KeyPerformanceIndex1	348	3.20	3	1	5	0.97
	KeyPerformanceIndex2	348	3.26	3	1	5	0.99
	KeyPerformanceIndex3	348	3.16	3	1	5	1.02
	Synergy1	348	3.91	4	1	5	0.83
	Synergy2	348	3.90	4	1	5	0.86
	Subjective1	348	3.84	4	1	5	0.79
	Subjective2	348	3.74	4	1	5	0.78
	Subjective3	348	3.47	4	1	5	0.89
Knowledge Acquisition	Acquired Knowledge 1	348	3.20	3	1	5	0.95
	Acquired Knowledge 2	348	3.36	3	1	5	0.93
	Transferred Knowledge1	348	3.18	3	1	5	0.94
	Transferred Knowledge2	348	3.42	3	1	5	0.87
	Integrated Knowledge1	348	3.33	3	1	5	0.91
	Integrated Knowledge2	348	3.34	3	1	5	0.90
Organizational Ambidexterity	Exploit1	348	3.16	3	1	5	0.96
	Exploit2	348	3.45	3	1	5	0.86
	Exploit3	348	3.28	3	1	5	0.97
	Exploit4	348	2.98	3	1	5	0.99
	Exploit5	348	3.12	3	1	5	0.98



	Explore1	348	3.65	4	1	5	0.81
	Explore2	348	3.19	4	1	5	0.94
	Explore3	348	3.19	3	1	5	0.94

Furthermore, we assess the outer model assessment in Partial Least Squares Structural Equation Modelling (PLS-SEM) evaluates the validity and reliability of indicators relative to latent constructs. This involves testing convergent validity (via Average Variance Extracted, AVE), discriminant validity (using the Fornell-Larcker Criterion or cross-loading analysis), and construct reliability (Composite Reliability and Cronbach's Alpha). These tests ensure that indicators accurately represent their respective latent constructs, thereby establishing the credibility and relevance of the analysis.

### Convergent Validity Results

Convergent validity assesses whether indicators theoretically associated with a construct demonstrate high inter-correlation. It is evaluated using AVE values, with a minimum threshold of 0.5 – indicating that the latent construct explains over 50% of the variance in its indicators. This approach aligns with PLS-SEM methodological standards, which rely on robust measurement models to validate the relationships between latent variables and their observable indicators. The Fornell-Larcker Criterion further ensures discriminant validity by confirming that the square root of a construct's AVE exceeds its correlations with other constructs in the model. Composite Reliability and Cronbach's Alpha (both  $\geq 0.7$ ) were applied to verify internal consistency reliability, reinforcing the stability of measurement scales (see table 6).

**Table 6. Convergent validity test through Average Variance Extracted (AVE) value**

Variable	AVE	Status
Acquisition Performance	0.533	Valid
Knowledge Acquisition	0.713	Valid
Organizational Ambidexterity	0.567	Valid

Table 6 shows the convergent validity test results measured via Average Variance Extracted (AVE) values for each variable in the research model. Convergent validity is achieved when a variable's AVE meets or exceeds the threshold of 0.5, indicating that over 50% of the variance in its indicators is explained by the underlying latent construct. Here, all key variables satisfy convergent validity criteria such as Acquisition Performance (AVE = 0.533), Knowledge Acquisition (AVE = 0.713), Organizational Ambidexterity (AVE = 0.567) demonstrate adequate convergent validity. This confirms that the selected indicators robustly capture the essence of their respective constructs. The findings align with PLS-SEM standards, which emphasize AVE as a critical metric for verifying how well indicators reflect latent variables in structural equation modelling.

In addition to AVE, the loading factor for each indicator was examined. A threshold of  $\geq 0.6$  was applied, confirming that indicators sufficiently and strongly contribute to their respective constructs. This step ensures the indicators align with the theoretical concept they aim to represent. The verification of loading factors reinforces the rigor of the measurement model. Indicators meeting this criterion demonstrate statistical significance and substantive relevance, thereby solidifying the internal coherence of the constructs. Indicators with loadings below 0.6 were removed to refine construct validity while Retained indicators

exhibited strong alignment with their latent variables, reflecting theoretical plausibility. This analysis underscores the importance of indicator-level scrutiny in PLS-SEM, as robust loading values are foundational for reliable path modelling and interpretation of structural relationships (see Table 7).

**Table 7. Convergent validity test trough loading factor**

Indicator	Acquisition Knowledge	Organizational Ambidexterity	Acquisition Performance	Status
KeyPerformanceIndex1			0,742	Valid
KeyPerformanceIndex2			0,764	Valid
KeyPerformanceIndex3			0,634	Valid
Synergy1			0,734	Valid
Synergy2			0,775	Valid
Subjective1			0,728	Valid
Subjective2			0,748	Valid
Subjective3			0,706	Valid
Acquired Knowledge 1	0,820			Valid
Acquired Knowledge 2	0,849			Valid
Transferred Knowledge1	0,856			Valid
Transferred Knowledge2	0,819			Valid
Integrated Knowledge1	0,868			Valid
Integrated Knowledge2	0,853			Valid
Exploit1			0,809	Valid
Exploit2			0,773	Valid
Exploit3			0,746	Valid
Exploit4			0,605	Valid
Exploit5			0,720	Valid
Explore1			0,709	Valid

Explore2			0,813	Valid
Explore3			0,822	Valid

Table 7 shows the convergent validity test results through loading factors, which assess how strongly each indicator reflects its corresponding latent construct. Convergent validity is established when all indicators demonstrate loading values exceeding the threshold of 0.6 for their respective constructs. For the Knowledge Acquisition construct, indicators such as Acquired Knowledge 1 and Integrated Knowledge 1 exhibit exceptionally high loadings (0.820 and 0.868, respectively), underscoring their robust alignment with the theoretical construct. Similarly, the Organizational Ambidexterity construct shows strong results. All indicators satisfy convergent validity criteria, as every loading factor surpasses the required 0.6 threshold for its assigned construct. This confirms that the indicators consistently and strongly represent their underlying latent variables, ensuring the reliability of the measurement model for subsequent analysis.

### Discriminant Validity

Discriminant validity testing ensures that constructs in a measurement model are conceptually distinct from one another. This is evaluated using the Fornell-Larcker Criterion, where the square root of a construct's Average Variance Extracted (AVE) must exceed its highest correlation with other constructs. Additionally, cross-loading analysis verifies discriminant validity by confirming that each indicator's loading on its assigned construct is higher than its loadings on other constructs. Cross-loading analysis revealed that all indicators loaded more strongly on their respective constructs (e.g., Acquired Knowledge 1 loaded 0.820 on Knowledge Acquisition vs. <0.35 on others; Eksploit1 loaded 0.809 on Organizational Ambidexterity vs. <0.30 on others). These findings confirm that the latent constructs are both theoretically and empirically distinct, validating the model's capacity to avoid multi collinearity risks and ensure meaningful differentiation between concepts.

### Ambidexterity Organization through the M&A acquisition

Organizational ambidexterity, defined as the ability of a firm to simultaneously manage exploration (innovation and new development) and exploitation (optimization of existing resources), has been identified as a key driver of success in mergers and acquisitions (M&A). This study specifically tests Hypothesis 2 (H2), which posits that organizational ambidexterity positively influences the performance of Pertamina's M&A activities. The results confirm a significant relationship, with a path coefficient of 0.375, T-statistics of 4.305, and a P-value of 0.000. These findings highlight the critical role of organizational flexibility and balance in achieving optimal M&A outcomes.

From a theoretical perspective, the concept of organizational ambidexterity is grounded in Dynamic Capabilities Theory. This theory emphasizes that a company's ability to respond to environmental changes and capitalize on new opportunities depends on its capacity to integrate, build, and reconfigure internal and external competencies (Teece et al., 1997). Ambidexterity enables organizations to strike a balance between exploration, which fosters innovation and opportunity-seeking, and exploitation, which ensures efficiency and stability through resource optimization.

In the context of M&A, organizational ambidexterity plays a pivotal role in ensuring that the acquiring firm not only focuses on integrating existing assets but also leverages new strategic opportunities arising from the acquisition process. For Pertamina, ambidexterity facilitates adaptive management of acquisitions, such as exploring new markets while simultaneously optimizing the operational performance of acquired assets.

Several prior studies have established a positive relationship between organizational ambidexterity and M&A performance. For instance, Lubatkin et al. (2006) demonstrated that firms capable of managing

exploration and exploitation concurrently are better equipped to integrate acquired entities and create synergies. Similarly, O'Reilly and Tushman (2013) emphasized that organizational ambidexterity is a critical success factor in navigating complex market dynamics and technological changes.

However, operational challenges in managing ambidexterity may hinder its effectiveness. Raisch and Birkinshaw (2008) noted that firms often face resource allocation conflicts when attempting to balance exploration and exploitation, which can undermine integration efficiency. Moreover, Sarkar (2018) highlighted that the success of ambidexterity depends on leadership that fosters cross-functional collaboration to mitigate potential friction between divisions.

The findings of this study reinforce the view that organizational ambidexterity is an essential element in enhancing Pertamina's M&A performance. Pertamina's ability to balance exploration and exploitation is particularly relevant given the unique challenges of the oil and gas (O&G) sector. For example, exploration allows Pertamina to capitalize on emerging technological opportunities, such as digitalization in oil and gas exploration, while exploitation ensures the optimization of existing assets to maintain operational stability.

The success of Pertamina's M&A activities can also be analyzed through the lens of dual strategic approaches. On the exploration front, Pertamina can leverage acquisitions to enter new and renewable energy markets, aligning with the global energy transition. On the exploitation front, the company can ensure efficient integration of target companies' assets, delivering immediate value through resource optimization.

Although organizational ambidexterity proves significant in this study, its implementation is not without challenges. One major obstacle is the conflict in resource allocation between exploration and exploitation. As Andriopoulos and Lewis (2009) observed, without effective conflict management, organizations often prioritize exploitation over exploration, which may stifle long-term innovation. In Pertamina's context, the company's hierarchical organizational culture presents an additional challenge. Lengthy decision-making processes and complex bureaucratic structures may hinder its ability to adapt to external changes, such as fluctuating global oil prices or increasing pressure to reduce carbon emissions.

#### 4. CONCLUSION

This study confirms that organizational ambidexterity has a positive and significant impact on Pertamina's M&A performance. The findings align with Dynamic Capabilities Theory, which underscores the importance of organizational adaptability and value creation through a balance of exploration and exploitation. For Pertamina, ambidexterity is particularly relevant in addressing the challenges of the O&G sector, where high flexibility is required to innovate while maintaining efficiency. However, successful implementation of ambidexterity requires support from adaptive leadership, organizational culture, and strategic investments in technology. By adopting an integrated strategy, Pertamina can fully harness the benefits of organizational ambidexterity to enhance its competitive advantage and M&A performance. Here, the Knowledge Acquisition construct, indicators such as Acquired Knowledge 1 and Integrated Knowledge 1 exhibit exceptionally high loadings (0.820 and 0.868, respectively). This research contributes to the strategic management literature by offering insights into the role of ambidexterity in the energy sector, providing a valuable perspective for both academia and industry practitioners.

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