

Strategic Decision-Making in the VUCA Era: A Synthesis of Empirical Findings through a Systematic Literature Review in Indonesia

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Abstract

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This study aims to synthesize empirical findings on strategic decision-making in the VUCA era (Volatility, Uncertainty, Complexity, and Ambiguity) within the Indonesian context using a Systematic Literature Review (SLR) approach. The research background highlights the dynamics of the global business environment, characterized by digital disruption, regulatory changes, and global crises such as the COVID-19 pandemic, which require organizations to establish adaptive, data-driven, and long-term-oriented decision-making mechanisms. The reviewed articles include empirical studies on leadership, digital innovation, human resource management, environmental dynamics, regulatory frameworks, and global crises relevant to organizations in Indonesia. The synthesis results indicate that the effectiveness of strategic decision-making is determined by the integration of internal factors, such as adaptive leadership, digital technology adoption, and human capital development, with external factors, including market volatility, regulatory changes, and global crisis challenges. This integration produces a conceptual framework that emphasizes the importance of flexibility, collaboration, and continuous learning. Theoretically, this study enriches the literature on strategic management in the context of developing countries.

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1. Introduction

The rapid global changes over the past two decades have underscored the urgency of understanding the VUCA context (Volatility, Uncertainty, Complexity, and Ambiguity) as a conceptual framework for analyzing the dynamics of the business environment. The term VUCA was first introduced by the U.S. Army War College at the end of the Cold War to describe a world characterized by uncertainty and complexity (Bennett & Lemoine, 2014). Over time, this concept was adopted into business and management studies to explain realities shaped by market instability, technological change, and unpredictable global risks. Ultimately, VUCA has become a relevant lens for understanding how organizations can survive, adapt, and even grow amid turbulence.

In the Indonesian context, organizations across sectors face similar challenges. Digital disruption is among the most dominant factors reshaping the national business landscape. Digital transformation in Southeast Asia, including Indonesia, has created both opportunities and challenges, such as the emergence of platform-based models, digital consumer behavior, and global competition. Regulatory shifts, geopolitical dynamics, and crises such as COVID-19 further highlight organizational vulnerability to uncontrollable external factors (Group, 2021).

Such conditions demand decision-making that is not only reactive but also proactive and adaptive. Eisenhardt and Zbaracki (1992) and Riyanto (2022) argue that strategic decision-making is a core management process determining long-term organizational direction. Sound decisions enable organizations to survive and gain

advantage, while poor ones heighten failure risks. In the VUCA era, reliance solely on intuition is insufficient; decisions must integrate data analysis, adaptive leadership, and risk management (Fajri & Aziz, 2021). Empirical findings reveal that internal factors such as digital innovation, leadership, and human resource management significantly influence decision quality. The use of big data and artificial intelligence improves predictive accuracy and supports evidence-based decision-making. Adaptive leadership enables fast responses through communication, flexible roles, and measured risk-taking (Huang et al., 2023). Meanwhile, HR management that develops digital skills and fosters continuous learning strengthens resilience (He et al., 2023).

Nonetheless, research on strategic decision-making in the VUCA era is still dominated by Western contexts. In Indonesia, comprehensive reviews that synthesize empirical findings remain scarce. Some works have addressed specific areas, such as digital-era leadership (Wujarso, 2023), technology-based strategy transformation, or HR's role in disruption (Marthalia, 2023). Yet, studies integrating internal and external factors to explain strategic decisions in Indonesia's VUCA landscape are rare. This gap is critical because Indonesia, as Southeast Asia's largest economy and a developing country, faces unique complexities absent in developed contexts, including bureaucratic inefficiency, uneven digital infrastructure, and socio-cultural diversity. To address this, the present study applies a Systematic Literature Review (SLR) to synthesize empirical findings on strategic decision-making in Indonesia. SLR was chosen for its ability to organize dispersed evidence, assess study quality, and provide holistic insights.

This study has three main objectives. First, to identify empirical findings on strategic decision-making in the VUCA era within Indonesian organizations. Second, to evaluate contributions of internal factors (leadership, digital innovation, human resource management) and external ones (environmental dynamics, regulation, global crises). Third, to develop a relevant conceptual framework explaining decision-making practices in Indonesia. The contribution of this study is both theoretical and practical. Theoretically, it integrates findings across multiple studies, enriching strategic management literature within developing-country contexts. Practically, it provides recommendations for managers, leaders, and policymakers in Indonesia to better anticipate VUCA challenges. Thus, this study contributes not only to knowledge advancement but also to strengthening resilient and sustainable managerial practices amid uncertainty.

2. Methods

This study employs the Systematic Literature Review (SLR) method to collect, evaluate, and synthesize empirical literature on strategic decision-making in the VUCA era within the Indonesian context. The SLR approach was chosen because it provides a comprehensive and structured framework for exploring existing knowledge while simultaneously identifying gaps that require further investigation. Unlike traditional narrative reviews, SLR emphasizes transparency and replicability by following a systematic procedure that includes article identification, screening, eligibility testing, and synthesis.

The process began with determining inclusion and exclusion criteria. The inclusion criteria consisted of empirical studies quantitative, qualitative, or mixed-method published in national or international journals, with a particular focus on strategic decision-making, leadership, human resource management, digital innovation, and organizational contexts in Indonesia. This ensured that the reviewed studies directly contribute to understanding the Indonesian VUCA environment. Exclusion criteria included purely conceptual papers, opinion-based articles, works lacking empirical evidence, and studies conducted outside Indonesia, as they would not provide the necessary contextual relevance.

To gather relevant literature, searches were conducted through several major academic databases using carefully formulated keywords and Boolean operators. The keywords included “strategic decision making,” “VUCA,” “Indonesia,” “strategic management,” “leadership,” “digital innovation,” and “human resources.” These keywords were combined strategically to maximize search accuracy and retrieve articles most relevant to the study’s focus. The initial search results were screened to remove duplicates, followed by title and abstract reviews to exclude irrelevant studies. Articles that passed this stage were then examined in full text to ensure they fully met the inclusion criteria.

The selected studies were subjected to a thematic analysis to identify patterns, categories, and relationships among variables. Key data extracted from each article included research objectives, methodological approaches, theoretical perspectives, and main findings. This step enabled systematic comparison across studies while highlighting similarities and differences. Internal factors such as leadership styles,

digital innovation practices, and human resource strategies were categorized alongside external factors including regulatory dynamics, environmental turbulence, and global crises. Finally, the extracted insights were synthesized to build a conceptual framework explaining how strategic decision-making in Indonesia operates within a VUCA context. This synthesis not only integrates fragmented empirical findings but also provides a foundation for future research directions and practical recommendations for organizational leaders navigating uncertainty.

3. Results and Discussion

3.1. Internal Factors: Leadership, Digital Innovation, and Human Resources

Internal organizational factors play a central role in shaping strategic decision-making in the VUCA era. Effective decisions are not only influenced by external dynamics such as regulations or markets but also by the organization's internal ability to anticipate and adapt to uncertainty. In the literature, three key internal factors leadership, digital innovation, and human resource management (HRM) emerge as the foundation of effective strategy formulation. Leadership is considered the most critical variable. Adaptive leaders understand environmental dynamics, anticipate risks, and communicate direction clearly. According to Daubin (2023), adaptive leadership engages organizational members to solve complex problems, rather than relying solely on top-down authority. In Indonesia, Wujarso (2023) emphasizes that adaptive leadership reduces uncertainty through open communication, cross-functional collaboration, and innovation. These findings echo global studies, such as Usman (2020) and Sahid et al. (2023), which highlight transformational leadership's

role in inspiring, motivating, and creating a shared vision. Yet, Indonesia's cultural context marked by hierarchy and collectivism requires leaders to balance flexibility with sensitivity to social values. Thus, adaptive and transformational leadership in Indonesia must combine strategic flexibility with inclusivity and cultural awareness.

Digital innovation is another essential factor. The VUCA era is defined by complexity, fast-changing data, and unpredictability. Tools like big data analytics and AI allow organizations to predict market trends and make evidence-based decisions. Indonesian e-commerce firms using big data improved marketing strategies during the COVID-19 pandemic. Similarly, Turi et al. (2023) found that European organizations enhanced agility through big data adoption. However, differences remain: Indonesia faces barriers such as uneven internet access and low managerial digital literacy, which limit technology's effectiveness. Thus, while digital innovation offers vast opportunities, its impact depends on readiness and integration within organizational processes.

Human resource management (HRM) further strengthens strategic decision-making by building workforce adaptability. Continuous training, reskilling, and digital literacy are crucial. Marthalia (2023) found that Indonesian firms investing in digital skills were better prepared for disruptions than those reliant on traditional practices. Internationally, stress the integration of business acumen with digital competencies. In Indonesia, however, a digital skills gap persists, particularly between younger employees and senior staff. Bureaucratic work cultures in some sectors also slow adaptation. Therefore, HRM strategies must blend technical

training with soft skills development communication, collaboration, and flexibility to prepare employees for uncertainty.

The literature underscores that synergy among leadership, digital innovation, and HRM is essential. Without strong leadership, digital tools face resistance. Without skilled HR, technology investments remain unproductive. Without digital tools, leaders and employees face information limits in strategy-making. Eisenhardt and Zbaracki (1992) note that decision-making results from the interplay of information, power, and politics. In the VUCA era, this interplay is more complex due to uncertainty. Indonesian studies Wujarso (2023), Marthalia (2023), and Internal strengths are the main defense against disruption, differing from Western literature, which emphasizes external governance or regulations. Globally, scholars like Luo (2020) argue that effective decisions require both internal adaptability and external responsiveness. Yet, in Indonesia, findings emphasize internal readiness as the dominant factor. This reflects structural constraints such as limited infrastructure and regulatory uncertainty. Thus, strengthening internal capabilities leadership, digitalization, and human capital—becomes more critical in ensuring organizations can navigate volatility and achieve resilience in the VUCA era.

3.2. External Factors: Environmental Dynamics, Regulations, and Global Crisis

Beyond internal strengths, external factors significantly influence strategic decision-making in the VUCA context. Indonesian organizations must adapt to environmental dynamics, shifting regulations, and global crises, all of which shape their ability to compete and survive. Environmental dynamics in Indonesia are

marked by high market volatility, changing consumer behavior, and competition. Manufacturers who adapt quickly to raw material price fluctuations by diversifying suppliers or enhancing efficiency are more resilient. This aligns with Bresciani et al. (2023), who stress dynamic capabilities as critical for managing uncertainty. Moreover, Indonesia's unique socio-cultural diversity creates further complexity, requiring tailored strategies. Hasibuan and Hendra (2023) highlight that sensitivity to local cultural contexts is crucial for firms in developing countries. Thus, environmental dynamics in Indonesia encompass not only economic but also social and cultural aspects, adding layers of unpredictability to decision-making.

Regulatory changes also present both opportunities and risks. Taxation and investment rules force multinationals to adjust strategies in Indonesia. Regulations can constrain but also enable, depending on how firms interpret them. Fredström et al. (2021) argue that institutions act as the rules of the game shaping organizational behavior. In Indonesia, regulations shift frequently due to political and developmental priorities. For example, the Omnibus Law on Job Creation (2020) had significant implications for labor and investment. While it aimed to attract investment, it also required legal risk assessments by firms. Compared to developed nations, Indonesia's regulatory environment is more volatile, with policies carrying dual effects: fostering growth but also generating new uncertainties. Strategic decisions thus demand heightened sensitivity to regulatory shifts.

Global crises highlight organizational vulnerabilities and resilience strategies. The COVID-19 pandemic disrupted Indonesian firms severely. Nainggolan et al. (2023) found that companies implementing hybrid work and digital supply chains

maintained continuity better than those using traditional models. Globally, Ivanov and Dolgui (2020) report similar findings, showing that diversified and digitalized supply chains increased resilience. Indonesian firms adopting digitalization were more adaptive during the pandemic. However, compared to developed economies, Indonesia faces additional structural challenges: limited infrastructure, skill gaps, and constrained financing (Group, 2021). These factors reduce adaptive capacity and make global crises more damaging locally.

Taken together, external factors require organizations to adopt holistic and proactive decision-making approaches. Acciarini et al. (2021) emphasize that external conditions remain decisive in shaping strategy. For Indonesia, this means balancing responsiveness to market dynamics, regulatory frameworks, and global crises, while building resilience through innovation and flexibility. The Indonesian case highlights unique challenges: volatile policies, socio-cultural complexity, and structural limitations in addressing crises. Compared with Western contexts, where external governance and infrastructure are stronger, Indonesian organizations rely more on internal resilience to navigate uncertainty. Thus, strategic decision-making in Indonesia must integrate both external and internal perspectives while adapting frameworks to local realities.

4. Conclusion

This study presents a synthesis of empirical findings on strategic decision-making in the VUCA era (Volatility, Uncertainty, Complexity, and Ambiguity) within the Indonesian context, using a Systematic Literature Review (SLR) approach. The

findings reveal that organizational success in making strategic decisions is not only determined by internal factors but is also strongly influenced by constantly changing external factors. Internal factors include adaptive leadership capable of guiding organizations through uncertainty, the utilization of digital innovation to enhance efficiency while creating new opportunities, and the strengthening of human resources (HR) through skills development and a culture of continuous learning. On the other hand, external factors involve the dynamics of a fluctuating business environment, government regulations that may either support or restrict organizational flexibility, and global crises such as the COVID-19 pandemic, which underscore the importance of organizational resilience. The integration of internal and external factors produces a conceptual framework that highlights the importance of flexibility, cross-functional collaboration, and continuous organizational learning in addressing VUCA challenges. From a theoretical perspective, this research contributes to the need for developing a more contextual strategic management model tailored to Indonesia's conditions, particularly in facing high levels of uncertainty.

Meanwhile, the practical implications emphasize the necessity of strengthening organizational capacity through the adoption of digital technologies, adaptive leadership practices oriented toward change, and HR management strategies focused on developing future competencies. For future research, it is recommended to explore causal relationships among factors using quantitative approaches, as well as conducting cross-sectoral studies to broaden the understanding of variations in strategic decision-making practices in Indonesia. In

this way, organizations across different sectors can be better prepared to respond to disruptions while also seizing strategic opportunities in the VUCA era.

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