RESOURCE-BASED STRATEGIC MANAGEMENT IN DIGITAL MARKETPLACES: CHALLENGES AND E-COMMERCE STRATEGIES OF INDONESIAN MSMES

MANAJEMEN STRATEGIS BERBASIS SUMBER DAYA DI PASAR DIGITAL: TANTANGAN DAN STRATEGI E-COMMERCE UMKM INDONESIA

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Abstract

This study investigates the challenges and strategic management approaches of digital Micro, Small, and Medium Enterprises (MSMEs) operating in Indonesia's e-commerce ecosystem through the theoretical lens of the Resource-Based View (RBV). Employing a qualitative multiple case study methodology, we examine how internal resource configurations influence competitive positioning and strategic efficacy. Our findings reveal that while MSMEs effectively leverage indigenous market knowledge and entrepreneurial flexibility, significant deficiencies in financial capital, advanced digital competencies, and technological infrastructure impede their ability to develop valuable, rare, inimitable, and non-substitutable (VRIN) resources critical for sustained competitive advantage. Strategic responses are predominantly characterized by reactive resource allocation, organic capability building, and incremental technology adoption. The study identifies a clear mediating relationship between resource endowments and strategic effectiveness, demonstrating that performance outcomes are strongly contingent upon the alignment between internal capabilities and e-commerce strategies. This research contributes to RBV theory by illuminating its application in digitally transforming emerging economies and provides empirical insights to inform policy interventions and managerial practice in the Indonesian digital MSME sector.

Keywords: Resource-Based View; e-commerce strategy; digital MSMEs

Abstrak

Penelitian ini menyelidiki tantangan dan pendekatan manajemen strategis Usaha Mikro, Kecil, dan Menengah (UMKM) digital yang beroperasi di ekosistem e-commerce Indonesia melalui lensa teoritis Resource-Based View (RBV). Menggunakan metodologi studi kasus ganda kualitatif, kami memeriksa bagaimana konfigurasi sumber daya internal memengaruhi posisi kompetitif dan kemanjuran strategis. Temuan kami mengungkapkan bahwa meskipun UMKM secara efektif memanfaatkan pengetahuan pasar asli dan fleksibilitas kewirausahaan, kekurangan yang signifikan dalam modal keuangan, kompetensi digital yang maju, dan infrastruktur teknologi menghambat kemampuan mereka untuk mengembangkan sumber daya yang berharga, langka, tak ada bandingannya, dan tidak dapat disubstitusi (VRIN) yang penting untuk keunggulan kompetitif yang berkelanjutan. Respons strategis sebagian besar ditandai dengan alokasi sumber

daya reaktif, pembangunan kemampuan organik, dan adopsi teknologi bertahap. Studi ini mengidentifikasi hubungan mediasi yang jelas antara dana abadi sumber daya dan efektivitas strategis, menunjukkan bahwa hasil kinerja sangat bergantung pada keselarasan antara kemampuan internal dan strategi e-commerce. Penelitian ini berkontribusi pada teori RBV dengan menerangi penerapannya dalam transformasi ekonomi berkembang secara digital dan memberikan wawasan empiris untuk menginformasikan intervensi kebijakan dan praktik manajerial di sektor UMKM digital Indonesia.

Keywords*: Resource-Based View; e-commerce strategy; digital MSMEs*

INTRODUCTION

The accelerated digital transformation of global markets, catalyzed by technological advances and shifting consumer behaviors, has fundamentally altered competitive landscapes across developed and emerging economies alike (Bharadwaj et al., 2013; Teece, 2018). Within this context, the expansion of e-commerce presents unprecedented opportunities for Micro, Small, and Medium Enterprises (MSMEs) while simultaneously introducing complex operational and strategic challenges (Mazzarol, 2015; Rahayu & Day, 2017). For Indonesia—Southeast Asia's largest economy with over 64 million MSMEs contributing approximately 61% to GDP—the digital transition of these enterprises holds significant socioeconomic implications (Ministry of Cooperatives and SMEs, 2023).

Despite growing scholarly attention to digital entrepreneurship in emerging markets (Nambisan, 2017; Li et al., 2018), there remains a notable research gap concerning the internal resource dynamics and strategic management approaches of digital MSMEs navigating Indonesia's distinctive socioeconomic context. Prior studies have predominantly examined external adoption factors (Rahayu & Day, 2017; Setyowati, 2020) or focused on broader regional analyses (Tuten & Solomon, 2017) without adequately addressing the intricate relationship between resource configurations and strategic efficacy within Indonesia's digital MSME ecosystem.

This research addresses this gap by investigating the key challenges encountered by Indonesian digital MSMEs and analyzing their e-commerce management strategies through detailed case studies. Three primary research questions guide this inquiry:

1. What are the distinctive resource landscapes of Indonesian digital MSMEs, including both core assets and critical deficiencies?

2. How do these internal resource configurations shape the challenges encountered in e-commerce operations?

3. What strategic approaches do these MSMEs employ to leverage existing capabilities and overcome resource constraints?

To address these questions, we employ the Resource-Based View (RBV) as our theoretical framework. RBV posits that a firm's sustained competitive advantage derives from its unique bundle of valuable, rare, inimitable, and non-substitutable (VRIN) resources and capabilities (Barney, 1991; Wernerfelt, 1984). This perspective offers a particularly relevant lens for examining

how resource endowments influence strategic choices and performance outcomes in resource-constrained environments (Peteraf & Barney, 2003).

The study makes several contributions to both theory and practice. First, it extends RBV applications to digital entrepreneurship in emerging markets, providing empirical insights into how resource constraints influence strategic management in rapidly digitizing economies. Second, it offers a nuanced understanding of the challenges facing Indonesian digital MSMEs, distinguishing between general operational issues and those specifically stemming from resource deficiencies. Third, it identifies patterns of strategic response to resource limitations, highlighting both adaptive approaches and persistent barriers to competitive advantage. Finally, the research provides actionable insights for policymakers and practitioners seeking to enhance the competitiveness of digital MSMEs in Indonesia and comparable emerging market contexts.

The paper proceeds as follows: Section 2 elaborates on our theoretical framework, detailing RBV principles and their application to digital MSMEs. Section 3 outlines our methodology, including research design, case selection, and analytical approach. Section 4 presents our findings, systematically addressing each research question. Section 5 discusses the theoretical and practical implications, while Section 6 concludes with limitations and future research directions.

THEORETICAL FRAMEWORK: RESOURCE-BASED VIEW

1. Foundational Principles of RBV

The Resource-Based View represents a pivotal theoretical framework in strategic management that shifts analytical focus from external industry structures to internal organizational resources and capabilities as primary determinants of competitive advantage (Barney, 1991; Wernerfelt, 1984). This perspective posits that firms achieve superior performance when they possess and effectively deploy resources that are valuable (enabling exploitation of opportunities or neutralization of threats), rare (not widely held by competitors), inimitable (difficult to duplicate), and non-substitutable (lacking strategically equivalent alternatives)—collectively termed VRIN resources (Barney, 1991; Peteraf, 1993).

RBV contrasts with market-based perspectives by emphasizing resource heterogeneity and relative immobility as fundamental economic assumptions (Barney, 2001). Heterogeneity implies that firms possess different bundles of resources, while immobility suggests that these differences can persist over time due to various isolating mechanisms, including path dependency, causal ambiguity, and social complexity (Dierickx & Cool, 1989; Mahoney & Pandian, 1992). These mechanisms prevent straightforward imitation, thereby enabling sustained competitive advantage for firms with superior resource configurations (Barney & Hesterly, 2012).

The framework distinguishes between tangible resources (physical, financial, technological) and intangible resources (human capital, organizational knowledge, reputation), with the latter often providing more sustainable competitive advantages due to their inherent complexity and social embeddedness (Hitt et al., 2016). Additionally, RBV emphasizes not

merely resource possession but resource orchestration—the managerial processes through which resources are identified, acquired, deployed, and combined to create value (Sirmon et al., 2011). This orchestration capability itself represents a potential source of competitive advantage (Helfat et al., 2007).

2. RBV Application to Digital MSMEs

When applied to MSMEs operating in digital marketplaces, RBV provides a particularly illuminating theoretical lens for several reasons. First, the digital context amplifies resource asymmetries, as these environments typically feature network effects, data accumulation advantages, and rapid technological change that can widen competitive gaps between resource-rich and resource-constrained firms (Nambisan et al., 2019; Teece, 2018). Second, digital transformation necessitates the development of distinctive digital resources and capabilities, including technological infrastructure, digital literacy, analytical competencies, and online relational capital (Li et al., 2018; Verhoef et al., 2021).

For digital MSMEs in emerging economies like Indonesia, RBV highlights the importance of specific resources that may constitute critical success factors in their context. These include digital literacy and technical skills among personnel (Ross et al., 1996; Wade & Hulland, 2004), agile operational capabilities for rapid adaptation to market changes (Teece et al., 2016), technological infrastructure supporting e-commerce operations (Zhu & Kraemer, 2005), and online brand reputation and customer relationships (Mikalef et al., 2020).

Moreover, RBV helps identify how resource deficiencies can impede digital MSMEs' growth and competitiveness. Limited access to financial capital constrains technological investment and talent acquisition (Adomako et al., 2016). Inadequate digital skills among personnel hinder effective platform utilization and data-driven decision-making (Ngoasong, 2018). Weak technological infrastructure undermines operational efficiency and scalability (Zhu & Kraemer, 2005). These resource constraints are particularly salient in emerging market contexts characterized by institutional voids and transitional digital ecosystems (Khanna & Palepu, 2010).

Through an RBV lens, effective e-commerce management strategies for digital MSMEs involve identifying existing valuable resources (e.g., local market knowledge, flexibility, specialized products), addressing critical resource gaps (e.g., through strategic partnerships or targeted skill development), and developing distinctive capabilities that competitors cannot easily replicate (Gregory et al., 2019; Li et al., 2018). This theoretical perspective guides our analysis of how Indonesian digital MSMEs navigate e-commerce challenges and implement strategies within their specific resource constraints.

3. Conceptual Framework

Building on RBV principles, we develop a conceptual framework (Figure 1) that illustrates the relationships between MSMEs' resource landscapes, the challenges they encounter, and their strategic responses. This framework posits that digital MSMEs possess

heterogeneous resource configurations comprising both valuable assets and critical deficiencies. These internal resource endowments directly influence the specific challenges MSMEs face in the e-commerce environment and the strategic options available to them.

The framework further suggests that the relationship between challenges and strategies is mediated by resource capabilities, with more robust resource configurations enabling more effective strategic responses. The alignment between resource endowments and strategic approaches ultimately determines performance outcomes. This conceptualization guides our empirical investigation, focusing attention on how resource differences explain varying strategic choices and effectiveness among Indonesian digital MSMEs.

METHODOLOGY

1. Research Design

This study employs a qualitative multiple case study approach to investigate the challenges and e-commerce management strategies of digital MSMEs in Indonesia. Case study methodology is particularly appropriate for examining complex phenomena within their real-world contexts, especially when the boundaries between phenomenon and context are not clearly evident (Yin, 2018). This approach aligns with our research objectives by enabling in-depth exploration of how internal resources influence strategic management within the specific institutional environment of Indonesia's digital economy.

The multiple case design follows a replication logic (Eisenhardt & Graebner, 2007), allowing for comparative analysis across different digital MSMEs to identify patterns in resource utilization and strategic responses. Each selected MSME constitutes a distinct case, providing a focused lens through which to examine resource configurations, encountered challenges, and implemented strategies. This approach facilitates both within-case analysis, addressing the unique circumstances of individual MSMEs, and cross-case analysis, identifying emerging patterns across the sample (Miles et al., 2014).

The research design is interpretive in nature, seeking to understand phenomena through the meanings participants assign to them (Klein & Myers, 1999). This approach acknowledges the socially constructed nature of organizational resources and capabilities, recognizing that their value and deployment are influenced by contextual factors and managerial perceptions (Rindova & Martins, 2018). Consequently, our methodology emphasizes capturing the subjective experiences and interpretations of MSME owners and managers while maintaining analytical rigor through systematic data collection and analysis procedures.

2. Case Selection

We employed purposive sampling to identify information-rich cases that could provide detailed insights into our research questions (Patton, 2015). The selection criteria required MSMEs to: (1) have been actively operating in Indonesian e-commerce markets for at least two years, ensuring sufficient experience with digital platforms; (2) derive at least 50% of revenue

from online channels; (3) fit the Indonesian government's official MSME classification based on annual turnover; and (4) represent diverse sectors to capture varied resource requirements and challenges.

Initially, we identified potential participants through multiple channels, including online business directories, e-commerce platform listings, and referrals from industry associations. Following preliminary screening, we selected eight digital MSMEs that collectively represented variation across industry sectors (fashion, culinary, handicrafts, electronics), operational scale (micro, small, and medium enterprises per official classifications), and digital sophistication levels. This purposeful heterogeneity in our sample enabled theoretical replication, wherein cases might predict contrasting results for anticipatable reasons (Yin, 2018).

Table 1 presents the characteristics of the selected MSMEs, using pseudonyms to maintain confidentiality. The sample encompasses three micro enterprises (annual turnover less than IDR 300 million), three small enterprises (turnover between IDR 300 million and 2.5 billion), and two medium enterprises (turnover between IDR 2.5 billion and 50 billion). The cases represent diverse operational histories (2-7 years in e-commerce) and digital channel utilization patterns (marketplaces, social media, proprietary websites).

Table 1: Profile of Selected Digital MSMEs

MSME Pseudonym	Sector	Scale	Years in E-commerce	Primary Digital Channels	Number of Employees
Batik Nusantara	Fashion	Small	5	Instagram, Marketplace	8
Spice Delight	Culinary	Micro	2	Instagram, WhatsApp	3
Craft Heritage	Handicrafts	Small	4	Marketplace, Website	11
Tech Solutions	Electronics	Medium	7	Website, Marketplace	27
Homestyle Decor	Home Decor	Small	3	Instagram, TikTok	9
Organic Treats	Culinary	Micro	2	Instagram, WhatsApp	2
Digital Gadgets	Electronics	Medium	6	Marketplace, Website	31
Fashion Forward	Fashion	Micro	3	Instagram, TikTok	4

Within each selected MSME, we identified key informants directly involved in e-commerce strategy and operations, including owners, managers, and senior staff responsible for digital activities. This approach ensured access to in-depth knowledge regarding resource utilization, challenges, and strategic decision-making processes relevant to our theoretical framework.

3. Data Collection

Data collection employed multiple methods to enable triangulation and enhance the robustness of our findings (Flick, 2018). Primary data were gathered through in-depth, semi-

structured interviews with 19 participants across the eight MSMEs (1-3 participants per case, depending on organizational size and structure). The interview protocol was informed by RBV principles, exploring key constructs including resource configurations, perceived challenges, strategic responses, and performance outcomes.

Interviews were conducted between September 2023 and January 2024, lasting 60-90 minutes each. All interviews were conducted in Bahasa Indonesia, audio-recorded with permission, and subsequently transcribed verbatim. The semi-structured format allowed for both systematic coverage of predefined topics and flexibility to explore emergent themes, facilitating rich data collection while maintaining cross-case comparability (Bryman, 2016).

Complementary data were collected through document analysis and direct observation. We examined relevant organizational documents, including business plans, marketing materials, website analytics reports, and operational guidelines, which provided contextual information and corroborated interview data regarding resource deployment and strategic implementation. Additionally, we conducted structured observations of each MSME's digital presence across various platforms, systematically documenting aspects such as content strategy, customer interaction patterns, and technical features. This multi-method approach enabled comprehensive data collection addressing different dimensions of our research questions.

4. Data Analysis

Our analytical approach followed a systematic process to ensure methodological rigor while maintaining theoretical sensitivity. After transcription and translation of interviews, we employed thematic analysis guided by RBV principles, developing both deductive codes derived from our theoretical framework and inductive codes emerging from the data (Braun & Clarke, 2006; Gioia et al., 2013).

The analysis proceeded through several iterative stages. First, we conducted open coding to identify preliminary concepts and patterns. Second, we developed axial codes, grouping related concepts into broader categories aligned with our research questions (e.g., resource types, challenge categories, strategic approaches). Third, we performed selective coding to identify core themes and relationships between categories. Throughout this process, we maintained constant comparison across cases to identify patterns while attending to unique contextual factors (Eisenhardt, 1989).

To enhance analytical rigor, we employed several validation techniques. We conducted team-based coding checks, with multiple researchers independently coding segments of data and comparing interpretations to ensure consistency. We developed case summaries that were reviewed by key informants to verify factual accuracy (member checking). Additionally, we maintained a systematic audit trail documenting analytical decisions and emerging interpretations.

The analysis culminated in the development of cross-case matrices and conceptual models that synthesized our findings regarding resource landscapes, challenges, and strategic

approaches across the digital MSMEs. These analytical outputs formed the basis for our findings and discussion, providing a foundation for both theoretical contributions and practical implications.

5. Ethical Considerations

The research adhered to rigorous ethical standards throughout design and implementation. We obtained institutional ethical approval prior to data collection and secured informed consent from all participants, clearly explaining the study's purpose, voluntary nature, and confidentiality provisions. To protect participant privacy and commercial interests, we employed pseudonyms for all MSMEs and individuals, and anonymized potentially identifying details in our findings. All data were securely stored on encrypted devices accessible only to the research team. These measures ensured ethical integrity while maintaining research quality.

FINDINGS

1. Resource Landscapes of Indonesian Digital MSMEs

Our analysis revealed complex resource landscapes characterized by distinct patterns of core assets and critical deficiencies across the examined digital MSMEs. While heterogeneity existed between cases, consistent themes emerged regarding the types of resources most prevalent and most lacking in this context.

a. Core Assets: Indigenous Capabilities

A predominant strength observed across cases was deep indigenous market knowledge. Participants consistently emphasized their intimate understanding of local consumer preferences, cultural nuances, and relationship dynamics as a fundamental asset. This tacit knowledge enabled MSMEs to craft resonant messaging and tailor offerings to specific market segments despite limited formal market research capabilities. As the owner of Batik Nusantara explained:

"We understand our customers' cultural preferences—when they need traditional patterns for ceremonies versus modern adaptations for casual wear. This knowledge is in our DNA and helps us communicate authentically online, which larger companies often struggle to replicate."

This finding aligns with RBV's emphasis on tacit knowledge as a potentially valuable and inimitable resource (Grant, 1996), suggesting that indigenous market knowledge constitutes a significant asset for these enterprises.

Entrepreneurial agility emerged as another key resource, manifest in rapid decision-making, flexible operational adjustments, and resourceful problem-solving. Several MSMEs demonstrated the capacity to quickly pivot marketing approaches or product offerings in response to digital marketplace dynamics, despite resource constraints. For instance, Fashion Forward rapidly adapted its product line during the pandemic by pivoting to fashionable face

coverings within two weeks of initial market signals, leveraging existing supplier relationships and design capabilities.

Specialized product knowledge represented a third core asset category, particularly evident in sector-specific technical expertise or traditional craftsmanship. Craft Heritage possessed distinct artisanal skills passed through generations, while Tech Solutions demonstrated specialized technical knowledge regarding electronics compatibility and local usage patterns. Such expertise constituted a valuable resource that, as the production manager at Craft Heritage noted, "provides authentic differentiation that is difficult for mass-market competitors to replicate."

b. Critical Deficiencies: Resource Constraints

Despite these strengths, significant resource deficiencies were pervasive across the sample. Limited financial capital emerged as the most pronounced constraint, restricting investments in technology, skills development, and marketing. Seven of the eight MSMEs reported significant financial limitations that directly impeded strategic initiatives. For instance, Digital Gadgets had identified an opportunity to develop an inventory management system customized for their multi-channel operations but lacked sufficient capital to fund its development:

"We know exactly what system would streamline our operations and reduce errors, but developing it requires upfront investment that's simply beyond our current financial capacity. We're forced to use a patchwork of affordable but suboptimal solutions."

This financial constraint directly inhibited the development of valuable, rare resources that could potentially confer competitive advantages, aligning with RBV's emphasis on resource acquisition barriers (Dierickx & Cool, 1989).

Deficiencies in advanced digital competencies constituted another critical limitation. While basic digital literacy was generally present, sophisticated skills in areas such as data analytics, advanced digital marketing, and e-commerce platform optimization were notably lacking across most cases. This skills gap was particularly evident in micro and small enterprises, where limited personnel often fulfilled multiple roles without specialized expertise. As Spice Delight's owner acknowledged:

"I know we're not maximizing our online potential. We post regularly but don't understand how to interpret analytics or optimize campaigns. When platform algorithms change, we notice reduced visibility but don't know how to adjust effectively."

This finding resonates with RBV's recognition of human capital as a critical resource for developing competitive capabilities (Wright et al., 2001), suggesting that deficiencies in this area significantly constrain strategic options for digital MSMEs.

Technological infrastructure limitations represented a third significant deficiency, manifesting in inadequate hardware, software, and connectivity resources. Most MSMEs

relied on basic consumer-grade technology and free or low-cost software solutions that offered limited functionality. Tech Solutions, despite operating in the electronics sector, described struggling with integration challenges:

"Our inventory systems don't communicate effectively with our online sales channels. We've cobbled together manual workarounds, but this creates inefficiencies and occasional errors that affect customer experience."

These technological constraints directly impeded the development of valuable operational capabilities, highlighting the resource dependencies that shape digital MSME competitiveness.

b. VRIN Resource Development Challenges

The data revealed significant challenges in developing truly inimitable resources, a key requirement for sustained competitive advantage per RBV. While several MSMEs had cultivated distinctive assets, these were often vulnerable to imitation or substitution. For instance, Batik Nusantara had developed distinctive design motifs, but reported: "We regularly see similar designs appearing on larger platforms within months, sometimes at lower price points that we can't match."

This difficulty in protecting distinctive resources was partially attributed to the transparency of digital marketplaces, which facilitate rapid competitive intelligence and replication. Furthermore, several MSMEs noted their limited bargaining power in supplier relationships, preventing the development of exclusive arrangements that might constitute inimitable resources. These findings highlight the particular challenges that resource-constrained digital MSMEs face in developing sustainable VRIN resources within competitive digital marketplaces.

2. Predominant Challenges Impeding E-commerce Growth

Our analysis identified five primary categories of challenges that consistently impeded e-commerce growth across the examined MSMEs. Importantly, these challenges were directly linked to the resource landscapes described above, demonstrating the explanatory power of the RBV perspective.

a. Financial Resource Limitations

Financial constraints manifested in specific operational challenges that directly impacted e-commerce effectiveness. Limited budgets for digital marketing resulted in restricted reach and visibility, particularly as organic visibility declined across platforms. As Homestyle Decor's marketing manager explained:

"The algorithms increasingly favor paid content. When we briefly invested in targeted advertising, our sales increased by 40%, but we couldn't sustain that spending level without compromising inventory investment."

Financial limitations also restricted technology investments, preventing adoption of integrated e-commerce systems that could enhance efficiency and customer experience. Several MSMEs reported delaying critical infrastructure upgrades due to capital constraints, directly impacting operational capabilities and customer experience. This finding illustrates how resource deficiencies generate specific operational challenges that limit competitive positioning, as predicted by RBV.

b. Human Capital Deficiencies

Limited digital expertise translated into specific operational difficulties across multiple domains. Content creation challenges were prevalent, with most MSMEs struggling to produce consistent, high-quality content optimized for different platforms. Data interpretation obstacles prevented effective utilization of available analytics, limiting data-driven decision-making. As Organic Treats' owner acknowledged:

"The platforms provide extensive analytics, but we don't fully understand how to interpret trends or apply insights strategically. We're making decisions based on instinct rather than data."

Platform mastery difficulties were also common, with MSMEs struggling to keep pace with frequent changes to algorithms, features, and best practices across multiple platforms. These skill-based challenges directly stemmed from human capital deficiencies, illustrating how resource constraints shape specific operational difficulties in the digital marketplace.

c. Technological Resource Limitations

Inadequate technological resources created distinct operational challenges, including inventory management difficulties across multiple sales channels. Fashion Forward described frequent incidents of overselling or stockouts due to manual reconciliation processes between platforms:

"We've had embarrassing situations where customers order products that show as available online but have actually sold out through another channel. Each incident damages our reputation and results in negative reviews."

Customer relationship management challenges were also prevalent, with MSMEs lacking systematic approaches to track interactions and personalize engagement across touchpoints. Most operated with fragmented customer data stored across multiple platforms, limiting their ability to develop the personalized relationships that could constitute a valuable intangible asset.

These technology-driven challenges directly impeded operational effectiveness and limited the MSMEs' ability to develop valuable digital capabilities, demonstrating the relationship between resource deficiencies and specific competitive constraints.

d. Market Differentiation Challenges

Achieving meaningful differentiation in crowded digital marketplaces presented significant challenges for most MSMEs. Price competition pressures were intense, with larger competitors frequently offering similar products at lower prices due to economies of scale. Spice Delight described this dilemma:

"Mass producers can offer similar products at prices below our production costs. We emphasize quality and authenticity, but many online customers make decisions primarily based on price comparisons."

Product imitation threats were also prevalent, with distinctive offerings frequently copied by competitors, sometimes within weeks of introduction. These market differentiation challenges reflected difficulties in developing and protecting inimitable resources that could sustain competitive advantage, a core challenge highlighted by RBV (Barney, 1991).

e. Logistical and Supply Chain Challenges

Logistics and supply chain inefficiencies created significant operational impediments, particularly for MSMEs serving geographically dispersed customers. Delivery reliability issues with third-party services directly impacted customer satisfaction and reputation. Inventory fragmentation across physical and digital channels created fulfillment inefficiencies and increased operational complexity. These challenges stemmed from inadequate integration of critical operational resources, highlighting how resource limitations manifest in specific operational difficulties.

Notably, these challenges exhibited clear patterns of interrelationship, often creating reinforcing cycles. For instance, financial limitations restricted technology investments, which exacerbated operational inefficiencies, further straining financial resources. This interconnectedness underscores how resource deficiencies create cascading effects across various aspects of e-commerce operations.

3. E-commerce Management Strategies

Our analysis revealed distinctive patterns in how the MSMEs developed and implemented strategies to leverage existing resources and address deficiencies in their e-commerce operations. These strategic approaches demonstrated both adaptivity to resource constraints and persistent limitations stemming from resource deficiencies.

a. Resource Allocation Strategies

Most MSMEs adopted predominantly reactive resource allocation approaches, responding to immediate operational necessities rather than pursuing long-term strategic development. Financial resources were typically directed toward inventory replenishment and basic operational costs, with strategic investments often deferred. This pattern reflected

severe resource constraints rather than strategic choice, as Tech Solutions' manager explained:

"We understand the value of investing in better systems and skills, but daily operational demands consume our limited resources. Strategic initiatives are continually postponed as we address immediate needs."

However, some MSMEs demonstrated more strategic allocation within constraints. Batik Nusantara adopted focused investment in specific, high-conversion marketing channels rather than dispersing limited resources across multiple platforms. This targeted approach maximized returns from scarce resources, demonstrating strategic resource orchestration despite limitations.

Technology investment typically followed incremental patterns, with MSMEs adopting affordable, modular solutions rather than comprehensive systems. This approach balanced immediate operational needs with resource constraints, allowing gradual capability development aligned with financial limitations. As Craft Heritage described:

"We add one technology component at a time—first basic accounting software, then a simple inventory system, now a customer database. Each addition is manageable financially and operationally, allowing us to build capabilities methodically."

These allocation strategies reflect pragmatic responses to resource constraints, aligning with RBV's recognition that resource orchestration represents a critical strategic process (Sirmon et al., 2011).

b. Capability Building Strategies

The MSMEs demonstrated distinctive patterns in addressing capability deficiencies, with organic learning processes prevalent across cases. Experiential, learning-by-doing approaches were common, with staff developing skills through direct engagement with digital platforms rather than formal training. Knowledge sharing communities played an important role, with several MSMEs actively participating in peer networks and online forums to acquire practical knowledge and troubleshoot challenges without financial investment.

Strategic partnerships emerged as another capability enhancement approach, particularly for addressing specific skill gaps. Digital Gadgets partnered with a local university's digital marketing program, hosting student projects that provided them with advanced social media marketing while offering students practical experience. Such collaborative arrangements enabled access to capabilities without direct financial investment, representing strategic responses to resource constraints.

Human capital development typically focused on narrow, immediately applicable skills rather than comprehensive digital capabilities. Most MSMEs reported prioritizing targeted skill acquisition addressing specific operational needs, such as photography techniques for

product presentation or basic search engine optimization, rather than broader digital marketing expertise. This focused approach reflected both resource limitations and pragmatic prioritization of immediate operational requirements.

c. Digital Market Positioning Strategies

Despite resource constraints, most MSMEs demonstrated deliberate strategic approaches to digital market positioning. Niche market focusing was prevalent, with enterprises identifying specialized segments where their indigenous knowledge and distinctive products could create value despite limited resources. For instance, Organic Treats focused exclusively on health-conscious urban professionals seeking traditional remedies with modern convenience, allowing them to optimize limited resources for a specific customer segment rather than competing broadly.

Narrative differentiation strategies were widely employed, using authentic storytelling and cultural connections to differentiate offerings when product features alone were easily imitated. Craft Heritage developed compelling narratives around traditional artisanal techniques, creator backgrounds, and cultural significance:

"We can't compete on price or even always on product uniqueness, but we can tell authentic stories that connect our products to cultural heritage in ways mass-market competitors cannot easily replicate."

This strategy leveraged indigenous knowledge as a potentially inimitable resource to create differentiation despite other resource limitations.

Community building emerged as another strategic approach, with MSMEs investing in developing engaged customer communities through personalized interaction, shared values, and consistent engagement. Fashion Forward cultivated a community of environmentally conscious fashion enthusiasts, fostering engagement not only around products but also around sustainable lifestyle content:

"Our most valuable asset isn't our current inventory but the community we've built. They provide feedback, advocate for our brand, and generate content that extends our reach despite our limited marketing budget."

These digital positioning strategies demonstrate how MSMEs leveraged existing resources, particularly indigenous knowledge and agility, to create value propositions that partially compensated for other resource limitations.

4. The Mediating Role of Resources in Strategic Effectiveness

Our cross-case analysis revealed clear patterns indicating that resource configurations significantly mediated the relationship between strategic intentions and effective implementation. MSMEs with relatively stronger resource endowments demonstrated greater capacity to implement their intended strategies effectively, while those with more severe

resource deficiencies experienced larger gaps between strategic aspirations and operational reality.

This mediating effect was particularly evident in technology adoption strategies. All eight MSMEs recognized the potential value of enhanced technological infrastructure, but their ability to effectively implement such improvements varied dramatically based on existing resource configurations. Digital Gadgets, with relatively stronger financial resources and technical expertise, successfully implemented an integrated inventory management system that substantially improved operational efficiency. In contrast, Fashion Forward's attempt to implement a similar system resulted in partial abandonment due to insufficient technical expertise and financial resources to support the transition process.

The relationship between resource endowments and strategic efficacy was also evident in market expansion approaches. MSMEs with stronger digital marketing capabilities and financial resources could effectively penetrate new market segments or platforms, while those with significant resource deficiencies struggled to maintain effective operations even in their core markets. Homestyle Decor described how resource limitations constrained their expansion:

"We identified promising opportunities in neighboring countries, but our existing personnel are already stretched thin managing current operations. Without additional human and financial resources, expanding would compromise our service quality in existing markets."

This finding underscores RBV's assertion that strategic options are bounded by resource endowments (Barney, 2001), demonstrating how internal capabilities directly influence the efficacy of strategic choices in the e-commerce context.

Importantly, MSMEs that demonstrated better alignment between resource allocation and strategic priorities generally achieved superior outcomes. Those that directed limited resources toward developing capabilities specifically relevant to their market positioning reported better performance than those dispersing resources across multiple strategic initiatives. This finding highlights the importance of coherent resource-strategy alignment (Sirmon et al., 2011), suggesting that effective resource orchestration can partially compensate for absolute resource limitations.

5. Comparative Performance Patterns

Cross-case comparisons revealed distinct performance patterns associated with different resource-strategy configurations. While acknowledging the multidimensional nature of performance and contextual variations between cases, several consistent patterns emerged regarding the relationship between resource endowments, strategic approaches, and performance outcomes.

MSMEs that successfully leveraged existing strengths while systematically addressing critical resource gaps demonstrated relatively stronger performance. For instance, Batik Nusantara strategically invested in developing digital marketing skills that complemented their

strong product knowledge and supplier relationships, creating an effective resource configuration that supported consistent growth despite overall resource constraints. Their focused approach to addressing specific resource deficiencies yielded better results than the more diffused efforts observed in some other cases.

Conversely, MSMEs attempting to pursue strategies misaligned with their resource base typically experienced suboptimal performance. Spice Delight's attempt to compete across multiple sales channels despite limited operational capacity resulted in inconsistent customer experiences and inefficient resource utilization. This misalignment between strategic ambitions and resource capabilities directly impacted their performance, supporting RBV's emphasis on strategy-resource congruence.

The development of community-based intangible assets appeared to enhance resilience against resource limitations. MSMEs that successfully cultivated engaged customer communities reported more stable demand and greater resistance to competitive pressures despite resource constraints in other areas. Fashion Forward attributed their survival during a challenging market period to their established community:

"When our main competitor launched a similar product line at lower prices, our community remained loyal because they valued our authentic sustainability commitment and personal relationships. That intangible connection provided resilience despite our price disadvantage."

This finding highlights how the development of certain intangible resources can disproportionately impact performance for resource-constrained enterprises, suggesting strategic prioritization opportunities.

Overall, these comparative insights demonstrate that while absolute resource limitations certainly constrained performance across all cases, effective resource orchestration and strategic alignment significantly influenced relative performance outcomes. The findings support RBV's central proposition that the alignment between internal capabilities and strategic approaches is a key determinant of competitive success, even in resource-constrained environments.

DISCUSSION

1. Theoretical Implications

This study contributes to RBV theory by providing empirical insights into how resource configurations shape strategic management in digitally transforming emerging economies. Our findings extend RBV in several important ways, addressing both its core propositions and contextual applications in the digital MSME context.

First, our results substantiate RBV's fundamental premise that internal resource configurations significantly influence competitive positioning and strategic options (Barney, 1991; Wernerfelt, 1984). The clear mediating relationship observed between resource endowments and strategic efficacy confirms that internal capabilities directly shape how

effectively firms can respond to market opportunities and challenges. However, our findings also reveal that the specific manifestation of this relationship is highly contextual, with indigenous knowledge and entrepreneurial agility providing disproportionate value in the Indonesian digital marketplace—a nuance not fully captured in traditional RBV formulations developed primarily in Western, large-enterprise contexts.

Second, the study enhances understanding of VRIN resource development in emerging digital economies. Our findings highlight the particular difficulty that digital MSMEs face in developing truly inimitable resources within transparent digital marketplaces where offerings are easily observed and replicated. This challenges the sustainability premise of traditional RBV and suggests that in digital contexts, competitive advantage may derive less from static resource uniqueness and more from dynamic capabilities enabling rapid adaptation and resource reconfiguration (Teece et al., 2016). The MSMEs' emphasis on agility and community relationships over physical product distinctiveness reflects this shifting basis of competitive advantage in digital environments.

Third, our results illuminate the specific resource orchestration processes (Sirmon et al., 2011) employed by resource-constrained enterprises. The incremental technology adoption patterns, focused skill development approaches, and strategic partnering behaviors identified in our analysis represent contextually adapted orchestration mechanisms that balance immediate operational needs with long-term capability development. These findings extend resource orchestration theory by demonstrating how these processes unfold under severe resource constraints, highlighting both the adaptive creativity of these enterprises and the persistent limitations imposed by resource deficiencies.

Finally, the study contributes to emerging perspectives on digital entrepreneurship in developing economies (Nambisan et al., 2019) by identifying how indigenous resources can provide distinctive value in digitally mediated markets. Our findings suggest that local market knowledge, cultural authenticity, and community relationships represent potentially valuable and difficult-to-imitate resources even when technological and financial resources are limited. This highlights the importance of contextualizing RBV applications to recognize culturally embedded resources that may constitute unique competitive assets in specific market environments.

2. Practical Implications

Our findings offer several practical implications for digital MSME managers, policymakers, and ecosystem stakeholders in Indonesia and comparable emerging markets.

For MSME owners and managers, our results suggest strategic prioritization approaches to maximize impact from limited resources. Rather than dispersing efforts across multiple initiatives, targeted investments in capabilities directly supporting distinctive market positioning are likely to yield better outcomes. The success patterns identified in our comparative analysis suggest focusing on community building and narrative differentiation as potentially high-return

strategies for resource-constrained enterprises, leveraging indigenous knowledge to create value propositions that larger competitors cannot easily replicate.

Additionally, our findings highlight the importance of coherent resource-strategy alignment. MSME managers should realistically assess their current resource base and ensure that strategic initiatives are calibrated to existing capabilities while systematically addressing critical gaps. The incremental technology adoption and focused skill development patterns observed in more successful cases provide practical models for balanced capability building within resource constraints.

For policymakers and support organizations, our results identify specific resource deficiencies that significantly impede digital MSME development. Targeted interventions addressing financial access, digital skills development, and technological infrastructure support would directly address the most critical barriers identified in our analysis. Furthermore, the importance of knowledge-sharing communities suggests that facilitating peer learning networks and mentorship programs could provide cost-effective support mechanisms aligned with the organic learning approaches prevalent among these enterprises.

Our findings also suggest that protection of intellectual property and support for distinctive branding may be particularly valuable for digital MSMEs struggling to develop inimitable resources. Policy initiatives strengthening intellectual property frameworks and providing accessible legal support for smaller enterprises could help address the imitation challenges that currently undermine efforts to develop sustainable competitive advantages in digital marketplaces.

3. Limitations and Future Research Directions

Several limitations should be considered when interpreting our findings. The case study methodology, while providing rich insights, limits statistical generalizability. Our sample, though diverse, cannot represent the full heterogeneity of Indonesia's digital MSME ecosystem. Additionally, our cross-sectional design captures resource configurations and strategies at a specific point in time, potentially missing longitudinal dynamics in resource development and strategic evolution.

These limitations suggest valuable directions for future research. Longitudinal studies could examine how resource configurations and strategic approaches evolve over time, particularly as MSMEs mature in their digital operations. Quantitative research could test the relationships identified in our qualitative analysis across larger, representative samples, potentially developing measurable constructs for key resource categories and strategic approaches.

Further research might also explore how institutional context shapes resource development and utilization. Comparative studies across different emerging economies could illuminate how varying institutional environments influence the resource challenges and strategic options of digital MSMEs. Additionally, research examining the intersection of digital

platforms and local market knowledge could further develop our understanding of how indigenous resources can be effectively leveraged in increasingly globalized digital marketplaces.

Finally, our findings regarding community-based intangible assets suggest promising research opportunities at the intersection of RBV and social capital theory. Investigations into how digital MSMEs develop and leverage community relationships as strategic resources could enhance understanding of social capital as a potential source of sustainable competitive advantage in digital contexts.

CONCLUSION

This study has examined the challenges and strategic management approaches of digital MSMEs operating in Indonesia's e-commerce ecosystem through the theoretical lens of RBV. Our findings reveal how internal resource configurations—comprising both valuable indigenous assets and critical deficiencies—shape the specific challenges these enterprises encounter and the strategic options available to them. The results demonstrate that while these MSMEs possess significant strengths in local market knowledge and entrepreneurial agility, pervasive limitations in financial capital, advanced digital skills, and technological infrastructure impede their ability to develop fully inimitable resources necessary for sustained competitive advantage.

The strategic responses observed reflect pragmatic adaptation to resource constraints, characterized by reactive resource allocation, organic capability building, and incremental technology adoption. More successful approaches leverage existing strengths in indigenous knowledge and community relationships while systematically addressing specific resource gaps directly relevant to market positioning. The clear mediating relationship between resource endowments and strategic effectiveness underscores RBV's explanatory power in this context, while also highlighting contextual nuances in how resources translate into competitive advantage in emerging digital economies.

These insights contribute to both theoretical understanding and practical management of digital entrepreneurship in resource-constrained environments. For theory, they extend RBV by illuminating how resource orchestration unfolds under severe constraints and how indigenous knowledge constitutes a potentially inimitable asset in digitalized emerging markets. For practice, they offer strategic guidance for MSME managers navigating resource limitations and suggest targeted interventions for policymakers seeking to strengthen this vital economic sector.

As Indonesia and comparable emerging economies continue their digital transformation, understanding how MSMEs can effectively leverage limited resources to create sustainable value will remain crucial for inclusive economic development. This research provides a foundation for such understanding, while highlighting the resilience and adaptive creativity of these enterprises as they navigate the opportunities and challenges of digital marketplaces from positions of resource constraint.

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