

Analysis Capability Dynamics of E-Commerce MSMEs in Adopting Generative AI Technology for Content Strategy Efficiency Creative

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ARTICLE HISTORY

Submitted : July 03, 2026
Reviewed : August 14, 2026
Revised : August 28, 2026
Accepted : September 01, 2026
Published : September 02, 2026

Conflict of Interest Statement:

The author(s) declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

ABSTRACT

Purpose: This study aims to examine how dynamic capabilities—detecting, utilizing, and transforming—mediate the adoption of Generative Artificial Intelligence (Generative AI) to optimize content marketing strategies among culinary Micro, Small, and Medium Enterprises (MSMEs) in Jatinangor.

Research Method: A qualitative descriptive approach with a multiple case study design was employed to explore how culinary MSMEs integrate Generative AI into content marketing while addressing digital and resource constraints.

Results and Discussion: The findings show that detecting capability develops organically through a bottom-up process, with creative staff acting as information gatekeepers. This capability is reflected in tactical budgeting for premium AI accounts and independent experimentation. Transforming capability emerges by restructuring conventional workflows into a human–AI hybrid model, in which AI generates ideas and drafts, while creative staff perform cultural and local curation. This integration reduces content production time by 50%–60% without compromising brand authenticity or local identity.

Implications: Generative AI serves as a capability enhancer, increasing creative productivity and supporting digital creativity among resource-constrained MSMEs.

Originality: This study contributes by explaining Generative AI adoption through a dynamic capabilities perspective and demonstrating how human–AI collaboration enables productive yet culturally authentic content marketing at the micro-business level.

Keywords: Dynamic Capabilities, MSME E-Commerce, Generative AI, Content Creation, Efficient Strategy.

1. Introduction

In Indonesia, Micro, Small, and Medium Enterprises (MSMEs) are considered one of the most vital pillars supporting national economic growth (Yolanda & Hasanah, 2024). In an increasingly hyper-competitive digital market, content marketing has undergone a paradigm shift from being merely a supporting promotional instrument to becoming an important mechanism for generating brand engagement and customer responses (Mere *et al.*, 2024). The growing adoption of e-commerce and social media has expanded market access for MSMEs, while simultaneously increasing the need to maintain a continuous



digital presence and respond to changing consumer preferences (Indiani *et al.*, 2025; Kilay *et al.*, 2022). Social media marketing has also become increasingly relevant to MSME performance, as digital platforms offer opportunities to engage customers and enhance market visibility (Tatik & Setiawan, 2025). Consequently, the dynamics of e-commerce and continuously evolving social media algorithms require businesses to produce creative content in the form of text, images, and short videos that is continuous, varied, and personalized. However, for many MSMEs, the increasing volume and frequency of content production constitute a significant operational challenge and may constrain their business development (Rainanto, 2019).

MSMEs face substantial challenges in maintaining consistent and effective content strategies because limited resources constrain their creative activities. Unlike larger corporations that can maintain dedicated creative teams or engage external agencies, MSMEs typically operate with limited financial capital, shortages of skilled creative professionals, and restricted technological capabilities (Budiarto *et al.*, 2018). These constraints are particularly important because digital transformation requires not only access to technology but also the development of organizational competencies to exploit it effectively (Yuwono *et al.*, 2025). Evidence from Indonesian MSMEs further indicates that digital IT capabilities and innovation-related capabilities are closely connected with business strategy and organizational performance (Probohudono *et al.*, 2025). At the same time, MSMEs must allocate their limited managerial and human resources among inventory management, customer service, production, and marketing. Such resource constraints can make it difficult to maintain the frequency and quality of digital content required in highly competitive markets (Agustina *et al.*, 2025). Thus, the challenge is not simply gaining access to digital platforms but developing the capabilities required to transform digital resources into sustained marketing and organizational value.

Against this background, the emergence of Generative Artificial Intelligence (Generative AI) represents a potentially disruptive development in digital content production. Generative AI introduces a new paradigm of efficiency by enabling the rapid generation and modification of text, visual materials, and other forms of marketing content (Adrian & Sahono, 2026). Through Large Language Models and AI-based visual-generation technologies, businesses can automate or accelerate activities such as copywriting, advertising design, content ideation, and video scripting at relatively low operational costs (Lahalisi, 2025). For resource-constrained MSMEs, these capabilities may reduce barriers to digital creativity and provide access to content-production capabilities that previously required specialized personnel or external agencies. The application of Artificial Intelligence in marketing can further support personalization and customer-oriented communication, potentially strengthening smaller firms' ability to engage digital consumers (Parmini & Yuliastuti, 2025).

The potential efficiency benefits of Generative AI, however, do not imply that its adoption is straightforward or automatically generates organizational value. MSMEs may face difficulties in integrating AI-generated outputs with existing business processes, maintaining brand identity, and developing the competencies required to use AI effectively. Research on MSME technology adoption indicates that digital transformation depends not only on technological availability but also on organizational capabilities, learning processes, and the ability to adapt existing routines (Nasution *et al.*, 2021; Yuwono *et al.*, 2025). Similarly, recent research on integrating ChatGPT into MSME activities highlights the importance of adaptive strategies and organizational readiness for realizing the benefits of AI technologies (Djaini *et al.*, 2025). Managerial digital literacy and internal acceptance may further influence the extent to which AI becomes embedded in everyday organizational practices (Fahmi, 2024). These conditions suggest that the effectiveness of Generative AI adoption is determined not simply by

the technology's sophistication or accessibility, but by the organization's ability to recognize, mobilize, and integrate it into its existing system of work.

To understand how organizations respond to disruptive technologies under conditions of environmental turbulence and resource constraint, Dynamic Capabilities Theory provides an appropriate theoretical foundation. Teece *et al.*, (1997) conceptualize dynamic capabilities as the firm's ability to integrate, build, and reconfigure internal and external competencies in response to changing environments. The framework subsequently emphasizes three interrelated processes: sensing, seizing, and transforming (Teece, 2018). Sensing concerns the identification of technological opportunities and environmental changes; seizing involves mobilizing resources and making organizational investments to capture those opportunities; and transforming refers to the reconfiguration of organizational resources, routines, and competencies to maintain alignment with environmental change. Recent evidence suggests that dynamic capabilities are particularly important for MSMEs undergoing digital transformation, as they enable firms to adapt their organizational processes despite resource limitations (Christanti & Jatiputra, 2023; Febriani *et al.*, 2025; Setiawan *et al.*, 2025). In the Indonesian context, dynamic capabilities have also been associated with the adoption of e-commerce, particularly through the interaction of entrepreneurial orientation and knowledge management (Nasution *et al.*, 2021).

The relevance of dynamic capabilities becomes particularly salient in the context of Generative AI adoption. Existing research suggests that AI adoption should not be understood merely as the acquisition of a technological resource, but as an organizational process that requires firms to develop the capacity to exploit that resource. Jayanto and Suparwata (2025), for example, emphasize the importance of organizational capability maturity in enabling firms to absorb and utilize Artificial Intelligence to support innovation and business development. Similarly, research on MSME digital transformation demonstrates that dynamic and agile capabilities facilitate organizational adaptation to changing technological environments (Febriani *et al.*, 2025; Setiawan *et al.*, 2025). This perspective implies that Generative AI may offer technological potential, but organizational capabilities determine whether that potential translates into productive outcomes.

Recent studies have begun to connect Generative AI directly with organizational capabilities and innovation. Qiao *et al.*, (2025) and Shi *et al.*, (2025) demonstrate the relevance of knowledge-based dynamic capabilities and AI capabilities in explaining the relationship between Generative AI and innovation performance. Jackson *et al.*, (2024) similarly conceptualize Generative AI from a capability-based perspective, emphasizing that the technology's organizational value depends on how it is implemented and integrated into business processes. Liu and Wang (2024) further highlight the implications of Generative AI for entrepreneurial performance, reinforcing the view that the technology should be examined in relation to the capabilities of entrepreneurs and organizations rather than as an isolated technological input.

The existing literature therefore provides an important foundation but leaves several questions unresolved. First, although dynamic capabilities have been widely examined in relation to digital transformation and e-commerce among MSMEs, empirical evidence concerning their role in the adoption of Generative AI for creative content production remains limited. Second, existing Generative AI research has largely examined innovation, entrepreneurship, knowledge capabilities, or technology-intensive organizational settings (Jackson *et al.*, 2024; Liu & Wang, 2024; Qiao *et al.*, 2025; Shi *et al.*, 2025), leaving relatively limited understanding of how resource-constrained MSMEs integrate Generative AI into everyday marketing routines. Third, previous studies provide insufficient explanation

of the microfoundations through which MSME actors identify AI opportunities, allocate scarce resources, develop AI-related competencies, and reconfigure conventional content-production routines.

This gap is particularly important because MSMEs operate under fundamentally different resource conditions from large corporations. Evidence on MSME digital transformation indicates that organizational capabilities, rather than technology adoption alone, determine whether digital resources translate into improved strategic and operational outcomes (Probohudono *et al.*, 2025; Yuwono *et al.*, 2025). Similarly, research on social media marketing demonstrates the growing strategic importance of digital engagement for MSMEs (Tatik & Setiawan, 2025), while studies of e-commerce adoption emphasize the role of organizational and dynamic capabilities in enabling firms to exploit digital opportunities (Indiani *et al.*, 2025; Nasution *et al.*, 2021). However, these studies do not explain how the emerging capabilities associated with Generative AI are developed at the operational level of content production.

Accordingly, this study addresses the convergence between Dynamic Capabilities Theory, Generative AI adoption, and MSME content marketing. Rather than treating Generative AI merely as a technological tool, this study examines how MSMEs develop sensing, seizing, and transforming capabilities to leverage the availability of AI for more efficient content production. In particular, the study investigates how MSME actors identify opportunities associated with Generative AI, mobilize scarce financial and human resources to experiment with and utilize AI tools, and subsequently reconfigure conventional content-production routines through human–AI collaboration. By focusing on these microfoundations, the study extends existing research on dynamic capabilities in MSMEs and contributes to the emerging literature on Generative AI-enabled organizational transformation. The study also provides practical insights into how resource-constrained MSMEs can leverage Generative AI to improve content-production efficiency while retaining human judgment, local identity, and brand authenticity.

The remainder of this paper is organized as follows. Section 2 provides a literature review and hypothesis development. Section 3 presents the research method and design. Section 4 provides the results and discussion. Section 5 presents Concluding Remarks and Recommendations.

2. Literature Review and Hypothesis Development

2.1 Content Marketing in E-Commerce MSMEs

Content marketing has become an increasingly important strategic instrument for Micro, Small, and Medium Enterprises (MSMEs) operating in digital and e-commerce environments. Unlike conventional marketing, content marketing emphasizes creating and distributing relevant, valuable, and engaging content to attract, retain, and influence target audiences. The increasing dependence of consumers on social media and digital platforms has consequently shifted marketing activities from product-oriented communication toward continuous engagement through text, visual, and audiovisual content. For MSMEs, this transformation creates both opportunities and challenges, as digital visibility increasingly depends on the ability to produce timely, differentiated content that aligns with rapidly changing consumer preferences.

The strategic importance of content marketing is particularly pronounced in e-commerce because digital platforms enable MSMEs to reach broader markets without requiring extensive physical infrastructure. However, achieving digital visibility requires continuous content production and

adaptation to platform-specific algorithms and audience preferences. Mere *et al.*, (2024) argue that content marketing increasingly functions as a determinant of brand engagement and conversion rather than merely as a supporting promotional instrument. Thus, the effectiveness of e-commerce marketing increasingly depends on an MSME's ability to consistently and efficiently develop creative content.

Nevertheless, MSMEs face structural limitations in developing such capabilities. Limited financial resources, shortages of skilled creative personnel, and competing operational priorities restrict their capacity to maintain professional content production (Budiarto *et al.*, 2018). These constraints can result in repetitive content, delayed responses to market trends, and inconsistent brand communication (Rainanto, 2019; Agustina *et al.*, 2025). Therefore, the central challenge for MSMEs is not merely whether they can access digital marketing technologies, but whether they can develop the organizational capabilities to exploit them effectively.

2.2 Generative AI and Digital Content Creation

The emergence of Generative Artificial Intelligence (Generative AI) has fundamentally altered the economics and processes of digital content creation. Generative AI refers to artificial intelligence technologies capable of producing new content, including text, images, audio, and video, based on user-provided instructions or prompts. The development of Large Language Models and multimodal generative systems enables businesses to automate or accelerate activities that traditionally required substantial human time and specialized creative skills. From a marketing perspective, Generative AI can support various stages of content production, including ideation, copywriting, image generation, script development, personalization, and content adaptation. Lahalisi (2025) highlights the potential of Generative AI to reduce the operational cost and time required to produce marketing content. For resource-constrained MSMEs, this capability is particularly relevant, as it can reduce reliance on expensive external agencies or specialized creative professionals. Generative AI can therefore lower the barriers to entry for digital creativity and enable smaller firms to participate more effectively in increasingly competitive digital markets. However, technological accessibility does not automatically translate into successful organizational adoption. Generative AI outputs may be generic, inconsistent with brand identity, or insufficiently sensitive to local cultural contexts. Furthermore, effective utilization requires users to possess sufficient digital literacy, prompting skills, evaluation capabilities, and knowledge of how to integrate AI-generated outputs into existing workflows. Fahmi (2024) and Djaini *et al.*, (2025) indicate that managerial readiness, organizational resistance, and difficulties in integrating AI into existing work systems can constrain technology adoption.

This distinction is important because it suggests that Generative AI should not be conceptualized solely as a technological solution. Rather, its value depends on the organizational capabilities that determine how the technology is accessed, interpreted, integrated, and transformed into productive outcomes. Consequently, understanding Generative AI adoption requires moving beyond a technology-centric perspective toward a capability-based explanation.

2.3 Dynamic Capabilities Theory

Dynamic Capabilities Theory provides a relevant theoretical foundation for explaining how organizations respond to technological and environmental changes. Teece *et al.*, (1997) conceptualize dynamic capabilities as the firm's ability to integrate, build, and reconfigure internal and external competencies in response to changing environments. Unlike the Resource-Based View, which primarily

emphasizes the possession and protection of valuable, difficult-to-imitate resources, Dynamic Capabilities Theory focuses on the organizational processes by which resources and competencies are continuously adapted. Teece (2007, 2018) subsequently develops dynamic capabilities into three interrelated processes: sensing, seizing, and transforming. Sensing refers to the ability to identify emerging opportunities and threats. Seizing concerns the mobilization and allocation of resources to capture identified opportunities. Transforming, or reconfiguring, refers to the continuous renewal and restructuring of organizational resources, routines, and competencies to maintain alignment with environmental changes.

The three dimensions provide a useful framework for examining technology adoption in MSMEs. First, sensing enables firms to recognize technological developments and identify opportunities associated with new digital tools. Second, seizing involves allocating resources, developing knowledge, and implementing technologies to capture those opportunities. Third, transforming concerns changes in organizational routines, structures, and workflows that allow new technologies to become embedded in daily operations. For MSMEs, these capabilities are particularly important because resource limitations make it difficult to compete by accumulating resources alone. Christanti and Jatiputra (2023) demonstrate that dynamic capabilities enable small businesses to learn, adapt, and reconfigure their operations in response to digital innovation. Similarly, Jayanto and Suparwata (2025) emphasize the importance of organizational capability maturity in enabling firms to effectively absorb and utilize Artificial Intelligence technologies. These findings indicate that dynamic capabilities can serve as an organizational mechanism through which resource-constrained firms convert technological opportunities into operational value.

2.4 Dynamic Capabilities and Generative AI Adoption

The relationship between Generative AI and dynamic capabilities can be understood by distinguishing between technology as a resource and capability as the ability to deploy that resource. Generative AI itself represents a technological resource that can potentially provide access to computationally enabled creative capabilities. However, the mere possession or availability of AI technology does not guarantee superior organizational outcomes. Firms must be able to identify relevant applications, mobilize resources, and redesign organizational processes around the technology. Recent studies increasingly recognize this relationship. Qiao *et al.*, (2025) and Shi *et al.*, (2025) demonstrate that Generative AI can influence knowledge-based dynamic capabilities and innovation performance through knowledge integration. These findings suggest that the value of Generative AI emerges not simply from automation but from its interaction with organizational knowledge and capabilities.

The theoretical distinction between technological resources and dynamic capabilities is also emphasized by Jackson *et al.*, (2024) and Liu and Wang (2024), who distinguish Generative AI's role as an organizational resource from the managerial and organizational capabilities required to exploit it. Such a distinction is particularly important in MSME contexts because limited resources heighten the need for effective resource orchestration. Rather than replacing organizational capabilities, Generative AI may function as an enabler or capability enhancer. In contrast, organizational actors remain responsible for identifying appropriate applications, evaluating outputs, and integrating AI into organizational routines.

Accordingly, the adoption of Generative AI can be interpreted as a dynamic capability process. Through sensing, MSMEs identify Generative AI's potential to address content-production constraints.

Through seizing, they experiment with available AI tools, allocate financial and temporal resources, and develop knowledge regarding their use. Through transforming, they redesign conventional content-production routines and establish new human–AI workflows. This perspective provides a more nuanced explanation of AI adoption than technology acceptance alone because it focuses on how organizational actors transform technological availability into strategic and operational value.

2.5 Human–AI Collaboration in Creative Content Production

Generative AI does not necessarily eliminate the role of human creativity. Instead, emerging research suggests that the greatest organizational value may arise from complementary human–AI collaboration. AI systems can perform activities characterized by speed, scalability, and computational processing, whereas humans retain important roles in contextual interpretation, judgment, creativity, cultural sensitivity, and brand authenticity. This complementarity is particularly relevant to MSME content marketing. Generative AI can undertake upstream activities such as generating ideas, producing initial drafts, developing alternative captions, and creating preliminary visual concepts. Human employees can subsequently evaluate, modify, contextualize, and localize these outputs. Such division of labor allows firms to exploit AI's productivity advantages while maintaining human oversight over strategic and cultural dimensions of communication. For culinary MSMEs, the human element is especially important because brand value is often tied to local identity, cultural meaning, authenticity, and customer familiarity. Generic AI-generated content may improve production efficiency but can also weaken differentiation when used without human curation. Consequently, a human–AI hybrid model can potentially reconcile two competing objectives: production efficiency and brand authenticity.

From a dynamic capabilities perspective, human–AI collaboration represents more than an operational arrangement. It constitutes a form of organizational reconfiguration in which conventional roles, routines, and task boundaries are redesigned around the complementary strengths of humans and AI. Thus, transforming capability becomes particularly relevant in explaining how MSMEs move from simply experimenting with Generative AI toward embedding it into their regular content-production processes.

3. Research Method

3.1 Research Design and Study Context

This study adopts a qualitative descriptive approach with a multiple-case study design to explore how culinary Micro, Small, and Medium Enterprises (MSMEs) adopt Generative Artificial Intelligence (Generative AI) to develop more efficient and creative content marketing strategies. A qualitative approach is appropriate because the study seeks to understand organizational processes, experiences, and practices rather than measure predetermined relationships among variables (Creswell & Poth, 2016). The multiple-case study design enables comparison across several MSMEs and facilitates the identification of similarities and differences in how dynamic capabilities are developed and applied in Generative AI adoption. The study was purposively conducted in Jatinangor, Sumedang Regency, West Java, Indonesia. Jatinangor provides a relevant research context because it is an educational and commercial area with a large student population and a highly competitive culinary business environment. The intensive interaction among culinary MSMEs, digital consumers, social media platforms, and e-commerce services makes the area particularly well-suited to examining the use of

Generative AI in digital content marketing. The unit of analysis comprises five local culinary MSMEs operating in Jatinangor, including businesses offering packaged foods, snacks, and beverages. The cases were selected through purposive sampling based on predefined inclusion criteria and the principle of information richness and data saturation.

3.2 Sampling and Data Collection

The study employed purposive sampling to select cases and informants with direct knowledge and experience of Generative AI adoption. The inclusion criteria for MSMEs were: (1) actively operating through online food-delivery platforms and/or social media commerce; (2) having used at least two Generative AI tools, such as ChatGPT, Midjourney, Canva AI, or CapCut AI, for content creation for a minimum of six months; and (3) operating at the micro or small-business level with an identifiable internal team structure. Primary data were collected through semi-structured, in-depth interviews with 10 informants: five business owners or managers responsible for strategic decision-making and five creative staff members responsible for implementing content-production activities. This two-level informant structure was intended to capture both managerial and operational perspectives on Generative AI adoption. The interview protocol was developed around the three dimensions of dynamic capabilities proposed by Teece *et al.*, (1997) and Teece (2018): sensing, seizing, and transforming. The questions explored how MSMEs identify opportunities associated with Generative AI (sensing), allocate resources and develop competencies to utilize AI tools (seizing), and restructure existing content-production routines through human-AI collaboration (transforming).

3.3 Measurement Model

The study relied primarily on interview data and was complemented by digital observations and documentary evidence. The semi-structured interview guide served as the principal research instrument, providing sufficient structure to ensure comparability across cases while allowing informants to elaborate on their experiences and practices. Digital observations were conducted by examining the informants' publicly accessible social media accounts and digital content. These observations were used to understand how Generative AI was reflected in actual content-production practices and to corroborate statements obtained during interviews. In addition, where available and permitted by the participating MSMEs, internal documents on content production costs, time allocation, and operational efficiency were examined as supporting evidence. The use of multiple data sources enabled the researchers to compare participants' narratives with observable digital practices and documentary evidence. This process strengthened the credibility of the findings and reduced reliance on a single source of information.

3.4 Data Analysis

Data were analyzed using thematic analysis following the interactive analytical framework of Miles, Huberman, and Saldaña (2014). The analytical process consisted of three interconnected activities: data condensation, data display, and conclusion drawing/verification. First, interview recordings were transcribed, and the data were condensed through coding and categorization. Initial codes were developed from both the theoretical framework and themes emerging from the empirical data. Particular attention was given to activities associated with sensing, seizing, and transforming, while allowing new themes to emerge inductively from the cases. Second, the coded data were organized into

case-based and cross-case displays to identify recurring patterns, similarities, and differences among the five MSMEs. The analysis compared managerial and creative staff perspectives to identify areas of convergence and divergence. Third, conclusions were developed through iterative interpretation and verification. Emerging findings were continuously compared with interview evidence, digital observations, and documentary data. Cross-case analysis was subsequently conducted to identify common mechanisms through which MSMEs integrated Generative AI into their content-production routines.

3.5 Common Method and Ethical Considerations

To establish the trustworthiness of the findings, the study employed data triangulation across informants and data sources. Information obtained from business owners was compared with accounts from creative staff, while interview narratives were cross-checked against observations of social media content and available operational documents. This triangulation enhanced the credibility and dependability of the interpretations. The study also maintained an audit trail of the data-collection and analytical processes, including interview protocols, coding procedures, case comparisons, and evidence used to support emerging themes. Researchers engaged in iterative verification of interpretations to minimize researcher bias and ensure that conclusions remained grounded in the empirical evidence. Ethical considerations were addressed throughout the research process. All participants were informed about the purpose of the study, the voluntary nature of their participation, and their right to withdraw from the study. Informed consent was obtained before interviews were conducted. The identities of the participating MSMEs and informants were anonymized in the reporting of findings, and commercially sensitive information concerning business operations, costs, and internal practices was treated confidentially.

4. Results and Discussion

4.1 Analysis Results

4.1.1 Capability Sensing: Identifying Trends and Opportunities in Technology Generative AI

Primary data collection through primary sources entailed in-depth interviews with 10 respondents, including 5 business owners as decision-makers in the strategic aspect, and 5 employees as content creators (executants in the technical aspect). The protocol for the semi-structured interview was established to explore the dimensions of the dynamic organization capability, which includes the ability to detect opportunities through the use of AI (sensing), allocation of power sources and training in prompt engineering (seizing), as well as transformation of routine work into human-AI collaboration (transforming). The triangulation method is used for data validation, in which narrative interviews are juxtaposed with secondary data from digital observations of the respondent's social media account and analyses of internal reports on the efficiency and cost of creative operations. The process of analysis entails interactive data analysis through thematic analysis, which involves three concurrent processes: data condensation, data display, and conclusion drawing/verification.

The findings field indicates that the capability manifestation sensing in the five MSMEs in Jatnangor is highly affected by the objective geographic and sociological operational areas. Jatnangor is an area of educational megapolitics in West Java, where a cluster of students from different universities creates a highly volatile digital market ecosystem. The population of consumer-students is

an early-adopter group that needs updates on visual and narrative trends in digital marketing that are consistent across platforms such as Instagram and TikTok. Hyper-competition from hundreds of outlets offering food and drink in the area has forced the managerial apparatus of the five MSMEs to sound the alarm and seek new digital tools capable of responding to the demands of fast-paced marketing.

Sensing process to technology: Generative AI in five culinary MSMEs. This was first aroused by the realization that it would be a recurring obstacle in internal operations involving production, content, and creativity. In a sense, traditional methods require allocating days, knowledge of graphic design, and the ability to write attractive captions (copywriting) that are engaging enough to capture consumers' attention, especially young consumers. The fifth party involved in the culinary business, which turns out to be the informant in this study. This admits to feeling operational fatigue due to limitations in staff and financial capital for recruiting an advertising agency to run outdoor advertising. The gap in the power structure motivates management to seek alternative solutions involving technology-savvy individuals actively.

Through the lens of information channels, findings from in-depth interviews show that the use of tools such as Generative AI like ChatGPT, Midjourney, Canva AI, and CapCut AI is introduced not through formal education but through asymmetric information sharing on social media and in communities of informal businesses. Owners of MSMEs can identify the potential of artificial intelligence through short educational videos shared on TikTok and Instagram that show how AI can write a promotional video script or instantly manipulate the background of a food photo. It can be observed that there are patterns in social media algorithms. This indicates that culinary MSMEs in Jatinangor use digital consumption platforms daily as a source of intelligence to compete for signals of new technology.

Surprisingly, sensing activities in research are not only confined to the owner's business at the managerial level but are strongly driven by the initiative of staff who, in the majority, are creators of content daily and are students of Jatinangor. The students' participation as employees will create an effective bridge for the transfer of technological knowledge in the culinary MSME sector. The characteristics of staff as young people born with digital literacy (digital natives) make it easy to detect the features of the latest artificial intelligence. The creative staff will function as information filters (information gatekeepers) who bring in, test, and recommend the use of specific Generative AI tools to the owner's efforts, thus enabling the organization's sensing activity to move organically from the bottom to the top (bottom-up process).

Following the implementation of Generative AI technology at the radar surveillance company, sensing capacity emerged among MSME actors to evaluate their eligibility for technical and economic management. It was not possible to incorporate all kinds of AI available on the market; rather, it was necessary to select based on the suitability of the need for the particular industry, which is culinary. Actors in the business found that ChatGPT was highly effective at generating a variety of weekly menu captions and hashtags using an algorithm. At the same time, Canva AI and CapCut AI were chosen for the convenience of visually manipulating their food products without requiring any specific computer specifications.

Aspects of finance become an equally significant factor in the matrix evaluation of the perpetrators' business, Culinary, in Jatinangor. The results of the observation indicate that the owners of the MSME take advantage of the significant opportunity in the generative AI business model based on freemium or affordable subscription models. From a managerial perspective, the availability of a free basic version of a tool such as ChatGPT or Canva AI is seen as an opportunity to overcome capital constraints. The capability to detect the efficiency of initial investment costs. This facilitates the rapid

breakdown of psychological resistance to adopting a new technology, given the low risk of financial failure relative to potential profits.

Apart from this, another aspect of their sensing capabilities is that these five MSMEs have been found to monitor their competitors' digital activity in the Jatinangor region. The respondents in such a practice constantly study the aesthetics of visual content and the frequency with which competing culinary businesses upload content that has grown their followers at an incredibly fast pace. Any improvements in the quality of graphics or captions posted by competitors using artificial intelligence are perceived as a direct competitive threat. Awareness of such a threat will definitely stimulate the organization to adopt Generative AI technologies.

4.1.2 Capability Seizing: Mobilization Resources and Execution AI Adoption

Once opportunity-exploitation technologies have been recognized through phase sensing with utmost care, the subsequent phases, strategic within the capability-seizing framework, will be the stages of seizing. Seizing capabilities is an organization's ability to utilize internal sources of power by making bold decisions through effective management and to exploit opportunities by applying technology within its business operations. In adopting advanced digital technologies such as Generative AI, the success of the seizing phase largely depends on leadership's ability to overcome limitations in structural capital and put in place incentive structures that motivate teamwork. For MSMEs, the ability to seize opportunities serves as a bridge between the theoretical outlook and the practical supremacy of artificial intelligence.

Findings from five businesses in Jatinangor indicate that financial capital constraints, which typically impede microbusiness success, have been overcome by adopting a freemium business model. The entrepreneurs exhibit managerial dexterity (managerial agility) in quickly reaching consensus on allocating the budget required to purchase premium subscriptions to Canva AI and ChatGPT Plus. The decision was made after management realized that subscription fees for the intelligent artificial platform would be significantly lower than the cost of hiring new personnel to design graphics professionally. Tactical Financial flexibility: This is evidenced by the ability to seize opportunities in the MSME industry, marked by financial flexibility in allocating the budget that directly impacts bottom-line operational costs and advertising.

The ability to achieve the greatest impact is evident in the commitment to time management, particularly allocating time for creativity and independent experimentation (trial and error). Due to limited access to formal training from institutions in the field, this fifth culinary MSME in Jatinangor relies on a learning process through practice (learning by doing). The business owner tolerates errors in the initial drafts of the trial period and relaxes the content release deadline by 2 to 4 weeks for the first use of AI. Space for experimentation is crucial to reduce psychological stress for the creative team, allowing them to independently explore the capabilities of Generative AI technology in engineering culinary menu promotions.

In the phase experiment conducted, mobilization of the capability of a cognitive organization centered on mastery of skills for the new method referred to as engineering prompts – this is the art of formulating instructions to be used by the specific text of the AI engine in generating the required output. The content creator uses digital discussion forums and video tutorials available on the Internet, through a process of self-reliance, to learn ideal methods for formulating prompts for artificial intelligence. Artificial intelligence for recognizing characteristics of the culinary menu of local Jatinangor

– including level of adjustment in terms of spiciness, texture of the food item, and segmentation in a price suitable for students. The staff's ability to formulate precise prompts is an asset. No new intangible assets that enhance the capability of the organization in overcoming weaknesses of AI algorithms that were initially generic.

An official step to prove that it successfully seized this phase in terms of its legitimacy. This is because of the legitimacy given by MSME owners who recognize Generative AI as an instrument. To work on standards in the business. The management of the five culinary MSMEs issues verbal and written instructions on how to use AI at the beginning of the idea-mining marketing process. Besides that, there are informal norms regarding the right and wrong use of AI, such as prohibiting the use of competitors' photo products as the basis for AI image manipulation. This institutionalization of the technology is extremely important so that the use of artificial intelligence can no longer be considered a side effect.

Harnessing the potential of culinary MSMEs in Jatinangor is not achieved through large investments in scalable IT infrastructure, but through agile execution and the ability to control cognitive teamwork. Opportunities are secured through Generative AI technology. This has successfully democratized digital creativity in micro-scale businesses with minimal capital. However, success comes only through technology licensing and staff skills training, and it is only half the battle on the path to organizational transformation. To achieve such adoption, which will lead to a sustainable content strategy for efficiency, MSMEs must take the final step toward capability transformation.

4.1.3 Capability Transformation: Reconstruction Routine Work Hybrid and Efficiency of Content Strategy

The peak phase in the framework capability dynamic is the stage of transforming or reconfiguring capabilities. Capability transformation refers to an organization's ability to continually align, renew, and restructure its tangible and Intangible assets over time. In adopting the latest technology, such as Generative AI, success in the capability transformation phase is determined not by the purchased tool's level of advancement, but by how the routine process is transformed to integrate the technology harmoniously into daily operations. The transformation of capability is very important for MSMEs to overcome inertia in organizations, which is the tendency of staff to go back to the conventional way of working due to resistance to change.

Field findings from five culinary MSMEs in Jatinangor indicate that workflow restructuring significantly affects content creation during production. Prior to the adoption of Generative AI, the workflow for manufacturing content was linear and time-consuming, beginning with manually searching for an idea, shooting the product, adding subtitles, and editing the video, a process that took 2 to 3 days. Through transformation capabilities, the routine workflow was transformed into a hybrid model that combines human and AI collaboration. The role of artificial intelligence was permanently integrated into the upstream process, where ChatGPT generated dozens of ideas for menu promotion content within minutes. In contrast, Canva AI and CapCut AI were used to compile the visuals.

Change channel Work: This process automatically defines and repeats the roles and descriptions in the job description for staff creating content daily at the MSME's culinary. Staff are no longer limited to repetitive, energy-draining tasks but instead become creative curators and editors. The responsibilities of staff now focus on the downstream phase: filtering, validating, and infusing local feel and suitability into the brand's voice in the AI-generated text. The transformation of this role will ensure

that the culinary content marketing in Jatinangor remains emotionally close to consumers/students, rather than relying on AI-generated visuals or text, which are usually stiff and generic.

Table 1. Research Results Matrix Capability Dynamic Culinary MSMEs Jatinangor

Dimensions Capability Dynamic	Key Indicators	Findings Field Empirical (Jatinangor Culinary MSMEs)	Impact & Efficiency Generated
1. Sensing (Detecting Opportunities & Threats)	• Environmental Scanning • Identification Technology • Analysis of Competitors	• MSME owners monitor visual trends and changes in consumer preferences among students in Jatinangor via TikTok/Instagram. • Recognizing AI tools (ChatGPT, Canva AI, CapCut AI) via informal community business. • Staff who are creative and young (digital natives) act as information gatekeeper who recommends technology to management.	• The organization is capable of detecting solutions to classic obstacles • Mitigating risk of digital stagnation by getting ahead of local culinary market trends.
2. Seizing (Capture & Execute Opportunity)	• Investment Tactical • Experiment Time Allocation • Prompt Engineering	• Management agrees to a small budget for a premium account (freemium model), cutting agency advertising costs. • Provide special time for the team for trial and error (2- 4 weeks). • Staff creative practice ability engineering prompts to ensure AI output is aligned with local culinary menu characteristics.	• Democratization of digital creativity in business-scale micro-enterprises with minimal capital. • The formation of intangible assets (new assets) in the form of skills and interaction between humans and machines.
3. Transforming (Reconfiguration & Transformation)	• Workflow Restructuring • Team Role Shift • Management Change	• Renovate channel work from conventional (linear, 2- 3 days) to hybrid collaboration channel work with human- AI. • AI executes phase upstream (idea/ draft), whereas staff creates in phase downstream as curator /editor. • Management dampens internal resistance by positioning AI as a capability enhancer, not a replacement man.	• Trimming time production content by 50% to 60% of count day becomes hours. • MSMEs can guard consistency of promotional volume daily to win social media algorithms without adding cost or staff.

Another challenge in transforming capability is managing employees' psychological aspects, which is well anticipated by the owners of culinary MSMEs in Jatinangor. In the early phase of the transformation process, some employees expressed concerns about whether the emergence of Generative AI would devalue their art skills or even take away their jobs. The management successfully reduced this internal resistance by making it clear through communication that AI enhances their capabilities, not replaces their positions at work. Their success in reducing digital fatigue is evidence of the organization's maturity in capability transformation and change management.

Empirical success reconfiguration routine. This will have a direct, exponential impact on the efficiency of content strategy for creative MSMEs. Based on internal document data from the report

operational informant, the integration of Generative AI has been proven to reduce content production time by 50%-60%. One package of content for culinary menu promotion (including Instagram captions, TikTok video scripts, and digital poster designs) that once took days to complete and publish can now be done and published within a few hours. Financial efficiency. This will allow the culinary MSMEs in Jatinangor to maintain the high volume and consistency of promotional uploads needed to beat social media algorithms, without recruiting new employees.

4.2 Discussion

The key findings of this study indicate that the adoption of Generative AI by five culinary MSMEs in Jatinangor successfully broke through long-standing structural barriers. Classic barriers such as marketing budget constraints, graphic design staff shortages, and business owners' time constraints were immediately overcome by the technology's freemium, instant nature. Unlike the previously challenging adoption of digital technology, which required investments in high-spec hardware, Generative AI democratizes the ability to create. Micro-enterprises in the culinary industry now have access to capabilities equivalent to...

The novelty of this aspect is that the study identified a pattern of opportunities for organic, bottom-up discovery in the Jatinangor region. Frequent interaction with the multi-campus, MSME-based culinary education ecosystem in the region was greatly facilitated by the presence of part-time student staff. The characteristics of young people as the digital generation drive innovation within the organization. They become agents who actively filter the information received and test new AI technologies based on their digital consumption. This pattern of knowledge transfer from the bottom to the top is what distinguishes MSMEs in Jatinangor from businesses in other regions, which generally rely on the cognitive instructions of the business owner as top management.

Field findings also demonstrate that successful technology implementation (mastery) is no longer determined by material capital ownership, but rather by new cognitive control skills in the form of rapid engineering. Culinary MSME staff are creative in applying artificial intelligence to understand flavor characteristics and visual aesthetics, and to promote local language familiar to Jatinangor students. This ability to formulate specific, context-dependent text instructions is a determinant of the quality of the original AI output, which is both generic and highly personalized. Mastery of these adaptive skills creates a new, valuable internal asset that is difficult for competitors to imitate, thereby directly enhancing the operational capabilities of culinary MSMEs.

Novelty is the most important objective of this research. This can be seen in the pipeline's transformation (reconstruction) from a conventional model to a human-AI hybrid model. Five culinary MSMEs in Jatinangor can collaborate by assigning roles in intelligent work, assigning technical and energy-intensive tasks to AI at the upstream stage. The process of gathering content ideas, drafting menu descriptions, and even writing the script for the basic promotional video was all done using ChatGPT and Canva AI. This restructuring was done suddenly, allowing the creative team to restructure their functions from the start without wasting days refining the visual concept.

Novelty was the primary reason for this research. This is illustrated by the fact that the process of restructuring (reconstructing) the pipeline has shifted from a traditional framework to a hybrid human-AI approach. Five culinary MSMEs in Jatinangor collaborated to perform their work more efficiently by delegating technical and laborious tasks to AI at the upstream stage. From gathering

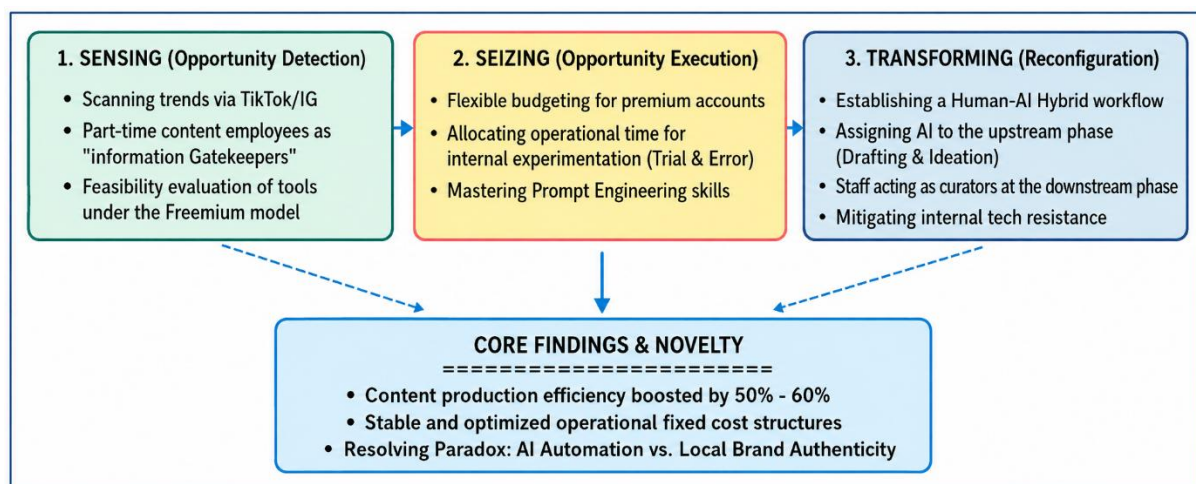
content ideas and drafting menu descriptions to scripting basic promotional videos, everything was done using ChatGPT and Canva AI.

The empirical efficiency gains, in the form of actual results generated through this hybrid collaboration, became evident during the process of reducing content production time to 50-60%. Producing promotional content, both visual and textual, has become very simple, so that what once took two to three days can now be done in just a few hours. This massive increase in efficiency will help generate significant profits for MSMEs in the culinary industry by leveraging social media algorithms. This requires frequent promotions, which can be achieved without increasing costs by hiring more employees.

From the analysis of the data collected in the field above, it is clear that this research has resolved the paradox in the theory discussed above regarding the loss of content originality due to the use of artificial intelligence. The results obtained from the Jatinangor study indicate that, optimistically, the operational efficiency and the local community's identity can coexist in perfect harmony. The problem lies not in the sophistication of the artificial intelligence algorithms used, but rather in the level of operational agility required to manage hybrid work.

As a collective approach, the novelty of this research lies in mapping the entire empirical model of how small businesses in the informal sector operate, through the agile organizational practices they employ to mitigate the disruption caused by Generative AI. This study will not only contribute to the literature by presenting something new in the study of strategic management in the contemporary era, but also provide a blueprint to accelerate the digitalization of millions of MSMEs in Indonesia.

Figure 1. Empirical Model Capacity of E-Commerce MSMEs in AI Adoption in Jatinangor



5. Concluding Remarks and Recommendation

This study examines how culinary MSMEs develop dynamic capabilities to integrate Generative AI into content marketing under resource constraints. The findings indicate that Generative AI does not create value through technological availability alone. Rather, value emerges from MSMEs' capacity to identify relevant opportunities, mobilize limited resources, and reconfigure existing routines around human-AI collaboration. The evidence reveals three interdependent capability processes. First, sensing enables MSMEs to recognize the relevance of Generative AI through bottom-up experimentation and informal

knowledge flows, particularly through digitally experienced creative staff. Second, seizing involves the selective allocation of scarce financial and temporal resources, including investment in premium AI tools and time for experimentation and skill development. Third, transforming occurs when conventional content-production routines are reconfigured into a hybrid human–AI workflow. In this arrangement, AI supports upstream activities such as ideation and drafting, whereas human employees retain downstream responsibility for contextualization, cultural interpretation, and brand curation.

The findings further suggest that this reconfiguration can reduce reported content-production time by approximately 50%–60% while preserving local brand identity. Importantly, the evidence indicates that efficiency is not achieved by substituting human creativity with AI, but by reallocating human effort toward higher-value activities that require contextual judgment and authenticity. Taken together, the findings position Generative AI as a capability-enhancing resource rather than an autonomous organizational capability. The strategic value of AI therefore depends on the organizational processes through which firms recognize, appropriate, and reconfigure the technology. This distinction extends Dynamic Capabilities Theory by showing how its microfoundations can operate in resource-constrained MSMEs, where capability development is often informal, employee-driven, and incremental rather than supported by formal organizational structures.

This study contributes to the Dynamic Capabilities literature in three ways. First, it extends the application of the sensing–seizing–transforming framework to the emerging context of Generative AI-enabled content marketing in MSMEs. Rather than treating AI adoption as a discrete technological decision, the findings conceptualize adoption as an ongoing capability process through which firms progressively recognize, experiment with, and embed AI into organizational routines. Second, the findings provide a microfoundational perspective on dynamic capabilities in resource-constrained firms. In contrast to conventional accounts that emphasize formal structures, managerial investments, and organizational-level capabilities, the cases demonstrate that capability development may originate from employees who identify emerging technologies, transfer knowledge, and initiate experimentation.

This suggests that the locus of dynamic capability formation in MSMEs may be distributed across organizational actors rather than concentrated exclusively at the managerial level. Third, the study refines the conceptual distinction between AI as a resource and AI-enabled capability. Generative AI provides technological potential, but it is human judgment, resource orchestration, and routine reconfiguration that convert this potential into organizational value. The human–AI hybrid workflow identified in this study therefore represents a mechanism through which technological resources are transformed into productive organizational capabilities while maintaining contextual and cultural authenticity.

Statement of Use of Generative AI

During the preparation of this work, the author used generative artificial intelligence tools to support the scientific writing process. Grammarly was used to check grammar, refine writing style, and improve clarity in scientific writing. All interpretations, analyses, and conclusions presented in this study are the sole responsibility of the author.

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