EXPLORING DIGITAL TRANSFORMATION OPPORTUNITIES FOR MSMES: A PHENOMENOLOGICAL STUDY IN THE EASTERN INDONESIAN CULINARY SECTOR

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ABSTRACT

Digital transformation offers substantial opportunities for Micro, Small, and Medium Enterprises (MSMEs) in Eastern Indonesia; however, its implementation remains constrained by infrastructural limitations, low levels of digital literacy, and cultural tensions. This study explores the lived experiences of culinary MSME actors as they navigate the complexities of digitalization, with the aim of understanding how they interpret, negotiate, and adapt to technological change. Adopting a phenomenology-based ethnographic approach, the research draws on in-depth interviews and documentation to capture rich, contextualized accounts of participants' digital experiences. The findings indicate that digital transformation within these enterprises does not constitute a linear or fully autonomous shift toward modernization. Instead, it represents a process of "conditioned becoming modern," characterized by constrained agency shaped by infrastructural barriers, selective adoption of digital tools, and strong dependence on family and community networks for knowledge exchange and skill acquisition. These results challenge the universal applicability of diffusionist perspectives, particularly Rogers' Diffusion of Innovation theory, which tends to assume relatively homogeneous pathways of technology adoption. The study therefore underscores the importance of context-sensitive policies that integrate local cultural values, social structures, and infrastructural realities to foster inclusive and sustainable digital transformation among MSMEs.

Keywords: *Digital Transformation; MSMEs; Phenomenology*

INTRODUCTION

Digital transformation is a highly influential phenomenon in driving economic growth, particularly in Indonesia's Micro, Small, and Medium Enterprises (MSMEs) sector (Ilyas, 2024). However, the process of digital technology adoption, especially in eastern Indonesia, faces unique and complex challenges. Limitations in infrastructure, low digital literacy, and tensions between traditional values and modernity are critical factors determining the success or failure of this transformation (Alam et al., 2023). According to Legowo et al. (2022), these challenges include difficulties in adapting to new technologies, particularly in regions that have historically underinvested in technological and infrastructural development.

Research by Alam et al. (2023) indicates that approximately 90% of MSMEs in Indonesia still operate conventionally. This issue is exacerbated by the increasingly digitalized environment, with only a small fraction of the nearly 64 million existing MSMEs capable of functioning in the digital sphere. This suggests that MSME actors in underdeveloped regions require greater support in digital training and technological literacy development. Constraints in accessing appropriate technological information and training pose significant barriers to their ability to innovate and compete in an increasingly competitive market (Serpian, 2021; Fauziyanti et al., 2023; Istiyana et al., 2024).

Previous studies on MSME digital transformation have predominantly focused on urban areas or regions with adequate infrastructure, employing quantitative approaches that measure technology adoption levels based on classical theories such as the Diffusion of Innovation (Rogers et al., 2014). Meanwhile, qualitative research exploring the subjective perspectives of MSME actors in marginalized regions remains limited. Some recent studies have begun integrating phenomenological approaches to understand the lived experiences (life-world) of business actors, as developed by Vom Lehn (2019) and Squires (2023). However, in-depth exploration in the context of Eastern Indonesia's culinary sector where the interplay between tradition and modernity is particularly pronounced has yet to be extensively examined. This gap underscores the necessity of the present study.

Further research utilizing phenomenological approaches highlights the importance of understanding local contexts and the subjective experiences of MSME actors in Eastern Indonesia. Wulandari & Nurhadi (2023) emphasize the significance of digital marketing as a tool for expanding market access for MSMEs. However, Fauziyanti et al. (2023) note that digital marketing training and outreach remain limited among MSME actors, particularly concerning the use of technology for product marketing and distribution.

These findings illustrate how traditional values and resistance to change can hinder the shift toward digitalization. Digital transformation is not merely a technical process but also a cultural one, as noted by Setiawan et al. (2021). Therefore, adjustments must be made to ensure that MSME actors do not lose their cultural identity while adapting to new technologies. By considering these aspects, targeted interventions can be implemented, enabling MSMEs in Eastern Indonesia to leverage digital opportunities without abandoning their cultural roots (Alam et al., 2023; Fauziyanti et al., 2023; Setiawan et al., 2021).

This study makes a significant contribution to the literature on digital transformation in the MSME culinary sector while offering new methodological and perspectival insights into the experiences of micro and small business actors in diverse contexts. While much prior research has centered on well-developed urban areas, few

studies have incorporated perspectives from marginalized regions, particularly in the culinary sector, which serves as a backbone of the local economy (Isalman et al., 2022; Wahyuningsih et al., 2024). Thus, understanding these challenges and how MSMEs respond, is crucial for developing policies that support sustainable digital transformation across Indonesia.

This study aims to explore the subjective experiences of culinary MSME actors in Eastern Indonesia in navigating digital transformation, highlighting the meanings, challenges, and cultural and structural factors influencing technology adoption. The goal is to formulate a digital adaptation framework tailored to local contexts. Theoretically, this research enriches technology adoption literature through a phenomenological approach in an underexplored region. Practically, its findings can inform inclusive MSME digitalization policies. Socially, the study emphasizes the role of community and local values as drivers of digital transformation while amplifying the voices of MSMEs in marginalized regions.

LITERATURE REVIEW

Digital transformation among Micro, Small, and Medium Enterprises (MSMEs), particularly in the culinary sector in Eastern Indonesia, presents unique challenges and opportunities deeply intertwined with local contexts (Rante, 2025). Existing literature indicates that Rogers' Diffusion of Innovations theory remains highly relevant in explaining technology adoption among MSMEs (Rogers et al., 2014), emphasizing five key factors: relative advantage, compatibility, complexity, trialability, and observability (Teng et al., 2022). In Eastern Indonesia, research suggests that "compatibility" extends beyond technological alignment with business systems to include cultural values (Serpian et al., 2016; Suliswanto & Rofik, 2019; Hendrawan et al., 2024). This demonstrates that enhancing digital adoption requires MSMEs to carefully consider existing cultural and local elements (Trenkle, 2020).

Digital transformation has emerged as a global phenomenon with significant implications for MSMEs, including those in the culinary sector (Aini et al., 2024). However, digital technology adoption among MSMEs in Eastern Indonesia faces distinct challenges related to infrastructure, digital literacy, and local values. This literature review explores the opportunities and challenges of digital transformation for culinary MSMEs in Eastern Indonesia through a phenomenological approach, incorporating theoretical perspectives and recent empirical findings.

Diffusion of Innovation

The Diffusion of Innovation theory (Rogers et al., 2014) posits that technology adoption depends on five key factors: (1) relative advantage, (2) compatibility, (3) complexity, (4) trialability, and (5) observability. In the context of MSMEs in Eastern Indonesia, this study argues that the "compatibility" factor must be expanded to include cultural dimensions, where technology must align with local values to facilitate adoption (Vom Lehn, 2019).

Furthermore, Bhabha's (2012) concept of hybrid modernity illustrates how MSMEs can integrate digital technologies with traditional practices, preserving their local identity while leveraging digital innovation (Fathurrahman & Fitri, 2024). Empirical studies reveal that culinary MSMEs in Eastern Indonesia selectively adopt digitalization, maintaining the authenticity of their products while utilizing digital platforms for marketing (Cueto et al., 2022). Research by Teng et al. (2022) also emphasizes that investing in appropriate technologies is crucial for successful digital transformation.

Thus, digitalization in the culinary sector not only enhances operational efficiency but also strengthens market competitiveness and local identity (Zomer et al., 2020).

Phenomenology-Based Ethnography

The ethnography-informed phenomenological approach (Vom Lehn, 2019) enables an in-depth understanding of MSME actors' subjective experiences in navigating digital transformation. This method emphasizes life-world analysis to uncover meaning structures shaped by social interactions, local values, and business dynamics.

However, challenges in digital transformation remain significant. For many MSMEs, limited digital literacy and inadequate infrastructure are major barriers to implementing digital strategies (Hendrawan et al., 2024). Muditomo & Wahyudi (2021) highlight the need for tailored digital transformation models that allow MSMEs to capitalize on opportunities while addressing digitalization challenges. Consequently, collaboration among governments, educational institutions, and the private sector is essential to improve digital literacy and develop necessary infrastructure (Li et al., 2017; Chen et al., 2024).

Phenomenology-based ethnography provides critical insights into how MSME actors perceive and interact with digital transformation. According to Garzoni et al. (2020) and Priyono et al. (2020), this approach underscores the importance of understanding subjective experiences and social contexts in digitalization processes. Given Eastern Indonesia's cultural diversity, this method allows researchers to explore meaning structures derived from social interactions and local values (Ilyas, 2024). Thus, phenomenological research can better elucidate the constraints and opportunities faced by culinary MSMEs in the region.

Hybrid Modernity

The concept of hybrid modernity explains how MSMEs integrate digital technologies with traditional practices without compromising their business identity (Bhabha, 2012). Research findings indicate that culinary MSMEs in Eastern Indonesia selectively adopt digitalization, preserving authentic aspects such as food flavors while utilizing digital platforms for marketing (Honer & Hitzler, 2015).

Considering these perspectives, it is evident that digital transformation for culinary MSMEs in Eastern Indonesia requires not only appropriate technology adoption but also a deep understanding of the local context influencing its acceptance and success. A comprehensive and inclusive approach is key to addressing challenges and leveraging opportunities in the digital era.

METHODS

This study employs a qualitative approach using phenomenology-based ethnography, as developed in management and organizational studies by Vom Lehn (2019). This approach enables an in-depth understanding of the subjective experiences of culinary MSME actors in Eastern Indonesia as they navigate and identify opportunities in digital transformation. The emphasis is placed on life-world analytical ethnography, which seeks to uncover meaning structures and lived experiences shaped by social interactions, local values, and the unique dynamics of the culinary business in the region.

The study adopts an interpretive phenomenological design, focusing on the direct experiences (Squires, 2023) of MSME actors regarding digital transformation and its opportunities. Research is conducted through the researchers' existential engagement in

the life-world of participants to holistically capture their perspectives and interpretations of digital transformation.
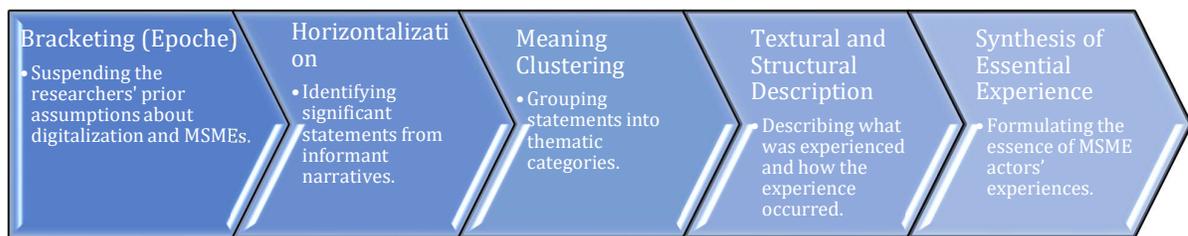
Informants were selected purposively based on the following criteria:
- Active culinary MSME operators in Eastern Indonesia,
- Those who have attempted or are currently using digital technologies (e.g., online ordering platforms, digital payments, social media), and
- Willingness to share in-depth business experiences.

A total of three informants were selected, adhering to phenomenological principles that prioritize depth of meaning over participant quantity (Creswell, 2016; Van Manen, 2016).

Data were gathered through in-depth semi-structured interviews that focused on narratives of experiences, perceptions, meanings, and daily business dynamics in the context of digitalization, as well as documentation including screenshots of digital applications used, digital brochures, and online promotional materials created by MSMEs.

Analysis followed an interpretive phenomenological approach, guided by life-world analytical ethnography (Honer & Hitzler, 2015), through the following stages:

Bracketing (Epoche)	Horizontalization	Meaning Clustering	Textural and Structural Description	Synthesis of Essential Experience
• Suspending the researchers' prior assumptions about digitalization and MSMEs.	• Identifying significant statements from informant narratives.	• Grouping statements into thematic categories.	• Describing what was experienced and how the experience occurred.	• Formulating the essence of MSME actors' experiences.

Source : Adapted from Honer & Hitzler, 2015

Figure 1
Stages of Data Analysis using life-world analytical ethnography

To ensure interpretive accuracy, dual reflection with colleagues was conducted, and participant validation was performed to confirm thematic interpretations (Creswell, 2016).

Validity was ensured through methodological triangulation involving interviews and documentation, member checking for informant verification, and research team discussions aimed at minimizing interpretive bias.

RESULTS AND DISCUSSION
In conducting this research, the researchers adopts intentionally a stance of bracketing by suspending preconceived assumptions (Van Manen, 2016) regarding MSME digitalization. This methodological approach consciously sets aside common presumptions such as the inherent positive impacts of technology adoption, perceived resistance to change among MSME actors in remote regions, and oversimplified binary distinctions between "traditional" and "modern" business practices. By employing this phenomenological reduction, the study ensures that findings authentically emerge from

participants' lived experiences rather than being constrained by the researchers' theoretical predispositions, thereby preserving the integrity of the informants' narratives as the primary source of knowledge.

Horizontalization: Significant Statements

The horizonalization stage was conducted by extracting significant statements from the interview transcripts that reflect the informants' business dynamics and digital adaptation. The identified significant statements, along with their respective categorizations, are presented in Table 1.

Table 1
Significant Statements from MSMES Informants

No.	Significant Statement	Informant	Context of Usage	Initial Code
1	"Can be seen by many people and g more customers"	Mrs. Sinta	Motivation for using digital media	Digital market expansion
2	"The network sometimes isn't available"	Mrs. Fitri	Technological infrastructure barrier	Infrastructure constraints
3	"My children taught me to use smartphones"	Mrs. Sinta	Technology learning process	Intergenerational knowledge transfer
4	"Not changing the taste and quality	Mrs. Sinta	Business identity preservation strategy	Product consistency
5	"Special culinary training center"	Mrs. Julaiha	Institutional support expectation	Need for structured training

Source : Data analysis, 2025

Meaning Clustering (Thematic Grouping)

Following the identification of significant statements, the data were further analyzed through thematic grouping to synthesize the core experiences of the informants. These statements were categorized into four distinct meaning structures (Digital Existence, Infrastructural Dissonance, Knowledge Transmission, and Hybrid Authenticity) as detailed in Table 2.

Table 2
Thematic Grouping

Cluster	Related Statements	Implicit Meaning
Digital Existence	- "Can be seen by many people" - "Customers reach us from other islands"	Digital platforms as business identity expansion

Cluster	Related Statements	Implicit Meaning
Infrastructural Dissonance	- "Network sometimes unavailable" - "Only using WiFi"	Gap between digital expectations and realities
Knowledge Transmission	- "My children taught me" - "Learning from YouTube"	Digital literacy as generational process
Hybrid Authenticity	- "Never change the original taste" - "Still sell from home while going online"	Negotiation between traditional and modern values

Source : Data analysis, 2025

Textural and Structural Description

Textural Description ("What" is Experienced)

The synthesis of these thematic clusters leads to a comprehensive textural and structural description, which elucidates how MSME actors experience digital transformation as a multifaceted phenomenon. This overarching experience is further broken down into specific aspects, including business identity expression and proximate social learning, as systematically illustrated in Table 3.
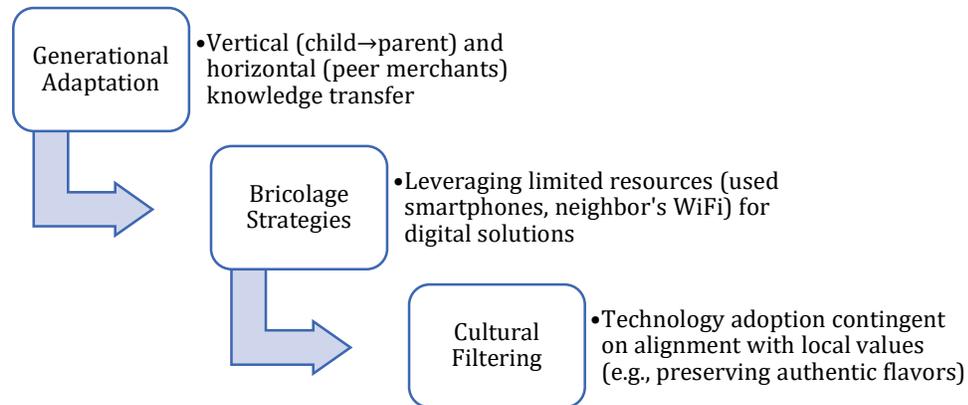
Table 3
Aspects of Digital Transformation Experiences Among Eastern Indonesian MSMEs

Digital Experience Aspect	Characteristics	Data Manifestations	Impact on MSMEs
1. Business Identity Expression Space	Digital as extension of traditional business identity	- "Business name 'Hito Yaya' promoted on FB" (Mrs. Julaiha) - "Post products to gain recognition across islands" (Mrs. Sinta)	- Expanded brand awareness - Formation of hybrid (offline-online) business identity
2. Contradiction Field	Tension between potential and infrastructure limitations	- "Network sometimes unavailable" (Mrs. Fitri) - "Can't sell online when it rains" (Mrs. Sinta)	- Dependence on external conditions - Unstable business patterns
3. Proximate Social Learning	Digital literacy through intimate social networks	- "My child taught me to use smartphones" (Mrs. Sinta) - "Learning from YouTube" (Mrs. Julaiha)	- Gradual technology adoption - Dependence on intermediary actors

Source : Data analysis, 2025 xxxx

Structural Description ("How" the Experience Occurs)

Following the textural and structural descriptions, the underlying process of how this transformation occurs is further explored through the identification of specific adaptive mechanisms. These mechanisms (comprising generational adaptation, bricolage strategies, and cultural filtering) delineate the strategic pathways taken by local entrepreneurs to navigate the digital landscape, as illustrated in Figure 2.

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┌──────────────┐   •Vertical (child→parent) and
│ Generational │     horizontal (peer merchants)
│  Adaptation  │     knowledge transfer
└──────────────┘
       │
       ▼
        ┌──────────────┐   •Leveraging limited resources (used
        │  Bricolage   │     smartphones, neighbor's WiFi) for
        │  Strategies  │     digital solutions
        └──────────────┘
               │
               ▼
                ┌──────────────┐   •Technology adoption contingent
                │   Cultural   │     on alignment with local values
                │  Filtering   │     (e.g., preserving authentic flavors)
                └──────────────┘
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Source : Adopted from Anatan & Nur (2023)

Figure 2
Pathways of Technological Transformation in Local MSMEs

Synthesis of Essential Experience

"Conditioned Becoming Modern," a phenomenon characterized by constrained agency where adaptive creativity is strictly bounded by infrastructure and literacy limitations (Aini et al., 2024; Hendrawan et al., 2024). This transformation manifests as a partial modernity, involving the adoption of technology without abandoning essential traditional business practices, while remaining deeply rooted in social embeddedness through the crucial role of family and community networks during the digital transition.

Theoretical Contrast

These findings modify Rogers' (Rogers et al., 2014) Diffusion of Innovation theory by demonstrating that technology adoption in marginal MSMEs follows non-linear pathways rather than a traditional sequential progression. Furthermore, the theory's "compatibility" factor requires significant expansion to include cultural compatibility, specifically regarding how digital tools must align with local values to be accepted. Finally, the conventional "late majority" or "laggards" categorization proves inadequate in this context, as digital resistance is often a result of structural constraints (such as infrastructure limitations) rather than a cultural or psychological aversion to change.

Methodological Implications

This study highlights the importance of utilizing embodied phenomenology to gain a deeper understanding of the digital practices within MSMEs, particularly how entrepreneurs navigate their daily business dynamics (Van Manen, 2016; Squires, 2023). Furthermore, it emphasizes the necessity of analyzing infrastructure as a lived experience rather than merely an external context, as evidenced by the "contradiction field" where network availability directly dictates business patterns. Finally, the research underscores the value of mapping "digital kinfolk," or the intimate social support networks, such as children and neighboring merchants, that are essential for digital literacy and technology adoption in these communities.

Discussion

The digital transformation among MSMEs in Eastern Indonesia's culinary sector reveals complexities that often diverge from the linear assumptions posited by conventional technology adoption theories, such as the Diffusion of Innovation Theory (Alam et al., 2023; Triono, 2019). Phenomenological analysis demonstrates that digitalization constitutes an ongoing negotiation between tradition and modernity, where MSME actors engage in a "conditioned process of becoming modern." Cultural identity and established business practices remain inseparable from new technology usage, creating unique challenges in digital innovation adoption.

Three key characteristics substantiate these findings. First, constrained agency emerges as entrepreneurs' adaptive capacities are limited by inadequate infrastructure and low digital literacy (Susano, 2024; Hardilawati, 2020). For instance, unreliable internet access and ineffective training programs frequently hinder optimal technology utilization (Piarna & Fathurohman, 2019). Second, partial modernity manifests through selective technology adoption (such as e-commerce and social media use) without abandoning identity-constitutive practices (Pattisahusiwa et al., 2024). Third, social embeddedness proves crucial, with family and community networks providing essential support during digital transitions (Pradnya & Yuniarta, 2024).

These findings challenge (Rogers et al., 2014) linear adoption model, suggesting the need to expand the "compatibility" dimension to incorporate local cultural frameworks. Technologies must demonstrate adaptability and harmony with existing community values to achieve meaningful adoption (Aini et al., 2024; Yutika, 2023). Furthermore, the "late majority/laggards" classification appears inadequate, as adoption delays stem primarily from structural constraints rather than cultural resistance (Nuraeni, 2023; Zahra et al., 2023).

The study also highlights generational digital learning patterns, where knowledge transfers vertically (youth to elders) and horizontally (peer-to-peer), often bypassing formal training programs (Ausat et al., 2022). This phenomenon not only shapes individual learning trajectories but also transforms social power dynamics, fostering new virtual communities of practice (Alam et al., 2023; Prakoso et al., 2023).

Ultimately, this research reconceptualizes digital transformation in Eastern Indonesia's culinary MSMEs as a socioculturally embedded process rather than a linear technological progression. This study advocates for more inclusive and context-sensitive policy approaches by recognizing that "partial modernity" constitutes a legitimate and effective adaptation strategy for MSMEs. Rather than enforcing comprehensive digital transformation, policies should prioritize the development of digital infrastructure that aligns with the real needs of business owners, such as establishing village internet centers with operating hours synchronized to local traditional market rhythms.

This approach should be reinforced by leveraging "digital kinfolk", the immediate social networks that have become frontline agents of digital literacy, as key partners in training programs. By doing so, technology adoption can unfold organically through pre-existing community-based trust channels, ensuring culturally grounded and sustainable implementation.

CONCLUSION AND SUGGESTION

The study demonstrates that culinary MSMEs in Eastern Indonesia approach digital transformation as a selective adaptation process, strategically adopting technologies like social media for marketing while intentionally preserving traditional production methods and transactions. This "partial modernization" emerges from continuous

negotiation between digital opportunities and cultural preservation, facilitated through tight-knit community networks that enable technology transfer and collective problem-solving around infrastructure limitations. The findings reveal a non-linear adoption pathway where technological compatibility depends as much on cultural alignment as on technical functionality, challenging conventional innovation diffusion models that assume universal adoption trajectories.

The research underscores how digital transformation in this context simultaneously presents challenges including connectivity gaps and generational divides in digital literacy while creating unique opportunities for hybrid business models that leverage both digital market access and traditional product authenticity. These insights call for development policies that move beyond standardized digitalization templates, instead prioritizing infrastructure solutions synchronized with local business rhythms and leveraging existing social networks as conduits for culturally-grounded digital skill development. Such context-sensitive approaches prove essential for supporting sustainable technological integration in Eastern Indonesia's distinctive socioeconomic ecosystem.

For culinary MSME practitioners in developing regions, the strategic adoption of "Hybrid Modernity" serves as a vital framework where digital tools facilitate market expansion without compromising the inherent authenticity of traditional products. This transition is best achieved through a bricolage strategy, which prioritizes the optimization of stable, low-bandwidth digital resources—such as WhatsApp or Facebook—that align with local infrastructural realities rather than forcing the adoption of complex, high-resource applications. To address prevalent gaps in digital literacy, the utilization of "digital kinfolk" offers a sustainable solution by engaging younger, technologically proficient family members as mentors to bridge the intergenerational knowledge gap.

Future scholarly inquiries should expand their geographical scope to include comparative analyses between urban centers and the more isolated regions of Eastern Indonesia, ensuring a more comprehensive mapping of localized challenges. A longitudinal research design is highly recommended to observe the behavioral evolution of these practitioners from a state of "conditioned modernity" toward autonomous digital maturity. Furthermore, there is a critical need to investigate the influence of third-party platform ecosystems on the profit margins of marginal enterprises and to evaluate the efficacy of state-led training programs within specific sociocultural contexts.

In analyzing this transformation, the integration of variables such as Cultural Compatibility and Infrastructural Dissonance is essential to measure how technology aligns with social values and technical realities. Additionally, the discussion of Conditioned Agency and Social Embeddedness provides a deeper understanding of how structural environmental constraints shape the adaptive creativity of entrepreneurs. By synthesizing these variables, the resulting models of digital transformation achieve both technical precision and deep sociocultural relevance for the communities of Eastern Indonesia.

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