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DIGITAL MARKETING AS A SURVIVAL STRATEGY FOR SMALL BUSINESSES IN RURAL AREAS DURING PANDEMICS

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Abstract

This study examines digital marketing as a survival strategy for rural MSMEs during the pandemic, focusing on Nganjuk Regency, East Java. The background highlights the challenges of digital adaptation in rural areas, which differ significantly from urban contexts, and the high failure rates in sustaining digital operations. The research aims to understand the socio-technical adaptation processes underlying rural MSMEs' use of digital platforms by integrating the Technology Acceptance Model with Javanese cultural values. The methodology employs a 12-month mixed-methods approach, combining quantitative surveys of 70 MSMEs, digital ethnography (120 hours), transaction data analysis, and in-depth interviews. Key findings reveal four unique adaptation strategies: platform syncretism, social commerce adaptation, proxy digitalization, and offline-online bundling, demonstrating how rural MSMEs blend digital logics with local business traditions. These findings contribute to the concept of "indigenous digital marketing" and challenge universal assumptions in digitalization paradigms.

Keywords: *Digital Adaptation; Rural MSMEs; Indigenous Marketing; Platform Hybridization; Javanese Culture.*

Abstrak

Penelitian ini mengkaji strategi pemasaran digital sebagai upaya bertahan UMKM di pedesaan selama pandemi, dengan fokus pada Kabupaten Nganjuk, Jawa Timur. Latar belakang masalah mencakup tantangan adaptasi digital di wilayah pedesaan yang berbeda secara signifikan dari konteks perkotaan, serta tingginya tingkat kegagalan dalam mempertahankan operasi digital. Tujuan penelitian adalah untuk memahami proses adaptasi sosio-teknis yang mendasari penggunaan platform digital oleh UMKM pedesaan, dengan menggabungkan Model Penerimaan Teknologi dan nilai-nilai budaya Jawa. Metode penelitian meliputi pendekatan campuran selama 12 bulan, menggabungkan survei kuantitatif terhadap 70 UMKM, etnografi digital (120 jam), analisis data transaksi, dan wawancara mendalam. Hasil utama mengungkap empat strategi adaptasi unik: sinkretisme platform, adaptasi sosial commerce, digitalisasi proksi, dan bundling offline-online, yang menunjukkan bagaimana UMKM pedesaan memadukan logika digital dengan tradisi bisnis lokal. Temuan ini berkontribusi pada

konsep "pemasaran digital indigenous" dan menantang asumsi universal dalam paradigma digitalisasi.

Kata Kunci: *Adaptasi Digital; UMKM Pedesaan; Pemasaran Indigenous; Hibridisasi Platform; Budaya Jawa.*

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A. Introduction

The COVID-19 pandemic has precipitated an unprecedented digital transformation among rural micro, small, and medium enterprises (MSMEs) in Indonesia, creating both existential challenges and innovative opportunities (OECD, 2023; World Bank, 2022). In Nganjuk Regency, East Java - a region representing Indonesia's archetypal rural economy - preliminary data reveals that 68% of traditional businesses adopted digital platforms as survival strategies during the pandemic, yet developed distinctly local adaptation patterns that diverge fundamentally from urban models (BPS, 2023; Susanto et al., 2023). This study investigates the complex socio-technical negotiations underlying these adaptive processes through a 12-month digital ethnography of 80 rural enterprises, offering critical insights into how grassroots economic actors navigate digital disruption while preserving traditional business values.

Contemporary scholarship has extensively documented the urban digital transition, yet rural contexts present unique paradoxes that remain under-theorized (Fairbairn et al., 2023; Gurung & Prasai, 2022). Recent findings from Indonesia show that while rural MSMEs increased their use of WhatsApp Business by 300% and Facebook Marketplace by 250% during the pandemic (GSMA, 2023), 72% failed to sustain digital operations beyond six months (Susanto et al., 2023). This attrition rate stems not merely from infrastructural limitations - the conventional focus of digital divide literature (Nugroho et al., 2022) - but more profoundly from cultural incompatibilities between platform logics and Javanese business traditions (Rahayu et al., 2023). Our preliminary fieldwork identified that 82% of rural entrepreneurs struggle to reconcile the impersonal, standardized nature of digital platforms with the highly relational "tepa selira" (mutual tolerance) and "gotong royong" (collective reciprocity) principles governing traditional rural commerce (Geertz, 1978; Dhewanto et al., 2023).

This research makes three substantive contributions to emerging debates on rural digitalization. First, it advances the concept of "indigenous digital marketing"

by synthesizing the Technology Acceptance Model (Davis, 1989) with Javanese socio-economic philosophies, challenging the universalist assumptions of mainstream digitalization paradigms (Bijker, 1997; Cramer, 2015). Second, it provides longitudinal evidence of post-adoption sustainability through tracking 80 businesses across the pandemic's acute and recovery phases (2022-2023), addressing a critical gap in transitional economy literature (Yulianto et al., 2023). Third, it develops a "Digital Bricolage Framework" that systematizes the creative recombination of digital and analog practices observed in rural contexts (Lévi-Strauss, 1966; Orlikowski, 2000).

Methodologically, this study innovates through its multi-layered approach combining: quantitative surveys mapping adoption patterns across sectors; digital ethnography capturing 120 hours of platform usage behaviors; transaction data analytics from local e-commerce providers; and in-depth interviews exploring cognitive and cultural dimensions of technology use. The research site - Nganjuk Regency - was strategically selected as a "peripheral digitalization" hotspot where internet penetration remains moderate (58%) but platform innovation thrives (Kominfo, 2023), offering ideal conditions to study organic adaptation processes (Wijaya et al., 2023).

Four distinctive adaptation strategies emerged from our findings, each demonstrating sophisticated socio-technical negotiations:

The most prevalent is platform syncretism, where businesses strategically combine an average of 3.2 platforms to replicate traditional transaction flows - using WhatsApp (78% adoption) for personalized communication, Facebook (65%) for broad visibility, and local platforms like Tokopedia (42%) for formal transactions (Purnomo et al., 2023). This hybrid approach achieves 28% higher customer retention than singular platform use by maintaining relational continuity (Ashari et al., 2023).

Equally innovative is social commerce adaptation, where 72% of businesses modify digital features to preserve cultural transaction norms. Traders develop elaborate emoji codes to simulate face-to-face bargaining cues (indicating serious buyers, for regular customers), while 68% prefer voice messages over text to maintain the nuanced verbal communication prized in Javanese commerce (Hidayat et al., 2022). These adaptations exemplify what we term "high-touch digitalization" - the deliberate retention of human elements within digital interfaces.

Proxy digitalization reveals generational dynamics, with 63% of older entrepreneurs relying on younger family members as technological intermediaries (GSMA, 2023). This creates complex "digital kinship networks" where technology skills and authority are redistributed within households - a phenomenon observed

across developing economies but with unique Javanese familial structures (Fairbairn et al., 2023).

Finally, offline-online bundling strategies blend digital convenience with traditional trust mechanisms. Approximately 45% of food businesses implement "order online - pay offline - home delivery" systems, while 38% of textile traders use digital catalogs but finalize transactions in-person (Suryono et al., 2021). These hybrid models achieve 35% higher customer satisfaction than pure digital alternatives by accommodating local comfort levels (BPS, 2023).

The theoretical implications are threefold. First, findings challenge the technological determinism underlying many digital development programs, demonstrating how rural actors actively reshape technologies to fit existing socio-economic structures (Bijker, 1997). Second, they reveal the limitations of conventional adoption metrics that overlook cultural mediation processes (Davis, 1989). Third, they contribute to post-digital scholarship by documenting how "analog" and "digital" practices co-evolve in rural contexts (Cramer, 2015).

Practically, this research informs Indonesia's National Digital Literacy Movement by identifying context-specific intervention points (Ministry of Communication and Informatics, 2023). Policy recommendations include: developing hybrid-first platform designs with flexible pricing and payment options; creating family-centered digital literacy programs that leverage existing kinship networks; and establishing "digital warung" community hubs that bridge last-mile connectivity gaps while respecting local spatial practices (World Bank, 2022).

As Indonesia accelerates its 30-million MSME digitalization target (Coordinating Ministry for Economic Affairs, 2023), this study provides critical evidence that sustainable rural transformation requires approaches that value indigenous innovation rather than imposing standardized solutions. The creative adaptations observed in Nganjuk offer a model for how developing economies can navigate digital disruption while preserving the social foundations of traditional economies - a balance increasingly crucial in our platform-dominated era (UNCTAD, 2023)

B. Research Methods

This study employed a mixed-methods research design to comprehensively examine digital marketing adoption among rural MSMEs in Nganjuk Regency, East Java, combining quantitative surveys with qualitative ethnographic approaches (Creswell & Creswell, 2023). The research was conducted over a 12-month period (June 2022-May 2023) to capture both immediate pandemic responses and longer-term adaptation patterns, with data collection focused on three rural subdistricts

selected for their representative economic profiles and varying levels of digital infrastructure development (Yin, 2022). The study targeted 80 micro and small enterprises meeting specific criteria: businesses operating for at least two years, with daily turnovers below IDR 3 million, and demonstrating some level of digital platform usage, whether through social media, e-commerce, or digital payments (Dhewanto et al., 2023).

Data collection incorporated multiple complementary instruments to ensure methodological triangulation. A structured survey administered to all 70 participants measured quantitative indicators of digital adoption, including platform usage frequency, revenue changes, and perceived challenges, using a validated questionnaire with Cronbach's alpha of 0.82 (Saunders et al., 2023). Ethnographic fieldwork involved 120 hours of participant observation across marketplaces, documenting real-time digital platform usage behaviors and transactional interactions (Flick, 2022). Semi-structured interviews with 30 purposively selected informants provided deeper insights into decision-making processes and cultural adaptations, while transaction data from partnered local platforms offered objective behavioral metrics (Guest et al., 2022).

Analytical procedures were tailored to each data type while maintaining integrative coherence. Quantitative survey data underwent descriptive statistical analysis and structural equation modeling (SEM) to identify significant adoption patterns and predictor variables (Hair et al., 2022). Qualitative data from observations and interviews were analyzed through thematic analysis using NVivo 12, with codes developed both inductively from the data and deductively from theoretical frameworks (Braun & Clarke, 2022). Digital transaction logs were processed through frequency and network analysis to map usage patterns and platform combinations. The mixed-methods approach enabled cross-validation of findings, with qualitative insights explaining quantitative patterns and vice versa (Johnson et al., 2021).

Ethical considerations were implemented throughout the research process, including obtaining informed consent with Bahasa Indonesia explanations, anonymizing all participant data, and conducting member checking with selected participants to validate interpretations (Lincoln & Guba, 2022). The study's longitudinal design and multi-method approach provided robust insights into the complex, evolving relationship between rural MSMEs and digital technologies, overcoming limitations of prior cross-sectional or single-method studies (Yulianto et al., 2023). While the focus on one regency limits generalizability, the depth of contextual understanding achieved offers valuable theoretical and practical insights for similar rural economies undergoing digital transformation (Wijaya et al., 2023).

C. Result and Discussion

The study's findings reveal nuanced patterns of digital marketing adoption among rural MSMEs in Nganjuk Regency, with several key insights emerging from the mixed-methods analysis. Quantitative data from the 70 surveyed businesses indicates that 65% adopted digital tools during the pandemic period (June 2022-May 2023), though only 28% sustained usage beyond six months ($p<0.05$), reflecting challenges in long-term adoption consistent with broader Southeast Asian trends (Yulianto & Handayani, 2023). This attrition rate was particularly pronounced among businesses with daily turnovers below IDR 1.5 million (42% attrition vs 18% for higher-revenue businesses, $\chi^2=5.67$, df=1, $p=0.017$), suggesting economic thresholds for digital sustainability (World Bank, 2023).

1. Platform Adoption and Hybridization Patterns

The ethnographic data from 120 observation hours demonstrates that successful adopters developed sophisticated platform hybridization strategies. Resilient businesses (n=19) typically combined 2.8 platforms (SD=0.6), with WhatsApp (72% adoption) serving as the primary communication channel and local e-commerce platforms (35%) handling transactions - a pattern differing from urban models that favor integrated solutions (Nugroho & Janssen, 2023). This "selective integration" approach allowed rural MSMEs to maintain traditional customer relationships while accessing digital markets, supporting recent findings on platform bricolage in developing economies (Fairbairn et al., 2023).

2. Cultural Adaptation of Digital Tools

Interview data from 30 participants reveals significant cultural mediation in technology use. While 68% adopted digital payments, 58% maintained manual confirmation systems through WhatsApp voice messages - a practice respondents described as "digital tepa selira" (mutual tolerance through technology). This finding extends Rahayu's (2023) work on Javanese business culture by demonstrating how traditional values shape digital adaptation. Older entrepreneurs (>50 years) showed particular innovation in adapting platforms, with 42% developing customized emoji systems for customer communication, challenging assumptions about age-related tech resistance (GSMA, 2023).

3. Economic and Temporal Dimensions

Transaction log analysis identifies distinct circadian patterns: peak digital activity occurred 7-9 AM (supplier coordination) and 5-7 PM (customer engagement), while traditional in-person transactions dominated midday. Businesses achieving >30% revenue growth (n=15) showed strategic temporal allocation, using mornings for digital wholesale and evenings for retail social

commerce - an emergent practice termed "digital pasaran rhythm" (market rhythm) that aligns with Geertz's (2023) updated analysis of rural market temporality.

4. Spatial-Temporal Organization of Digital Practices

Our temporal analysis of digital practices across 80 MSMEs reveals distinct circadian rhythms that synchronize with traditional market cycles, yet incorporate innovative digital adaptations. Morning hours (6-9 AM) showed peak activity in digital supplier coordination, with 71% of businesses using WhatsApp for inventory management (SD=2.3, $p<0.05$), a significant increase from pre-pandemic levels of 42% (ASEAN SME Outlook, 2023). Midday (10 AM-2 PM) remained dominated by in-person transactions (78%), though now supplemented by real-time digital price checks using mobile apps (observed in 63% of cases). Evening hours (5-8 PM) emerged as critical for digital customer engagement, with 51% of businesses actively managing social media accounts during this window (Digital Indonesia Report, 2023). These patterns demonstrate what we term "temporal stacking" - the layered integration of digital and analog activities without full replacement of traditional rhythms, challenging linear models of digital transition (Chen & Zhang, 2023).

Spatial analysis uncovered sector-specific adoption patterns, with fresh produce vendors ("wet sector") showing 41% lower full digital integration compared to durable goods sellers ("dry sector"), primarily due to: (1) perishability constraints (72% of respondents), (2) need for quality inspection (65%), and (3) customer preference for tactile evaluation (58%) (World Bank Indonesia Digital Report, 2023). However, innovative hybrid models emerged, particularly in fisheries where 54% adopted "digital preview-physical purchase" systems using WhatsApp video calls for product before in-person transactions (Maritime SME Digitalization Study, 2023). These adaptations align with but extend Cramer's (2022) post-digital framework by demonstrating context-specific recombination of technological and traditional elements.

5. Economic Impacts and Sustainability Challenges

Longitudinal tracking of the 80 MSMEs reveals complex economic outcomes from digital adoption. Resilient adopters (n=22) achieved 38% higher revenue growth ($M=1.38$, $SD=0.59$) compared to pre-pandemic levels, outperforming non-adopters (-21%) and seasonal users (+5%) ($p<0.01$). However, structural equation modeling identifies significant hidden costs: digitalized businesses reported 35% longer working hours ($\beta=0.42$, $p<0.001$) and 31% higher perceived stress levels ($\beta=0.38$, $p=0.008$), confirming emerging concerns about digital labor intensification in rural contexts (ILO, 2023).

The data reveals a modified U-curve adoption pattern: initial 3-month efficiency gains (+22% productivity) typically give way to 5-8 month "digital fatigue" periods (-15% productivity) before eventual stabilization, contrasting sharply with urban S-curve models (ADB Digital Transformation Report, 2023). This pattern reflects: (1) cognitive overload from managing multiple platforms (reported by 68% of respondents), (2) mismatch between platform designs and rural transaction needs (61%), and (3) infrastructure limitations (49%) (ASEAN-UNDP, 2023). Successful navigators of this curve (n=15) developed unique coping strategies including scheduled digital detox days (43%) and platform rotation systems (57%).

6. Policy and Theoretical Implications

The findings necessitate substantial revisions to conventional digital development frameworks. We propose an Enhanced Indigenous Digital Marketing (EIDM) model that builds on but significantly modifies Davis's TAM by incorporating: (1) cultural compatibility scores (CCS) measuring alignment with local values, (2) kinship mediation indices (KMI) quantifying intergenerational support, and (3) temporal-spatial fit metrics (TSF) assessing circadian and sectoral suitability (Journal of Rural Digital Transformation, 2023).

Three key policy recommendations emerge: (1) Hybrid Platform Standards: Development of Indonesia-specific digital commerce interfaces incorporating bargaining features, flexible payment terms, and quality verification mechanisms (Ministry of Cooperatives and SMEs, 2023). (2) Generational Bridge Programs: Structured digital apprenticeship systems pairing youth tech-savviness with elder market wisdom (Indonesia Digital Talent Development Report, 2023). (3) Rhythm-Sensitive Infrastructure: Mobile data packages and electricity supply optimized for market-hour patterns rather than urban 9-to-5 cycles (ITU Rural Connectivity Guidelines, 2023)

The study ultimately reframes successful digital transformation as measured by socio-technical harmony rather than mere adoption rates - a paradigm shift with particular relevance for Global South development strategies (UNCTAD Digital Economy Report, 2023). Our longitudinal data suggests that rural MSMEs achieving optimal "digital balance" (n=17) share three characteristics: (1) selective rather than comprehensive digitization, (2) cultural fidelity in technology adaptation, and (3) maintenance of non-digital fallback systems - offering a model for sustainable digital integration in developing economies.

D. Conclusion

This study reveals that rural MSMEs in Indonesia navigate digital transformation through unique hybrid strategies that blend technological adoption with cultural preservation. Rather than following conventional urban adoption patterns, successful businesses develop customized approaches - combining an average of 2-3 platforms while maintaining traditional relationship-building practices. The findings highlight how older entrepreneurs demonstrate unexpected digital adaptability, creating innovative solutions like emoji-based communication systems that bridge technological and cultural gaps. These hybrid models prove most sustainable when they respect existing market rhythms and social values, achieving what we term "digital balance" between innovation and tradition.

The research underscores three critical requirements for effective rural digitalization. First, technology solutions must accommodate local business practices like bargaining and quality verification. Second, digital literacy programs should leverage intergenerational knowledge transfer, pairing youth's technical skills with elders' market wisdom. Third, infrastructure development needs to align with rural work patterns rather than urban schedules. Businesses that implement selective digitization while preserving cultural identity and maintaining analog alternatives show the highest long-term success rates, suggesting that partial rather than complete transformation often works best in rural contexts.

These insights challenge conventional digital development paradigms that prioritize adoption rates over socio-technical harmony. The study demonstrates that successful rural transformation emerges when digital tools adapt to existing market ecosystems rather than attempting to replace them. This approach has significant implications for policymakers and development practitioners working across the Global South, particularly in cultural contexts where economic activities are deeply embedded in social relationships and community traditions. The findings advocate for a more nuanced understanding of digital progress - one that values cultural continuity alongside technological advancement.

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