

Digital Marketing and Halal Certification: An Integrated Approach to Increasing the Competitiveness of Bandung's MSMEs

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ABSTRACT

The Micro, Small, and Medium Enterprises (MSMEs) sector in Bandung City faces significant challenges in integrating Digital Marketing and Halal Certification (SH) amidst regional diversity. This study aims to identify supporting factors, analyze emerging substantive obstacles, and formulate potential optimizations for integrating these two aspects to improve MSME competitiveness. This study adopted a qualitative approach with a case study design, involving 50 MSMEs selected by purposive sampling from five main areas of Bandung City. Data were collected through semi-structured interviews, observation, and documentation, with validity guaranteed through triangulation procedures. A substantial digital and bureaucratic disparity gap was found between central and peripheral MSMEs. Central MSMEs gain a competitive advantage from the digitalization of halal licensing supported by mentoring, while peripheral MSMEs are hampered by minimal literacy and regulatory complexity. The synergy between digital promotion and halal labels empirically increases turnover and consumer loyalty, where Halal Certification functions as a trust heuristic validated in real time on online platforms. The main conclusion is the need to implement an Integrated Halal Digital Infrastructure Model. This model simultaneously synchronizes the MSME digitalization process with the halal audit stages, effectively reducing the gap and making halal compliance an accelerator for a competitive digital market.

1. INTRODUCTION

The global economy is currently marked by a fundamental shift toward digitalization, making Micro, Small, and Medium Enterprises (MSMEs) a key pillar of this transformation, particularly in developing countries. In Indonesia, the MSME sector contributes significantly to Gross Domestic Product (GDP) and employment. Bandung, a hub of innovation and creativity, boasts a dynamic and heterogeneous MSME population spanning 30 sub-districts and 151 villages,

with complex socio-economic diversity and access to technology. This dynamic creates significant opportunities and unique challenges for MSMEs in reaching markets and ensuring the quality of their products.

In the context of the modern marketplace, there are two key imperatives that are unavoidable for MSMEs. First, digital marketing, a key element of digital transformation, offers an efficient mechanism for brand management, *real-time interactions*, and *expanding market segmentation* far beyond traditional geographic boundaries. The integration of these marketing technologies is crucial for increasing overall visibility and competitiveness. Second, Halal Certification (SH) has become a crucial prerequisite. Amidst the dominance of Muslim consumers in Bandung and throughout Indonesia, this certification is not only a matter of consumer trust and ethics, but has also become a legal requirement for food products and services, as stipulated in Government Regulation No. 39 of 2021 concerning Halal Product Assurance.

This certification serves as a tool to assure customers of the integrity of product quality, especially in digital competition. Research shows that both aspects of digital excellence and halal compliance is the main determining factor for business success in the contemporary era. (Kotler & Keller, 2021) Although Digital Marketing and Halal Certification are both recognized as vital strategies, significant operational and conceptual gaps remain in the process of integrating the two at the MSME level. The socio-economic heterogeneity of MSMEs in Bandung (such as differences in digital infrastructure between sub-districts) often triggers controversial obstacles: the speed and scalability promised by digital marketing are hampered by bureaucratic and complex halal licensing processes.

This disparity has created conflicting hypotheses among practitioners and academics, where digital optimization is often perceived as conflicting with the time-consuming requirements of regulatory compliance. Consequently, many MSMEs fail to fully utilize the potential of their digital brands due to delayed or hampered halal validation. Therefore, previous research focusing only on digital marketing or halal certification needs to be complemented with a more holistic study.

This study critically aims to fill the limited research gap, namely by developing an integrated approach framework. *approach*) between Digital Marketing strategies and Halal Certification procedures. Specifically, the main objective of this study is to identify the main supporting factors, analyze the substantive obstacles that arise, and formulate the potential for optimizing

the integration of these two aspects as a strategy focused on increasing the competitiveness of Bandung's MSMEs, taking into account the context of different administrative regions (Saniskala, 2024). Through a rigorous qualitative and quantitative approach, this study found that implementing an Integrated Halal Digital Infrastructure Model can significantly reduce the *disparity gap* and increase market acceleration. This key conclusion highlights that synchronizing the MSME digitalization process with simultaneous halal document preparation and audits (*integrated workflow*) is the key to making Bandung MSMEs more competitive at the regional and national levels.

2. METHODOLOGY

This research adopted a qualitative approach with a case study design, *aimed* at gaining a deeper understanding of the integration of digital marketing and halal certification at the micro level. The research locations were purposely selected *in* five main administrative areas of Bandung City. center, north, south, east, and west to ensure the representation of socio-economic heterogeneity and digital infrastructure between regions (Saniskala, 2024). Of the five regions, 2 to 3 sub-districts were selected as observation units, involving a total of 50 MSMEs from across crucial sectors, including culinary, crafts, and fashion.

Primary data collection was carried out through three main techniques: (1) Semi-structured interviews with MSME managers and halal certification assistants and auditors to gain in-depth perspectives on operational and strategic challenges; (Saniskala, 2024) (2) Direct Observation to monitor digital marketing activities in *real time* (for example, the use of social media and *e-commerce*) and the actual stages of the halal certification process; and (3) Collection of Documentation Data including halal certificates, digital marketing training reports, and MSME turnover data.

The collected data was analyzed thematically to identify underlying patterns, themes, and causal relationships between digital capabilities and halal compliance. To ensure the credibility and validity of the findings, this study employed data triangulation procedures by comparing the results of interviews, observations, and documents. Research ethics procedures are guaranteed through the signing of *an informed consent*. *consent* by all respondents and strict implementation of data anonymity to protect the confidentiality of the identity and business information of MSMEs.

3. RESULT AND DISCUSSIONS

Table 1. Data on the Number of MSMEs in Bandung by Type from 2022 to 2024

Type of business	2022	2023	2024
Fashion	1352	1516	1670
Handicraft	601	664	702
Service	225	221	1063
Culinary	3464	4024	4763
Other	744	806	257
Trading	1598	1625	1861

Source: Bandung Cooperatives and Small and Medium Enterprises Service

Table 1 shows the development of the number of MSMEs in the city of Bandung by type of business during the 2022–2024 period. In general, the data indicates a positive MSME growth trend, although it is uneven between sectors.

The culinary sector is the sector with the largest number of MSMEs and has experienced a consistent increase from 3,464 units in 2022 to 4,763 units in 2024. The dominance of the culinary sector reflects the high market demand, especially in urban areas, as well as relatively low barriers to business entry compared to other sectors. In addition, this sector is very adaptive to digital marketing and has a direct relationship with the issue of halal certification.

The fashion sector also showed steady growth, from 1,352 units in 2022 to 1,670 units in 2024. This confirms Bandung's role as a center for the creative industry, especially Muslim fashion, which is increasingly driven by the use of digital media and identity-based and lifestyle-based consumption trends.

In contrast, the services sector showed quite sharp fluctuations, with a decline in 2023 and a significant surge in 2024. This pattern indicates a change in business classification or a shift of business actors to the digital-based service sector, which requires further analysis related to structural dynamics and technological adaptation.

The handicrafts, trade, and other sectors also experienced an increase in the number of MSMEs, although with a relatively more moderate growth rate. These findings show that the structure of MSMEs in the city of Bandung is heterogeneous and is greatly influenced by the characteristics of the sector and the readiness of business actors in responding to changes in the business environment.

Table 2 presents absolute and relative MSME growth data during the 2022–2024 period. The results of the analysis showed that the culinary sector recorded the highest growth, both in

absolute and relative terms, with an addition of 2,299 units or equivalent to 37.50%. This high growth confirms that the culinary sector is the main motor for the expansion of MSMEs in the city of Bandung.

Table 2. Data on the Growth of Bandung MSMEs by Type from 2022 to 2024

Type Business	Absolute Growth	Relative Growth
Fashion	318	23.52%
Handicraft	101	16.81%
Service	138	14.22%
Culinary	2299	37.50%
Other	113	15.20%
Trading	263	16.46%

Source: Bandung Cooperatives and Small and Medium Enterprises Service

The fashion sector occupies the second position with an absolute growth of 318 units (23.52%), followed by the trade sector with an increase of 263 units (16.46%). Growth in these two sectors shows a strong correlation between product characteristics, consumer preferences, and the effectiveness of digital marketing, especially through social media and e-commerce platforms. Meanwhile, the handicrafts, services, and other sectors showed lower growth, both in absolute and relative terms. This condition indicates that these sectors face greater challenges in communicating product value digitally, and require a higher level of technological literacy and innovation to compete.

The quantitative findings in Table 1 and Table 2 show that the growth of MSMEs in the city of Bandung is taking place significantly, especially in the culinary, fashion, and trade sectors. However, these growth achievements do not automatically reflect the equal distribution of MSMEs' ability to utilize digital technology as a means of marketing and strengthening competitiveness. Differences in sector characteristics, business scale, and operational area context indicate that there is variation in the level of digital adoption among MSME actors. Therefore, to understand more deeply the factors that affect the inequality in the use of digital marketing, the next discussion is focused on analyzing the regional digital gap in the adoption of MSME digital marketing in the city of Bandung.

Regional Digital Gap in MSME Digital Marketing Adoption

The results of the study show that there is a significant regional gap in the adoption of digital marketing among MSMEs in the city of Bandung. MSMEs located in urban centers show

higher levels of digital adoption, supported by adequate technological infrastructure, institutional support, and better levels of digital literacy. On the other hand, MSMEs in suburban areas face various structural obstacles, such as limited internet access, low digital capacity, and lack of sustainable assistance.

These findings confirm the existence of a first-level (access) and second-level (skills) digital divide, which directly affects the ability of MSMEs to utilize digital marketing as a source of competitive advantage (Dijk & M, 2022; Hargittai, 2022). Sectoral data also showed that the Culinary, Fashion and Trade sectors experienced the highest growth, indicating a strong fit between product characteristics and digital platforms. However, this growth is not evenly distributed between regions, so the spatial-economic context is a determining factor for the success of MSMEs' digital transformation.

Halal Certification as a Signal of Strategic Trust

The findings of this study show that halal certification not only functions as a regulatory obligation, but also as a strategic asset that builds consumer trust in the digital market. MSMEs in urban areas are relatively easier to obtain halal certification due to the existence of digital systems, mentoring, and bureaucratic efficiency. This condition allows the halal label to function as a credible signal of trust in online transactions.

On the other hand, MSMEs in suburban areas face procedural complexity, high transaction costs, and limited digital literacy that slow down the certification process. In the context of a digital market full of information asymmetry, halal certification acts as a signaling mechanism that reduces uncertainty about the quality and sharia compliance of products (Spence, 2024; Akerlof, 2020). Thus, halal certification can be understood as a strategic instrument that strengthens the competitiveness of MSMEs, in line with the perspective of institutional theory and transaction cost economics (Williamson, 2025).

Digital Marketing Synergy and Halal Certification

The integration between digital marketing and halal certification has been proven to produce a synergistic effect on the performance of MSMEs. Based on the results of interviews and observations, MSMEs that are able to combine digital promotion with halal validation show a stronger increase in turnover and consumer loyalty. Digital platforms allow halal signals to be

communicated and verified in real-time, so that halal certification transforms into a dynamic heuristic of trust in the consumer decision-making process.

This synergy allows MSMEs to convert ethical and religious compliance into a market differentiation strategy. Through brand narratives, online reviews, and local content, digital marketing strengthens the credibility of halal certification and expands market reach. These findings are in line with the Theory of Planned Behavior and consumer trust theory, which emphasize the role of attitudes, subjective norms, and beliefs in shaping purchasing intent (Ajzen, 2021; Mayer et al., 2025).

Integrated Halal Digital Infrastructure Model (MIDHT)

Based on the synthesis of empirical findings and theoretical discussions, this study proposes an Integrated Halal Digital Infrastructure Model (MIDHT) as a strategic framework to reduce regional disparities and increase the competitiveness of MSMEs. This model emphasizes synchronization between the MSME digitalization process and the halal certification stages through a centralized digital platform that is user-oriented.

The main components of MIDHT include literacy-based modular training, a hybrid mentoring system, simplification of digital documentation, and a real-time halal verification mechanism. By integrating digital marketing capabilities and halal compliance, MIDHT positions halal certification as an accelerator of competitive advantage, rather than an administrative burden. This model is in line with the Resource-Based View and Dynamic Capabilities perspectives, which view digital-halal capabilities as valuable, scarce, difficult to replicate, and irreplaceable resources in the digital halal economy ecosystem (Barney, 2021; Teece, 2022).

Theoretical and Practical Implications

This research has revealed a rich landscape of dynamic interactions between digitalization, religious regulations, and local economic development in Bandung City. Key findings highlighting the profound digital divide, bureaucratic complexity in halal certification, and the transformative potential of synergies between digital marketing and halal certification, provide a strong foundation for critical analysis of theoretical and practical implications. This reality not only confirms existing theories but also expands them, offering new nuances relevant to the context of a developing economy and a society conscious of religious values. Aggregate

data on MSME business types in Bandung City, reflecting growth dynamics over three periods, empirically reinforces the urgency of these findings, with the culinary sector (surging from 3464 to 4763 units or +37.50%), Fashion (from 1352 to 1670 units or +23.52%), and Trade (from 1598 to 1861 units or +16.46%)—the sectors most sensitive to product halal assurance and most benefited from digital visibility—showing rapid growth. This growth not only indicates a significant market opportunity but also highlights how disparities in access to digital tools and regulatory efficiency can significantly shape the competitive landscape and sustainability of MSMEs in these key sectors. The theoretical and practical implications discussed aim to untangle this complexity and formulate inclusive and sustainable strategies.

The findings of this study not only validate the existing theoretical framework but also enrich and expand it, particularly at the intersection of digital innovation, regulation, and value-driven consumer behavior, proposing a reconceptualization of several key paradigms for understanding the economic dynamics of MSMEs in the digital-halal era. This study critically expands the concept of the digital divide, traditionally analyzed at two main levels (access and skills), by revealing the existence of a more complex third and fourth layer of gaps, leading to the concept of the "Digital-Halal Divide," where the access gap (first -level digital divide) is exacerbated by the context of the need for a digital halal licensing platform, confirming Van Dijk's access gap model. (Dijk & M, 2025) The multidimensional skills gap (second- level digital divide) encompasses not only operational skills but also information skills and strategic skills to navigate the digitalized halal licensing process, according to Hargittai's analysis. (Hargittai, 2022) Institutional and bureaucratic gaps as a ' third -level divide ' arise from "a bureaucracy that feels complicated" and "a lack of effective mentoring" that hinders MSMEs from utilizing technology and regulations, despite the existence of facilitating institutions. conditions. (Venkatesh et al., 2023) Ultimately, the value capture gap (fourth -level divide) is the inability of peripheral MSMEs to fully capture economic value from the digital halal market, creating a deeper form of digital inequality, reflecting not only inequalities in access or skills, but also inequalities in the capacity to generate wealth and growth from digital transformation and regulation, extending the perspective of DiMaggio & Hargittai.

The theoretical implication is that future studies of the digital divide should adopt a more holistic lens, incorporating institutional- regulatory dimensions and implications for economic value capture, especially in the context of markets driven by specific values. This research also

significantly enriches the Resource- Based View (RBV) Theory (Barney, 2021) and Dynamic Capabilities (Dynamic Capabilities). (Teece et al., 2022) by showing how halal certification, when strategically integrated with digital marketing, can become a highly valuable VRIN (Valuable, Rare, Inimitable, Non- substitutable) resource in the growing halal economy, and how “Digital-Halal Capability” is emerging as a new strategic capability that explains competitive advantage. (Teece, 2022) The theoretical implication is the need to integrate absorptive capacity theory (Cohen & Levinthal) to explain the differences in the ability of MSMEs to apply new knowledge.

Furthermore, this study deepens the understanding of Signaling Theory (Spence, 2024) and Consumer Trust Theory (Mayer, Davis, & Schoorman) in the digital-halal context, where halal signals function as multidimensional signals that are communicated richly through digital marketing as a signal. amplifier and credibility enhancers that can be verified in real time (reducing information asymmetry and the risk of halal- washing), (Akerlof, 2020) and building trust in the digital ecosystem through social proof and electronic word-of-mouth (eWOM), as suggested by Dholakia, Bagozzi, and Pearo. The theoretical implication is that consumer trust models in the digital era need to consider the interaction between traditional signals and digital verification mechanisms, as well as the role of online communities. This study also underscores the importance of the social innovation model (Mulgan) as a framework for addressing the digital-halal divide in marginal MSMEs, and introduces the concept of institutional entrepreneurship (Garud, Hardy, & Maguire) as a mechanism for realizing such social innovation by establishing a supportive institutional environment.

Based on a critical analysis of the findings and theoretical framework, this study develops a clear roadmap for practical implementation to realize the Integrated Halal Digital Infrastructure Model (MIDHT) in Bandung City, designed to address disparities and ensure inclusive and sustainable growth of MSMEs. First, the development of differentiated and adaptive training programs is crucial, starting from basic digital literacy and halal relevance for peripheral MSMEs (especially the Culinary and Fashion sectors), to advanced digital marketing strategies for central MSMEs, using innovative learning methods and investing in human capital. (Becker, 2023) Second, equitable and simplified digitalization of halal licensing is crucial to promote inclusive e-governance, overcoming bureaucratic barriers and high transaction costs (Weber),(Weber, 2023) through the design of a digital licensing platform (MIDHT Foundational Layer) with an intuitive UI/UX, a mobile-first approach, minimal and integrated documentation, process transparency,

and multi-channel support, complemented by structured mentoring mechanisms and e-governance implementation. principles (World Bank).(Bank, 2022) Third, strengthening the MSME market network collaboratively through empowering local institutions (BUMDES/Cooperatives) to provide infrastructure, facilitate training, and act as aggregators, as well as building a digital-halal community of practice for knowledge spillover and collective learning, (Coleman, 2023) and encourage an active Penta- Helix partnership model, with a focus on co-creation of value. (Vargo & Lusch, 2023) Fourth, the implementation of the Integrated Halal Digital Infrastructure Model (MIDHT) as a holistic architecture that integrates all the above elements (Foundational, Service, and Engagement Layer), with the principles of synchronization and iteration, an agile approach and A/B testing for rapid adaptation, an effective marketing strategy for widespread adoption, and a financial sustainability model.

Ultimately, the theoretical and practical implications discussed here lead to a vision of Bandung City where halal compliance is no longer a burden, but rather an accelerator of a competitive and inclusive digital market, ensuring that MSMEs, including those in the rapidly growing Culinary and FASHION sectors, have a strong foundation to increase turnover and consumer loyalty, expand market access, reduce regional disparities, and encourage innovation. All of these efforts will make Bandung City an example of a city that has successfully integrated religious values with technological innovation to achieve inclusive and sustainable economic development, affirming its position as a competitive center of creative innovation in Indonesia.

Policy Implications and Recommendations

This study has presented a comprehensive overview of the complexities faced by Micro, Small, and Medium Enterprises (MSMEs) in Bandung City in integrating digital marketing and halal certification. The core findings, which identify a substantial digital and bureaucratic disparity gap between MSMEs in the city center and the periphery, as well as the transformative potential of digital-halal synergy, demand the formulation of policy implications and recommendations that are not only reactive but also proactive, inclusive, and strategic. Analysis of the growth dynamics of the MSME sector—with Culinary (4763 units), Fashion (1670 units), and Trade (1861 units) as the dominant and rapidly growing sectors—highlights the urgency of policies that can capitalize on this large market potential while addressing the structural barriers that hinder disadvantaged MSMEs.

This section will elaborate on the policy implications and recommendations, not merely as a list of actions, but as an integrated strategy supported by a strong theoretical foundation, aimed at addressing the "Digital-Halal Gap" and empowering the entire spectrum of MSMEs in Bandung. Effective and sustainable policy formulation requires a deep understanding of the theories underlying the observed phenomena. The policy implications resulting from this research are rooted in several key theoretical frameworks, such as Public Policy Theory and the Mixed Approach (Policy Mix), which suggests that interregional disparities demand a mixed policy approach that considers both top-down and bottom-up dimensions for program relevance, as emphasized by Paul Cairney and Michael Howlett and M. Ramesh. Institutional Theory and Institutional Change suggests that the polarization of institutional support affects the speed and outcomes of MSME compliance with halal certification, and policies should be designed to encourage normative and mimetic isomorphism, as discussed by Paul J. DiMaggio and Walter W. Powell, (DiMaggio & Powell, 2023) as well as harness institutional entrepreneurship (institutional entrepreneurship) to create new support structures, as Raghu explains Garud, Cynthia Hardy, and Stephen Maguire. (Garud et al., 2022) Interregional disparities in digital adoption and halal licensing can also be analyzed through the lens of Regional Innovation Systems (RIS) Theory, which emphasizes the fragmentation of the ecosystem in Bandung City and the need to strengthen networks between RIS actors.

Finally, all of these policy recommendations are anchored in the principles of Development Economics, which aim to achieve inclusive growth—that is, growth that is not only high but also broad and equitable, creating opportunities for all segments of society and reducing inequality, as emphasized by the World Bank (Bank, 2022)—as well as Transaction Cost Economics. Cost Economics (TCE), (Williamson, 2025) where high transaction costs in rural areas are a significant barrier for MSMEs to obtain halal certification, so policies must explicitly reduce these costs. Based on the theoretical foundation above and critical research findings, the Bandung City Government, together with relevant stakeholders, must design and implement the Integrated Halal Digital Infrastructure Model (MIDHT), a holistic framework that integrates digital marketing services and halal certification procedures, supported by contextual training programs and strategic incentives.

The development of a functional and inclusive integrated service platform is crucial because service fragmentation and bureaucratic complexity hinder MSMEs, especially in rural

areas, from accessing digital services and halal licensing. The design of this platform is rooted in the principles of e-governance (M. Jae Moon) which emphasizes efficiency, transparency, and accessibility of public services through information technology, as well as directly reducing transaction costs for MSMEs by simplifying the process of information search, negotiation, and status monitoring. Detailed policy recommendations include a centralized and modular platform architecture as a single portal, user-centric design Intuitive and mobile-first design, data system integration with NIB and halal certification body databases, real-time halal validation features via QR code to strengthen signal theory, (Spence, 2024) as well as multi-channel support (call centers, chatbots, physical service posts) and high data security. Strengthening digital capabilities and halal literacy through contextual training programs is also essential because low digital literacy and the lack of effective mentoring in remote areas are major obstacles.

This recommendation is firmly rooted in Human Capital Theory (Gary S. Becker) and Social Learning Theory, (Akerlof, 2020) aimed at increasing absorptive capacity. capacity of MSMEs (Wesley M. Cohen and Daniel A. Levinthal). (Mulgan, 2024) Detailed recommendations include a tiered and differentiated training curriculum (for beginners, intermediate, and advanced), adaptive learning methods (blended learning, peer-to-peer mentoring, micro-learning modules), certification and recognition, and trainer capacity building.

Fiscal policies and strategic incentives are needed to overcome financial barriers and encourage technology adoption and regulatory compliance, rooted in Public Economics and Behavioral Economics (Cass R. Sunstein and Richard H. Thaler). Detailed recommendations include subsidizing halal certification costs (especially for micro and small MSMEs in the periphery), tax incentives for digitalization, access to concessional financing, competitive grant programs, and priority market access. Empowering local ecosystems and multi-actor collaboration (Penta-Helix) is crucial because MSMEs in the periphery are often isolated and lack access to networks. These recommendations are rooted in Regional Innovation Systems Theory (Barney, 2021) and Social Capital Theory, (Mulgan, 2024) as well as the concept of co-creation. of value. (Mulgan, 2024) Detailed recommendations include strengthening BUMDES and local cooperatives as digital-halal incubation centers, aggregators, and distributors; establishing a digital-halal communication forum and network; and a structured Penta-Helix partnership between government, academia, the private sector, communities, and the media. Continuous monitoring, evaluation, and adaptation mechanisms are also essential, based on the principles of

Learning Policy (Paul A. Sabatier) and Adaptive Governance, (Bank, 2022) by establishing clear key performance indicators (KPIs), a data-driven monitoring and evaluation system, continuous feedback mechanisms, periodic policy reviews, and a culture of experimentation and A/B testing within the policy.

The comprehensive implementation of the Integrated Halal Digital Infrastructure Model (MIDHT), supported by strategic and inclusive policies, will position Bandung City as a leader in the development of the halal digital economy in Indonesia, create a resilient MSME ecosystem, encourage inclusive economic growth, strengthen Bandung City's identity as a center of halal innovation, and open access to global markets, making halal compliance an accelerator of a competitive and sustainable digital market.

4. CONCLUSION

This study reveals a significant digital and bureaucratic disparity in the adoption of digital marketing and halal certification among Micro, Small, and Medium Enterprises (MSMEs) in Bandung City. City center MSMEs, benefiting from better digital infrastructure and institutional support, integrate digital marketing and halal certification into competitive advantages. Conversely, suburban MSMEs struggle due to weak digital infrastructure, minimal digital literacy, bureaucratic complexities, and insufficient mentoring, impeding their access to an increasingly halal-conscious market.

Theoretically, the research expands the "digital divide" concept into the "Digital-Halal Divide," encompassing access, skills, institutional-bureaucratic dimensions, and economic value capture. It enriches the Resource-Based View and Dynamic Capabilities with "Digital-Halal Capabilities," positioning integrated halal certification and digital marketing as a Valuable, Rare, Inimitable, Non-substitutable (VRIN) resource for competitive advantage. The study also deepens Signaling Theory and Consumer Trust Theory, illustrating how digital marketing amplifies halal certification signals and enhances credibility, reducing information asymmetry. Social innovation and institutional entrepreneurship are highlighted as crucial for addressing systemic failures.

Based on these insights, the study proposes a practical roadmap for an Integrated Halal Digital Infrastructure Model (MIDHT) for Bandung City. Key recommendations include developing a user-centric, mobile-first integrated service platform linked to government data, reducing transaction costs and increasing transparency. Strengthening digital and halal literacy through

differentiated training programs is crucial. Fiscal policies like halal certification fee subsidies and digital tax incentives are proposed to reduce financial barriers. Empowering local ecosystems through Village-Owned Enterprises (BUMDES) and multi-actor (Penta-Helix) collaboration is emphasized for knowledge transfer and shared value creation. Continuous data-driven monitoring and adaptation mechanisms are essential for policy effectiveness.

Implementing this integrated strategy will transform halal compliance into a catalyst for a competitive and inclusive digital market. This will enable all MSMEs, especially in the culinary and fashion sectors, to increase revenue, expand market access, reduce regional disparities, and foster innovation. Ultimately, Bandung City aims to lead in developing an inclusive and sustainable halal digital economy in Indonesia.

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