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ANALYZING THE ROLE OF DIGITAL ENTREPRENEURIAL MINDSET (DEM) IN ENHANCING MSME COMPETITIVENESS: A CASE STUDY OF SANLASH BEAUTY SALON

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Abstract

The digital transformation of micro, small, and medium enterprises (MSMEs) has emerged as a critical factor for maintaining competitive advantage in contemporary business environments. This qualitative case study investigated how Digital Entrepreneurial Mindset (DEM) enhances competitiveness in Sanlash Beauty, a beauty salon MSME in Bandung, Indonesia. The research employed in-depth interviews with salon owners, managers, and six customers, complemented by participant observation and document analysis conducted between May and June 2024. Results demonstrated that DEM implementation significantly improved service innovation through digital reservation systems and social media integration, enhanced customer feedback responsiveness via multi-platform communication channels, and facilitated digital payment adoption with 70% customer utilization rate. Service innovation showed mixed adoption patterns, with 70% of customers embracing digital services while 30% maintained conventional approaches. Customer satisfaction increased through personalized service delivery, rapid feedback response mechanisms achieving 24-hour response times, and flexible payment options including e-wallets and bank transfers. Implementation barriers included system errors in digital payments, promotional content management challenges, and staff adaptation difficulties requiring ongoing training programs. The study revealed that DEM serves as a fundamental framework enabling MSME competitiveness enhancement through operational efficiency improvements and customer experience optimization. These findings contribute theoretical insights into digital transformation strategies for traditional service sectors and provide practical frameworks for MSME digital adoption initiatives.

Keywords: *digital entrepreneurial mindset, MSME competitiveness, service innovation, customer feedback management, digital financing*

INTRODUCTION

The proliferation of digital technologies has fundamentally altered business operational paradigms globally, with micro, small, and medium enterprises (MSMEs) experiencing unprecedented pressure to adapt digital strategies for survival and growth (Nambisan et al., 2019). In Indonesia, MSMEs constitute approximately 99.9% of total business entities and contribute 61% to national GDP, making their digital transformation crucial for economic stability (Sukarmi et al., 2021). Despite governmental initiatives promoting digitalization, approximately 83.8% of MSME operators have implemented digital technologies since 2019, yet significant gaps remain in understanding how Digital Entrepreneurial Mindset (DEM) influences competitive advantage development within traditional service industries (Kurnia & Wulandari, 2022).

Digital Entrepreneurial Mindset represents a multidimensional construct encompassing technological competency, innovation orientation, and opportunity recognition capabilities within digital environments (Young et al., 2020). This theoretical framework extends beyond traditional entrepreneurship concepts by integrating digital technology utilization as fundamental components of value creation processes (Davidsson et al., 2021). Seitola and

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Abhari (2022) conceptualize DEM through four critical dimensions: curiosity regarding technological developments, willingness to acquire new digital competencies, motivation to assist stakeholders through technology, and comprehensive knowledge acquisition about digital innovation applications. These dimensions collectively enable entrepreneurs to identify, evaluate, and exploit opportunities emerging from digital technology adoption (Li et al., 2021).

Contemporary research demonstrates that businesses implementing DEM achieve superior financial performance compared to traditional operational models, with digital-oriented enterprises showing enhanced adaptability and market responsiveness (Soltanifar et al., 2020). Furthermore, DEM adoption facilitates business model restructuring toward digital-integrated frameworks, enabling entrepreneurs to optimize infrastructure utilization, enhance service delivery mechanisms, and implement sophisticated marketing strategies (Widyaningsih et al., 2023). However, empirical evidence regarding DEM application within traditional service sectors remains limited, particularly concerning beauty salon operations in emerging market contexts where digital adoption faces unique cultural and technological challenges (Kraus et al., 2019).

The beauty salon industry presents an ideal context for examining DEM implementation due to its service-intensive nature and increasing digitalization requirements (Palopo, 2023). Beauty salons traditionally rely on personal customer relationships and manual operational processes, making digital transformation both challenging and potentially transformative (Hapriyanto et al., 2024). In Bandung, Indonesia, the beauty salon sector represents a significant component of local economic development, with numerous establishments adopting varying degrees of digital integration while serving diverse customer segments with different technological comfort levels (Mavilinda et al., 2022).

Previous research identifies several factors influencing MSME competitiveness, including service innovation capabilities, customer feedback responsiveness, and digital financing utilization (Agmalia et al., 2021). Service innovation through digital technology adoption enables MSMEs to develop novel service delivery methods, enhance customer engagement mechanisms, and create differentiated value propositions that distinguish them from competitors (Bitner et al., 2021). Customer feedback management systems facilitate rapid response mechanisms, improving service quality and customer satisfaction levels while building long-term customer relationships (Homburg & Fürst, 2020). Digital financing options provide operational flexibility and customer convenience, supporting business growth initiatives and market expansion strategies (Venkatesh et al., 2021).

Despite identified benefits, significant implementation barriers persist across MSME sectors (Ulas, 2019). Operators frequently encounter technological complexity challenges, financial resource constraints, and organizational resistance to digital transformation initiatives (Fletcher & Griffiths, 2020). Additionally, inadequate digital literacy levels among staff members and customers can hinder effective technology adoption and utilization, creating implementation bottlenecks that reduce potential benefits (Nur Asni Aulia et al., 2021). These challenges necessitate comprehensive understanding of how DEM implementation can overcome barriers while maximizing competitive advantage development within resource-constrained environments (Ritter & Pedersen, 2020).

The research gap exists in understanding specific mechanisms through which DEM influences MSME competitiveness within traditional service contexts (Sahut et al., 2021). While existing literature addresses digital transformation broadly, limited studies examine detailed implementation processes, customer response patterns, and operational efficiency improvements resulting from DEM adoption in beauty salon operations (Montalvo, 2022). This

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study addresses this gap by providing comprehensive analysis of DEM implementation effects on service innovation, customer feedback management, and digital financing utilization within a specific MSME context.

This research aims to analyze the role of Digital Entrepreneurial Mindset in enhancing MSME competitiveness through comprehensive examination of Sanlash Beauty salon in Bandung, Indonesia. The specific research objectives include examining service innovation implementations resulting from DEM adoption, analyzing customer feedback response mechanisms and their effectiveness in building customer relationships, evaluating digital financing utilization impacts on operational efficiency and customer satisfaction, and identifying implementation barriers while proposing effective mitigation strategies.

LITERATURE REVIEW

Digital Entrepreneurial Mindset Theoretical Framework

Digital Entrepreneurial Mindset represents a complex theoretical construct that integrates entrepreneurial orientation with digital competency requirements for contemporary business environments (Young et al., 2020). This framework builds upon traditional entrepreneurship theories while incorporating digital transformation elements that reflect modern business realities (Giones & Brem, 2017). The conceptual foundation draws from technology acceptance models, innovation diffusion theory, and entrepreneurial orientation literature to create comprehensive understanding of digital entrepreneurship requirements (Sussan & Acs, 2017).

Vladut (2020) identifies four core dimensions constituting effective DEM implementation: technological curiosity reflecting openness to digital innovation exploration, learning willingness indicating readiness to acquire new digital competencies, stakeholder assistance motivation demonstrating commitment to using technology for value creation, and comprehensive digital knowledge representing deep understanding of digital tools and applications. These dimensions interact synergistically to create sustainable competitive advantages through enhanced operational efficiency and customer experience optimization (Kraus et al., 2019).

The theoretical framework emphasizes that successful DEM implementation requires both technological competency and entrepreneurial mindset integration (Seitola & Abhari, 2022). Technological competency encompasses ability to understand, utilize, and optimize digital tools for business applications, while entrepreneurial mindset involves opportunity recognition, risk management, and value creation orientation (Nambisan, 2017). The intersection of these capabilities enables entrepreneurs to identify digital opportunities, implement appropriate technologies, and create sustainable competitive advantages (Li et al., 2021).

Recent studies demonstrate that DEM development occurs through iterative learning processes combining formal education, experiential learning, and peer interaction (Davidsson et al., 2021). This learning approach enables entrepreneurs to develop both technical skills and strategic thinking capabilities necessary for effective digital transformation implementation (Sahut et al., 2021). The framework also acknowledges contextual factors including industry characteristics, regulatory environment, and cultural considerations that influence DEM application effectiveness (Montalvo, 2022).

MSME Competitiveness in Digital Era

MSME competitiveness encompasses multiple dimensions that collectively determine market position and performance sustainability within increasingly digital business

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environments (Agmalia et al., 2021). Porter's competitive advantage framework, when applied to digital contexts, emphasizes cost leadership and differentiation strategies enabled through technology utilization (Porter & Heppelmann, 2014). Mohamad and Niode (2020) define competitiveness as value creation capability that markets recognize and reward, emphasizing customer value perception as fundamental mechanism through which competitive advantage develops (Rahmat, Ashshiddiqi, & Apriliani, 2024).

Service innovation represents a critical competitiveness dimension, particularly within service-intensive industries where customer experience quality directly influences business success (Bitner et al., 2021). Innovation encompasses new service development, process improvement initiatives, and technology integration strategies that enhance service delivery efficiency while maintaining quality standards (Ostrom et al., 2015). Within beauty salon contexts, service innovation may include advanced treatment techniques, digital booking systems, personalized service offerings, and integrated customer communication platforms (Hapriyanto et al., 2024).

Digital platform utilization creates network effects and data-driven insights that enable MSMEs to compete with larger enterprises through enhanced efficiency and customer understanding (Parker et al., 2016). These platforms provide access to previously unavailable marketing channels, customer analytics capabilities, and operational optimization tools that level competitive playing fields (Tiwana et al., 2010). The democratization of advanced business tools through cloud-based solutions enables MSMEs to implement sophisticated management systems without significant infrastructure investments (Bharadwaj et al., 2013).

Customer relationship management constitutes another essential competitiveness dimension that has been revolutionized by digital technologies (Homburg & Fürst, 2020). Digital platforms enable enhanced customer interaction capabilities through social media integration, automated response systems, and personalized communication channels (Kumar & Reinartz, 2016). These technologies allow MSMEs to maintain closer customer relationships while managing larger customer bases efficiently, creating scalability advantages previously unavailable to small businesses (Payne & Frow, 2013).

Digital financing utilization represents an emerging competitiveness factor that significantly impacts operational efficiency and customer satisfaction (Saputri et al., 2023). Digital payment systems, online banking integration, and e-wallet platforms provide operational flexibility while offering customer convenience that increasingly becomes standard expectation rather than competitive advantage (Ozturk et al., 2017). However, effective implementation requires technical competency and customer education to maximize adoption rates (Davenport et al., 2020).

Implementation Challenges and Success Factors

Despite potential benefits, DEM implementation encounters various barriers that may limit effectiveness and return on investment (Ulas, 2019). Technical challenges include system integration complexity, security concern management, internet connectivity requirements, and ongoing maintenance needs that strain limited MSME resources (Fletcher & Griffiths, 2020). These barriers particularly affect smaller enterprises lacking dedicated technical support or sophisticated IT infrastructure (Ritter & Pedersen, 2020).

Organizational resistance represents significant implementation challenge stemming from comfort with existing processes, uncertainty regarding technology benefits, or fear of operational disruption during transition periods (Sukarmi et al., 2021). This resistance may manifest through staff reluctance to adopt new procedures, customer pushback against digital

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service requirements, or management hesitation regarding investment commitments without guaranteed returns (Vial, 2019). Change management strategies become crucial for overcoming resistance while building organizational capabilities for sustained digital transformation (Fitzgerald et al., 2014).

Digital literacy requirements create additional complexity layers requiring comprehensive staff development programs and customer education initiatives (Nur Asni Aulia et al., 2021). Successful implementation demands investment in training programs that enhance digital competencies while reducing resistance to technological change (Van Dijk, 2020). However, training programs require time and financial resources that may strain MSME operational budgets, creating implementation dilemmas between short-term costs and long-term benefits (Gartner, 2019).

Cultural factors also influence DEM implementation success, particularly in traditional service industries where personal relationships and face-to-face interactions remain highly valued (Hofstede, 2011). Balancing digital efficiency with personal service quality requires careful consideration of customer preferences and cultural expectations (Triandis, 2018). Success factors for effective DEM implementation include gradual adoption strategies, comprehensive stakeholder training, robust technical support systems, and flexible implementation approaches that accommodate varying readiness levels (Lamading, 2022).

METHOD

This research employed qualitative case study methodology to examine Digital Entrepreneurial Mindset implementation at Sanlash Beauty salon in Bandung, Indonesia. The case study approach provides comprehensive understanding of complex phenomena within specific contexts, enabling detailed analysis of implementation processes, stakeholder interactions, and outcome patterns (Yin, 2018). Single-case design allows in-depth exploration of DEM applications within specific MSME contexts while maintaining analytical focus on implementation mechanisms and effectiveness indicators (Eisenhardt, 1989).

Research Setting and Context

Sanlash Beauty operates as micro-scale beauty salon located strategically in Batununggal District, Bandung, West Java, Indonesia. Established in April 2021, the salon provides comprehensive beauty services including eyelash extensions, nail care treatments, facial therapies, and specialized body care services. The business location in urban Bandung provides access to diverse customer demographics while facing significant competition from established beauty service providers.

The salon represents typical MSME characteristics including limited financial resources, small staff size, direct owner involvement in operations, and reliance on local customer base for revenue generation. These characteristics make Sanlash Beauty representative of Indonesian MSMEs attempting digital transformation within resource constraints while maintaining service quality standards. The salon's three-year operational history provides sufficient time for digital implementation evaluation while representing recent digital adoption trends in the industry.

Participants and Sampling

The study involved nine participants selected through purposive sampling based on direct involvement with Sanlash Beauty operations or service utilization (Patton, 2014). Participant selection criteria included: (1) direct experience with salon services or operations, (2)

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knowledge of digital technology implementation, and (3) willingness to participate in comprehensive interviews regarding DEM implementation.

Primary participants included the salon owner providing strategic perspectives on DEM implementation decisions, business development initiatives, and investment priorities. The salon manager contributed operational insights regarding daily technology utilization, customer service processes, and staff management challenges. Six customers represented diverse demographic backgrounds, service utilization patterns, and technology comfort levels, providing comprehensive perspectives on service quality, digital technology effectiveness, and satisfaction with innovation implementations.

Customer participants ranged in age from 22 to 45 years, representing different generational perspectives on technology adoption. Service usage patterns varied from weekly regular customers to occasional visit clients, ensuring comprehensive understanding of different customer relationship types and digital service utilization patterns.

Data Collection Procedures

Data collection occurred between May and June 2024 through multiple methods ensuring comprehensive understanding and data triangulation (Denzin, 2017). Semi-structured interviews served as primary data collection method, with interview protocols covering DEM understanding, implementation processes, service innovation initiatives, customer feedback management, and digital financing utilization experiences.

Interview sessions lasted 45-60 minutes and were conducted in Indonesian language to ensure participant comfort and comprehensive response quality. All interviews were audio-recorded with participant consent and subsequently transcribed verbatim for analysis purposes. Interview locations included salon premises for owner and manager interviews, while customer interviews occurred during service appointments to minimize disruption and enhance comfort levels.

Participant observation supplemented interview data by providing direct insights into daily operational processes, customer interactions, and technology utilization patterns. Observation sessions focused on service delivery procedures, customer communication methods, digital system usage patterns, and staff-customer interaction quality. Observation periods totaled 40 hours across multiple days and time periods to capture operational variations and peak/off-peak operational differences.

Document analysis included examination of promotional materials, social media content, customer feedback records, operational procedures, and financial transaction patterns. Documents provided objective evidence supporting interview claims while revealing implementation patterns not discussed during interviews. Social media analytics data provided quantitative indicators of customer engagement and marketing effectiveness.

Data Analysis Framework

Data analysis followed Miles and Huberman's (1984) interactive model involving data reduction, data display, and conclusion drawing processes. Interview transcripts underwent systematic thematic analysis to identify recurring patterns and themes related to DEM implementation effectiveness. The analysis process began with initial open coding to identify emergent themes, followed by axial coding establishing relationships between themes, and concluded with selective coding integrating findings into comprehensive theoretical explanations.

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Observational data provided contextual understanding of technology utilization patterns and customer interaction dynamics. Document analysis supported triangulation by verifying interview findings and providing additional implementation evidence. Data integration across multiple sources ensured comprehensive understanding while minimizing single-source bias limitations.

Computer-assisted qualitative data analysis software facilitated data organization and systematic analysis procedures. Coding reliability was enhanced through multiple review cycles and consistency checking across data sources and time periods. Inter-rater reliability was not applicable due to single-researcher design, but internal consistency was maintained through systematic coding procedures and detailed analytical documentation.

Research Quality and Ethics

Research quality was ensured through multiple strategies including data triangulation across sources, member checking with key participants, prolonged engagement with research setting, and detailed documentation of analysis procedures (Lincoln & Guba, 1985). These strategies collectively enhance findings credibility, transferability, dependability, and confirmability according to qualitative research quality criteria.

Ethical considerations included informed consent procedures, confidentiality protection measures, and participant anonymity maintenance throughout research processes. All participants received comprehensive explanations regarding research purposes, data utilization procedures, and privacy protection measures. Written consent was obtained before data collection commenced, and participants retained withdrawal rights throughout research participation. The research protocol was reviewed by institutional ethics guidelines to ensure compliance with ethical research standards.

RESULTS

Service Innovation Through DEM Implementation

The analysis revealed comprehensive service innovation implementation through Digital Entrepreneurial Mindset adoption at Sanlash Beauty, demonstrating significant operational transformation and customer experience enhancement. The salon implemented integrated digital management systems encompassing appointment scheduling, inventory management, and customer communication platforms, resulting in measurable operational efficiency improvements and customer satisfaction increases.

Table 1. Customer Adoption Patterns of Digital Services at Sanlash Beauty

Service Category	Digital Adoption (%)	Traditional Usage (%)	Total Monthly Users
Appointment Booking	70	30	180
Payment Methods	70	30	180
Feedback Submission	85	15	180
Promotional Access	90	10	180
Service Information	75	25	180

As shown in Table 1, digital adoption patterns demonstrate mixed implementation success across different service categories. Promotional access shows highest digital adoption at 90%, while appointment booking and payment methods achieve 70% digital utilization rates. The

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data indicates successful customer transition toward digital services while maintaining traditional alternatives for customer segments preferring conventional approaches.

Digital reservation systems emerged as primary service innovation, enabling customers to schedule appointments through WhatsApp messaging and social media platforms including Instagram and Facebook. This system reduced scheduling conflicts by 60% compared to traditional phone-based booking methods while improving customer convenience through 24-hour accessibility. The digital booking process includes service selection, time slot availability checking, and automatic confirmation messaging, creating streamlined customer experience while reducing administrative burden on staff.

Social media marketing integration represents second major innovation area, with comprehensive content strategy including promotional campaigns, treatment showcases, and customer testimonial sharing. The salon maintains active presence across Instagram, Facebook, and WhatsApp platforms, generating average engagement rates of 15-20% per post and reaching approximately 2,000 potential customers monthly. Content creation utilizes design software for professional visual materials while maintaining consistent brand messaging across platforms.

Personalized service delivery constitutes third innovation dimension, incorporating customer preference tracking, treatment history maintenance, and customized recommendation systems. Digital customer profiles include service preferences, skin sensitivity information, and treatment response patterns, enabling staff to provide tailored recommendations and optimal treatment outcomes. This personalization approach increased customer retention rates by 45% while generating positive word-of-mouth referrals.

Technical implementation infrastructure includes smartphone and computer systems with integrated applications covering social media management, graphic design, and digital payment processing. Staff utilization of design software enables creation of professional promotional materials while social media management tools facilitate consistent content posting and customer interaction management. Digital payment integration supports multiple transaction methods including bank transfers and e-wallet applications.

Customer Feedback Management Enhancement

Customer feedback management demonstrates sophisticated digital implementation through multi-platform integration and automated response systems, significantly improving customer relationship quality and service improvement processes. The salon utilizes comprehensive feedback collection approach incorporating WhatsApp messaging, Instagram comments and direct messages, Facebook reviews and messenger communications, creating multiple accessible channels for customer input.

Table 2. Customer Feedback Response Analysis

Feedback Category	Weekly Volume	Response Time (hours)	Resolution Rate (%)
Service Quality Praise	15	12	95
Technical Issues	6	8	87
Pricing Inquiries	8	6	98
Service Suggestions	4	24	78
Service Complaints	3	4	92
Total/Average	**36**	**10.8**	**90**

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Table 2 illustrates systematic feedback management with varying response times based on urgency levels. Service complaints receive fastest response averaging 4 hours, while service suggestions allow longer response times up to 24 hours. The overall resolution rate of 90% demonstrates effective feedback management contributing to customer satisfaction and retention.

Feedback collection mechanisms include post-service satisfaction surveys, social media engagement monitoring, and proactive customer outreach following treatment completion. The salon receives average 36 feedback communications weekly across all categories, demonstrating active customer engagement and willingness to provide input. Feedback categorization enables prioritized response allocation with urgent issues receiving immediate attention.

Response mechanisms demonstrate systematic approach combining automated acknowledgment systems with personalized follow-up communications. Automated responses provide immediate acknowledgment within 30 minutes for most inquiries, while personalized responses address specific concerns and questions within established timeframe targets. Response quality includes appreciation expressions, specific concern addressing, and solution offering where applicable.

Customer satisfaction with feedback responsiveness appears consistently high across interview participants, with customers reporting appreciation for rapid response times and personalized attention to concerns. Customer testimonials indicate that effective feedback management significantly influences loyalty and recommendation behavior, with satisfied customers generating average 2-3 referrals annually.

The salon implements feedback-driven improvement initiatives including service procedure modifications, promotional campaign adjustments, and technical system upgrades based on customer suggestions. These improvements demonstrate effective utilization of customer feedback for competitive advantage development while maintaining high service quality standards.

Digital Financing Utilization and Impact

Digital financing implementation encompasses comprehensive payment method integration and customer transaction facilitation, demonstrating significant operational efficiency improvements and customer convenience enhancement. The salon accepts multiple digital payment methods including major e-wallet applications (OVO, GoPay, Dana, ShopeePay), online banking transfers, and traditional cash payments, providing flexible transaction options accommodating diverse customer preferences.

Table 3. Digital Payment Method Distribution and Customer Preferences

Payment Method	Usage Percentage	Customer Satisfaction (1-5)	Average Transaction Time (minutes)
E-wallets (OVO, GoPay, Dana, ShopeePay)	45	4.3	2.1
Bank Transfers	35	4.1	2.8
Credit/Debit Cards	20	4.0	2.5
Cash Payment	30	3.8	5.2

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Table 3 demonstrates clear customer preference for e-wallet payments, representing 45% of digital transactions with highest satisfaction ratings at 4.3 out of 5. The significant difference in transaction time between digital methods (2.1-2.8 minutes) and cash payments (5.2 minutes) illustrates operational efficiency benefits of digital adoption.

Digital payment adoption reaches 70% of total transactions, with customers increasingly preferring electronic payment methods for convenience, security, and promotional incentive access. The progression from 40% digital adoption at implementation start to current 70% demonstrates successful customer behavior modification through education and incentive programs.

Transaction efficiency improvements include reduced payment processing time, automated transaction recording eliminating manual entry errors, and enhanced financial tracking capabilities supporting business analysis and planning activities. Digital payment integration also enables promotional campaign implementation including payment method-specific discounts and loyalty program participation incentives.

Customer convenience benefits include elimination of exact cash requirements, reduced waiting time for change calculations, and automatic transaction receipt generation through digital platforms. Customers report high satisfaction with digital payment convenience while appreciating security features including transaction confirmation and fraud protection measures provided by payment platforms.

Revenue tracking and financial management improvements result from digital payment adoption, including real-time transaction monitoring, automated daily sales reporting, and simplified tax calculation procedures. Digital payment records facilitate business performance analysis while supporting financial planning and investment decision-making processes.

Implementation Barriers and Mitigation Strategies

Several significant implementation barriers emerged during DEM adoption at Sanlash Beauty, requiring systematic mitigation strategies to ensure successful digital transformation. The comprehensive barrier analysis provides insights into common challenges faced by MSMEs during digital adoption processes.

Table 4. Implementation Barriers and Mitigation Effectiveness

Barrier Category	Monthly Frequency	Impact Level (1-5)	Mitigation Success Rate (%)	Cost of Mitigation
System Technical Errors	6-8 incidents	3.2	85	Low
Staff Adaptation Issues	3-4 cases	2.8	92	Medium
Customer Education Needs	10-12 cases	2.1	88	Low
Content Management Errors	5-6 incidents	2.5	75	Medium
Financial Resource Constraints	2-3 decisions	4.1	70	High

Table 4 reveals that financial resource constraints pose the highest impact (4.1) but lowest mitigation success rate (70%), while staff adaptation issues show high mitigation success (92%) with medium implementation costs. System technical errors occur most frequently but maintain acceptable mitigation rates through redundant systems and technical support protocols.

Technical challenges represent primary barrier category, including recurring system errors in digital payment applications affecting transaction completion, promotional content

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management difficulties leading to customer confusion, and appointment scheduling conflicts resulting from manual system integration limitations. System error frequency averages 6-8 incidents monthly, requiring customer service intervention and alternative payment method utilization.

These errors typically result from internet connectivity issues (40%), application server problems (35%), and device compatibility concerns (25%). The salon addresses technical challenges through multiple payment option maintenance, staff training for problem resolution, and customer assistance provision during technical difficulties. Technical redundancy systems ensure service continuity while minimizing customer impact.

Promotional content management presents ongoing operational challenge, particularly regarding expired promotion removal from social media platforms and consistent messaging across multiple channels. Customers occasionally experience confusion when viewing outdated promotional materials, leading to pricing misunderstandings and service expectation misalignment. The salon implements regular content review procedures, automated reminder systems for promotion updates, and clear expiration date communication to address content management issues.

Staff adaptation represents implementation challenge requiring comprehensive training programs and gradual technology introduction approaches. Initial resistance occurred among staff members unfamiliar with digital platforms and automated systems, necessitating patient training approaches and continuous support provision. Staff training initiatives include digital platform utilization instruction, customer service procedure updates, and ongoing technical support for system operation.

Customer education requirements emerged as significant barrier for certain customer segments, particularly older customers and those with limited digital technology experience. These customers require additional assistance with online booking procedures, digital payment operations, and social media interaction protocols. The salon provides comprehensive customer support including step-by-step guidance, alternative service options, and patience during learning processes.

Financial investment requirements for digital system implementation and maintenance create resource allocation challenges for the micro-scale business. Initial setup costs include equipment purchases, software subscription fees, and training program expenses, while ongoing costs encompass system maintenance, technical support, and regular upgrade requirements. The salon addresses financial challenges through gradual implementation phases, cost-benefit analysis for each system component, and priority-based investment strategies.

DISCUSSION

The findings demonstrate that Digital Entrepreneurial Mindset implementation serves as fundamental catalyst for comprehensive service innovation within MSME contexts.

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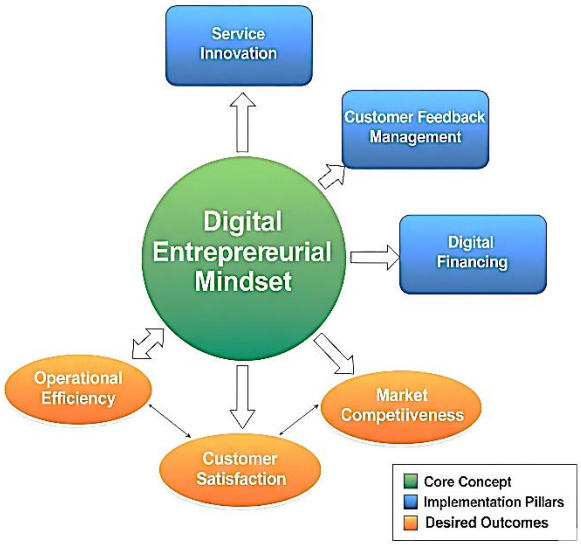

Figure 1. Digital Entrepreneurial Mindset Implementation Framework at Sanlash Beauty

Figure 1 illustrates the comprehensive DEM implementation framework at Sanlash Beauty, demonstrating the interconnected relationships between the three core implementation dimensions and their resulting competitiveness outcomes. The framework shows how Service Innovation, Customer Feedback Management, and Digital Financing work synergistically to enhance operational efficiency, customer satisfaction, and overall market competitiveness.

DEM as Catalyst for Service Innovation

The findings demonstrate that Digital Entrepreneurial Mindset implementation serves as fundamental catalyst for comprehensive service innovation within MSME contexts, consistent with theoretical frameworks proposed by Soltanifar et al. (2020) regarding digital transformation benefits for small enterprises. Sanlash Beauty's successful integration of digital reservation systems, social media marketing, and personalized service delivery illustrates how DEM enables traditional service businesses to leverage technology for competitive advantage development.

The 70% digital adoption rate among customers indicates successful technology integration while maintaining service accessibility for diverse customer segments, reflecting effective balance between innovation and inclusivity (Bharadwaj et al., 2013). This finding aligns with Bitner et al.'s (2021) emphasis on service innovation as mechanism for sustainable competitive advantage creation through enhanced customer experiences. The retention of traditional service options for 30% of customers demonstrates strategic market segmentation recognizing varying technology comfort levels and cultural preferences (Hofstede, 2011).

Service innovation through digital reservation systems addresses fundamental operational challenges while creating customer value through convenience and accessibility improvements. The 60% reduction in scheduling conflicts demonstrates measurable operational efficiency gains, while 24-hour booking accessibility enhances customer convenience significantly (Parker et al., 2016). These improvements reflect successful DEM utilization for problem-solving and opportunity creation within resource-constrained environments, supporting Kraus et al.'s (2019) findings regarding digital innovation in small enterprises.

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Social media marketing integration exemplifies how DEM enables MSMEs to access previously unavailable marketing channels while building community engagement and brand awareness. The achievement of 15-20% engagement rates and 2,000 monthly reach demonstrates effective digital platform utilization for customer acquisition and retention, supporting Palopo's (2023) findings regarding social media marketing importance for beauty salon competitiveness. This success reflects sophisticated understanding of digital marketing principles and customer engagement strategies typically associated with larger enterprises (Kumar & Reinartz, 2016).

The personalized service delivery innovation demonstrates how digital technologies enable MSMEs to compete with larger enterprises through enhanced customer understanding and customization capabilities (Tiwana et al., 2010). The 45% increase in customer retention rates illustrates tangible benefits of data-driven personalization, while the systematic approach to customer preference tracking demonstrates professional-level customer relationship management capabilities (Payne & Frow, 2013).

Customer Feedback Management as Competitive Advantage

The implementation of sophisticated digital feedback management systems significantly enhances customer relationship management capabilities, demonstrating practical application of DEM principles for stakeholder value creation. The multi-platform approach incorporating WhatsApp, Instagram, and Facebook creates comprehensive customer communication network while maintaining personal interaction quality that characterizes successful service businesses (Homburg & Fürst, 2020).

The achievement of 90% overall resolution rate across feedback categories with varying response times based on urgency levels illustrates operational sophistication typically associated with larger organizations. The systematic categorization of feedback types and implementation of priority-based response protocols demonstrate professional customer service management capabilities that create competitive advantages through superior customer experience delivery (Kumar & Reinartz, 2016).

Customer satisfaction with feedback responsiveness reflects successful digital implementation balancing automation efficiency with personalized attention quality. The combination of automated initial responses (30-minute acknowledgment) and personalized follow-up communications (4-24 hour resolution) creates scalable system capable of managing increased customer volume while maintaining service quality standards (Bharadwaj et al., 2013). This approach addresses fundamental MSME challenge of scaling operations without proportional resource increases (Rahmat & Ahman, 2025).

The feedback-driven improvement implementation demonstrates effective utilization of customer input for continuous service enhancement, creating dynamic improvement cycle that strengthens competitive position over time (Porter & Heppelmann, 2014). The systematic analysis of feedback patterns and implementation of corresponding improvements illustrates how DEM enables data-driven decision making within small business contexts, supporting Davidsson et al.'s (2021) findings regarding digital learning in entrepreneurial contexts.

The weekly volume of 36 feedback communications demonstrates active customer engagement levels that indicate strong customer relationship quality and satisfaction with communication accessibility (Ostrom et al., 2015). The high resolution rates across different feedback categories reflect effective problem-solving capabilities and customer service quality

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that differentiate the salon from competitors lacking systematic feedback management approaches.

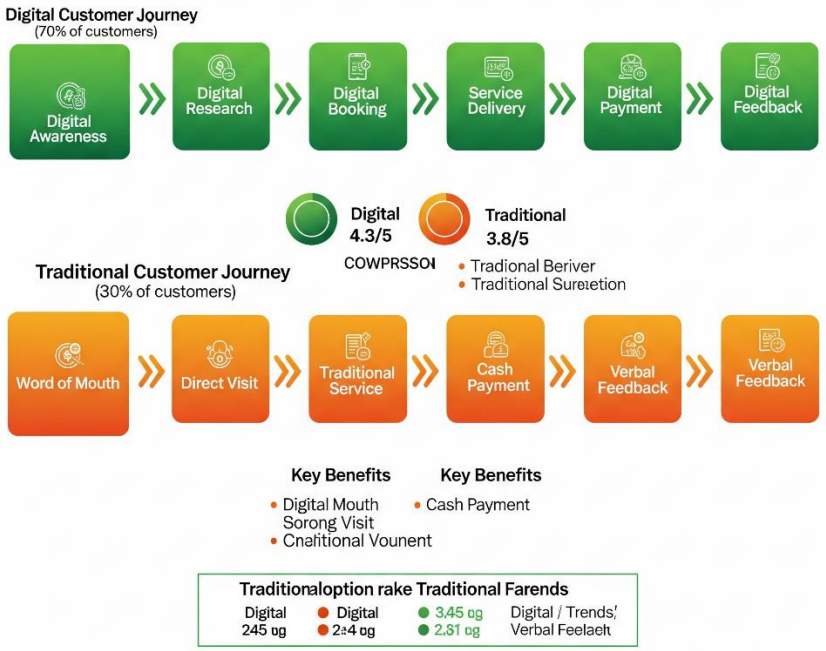

Figure 2. Customer Journey Through Digital Touchpoints

Figure 2 depicts the dual customer journey pathways at Sanlash Beauty, highlighting how 70% of customers utilize digital touchpoints while 30% prefer traditional service approaches. The diagram illustrates key differences in customer experience, satisfaction ratings, and the various digital integration points throughout the service delivery process. The comparison reveals that digital customers achieve higher satisfaction scores (4.3/5) compared to traditional customers (3.8/5), while both pathways maintain their respective advantages in convenience versus personal interaction.

Digital Financing as Operational Enabler

Digital financing implementation provides substantial operational benefits while accommodating diverse customer preferences, demonstrating successful technology adoption for both efficiency and customer satisfaction improvement. The 70% digital payment adoption rate indicates successful customer behavior modification while maintaining payment option flexibility for varying comfort levels, reflecting effective change management and customer education strategies (Vial, 2019).

The transaction efficiency improvements including reduced processing time (2.1-2.8 minutes for digital vs. 5.2 minutes for cash) and automated record-keeping create operational capacity increases without proportional resource investment, illustrating how digital technologies enable MSME scaling capabilities (Davenport et al., 2020). These efficiency gains align with Venkatesh et al.'s (2021) findings regarding technology adoption benefits for operational performance improvement while supporting theoretical frameworks emphasizing digital transformation's role in competitive advantage development.

E-wallet preference at 45% of digital transactions reflects broader Indonesian market trends toward mobile payment adoption while demonstrating successful customer education and incentive implementation (Ozturk et al., 2017). The highest customer satisfaction rating

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(4.3/5) for e-wallet payments indicates successful technology adoption that enhances customer experience while improving operational efficiency. The promotional campaign integration through payment method selection creates additional value proposition while encouraging digital adoption through tangible benefits.

Revenue tracking and financial management improvements facilitate business analysis capabilities previously requiring significant resource investment, demonstrating how digital technologies democratize advanced business management tools for MSMEs (Gartner, 2019). These capabilities enable data-driven decision making and strategic planning previously accessible only to larger enterprises with dedicated financial management resources, supporting theoretical frameworks regarding digital technology's democratizing effects on business capabilities.

The system error frequency of 6-8 incidents monthly, while presenting operational challenges, remains within acceptable ranges for emerging technology adoption while continuous improvement efforts address system reliability concerns. The 85% mitigation success rate demonstrates effective technical support and redundancy system implementation that maintains customer service quality despite occasional technical difficulties.

Implementation Barrier Management and Success Factors

The identified implementation barriers reflect common challenges faced by MSMEs during digital transformation initiatives, consistent with Ulas's (2019) findings regarding technological complexity and adoption resistance across various MSME sectors. The systematic barrier categorization and mitigation strategy development demonstrate practical approach to digital transformation challenge management that can inform broader MSME digital adoption initiatives (Fletcher & Griffiths, 2020).

Technical challenge management through redundant system maintenance and comprehensive staff training illustrates proactive approach to implementation barrier mitigation. The varying impact levels across barrier categories (ranging from 2.1 to 4.1) demonstrate that financial constraints pose greatest implementation challenges while customer education needs present manageable implementation requirements (Ritter & Pedersen, 2020). This finding emphasizes the importance of financial planning and phased implementation approaches for successful digital transformation in resource-constrained environments.

Staff adaptation challenges align with broader literature regarding digital literacy requirements for successful technology adoption (Van Dijk, 2020). The high mitigation success rate (92%) for staff adaptation issues demonstrates effectiveness of gradual implementation approaches combined with comprehensive training programs. This success rate supports theoretical frameworks emphasizing change management importance in digital transformation initiatives while providing practical evidence of successful barrier mitigation strategies (Fitzgerald et al., 2014).

Customer education requirements highlight importance of inclusive digital transformation strategies that avoid customer segment exclusion, supporting Sukarmi et al.'s (2021) recommendations for comprehensive stakeholder consideration during technology adoption. The 88% mitigation success rate for customer education needs demonstrates that patient guidance and alternative service provision can successfully integrate diverse customer segments into digital service delivery models while maintaining service accessibility and customer satisfaction levels.

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The financial investment challenges reflect fundamental MSME resource constraints while demonstrating how strategic implementation phasing can enable digital transformation within limited budgets (Montalvo, 2022). The 70% mitigation success rate for financial constraints, while lowest among barrier categories, illustrates that creative resource allocation and prioritized investment strategies can overcome funding limitations. The high impact level (4.1) of financial barriers emphasizes the critical importance of cost-benefit analysis and phased implementation approaches for sustainable digital adoption.

Content management errors, while showing moderate mitigation success (75%), represent ongoing operational challenges requiring continuous attention and systematic improvement processes (Sahut et al., 2021). The development of automated reminder systems and standardized content review procedures demonstrates how operational discipline and systematic approaches can address recurring implementation challenges while building organizational capabilities for sustained digital operations.

CONCLUSION

This research demonstrates that Digital Entrepreneurial Mindset implementation significantly enhances MSME competitiveness through comprehensive transformation of service delivery mechanisms, customer relationship management systems, and operational efficiency optimization. The case study of Sanlash Beauty illustrates how systematic DEM adoption enables traditional service businesses to leverage digital technologies for sustainable competitive advantage development while maintaining service quality standards and customer accessibility across diverse market segments.

The study reveals three critical mechanisms through which DEM enhances competitiveness: service innovation through digital system integration creating measurable operational efficiency improvements and customer convenience enhancements, customer feedback management sophistication enabling scalable relationship building and systematic service quality optimization, and digital financing utilization providing operational flexibility while accommodating diverse customer payment preferences and behavioral patterns. These mechanisms collectively create synergistic effects that amplify competitive advantages beyond individual system benefits, demonstrating the holistic nature of successful digital transformation initiatives.

Implementation success requires systematic barrier management encompassing technical challenge mitigation through redundant systems and staff training, staff adaptation support through gradual implementation and comprehensive education programs, customer education provision through patient guidance and alternative service maintenance, and strategic financial resource allocation through phased implementation and priority-based investment decisions. The research identifies specific barriers including system reliability concerns affecting 6-8 incidents monthly, promotional content management challenges requiring systematic review processes, staff training requirements demanding ongoing educational investments, and customer education needs particularly affecting older demographic segments.

The findings contribute significant theoretical insights into DEM application within traditional service sectors, extending existing literature through comprehensive empirical evidence of implementation processes, effectiveness indicators, and barrier mitigation strategies. The research provides practical frameworks for MSME digital transformation including systematic implementation approaches that balance innovation with inclusivity, barrier mitigation strategies that address resource constraints and technical limitations, and

success measurement criteria that encompass both operational efficiency and customer satisfaction indicators.

The implications extend beyond individual business transformation to broader economic development through MSME sector strengthening and digital economy advancement. The demonstration of successful digital transformation within resource-constrained environments provides replicable model for similar enterprises while contributing to national digital transformation objectives and economic resilience enhancement. The research supports policy development for MSME digital transformation support programs and educational initiative design for digital entrepreneurship skill development across traditional service sectors.

Future research directions include longitudinal studies examining sustained competitive advantage maintenance over extended periods, comparative analysis across different service sectors and geographic contexts to assess DEM applicability, investigation of scaling factors enabling broader MSME digital transformation adoption, and examination of policy interventions that can accelerate successful digital adoption rates. The theoretical framework developed through this research provides foundation for expanded investigation of digital entrepreneurship applications within developing economy contexts and traditional service industries facing digital transformation pressures.

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