

Exploring Digital Transformation Strategies of Non-Starred Hotels in Bali: A Study on Pulau Bali Hotel Denpasar

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Abstract

The stagnation of competitiveness among non-star hotel MSMEs in Bali has emerged as a critical issue amid the acceleration of global digital tourism. In the face of pervasive digital disruption, non-star hotels confront a "Digital Readiness Gap" that threatens their very existence. This study investigates the Digital Readiness Gap in hospitality MSMEs through a qualitative case study of Pulau Bali Hotel Denpasar. Using the Resource-Based View (RBV) lens, data were gathered from five key informants and analyzed thematically. A qualitative descriptive approach was utilized, involving in-depth interviews with five key informants comprising hotel owners, operational managers, and operational staff. Data were analyzed thematically to map the integration of internal resources with appropriate technologies. The novelty of this research lies in the development of a 'Class Upgrade' roadmap, which was synthesized from the thematic findings, and delineating a three-stage transition from manual operations to digital maturity: (1) Digital Literacy Foundation (2) Operational Automation and (3) Strategic Integration with Star-Rated Standards. Each stage specifies required resources (financial allocation, training hours, technology procurement), measurable indicators (staff certification rates, double-booking reduction, guest satisfaction scores), and evaluation benchmarks against Minister of Tourism Regulation No. 4 of 2021, transforming the roadmap into an empirically grounded, actionable framework. The findings provide yield strategic implications for hotel managers undertaking operational modernization, as well as for local governments as a foundation for MSME digital acceleration policies. The urgency of this research resides in efforts to strengthen local economic resilience, enabling these enterprises to transform into internationally competitive and sustainable business entities.

KEYWORDS

digital transformation; non-star hotels, hotel MSMEs; global competitiveness.

Introduction

The tourism sector in Bali currently stands at a pivotal juncture of digital economic transformation, compelling the entire accommodation ecosystem to adapt or face elimination. Non-star hotels, representing the MSME accommodation segment that serves as the backbone of the local economy, play a vital role in distributing economic benefits directly to communities (Kusa et al., 2022). However, despite their quantitative dominance, non-star hotels frequently remain entrenched in conventional business models that have lost relevance within global market dynamics heavily dependent on information accessibility and digital transaction velocity (Martins et al., 2021).

Non-star hotels now compete not only with local counterparts but also with application-based accommodation platforms offering efficiency and price transparency. Stagnation in digital technology adoption risks rendering non-star hotels irrelevant, notwithstanding their strategic locations and historical value (Kusa et al., 2022).

Competitive inequality emerges as a fundamental issue when large hotels with substantial capital deploy service automation at scale, while non-star hotels remain

mired in manual operational management. This phenomenon engenders 'digital invisibility,' which is analytically defined as the lack of an optimized digital footprint leading to low market discoverability. In the case of Pulau Bali Hotel, this invisibility is evidenced by low visibility scores on major OTAs, inconsistent review presence, and a high dependency on offline walk-in guests compared to digital-native competitors. Without a structured digital transformation strategy, non-star hotels will persist in marginal zones, capable only of contesting residual market segments devoid of meaningful bargaining power (Gobble, 2018; Kusa et al., 2022; Wiguna et al., 2020). Conversely, amid the dominance of global hotel chains, MSME accommodation establishments or non-star hotels maintain a vital role in preserving locally-based tourism ecosystems. Nevertheless, the advancement of digital technology and the shifting behaviors of millennial tourists and digital nomads have fundamentally altered hospitality industry standards (Arslan, 2024).

The primary challenge identified is not merely a shortage of technological hardware, but rather the absence of a digital transformation roadmap tailored to the scale of Micro, Small, and Medium Enterprises (MSMEs) (Marjanovic & Kovacevic-Opacic, 2025; Suryani et al., 2021). Numerous non-star-rated hotels encounter operational cost inefficiencies and revenue leakage due to fragmented customer data management and passive marketing strategies. The imperative for this grading is grounded in Minister of Tourism and Creative Economy Regulation No. 4 of 2021 regarding Business Standards for the Hospitality Sector. For the management of Pulau Bali Hotel, achieving this formal star classification is not merely an analytical assumption but a strategic objective to bridge the credibility gap in the international market (Arslan, 2024).

An examination of the State of the Art in current tourism management research reveals that academic focus has been predominantly concentrated on digitalization within star-rated hotels and large corporations (Baptista et al., 2020; Kimingi et al., 2024; Wambugha & Tumuti, 2025). Consequently, a significant literature gap persists regarding how MSMEs and hospitality startups navigate the "Twin Transition"—the simultaneous integration of digital transformation and quality standard improvements—particularly within highly saturated markets such as Denpasar, Bali (Al-Shahamani et al., 2025; Aulisio & Pereno, 2024). Table 2: Systematic Comparison of Prior Studies and Present Research inserted the Introduction section, systematically comparing four dimensions across six seminal studies: (1) Research Focus, distinguishing between star-rated hotels (Kimingi et al., 2024; Wambugha & Tumuti, 2025) and non-starred MSMEs (present study); (2) Theoretical Lens, contrasting technology adoption models with the RBV-VRIN framework employed herein; (3) Methodological Approach, differentiating quantitative surveys from the qualitative case study design; and (4) Key Contribution, highlighting the absence of integrated digital-standardization roadmaps in prior research versus the proposed "Class Upgrade" framework. This research addresses that gap by examining the simultaneous pressure of digital adoption and quality standardization within the resource-constrained context of Denpasar's urban hotel sector. This research aims to address this gap by offering a novel perspective on business escalation through digitalization centered on the resource constraints inherent to MSMEs (Farida et al., 2022).

While current research has extensively mapped digitalization in large-scale star-rated hotels (Kimingi et al., 2024; Wambugha & Tumuti, 2025), there is limited empirical evidence on how non-starred MSMEs navigate the 'Twin Transition' of digital adoption and quality standardization (Pissareva et al., 2025). This study advances previous frameworks by proposing a technological adaptation model specifically tailored to the resource constraints of urban small-

scale hotels. Although this study focuses on a single-case analysis of Pulau Bali Hotel, it provides a micro-level perspective that serves as a conceptual proposition for the broader non-starred hotel sector in Bali.

Distinct from conventional digital transformation models, this research proposes a technological adaptation framework that bridges the gap between internal management improvements and the specific certification parameters for star-rated hotels in Indonesia (Zhang et al., 2024). This novelty offers a pragmatic solution for non-star-rated hotels to achieve digital autonomy while preserving the localized service characteristics that constitute their unique identity.

The urgency of this study is underscored by the accelerated economic recovery in Bali, which demands a standardized level of accommodation quality across the board. The Pulau Bali Hotel Denpasar was selected as a case study as it exemplifies the complex challenges faced by urban hotels; despite possessing a robust physical structure, a strategic location in the heart of Denpasar, and significant historical value, the establishment remains at risk of losing its competitive edge due to the prevailing digital gap.

Comprehensive in scope, this research aims to formulate a holistic digital transformation strategy to ensure the economic sustainability of hospitality MSMEs. The study addresses two primary research questions: (1) what is the nature of the current digital transformation at the Pulau Bali Hotel Denpasar, and (2) how does this influence their competitiveness and business sustainability? The findings are expected to serve as a catalyst for non-star-rated hotels in Bali to elevate their grading. Ultimately, this will enable them to not only withstand technological disruption but also contribute significantly to a more resilient, high-quality, and economically sustainable Balinese tourism sector by strengthening local community-based enterprises.

Literature Review

Resource-Based View (RBV) Theory

The Resource-Based View (RBV), as developed by Barney (1991), serves as the theoretical cornerstone of this study to elucidate how non-star-rated hotels can cultivate a sustainable competitive advantage by leveraging unique and valuable internal resources. Within the context of hospitality MSMEs, the RBV framework posits that digital transformation transcends the mere adoption of physical technology; rather, it represents the creation of strategic assets through organizational capabilities and data management that satisfy the VRIN criteria—Valuable, Rare, Inimitable, and Non-substitutable (Purba et al., 2023). From this perspective, the "grading escalation" strategy for non-star-rated hotels becomes attainable if the firm successfully integrates digital assets with local wisdom (human capital). This synergy facilitates the delivery of high-quality service standards that are difficult for competitors to replicate, thereby strengthening the firm's strategic positioning within the global market (Suryani et al., 2024).

Digital Transformation

In the hospitality sector, digital transformation is conceptualized as a fundamental shift characterized by the integration of information technology across all business domains, fundamentally restructuring operational processes and the delivery of customer value (Bilgili & Koc, 2021). For small-scale hotels, this variable extends beyond the mere utilization of Online Travel Agents (OTAs); it encompasses the automation of digital management systems and the application of foundational data analytics for strategic decision-making. Existing literature indicates that the success of digital transformation within MSMEs is highly contingent upon the digital literacy of owners and organizational cultural readiness. These factors serve as critical determinants that directly

influence operational cost efficiencies and facilitate a significant expansion of market reach (Barykin et al., 2021).

Global Competitiveness

Global competitiveness within the hospitality industry is defined as a firm's capacity to generate unique value-added offerings and deliver service standards that align with international market expectations (Hitt et al., 2020; Lee & Peterson, 2000). In the context of non-star-rated hotels in Bali, global competitiveness is not measured solely by the luxury of physical amenities; rather, it is derived from the integration of comparative advantage—rooted in rich local cultural heritage—with technology-based competitive advantage. Extant literature indicates that the ability of MSMEs to compete globally is significantly influenced by digital visibility and the consistent delivery of service quality standardized under Cleanliness, Health, Safety, and Environmental Sustainability (CHSE) frameworks (Zulkifli et al., 2023). Such a strategy enables small-scale hotels to position themselves effectively within the global tourism supply chain, attract high-value tourist segments, and maintain market share amidst the proliferation of global platform-based accommodation providers.

Business Sustainability

Business sustainability for hospitality MSMEs is defined as the organizational capability to maintain long-term financial performance by integrating operational efficiency with compliance to industry standards (Seguí-Amortegui et al., 2019). In this study, sustainability is viewed not only through an ecological lens but also through the lens of quality standardization, which allows non-star-rated hotels to consistently meet the criteria for grade escalation. Prior research underscores that digitalization serves as a critical enabler of business sustainability; through digitized systems, hotels can accurately monitor resource utilization, enhance customer retention via service personalization, and cultivate economic resilience against the fluctuations of a dynamic tourism market (Bilgili & Koc, 2021).

Methods

Research Design

This study was conducted at the Pulau Bali Hotel in Denpasar, Bali, Indonesia, employing a qualitative approach with a descriptive case study design. The selection of this design was necessitated by the requirement to explore contemporary phenomena in-depth within their real-life contexts (Hara, 2008). The research focuses on the interpretation and strategic maneuvers of micro-business units as they navigate the systemic pressures of digital transformation in Bali.

Participants and Informant Selection

The study utilized a census technique (also referred to as saturated sampling), wherein the entire population of five employees and owners was designated as key informants (Hossan et al., 2023). This strategy was implemented to acquire a holistic perspective across the hotel's lean organizational structure, comprising: Manager/Owner (1 person): Providing strategic and policy-oriented perspectives. Front Office Staff (2 persons): Offering insights into operational execution and guest interactions. Administrative/Finance Staff (1 person): Focusing on organizational efficiency and internal systems. Operational/Housekeeping Staff (1 person): Addressing the practicalities of foundational technological adaptation.

Data Collection Techniques

This study was conducted at the Pulau Bali Hotel

Denpasar. Data were gathered through semi-structured interviews and field observations conducted between March and April 2026. The coding process was conducted by the primary researcher through manual inductive coding of all five interview transcripts with six-phase thematic analysis Braun & Clarke (2006). To enhance trustworthiness, data source triangulation was applied by combining interview transcripts with documentary evidence (reservation reports, OTA profiles, and digital SOPs), while member checking was conducted by returning preliminary findings to the hotel manager for validation of semantic accuracy and contextual appropriateness. Initial codes were derived directly from the transcripts, organized into a preliminary codebook, and refined through constant comparison across the dataset before being categorized into four higher-order themes aligned with the RBV-VIRIN dimension. All participants provided informed consent, and the data validation was further strengthened through member checking with the hotel management. To ensure high data credibility and rigor, the researcher employed semi-structured interview guides complemented by data source triangulation across three distinct techniques: (1) In-depth Interviews: Conducted face-to-face to elicit nuanced insights into the psychological, technical, and managerial barriers associated with digital adoption. (2) Participant Observation: The researcher performed direct observations of staff interactions with digital devices and information systems during standard operational hours. (3) Documentary Research: This involves a systematic review of reservation reports, the hotel's digital profiles on various Online Travel Agents (OTAs), and existing digital Standard Operating Procedures (SOPs). The interview protocol consisted of 12 semi-structured questions, with each interview lasting approximately 45–60 minutes during the data collection. To ensure trustworthiness, the study utilized an audit trail and member checking, where preliminary findings were returned to the hotel manager for validation (Shoozan & Mohamad, 2024). Thematic analysis followed an inductive coding process, where initial codes were derived directly from the transcripts before being categorized into the four RBV dimensions: valuable, rare, inimitable, and non-substitutable.

Data Analysis Techniques

The data analysis was processed using Thematic Analysis as formulated by Braun & Clarke (2006) followed by six systematic phases: Phase 1: Familiarizing with the Data: The researcher engaged in repeated immersion in the interview transcripts of the five informants to gain a comprehensive understanding of the content depth. Phase 2: Generating Initial Codes: Relevant segments of text systematically labeled (coded) in alignment with the research questions. Phase 3: Searching for Themes: Once the coding process is complete, codes with shared conceptual meanings will be synthesized into potential thematic categories. Phase 4: Reviewing Themes: The researcher verify the themes against the extracted data units and the dataset as a whole to ensure internal homogeneity and external heterogeneity. Phase 5: Defining and Naming Themes: An iterative, in-depth analysis conducted to refine the essence of each theme and assign representative nomenclature. Phase 6: Producing the Final Report: The final stage involves the synthesis of analysis into a coherent scholarly narrative.

Result and Discussion

The research inquiries posed to the informants were centered on three primary pillars: the mechanisms of Digital Transformation adoption, strategies for attaining global competitiveness within a saturated market, and efforts to ensure business sustainability through resource efficiency—all analyzed through the lens of the RBV framework. Based on the

informants' responses, the research findings are articulated below.

Digital Transformation Profile of Pulau Bali Hotel Denpasar

Interviews with five key informants at the non-star-rated Pulau Bali Hotel Denpasar revealed a complex dynamic between limited physical resources and the latent potential of human capital. The digital transformation currently underway is categorized as partial adoption, characterized by the integration of technology into specific operational functions rather than a fundamental transformation that redefines the overarching business model. One informant noted:

"At present, we are unable to achieve full digitalization due to capital constraints. However, we have incorporated technological integration into our five-year roadmap, designating a portion of our profits specifically for future technological investment".

The hotel owner demonstrates strategic awareness by incorporating technology utilization into five-year forward planning, indicating top-management commitment to digitalization. However, current implementation is impeded by capital constraints that constitute the principal barrier to achieving full digitalization.

The manager's vision to integrate technology within the forthcoming five-year plan reflects efforts to build Dynamic Capabilities. Within RBV theory, competitive advantage emanates not merely from existing assets, but from managerial capacity to reconfigure resources amid market shifts. Although the manager acknowledges capital limitations hindering full digitalization, the commitment to allocate profits despite subdued hotel occupancy indicates that technology is regarded as a Valuable Resource for long-term resilience. Strategically, however, this investment risks positioning the hotel merely at Competitive Parity, wherein the establishment can only meet minimum standards without possessing uniqueness that is difficult to imitate (Inimitable).

At the operational level, findings reveal significant digital literacy variation among employees. Front Office staff experienced initial adaptation difficulties—evidenced by delays in booking processes and technical confusion—yet demonstrated positive learning progression over time.

"I was initially surprised by the technology and somewhat slow in completing tasks, but now I am increasingly proficient in operating it."

Administrative/Finance and Operations/Housekeeping staff reported substantial efficiency gains through transaction data processing automation and inter-departmental communication. These findings indicate that digital transformation has generated competence enhancement within the organization: administrative functions experience high efficiency, whereas customer-facing functions remain in adaptation phases.

Global Competitiveness from a Stakeholder Perspective

Regarding human resource readiness, Informants 2 and 4 provided responses indicating a positive learning curve, wherein technology enhanced work velocity and financial data accuracy.

"I feel much faster at work, receipts no longer accumulate, bills can be paid on time, and customer payments can be received promptly and accurately."

From an RBV theoretical perspective, human resources capable of technology adaptation constitute a valuable asset. This represents a clear positive contribution of digital transformation, particularly evident in this domain, demonstrating that digitalization has enhanced Administrative Capability. This yields advantages in work time efficiency that mathematically offset application subscription costs. From a qualitative perspective, informants perceived that this automation significantly reduced manual paperwork

and saved daily administrative hours. While this study did not audit financial logs, the qualitative inference from the staff suggests that improved billing accuracy has positively influenced the hotel's immediate cash flow tracking. Financial data transparency serves as a strategic asset enabling hotel owners to engage in data-driven decision making—crucial for MSME business sustainability in monitoring cash flows in real-time.

However, findings from the Front Office Informant revealed impediments regarding Human Capital Readiness, who stated:

"I remain confused using digital-based programs due to insufficient technology comprehension."

This response indicates that human capital within this hotel has not achieved Inimitable criteria (difficult to imitate). Competency disparities among staff create vulnerability points within the service value chain. Digital transformation at this hotel remains mechanistic, having yet to evolve into comprehensively integrated organizational capability. From an RBV perspective, however sophisticated technology may be, it becomes a non-productive asset when employees as operators lack adequate digital literacy. Staff inability to fulfill foreign guest expectations with high technological standards generates reputational risk, which theoretically constitutes the most valuable intangible asset in the service industry.

Analysis of Digital Transformation through the RBV Lens

Findings confirm that digital technology generates added value at the operational level. Administrative/Finance staff reported accelerated payment cycles and payment tracking; Operations/Housekeeping staff identified inter-departmental communication efficiencies. This aligns with literature indicating that digitalization within hospitality MSMEs enhances operational cost efficiency (Barykin et al., 2021; Bilgili & Koc, 2021).

The hotel owner explicitly acknowledged capital constraints as impediments to full digitalization, indicating that adopted technologies are generic or basic and accessible to all competitors. Administrative/Finance staff confirmed intensive market price transparency, indicating an absence of technological differentiation. From an RBV perspective, resources lacking rarity cannot constitute foundations for sustainable competitive advantage (Purba et al., 2023).

Inimitable and Non-substitutable perspectives, findings identified no formation of unique capabilities integrated with local wisdom or tacit knowledge. Digital transformation focused upon off-the-shelf technology adoption rather than proprietary system development combining Balinese cultural values with digital efficiency. This contradicts Suryani et al. (2021) recommendation that hospitality MSMEs must integrate digital assets with human capital grounded in local wisdom to create inimitable service standards.

Global Competitiveness: Visibility versus Credibility

The international market diversification reported by Front Office staff

"hotel guests are becoming increasingly diverse in terms of their country of origin"

This indicates successful global market penetration facilitated by digital platforms. Specifically, Front Office data indicated a more diverse guest profile from various countries. However, this suggests an expansion in market reach rather than deep market penetration, as the hotel still faces intense price competition from surrounding establishments. However, the digital price transparency identified by Administrative and Financial staff has fostered an environment of hyper-competition, rendering price-based differentiation unsustainable. These findings align with current literature suggesting that hospitality SMEs operating within highly saturated markets must prioritize experience differentiation over price competition (Aulisio & Pereno, 2024).

Furthermore, these results extend the conceptual understanding of the digital visibility trap: a phenomenon in which increased digital exposure, absent a simultaneous enhancement of operational capabilities, accelerates the market's exploitation of organizational weaknesses. This phenomenon, termed the 'Digital Visibility Trap,' occurs when increased online exposure broadcasts internal service failures—such as the double bookings identified in this case—to a global audience before the organization develops the technical capacity to synchronize its inventory. Non-rated hotels that rely on global platforms without implementing internal standardization face negative information asymmetry. In this context, unregulated digital reviews disseminate negative information at a velocity that far exceeds the organization's capacity for corrective measures.

Business Sustainability and Economic Resilience

Findings indicate uneven returns on digital investment: while internal efficiency has been achieved (reductions in time and paper consumption), external resilience has degraded due to customer attrition following systemic failures. Front Office staff reported that

"Double bookings frequently occur, leading to guest dissatisfaction and subsequent relocation to competing hotels,"

suggesting that technical failures at customer touchpoints exert a disproportionate impact on customer retention. This further implies that the existing digital resources fail to meet the Non-substitutable criterion and lack fundamental reliability. Within the Resource-Based View (RBV) framework, such systemic failures jeopardize the firm's reputation—the most critical intangible asset in the service industry.

From a sustainability perspective, the hotel employs a reactive strategy that is inherently unsustainable. Allocating profits toward technological investment solely as a response to low occupancy periods indicates a "fire-fighting" approach rather than the development of preventative organizational capabilities. Scholarly literature emphasizes that the sustainability of hospitality SMEs requires consistent investment in Customer Relationship Management (CRM) and service personalization (Bilgili & Koc, 2021).

The participant's statement regarding capital constraints highlights a state of 'partial adoption'. Interpreted through the RBV lens, these basic technologies currently provide only 'Competitive Parity' rather than a 'Sustainable Competitive Advantage,' as the tools utilized are generic and easily accessible to competitors. This empirical evidence suggests that without the integration of local tacit knowledge (human

capital), the digital assets remain 'substitutable' and fail to satisfy the 'Inimitable' criterion of the VRIN framework

To substantiate the novelty of the proposed 'Class Upgrade' roadmap and clarify the empirical

basis of the study, Figure 1 (Class Upgrade Roadmap: A Three-Stage Digital Transformation Framework for Non-Starred Hotels) has been inserted following the Results and Discussion section, presenting a dedicated conceptual model that transforms the narrative roadmap into a visible, theoretically grounded framework. The figure delineates three sequential stages—(1) Digital Literacy Foundation (staff training, OTA optimization, guest data digitization; 12-month milestone, indicators: 80% staff certification, OTA visibility score improvement); (2) Operational Automation (PMS integration, real-time inventory synchronization, automated billing; 24-month milestone, indicators: double-booking reduction, payment cycle acceleration); and (3) Strategic Integration with Star-Rated Standards (CHSE compliance digitization, CRM implementation, cultural value-added services; 36-month milestone, indicators: guest satisfaction scores, revenue benchmarks against Minister of Tourism Regulation No. 4 of 2021). Each stage specifies required resources (financial allocation, training hours, technology procurement), progression mechanisms (capability-building sequences, system integration protocols, certification compliance pathways), and expected outcomes (competitive parity → sustainable competitive advantage transition). This process ensures that the strategic recommendations are not merely speculative but are derived directly from the observed digital maturity of the case subject. Table 1 illustrates the transition from initial data codes to higher-order themes, providing a transparent audit trail of how the hotel's internal resources currently interact with digital pressures.

As evidenced in Table 1, the digital transformation at Pulau Bali Hotel is currently characterized by Valuable but Non-Rare resources. The 'Fragmented Digital Adoption' theme indicates that while the hotel has successfully integrated basic tools, these assets are generic and widely available to competitors, leading to a state of Competitive Parity (Gerhart & Feng, 2021). Furthermore, the mapping identifies a critical tension between 'Digital Visibility' and 'Operational Readiness.' This highlights the empirical foundation of the 'Class Upgrade' roadmap: the transition to a star-rated status depends less on the procurement of hardware and more on the Organization (O) dimension of the RBV—specifically, the synchronization of digital systems with staff literacy to eliminate systemic errors

Table 1. Thematic Coding and RBV Mapping of Digital Transformation

Research Pillar	Initial Codes (Data Evidence)	Derived Themes	RBV Dimension Mapping	Strategic Outcome
Mechanisms of Adoption	Capital constraints; Generic OTA usage; 5-year tech roadmap; Partial integration.	Fragmented Digital Adoption	Valuable (but Non-Rare)	Competitive Parity: Technology meets basic market standards but lacks the uniqueness to outperform rivals.
Global Competitiveness	Increased guest diversity; Real-time price monitoring; Recurring double-bookings.	Digital Visibility vs. Operational Readiness	Imperfect Mobility (Reputational Risk)	Visibility Trap: Increased digital exposure accelerates the spread of negative reviews due to systemic failures.
Human Resource Readiness	Digital literacy variation; Positive learning curve (Admin); Front-office confusion.	Asymmetric Human Capital Capability	Inimitable (Latent Asset)	Mechanistic Transformation: Technology remains a non-productive asset if not synchronized with staff digital literacy
Business Sustainability	Paperless initiatives; Faster payment cycles; Reactive "fire-fighting" investment	Operational Efficiency & Economic Resilience	Organization (Process Value)	Internal Resilience: Gains in back-end efficiency reduce overhead but have yet to translate into superior guest value

like double-bookings. This analytical mapping serves as the baseline for the proposed strategic framework tailored for hospitality MSMEs.

These findings identify a hidden trade-off in the digital transformation of SMEs: the operational efficiencies gained through backend automation may be offset by the degradation of the customer experience if implementation is not balanced by an enhancement of customer-facing capabilities. Business sustainability necessitates a dual balance between internal efficiency and external satisfaction—an equilibrium that has not yet been realized in this context.

Operational Efficiency and Global Expectations

Data gathered from administrative and housekeeping staff reveal that digitalization has successfully generated time and cost efficiencies, supporting Green Hotel concepts through paperless initiatives. This aligns with the Valuable component of the RBV framework as it reduces operational overhead. However, these efficiencies have yet to be converted into superior global competitiveness. Informant 5 noted that service speed fails to meet five-star standards due to personnel shortages. This underscores that while technology may be available, if it is not supported by the requisite quantity and quality of human resources, the firm will only achieve Competitive Parity (meeting minimum market standards) rather than a sustained competitive advantage. Furthermore, while the adoption of digital communication technology has streamlined coordination between housekeeping and the front office, and the transition to paperless reporting enhances the firm's environmental value proposition, these operational gains remain secondary to the broader need for resource integration.

Conclusion

This study demonstrates that for Pulau Bali Hotel Denpasar, digital transformation is still at a functional adoption stage. While these findings serve as a conceptual proposition for other hospitality MSMEs in Bali, the results are fundamentally rooted in the specific capital and human resource constraints of the case studied. Although technology has been acknowledged as a Valuable asset for operational efficiency and administrative cost reduction, its utilization remains confined to routine activities. Capital constraints necessitate incremental technology investment, which, from an RBV perspective, merely positions hotels at Competitive Parity rather than distinctive competitive advantage.

Significant impediments were identified as gaps in Human Capital Readiness. Digital competency disparities among staff resulted in suboptimal software effectiveness. System failures such as recurring double bookings indicate that existing technology lacks mature procedural management (Organized). This demonstrates that without equitable digital literacy support, investments in digital devices risk damaging intangible assets, specifically guest trust and hotel reputation globally (Alyasiri & Al-Taie, 2024).

Digitalization has provided market price transparency access, enabling real-time competitor monitoring. Nevertheless, the global competitiveness of this non-star hotel remains vulnerable due to high dependency on third-party platforms (OTAs) and minimal Inimitable (difficult to imitate) digital service differentiation. Efficiency gains generated in operational and housekeeping departments indeed contribute to cost resilience, yet remain insufficiently converted into service advantages meeting foreign tourist expectations accustomed to smart tourism ecosystems.

Hotel business sustainability amid intense competition in Bali critically depends upon management capacity to reconfigure internal resources. Digital transformation

demonstrably supports sustainability regarding financial accountability and physical resource conservation (green hotel concept). However, long-term sustainability can only be achieved if the hotel successfully transforms technology from mere work tools into core organizational competencies that harmonize system velocity with distinctive Balinese personal service touch.

Recommendations

Hotel management is advised to transition from pure technology procurement strategies toward human resource-based digital capability development strategies. Priority must be accorded to structured digital literacy training for all staff to minimize systemic errors and enhance guest User Experience. Furthermore, periodic system audits are required to ensure seamless data integration between front office operations and online reservation platforms, thereby preventing financial losses and reputational decline attributable to guest complaints.

For tourism stakeholders, it is recommended that support schemes for hospitality MSMEs extend beyond physical device or software grants to encompass technical and managerial mentorship. A contextualized digital transformation mentorship model is required for small-scale hotels with personnel limitations. Intensive training stimuli regarding simple data analytics utilization for monitoring global market prices will serve as the key for non-star hotels in Bali to upgrade into independently globally competitive business entities.

For subsequent researchers, this study opens several research agendas recommended for advancing tourism management scholarship. Quantitative research with large samples utilizing cross-sectional surveys across non-star hotels in Bali is required to test the generalizability of findings and quantify relationships among digital transformation, competitiveness, and sustainability variables.

Research Limitations

This study acknowledges several limitations essential for maintaining academic integrity and guiding future research directions.

First, sample and generalizability constraints. This study employed a single-case design at Pulau Bali Hotel Denpasar with five key informants. While providing high analytical depth, findings cannot be statistically generalized to the entire population of non-star hotels in Bali or Indonesia. This hotel's unique characteristics—urban location, historical value, and specific ownership structure—may differ significantly from non-star hotels in rural locations or with alternative ownership models.

Second, temporal constraints and change dynamics. Data collection occurred during a specific period that may not capture Bali's tourism seasonal cycles. The hospitality industry exhibits high sensitivity to visitation fluctuations, with digital transformation and hotel competitiveness potentially varying substantially between high and low seasons. Furthermore, the rapid evolution of digital technology renders findings susceptible to rapid obsolescence as hotels and competitors adopt new technologies.

Third, stakeholder perspective limitations. This study relied upon internal hotel stakeholder perceptions (owners, managers, and staff) without integrating external perspectives such as guests, competitors, or regulators. Internal perceptions may exhibit positive bias toward hotel conditions or negative bias resulting from organizational dynamics. Guest perspectives—as ultimate service recipients—are crucial for validating findings regarding competitiveness and sustainability, yet remain unaddressed in this study.

Fourth, methodological constraints in quantitative measurement. As a qualitative study based on in-depth interviews, this research did not generate quantitative metrics regarding digital efficiency levels, market share, or profitability.

Without comparative quantitative data, determining whether findings concerning operational efficiency or customer loss are statistically significant or merely anecdotal becomes problematic.

Research Implications

Theoretical Implications

This study extends the application of Resource-Based View (RBV) theory to the context of non-star hospitality MSMEs in emerging economies. Findings regarding operational competency traps and the stalled grading concept enrich understanding of vertical mobility barriers within the hospitality industry, which has previously been dominated by studies on large corporations and star-rated hotels. This contribution addresses the literature gap identified by Kimingi et al. (2024) and Wambugha & Tumuti (2025) concerning the dominance of academic focus on star-rated establishments.

Practical Implications for Hotel Management

For owners and managers of Pulau Bali Hotel and similar non-star hotels, this study provides implementable strategic recommendations.

First, digital investment priorities must be reallocated from backend administrative functions to customer-facing frontend operations. Findings indicate that system failures at customer contact points (double bookings) exert disproportionate impact upon retention compared to backend efficiencies. Implementation of property management systems (PMS) integrated with online travel agent (OTA) platforms featuring real-time inventory management constitutes a critical priority.

Second, hotels must develop experience-based differentiation integrating Balinese cultural wisdom with digital services. Unlike global hotel chains reliant upon standardization, non-star hotels can create inimitable competitive advantage through service personalization reflecting local cultural values—such as traditional greetings, authentic culinary offerings, or architecture preserving Balinese aesthetics.

Practical Implications for the Bali Tourism Office

It is recommended that the Bali Tourism Office develop

managerial digital literacy programs specifically targeting non-star hotel owners. These programs must transcend operational technical training to encompass strategic understanding of how to convert digitalization into sustainable competitive advantage—including comprehension of RBV, market differentiation, and digital customer relationship management.

Author contributions

Ni Kadek Suryani: Conceptualization, methodology design, data collection, formal analysis, investigation, original draft preparation, and manuscript revision. Anita Heptariza: Literature review supervision, theoretical framework refinement, and critical review of the manuscript. Luh Ade Calista Sandy Wendikasari: Data validation, editing of the final manuscript. I Gede Agus Antesa Paramartha: administrative coordination and final approval of the manuscript for submission. All authors have read and agreed to the published version of the manuscript.

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