



ADVANCED INTERNATIONAL JOURNAL
OF BUSINESS, ENTREPRENEURSHIP
AND SMES
(AIJBES)

www.gaexcellence.com/aijbis



A CONCEPTUAL FRAMEWORK FOR DIGITAL RESILIENCE: INVESTIGATING THE MEDIATING ROLE OF STRATEGIC DIGITAL ADOPTION AMONG CBT SMES IN SELANGOR

Zakmalisa Erna Md Zaki^{1*}, Khairun Najiah Ahmad², Norzuwana Sumarjan³, Nur Shahirah Mior Shariffudin⁴

¹ Department of Hospitality, School of Hospitality and Creative Arts, Management and Science University (MSU), University Drive, Off Persiaran Olahraga, Section 13, 40100 Shah Alam, Selangor, Malaysia

✉ zakmalisa_erna@msu.edu.my

iD <https://orcid.org/0000-0001-9241-2958>

² Department of Tourism Management, Faculty of Hotel and Tourism Management, Universiti Teknologi MARA (UiTM), Puncak Alam Campus, 42300 Bandar Puncak Alam, Selangor, Malaysia

✉ khairun@uitm.edu.my

iD <https://orcid.org/0000-0003-1127-670X>

³ Department of Hotel Management, Faculty of Hotel and Tourism Management, Universiti Teknologi MARA (UiTM), Puncak Alam Campus, 42300 Bandar Puncak Alam, Selangor, Malaysia

✉ norzul61@uitm.edu.my

iD <https://orcid.org/0000-0002-7734-4587>

⁴ Faculty of Applied Social Sciences, Universiti Sultan Zainal Abidin (UniSZA), Gong Badak Campus, 21300 Kuala Nerus, Terengganu, Malaysia

✉ shahirahmior@unisza.edu.my

iD <https://orcid.org/0000-0002-8280-5966>

*Corresponding Author

Article Info:

Article history:

Received date: 22.07.2026

Revised date: 10.08.2026

Accepted date: 24.08.2026

Published date: 20.09.2026

Abstract:

This conceptual paper aims to examine the main determinants of digital resilience among Small and Medium Enterprises (SMEs) involved in Community-Based Tourism (CBT) in Selangor, Malaysia. These micro-enterprises are important to regional socio-economic development but are quite sensitive to unexpected external shocks. The study establishes a framework that differentiates fundamental, transactional digital

To cite this document:

Zaki, Z. E. M., Ahmad, K. N., Sumarjan, N., & Shariffudin, N. S. M. (2026). A Conceptual Framework for Digital Resilience: Investigating the Mediating Role of Strategic Digital Adoption Among CBT SMEs in Selangor. *Advanced International Journal of Business Entrepreneurship and SMEs*, 8 (29), 1492-1508.

adoption from the longer-term capacity for sustained resilience. It proposes a structural model that draws on the Technology-Organization-Environment (TOE) framework to identify technological readiness and environmental pressure as the two main antecedent conditions, and on Dynamic Capabilities Theory (DCT) to explain how these conditions are converted into adaptive capacity. Methodologically, it synthesizes extant literature to produce a series of research propositions positioning strategic digital adoption as the mediating mechanism that links these antecedents to digital resilience as the outcome construct. Conceptual analysis suggests that technological readiness and environmental pressure do not, in and of themselves, give rise to systemic resilience. Their contribution to resilience is expected to occur through strategic digital adoption, which involves operational integration, data governance and proactive business-model adaptation. The authors argue that ad-hoc adoption of technology only provides short-term operational survival, whereas strategic integration develops the dynamic capabilities needed to withstand macroeconomic shocks. Based on this, the framework identifies where tourism operators, policymakers and state organisations such as Tourism Selangor should focus targeted digital-intervention projects to sustain rural micro-economies in the long run.

DOI: 10.35631/AIJBES.829084

Keyword:

CBT SMEs, Digital Resilience, Selangor Tourism, Strategic Digital Adoption, TOE Framework



© The authors (2026). This is an Open Access article distributed under the terms of the Creative Commons Attribution (CC BY NC) (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits non-commercial re-use, distribution, and reproduction in any medium, provided the original work is properly cited. For commercial re-use, please contact aijb@gaexcellence.com.

Introduction

Context and Background of CBT SMEs in Selangor

Community-Based Tourism (CBT) has become an important socio-economic approach in various developing countries as it engages the local community of rural and peri-urban areas by transforming local natural resources and cultural heritage into sustainable tourism goods (Senbeto et al., 2026). In the Malaysian state of Selangor, CBT initiatives, in particular homestay clusters, localised eco-tourism ventures and agricultural tourism cooperatives in districts like Sabak Bernam, Kuala Selangor and Hulu Langat, are important drivers of regional economic diversification. This micro-scale Small and Medium Enterprises (SMEs) provide metropolitan travellers with an authentic engagement with the traditional culture, heritage, and ecological landscapes of rural Malaysia (Hisham et al., 2025).

Unlike corporate hospitality firms, CBT SMEs are structurally defined by collective community ownership, particular operational constraints, and a strong reliance on the conservation of local natural and social ecosystems. In the last decade, state promotional

authorities like Tourism Selangor and the Ministry of Tourism, Arts and Culture (MOTAC) have been actively including these community-led operations into national development masterplans. This integration regards CBT as an effective tool for reducing the urban-rural economic gap, controlling rural youth migration and promoting local entrepreneurship.

The Vulnerability Paradox in Community Tourism

CBT SMEs in Selangor have received widespread recognition for their contribution to economic grassroots models. However, they are caught in a continuous operational conundrum of being deeply embedded into localized cultural and natural ecosystems, which makes them very susceptible to significant external shocks (Senbeto et al., 2026). Unlike major institutional hospitality chains, community-led firms have razor-thin financial margins, no institutionalized risk management techniques, and are heavily dependent on regular, unobstructed people mobility flows.

The history of the global hospitality business has shown that macro-level catastrophes such as health pandemics, localized flooding due to climate change, abrupt changes in macroeconomic indicators and travel alerts can destroy micro tourism ecosystems within days (You et al., 2025). You et al. (2025) also stated that today's macroeconomic climate is variable, unpredictable, complex and ambiguous (VUCA) and rural micro-entrepreneurs can no longer survive on normal operational frameworks. The changing demographics of tourists towards digital natives who are more oriented towards frictionless online engagement is turning the analog communication and marketing tactics of traditional enterprises into a specific competitive disadvantage and a doorway for exclusion from the market.

The Evolution from Digitalization to Digital Resilience

In response to these systemic vulnerabilities, academic and industrial spheres have widely promoted digital transformation as a universal solution for SME survival (Hokmabadi et al., 2024). Initial initiatives focused heavily on basic digitalization, encouraging rural operators to adopt point-of-sale e-wallets, create basic business profiles on mainstream social media platforms, or enlist properties on third-party online travel agencies (OTAs).

Disruptions in the market structure demonstrate that simple use of technology is not a guarantee of survival in the long term. As per stated by Petrova (2025), isolated deployments of digital tools are not sufficient to safeguard a company against deep platform algorithm adjustments, systemic cyber-risks or sudden shifts in digital consumer behaviour. This reality has driven a dramatic movement in academic literature, away from simple adoption indicators and towards the concept of Digital Resilience. In essence, digital resilience is the dynamic capability of a company to mobilize integrated digital resources to survive external shocks (Kocijan & Detelj, 2025; Setyawan et al., 2026). It enables a corporation to instantly adjust operational workflows during a live crisis, turning unanticipated disruptions into real strategic advantages.

Research Objectives and Scope

While the conceptual advantage of digital resilience is well understood, the specific structural paths by which resource-constrained CBT SMEs gain this capacity are underdeveloped. The extant tourism literature often provides generic views by combining group-imprinting micro-

scale homestays with established metropolitan boutique hotels, ignoring the unique resource restrictions and communal governance structures of CBT ecosystems.

This conceptual study addresses these gaps in literature by proposing a specific paradigm to assess the antecedents and internal mechanisms of the digital resilience of CBT SMEs in Selangor. This research is based on the Technology-Organization-Environment (TOE) paradigm and the Dynamic Capabilities Theory (DCT). The three main objectives of this study are:

1. Assessing the two engines of development: Understanding the interplay between internal technical capabilities and external environmental pressures.
2. To realize the mediating mechanism: Framing of strategic digital adoption as the key mediating mechanism that transforms baseline digital inputs into sustainable organizational resilience.
3. To bridge theory and practice: A complete collection of research propositions to stimulate empirical confirmation and give a framework for state level tourist policy development.

Problem Statement

The Transactional-Strategic Misalignment Gap

CBT operators in Selangor have largely accepted basic digital technologies, aided by state finance and literacy programmes (Mohamad, 2024), but the operational gap remains substantial. The issue is that these firms are, on the whole, shallow and transactional consumers of technology. Petrova (2025) notes that digital footprints in this industry are principally limited to basic communications and payment processing, while cloud-supported infrastructures, a single source of truth, or fully integrated booking engines show little real strategic integration. Funding has addressed the initial access issue, but the conversion of basic technical tools at the disposal of SMEs into systemic organisational skills remains largely unaddressed.

These organizations experience a sudden interruption in operations due to the lack of underlying structural resilience in the face of external shocks such as sudden shifts in search engines of online platforms, structural downtime of networks, or regional crises (Kocijan & Detelj, 2025). This dynamic presents a key intellectual and practical question: why does the adoption of core technology not translate into long-term organizational survival amid crises? The solution is the absence of Strategic Digital Adoption, a holistic process of incorporating technology into long-term business governance, community asset planning and proactive risk mitigation strategies (Yang & Ming, 2024).

The Capability-Pressure Implementation Disconnect

The other, more challenging issue is to identify the genuine consequences of internal capabilities and external market conditions on strategic decisions. The classic Technology-Organization-Environment (TOE) paradigm proposes that the development in internal technical knowledge or market elements should lead to improvements in the organization (Mohamad Yusman Ammeran & Abdul Latip, 2024). But in the practice of CBT this planned interaction is frequently interrupted by severe resource restrictions and significant structural friction.

Rural tourist firms are in a worse and more challenging situation on the ground. They are caught between a rock and a hard place with online competitors from major commercial resorts and hyper-fluid wants of digital-native customers (Walewangko et al., 2026). As Mohamad (2024) notes, seminars conducted by the government are working hard to fill in these gaps by enhancing the baseline ICT competencies of community leaders. But there is a huge strategic gap. Local groupings do not have a consistent method of making strategic decisions at the middle level. It is hard for them to relate the skills they just learned to the real needs of the industry. That leaves operators at the mercy of big market forces or worse, spending valuable resources on complex mismatched technology that offers little defense against external shocks.

Lack of Empirically Validated Intervening Models in Micro-Tourism Literature

In the tourism and hospitality literature, there is a lack of an integrative structural model that explains the process of digital resilience development, especially in relation to community-level entrepreneurship (Senbeto et al., 2026). Recent systematic evaluations have extensively mapped the overall association between digital transformation and SME survival, but the precise interplay of digital skills, organizational resilience, and non-financial risk variables requires much deeper exploration (Hokmabadi et al., 2024).

The mechanism which transforms the internal capabilities and external pressures to systematic Digital Resilience in the rural Malaysian tourism has to be explored, since researchers have not yet modelled the role of Strategic Digital Adoption as an operational bridge. This conceptual gap is also a careful blindness. In the absence of a strong framework, academic researchers, owners of small businesses and state policymakers (Tourism Selangor) lack any evidence-based plan. In short, they are shooting in the dark when it comes to defining suitable policies for designing, funding and deploying sustainable and resilient digital transformation initiatives.

Literature Review

Theoretical Underpinning

The Technology-Organization-Environment (TOE) Framework

The TOE framework was originally developed by Tornatzky and Fleischer (1990) and recognizes three different factors which impact on the technology adoption of an organization:

- The Technological Context which involves the internal and external technologies available to the firm, including baseline infrastructure, technical skills and equipment maturity.
- The Organizational Context which includes internal corporate features such as organizational structures, leadership styles, employee culture, and adequate financial reserves.
- The Environmental Context represents the external landscape surrounding an organization, encompassing industry competitors, customer demographics, regulatory frameworks, and macroeconomic volatility.

Tornatzky and Fleischer have proposed a TOE framework which is most useful for CBT SMEs working within different paradigms of community-based management to map the interactions

between internal and external forces on organizational development (Chiew & Cheah, 2025). In order to maintain analytical precision, this current research purposefully disaggregates two distinct constructs that is technical capability from technological dimension and environmental pressure from environmental dimension. This allows a more concentrated and in-depth analysis of how these factors are creating systemic change, while adjusting for differences in the size of organizations.

Dynamic Capabilities Theory (DCT)

The TOE paradigm fits well for the classification of static environmental and internal components, but it does not define how an organization continues to change its everyday activities to survive market shocks over time. To model this fluid process, this work draws on the Dynamic Capabilities Theory (DCT) created by Teece, Pisano and Shuen (1997). DCT defines a firm's dynamic capability as the ability to actively combine, develop and reconfigure internal and external capabilities to satisfy the needs of quickly changing markets. To operationalize this, Teece (2007) decomposed these capacities into three iterative processes:

1. Sensing: The analytical identification of market opportunities and systemic threats.
2. Seizing: The mobilization of organizational resources to capture value from those identified opportunities.
3. Transforming (or Reconfiguring): The continuous realignment of tangible and intangible assets to sustain long-term competitiveness and resilience.

This research challenges the notion of digital technologies as non-active and inactive instrumental components. Rather the company systematically utilize these instruments that is called as a dynamic competency emergent (Setyawan et al., 2026). This paradigm is underpinned by the Dynamic Capabilities Theory (DCT) and perceives a CBT SME strategic digital adaptation as an iterative workflow rather than a one-off purchase. The above workflow is the engine for the firm to constantly sense market shocks, find opportunities in fluid tourist requests and re-align internal operation on the fly. This continuous alignment is one of the main reasons why raw fundamental technology gives a powerful and stable base for true digital resilience (Hisham et al., 2025).

The Construct of Digital Resilience

The concept of organizational resilience as a mere reactive safety net in a crisis has been generally abandoned in contemporary management literature in favor of a rather proactive and continuing ability for strategic adaptation (Duchek, 2020). Naturally, this general ability has been transformed into a specialized form, digital resilience, as ordinary business activities increasingly migrate to the cloud-based ecosystems and data-driven domains (Petrova, 2025). There is a significant conceptual separation between basic digitization and actual digital resilience. Standard digitization is about getting quick operational successes like as automated invoicing or basic social media marketing channels (Hokmabadi et al., 2024). On the other hand, digital resilience focuses on long-term structural agility, secure data safe-keeping and business continuity while an enterprise is operating under extreme operational stress (Kocijan & Detelj, 2025). With resilience, one can immediately derive three basic operational abilities when applied to a community-based tourism enterprise.

- **Absorptive Capacity:** This serves as organization first line of defense, i.e., the capability that shields all fundamental booking data till high visitors' business pass, applying lines of articulated with customers even if the framework is crashed wholly or failed suddenly (Petrova, 2025).
- **Adaptive Capacity:** Essentially, the adaptability of the organisation. This describes the transfer capacity of a corporation to modify its business practices, distribution channels; and regular functioning standards with digital innovations at the time of physical downtimes or an instant localized recession in this industry (Setyawan et al., 2026).
- **Transformative Capacity:** unique capacity to use the digital data and knowledge as a means of reshaping the entire organizational design, not just for survival but also for long-term sustenance. The opportunities will be so limited that local operators may develop entirely new alternative revenue streams, either providing virtual tourism experiences or a home scheme marketplace also can help some to re-enter to totally new market sectors post-crisis (Suryani & Dwiputra, 2025).

Strategic Digital Adoption as an Active Mediator

A lot of the technology acceptance literature maintains a classic trap, treating adoption as binary: whether a tool is present in an enterprise or not. Nevertheless, studies estimating the contribution of advanced manufacturing technology show that it depends mostly on the extent of implementation and strategic goal (Yang & Ming, 2024). The current study highlights that Strategic Digital Adoption is complex and multifaceted beyond using the technology. The strategic digital adoption, however, is a situation where a company has fully integrated digital technologies into its corporate identity, business processes and long-term business models (Petropoulou et al., 2024). In the context of how CBT will operate, this strategic alignment means an end to random decentralized usage of Tools and a turn towards centrally governed integrated vehicles. Examples include:

- **Infrastructure Booking upgrade:** The automation tool for local operators that changes from a basic, manual social media posts to cloud-based reservation engines capable of tracking availability in real time.
- **Data-Fueled Financial Planning:** From data-lacking digital currency exchanges to a data-powered accounting system. Such methods allow managers to assess the budget, which is particularly essential within the low seasons in tourism (Walewangko et al., 2026).
- **Active Risk Management:** Digital risk management policies are a must for organizations. They are capable of keeping customer information access controlled and secured, as well as business activities from external attacks (Petrova, 2025).

This is to highlight the strategic depth. Thus, the theory directly lends itself to considering digital adoption as an intermediary: the mechanism that converts a static set of tools embedded in an organisation for daily enterprise persistence into a diverse, dynamic potential.

Antecedent Factors

Technical Capability

This capability was associated with the technology dimension of the TOE framework that pertains to basic digital literacy, specialized IT skills and technical infrastructures existing in an enterprise (Mohamad Yusman Ammeran & Abdul Latip, 2024). This is often directly within the scope of digital literacy for micro-scale CBT operators, specifically implemented by homestay coordinators or leaders of the village committee (Mohamad, 2024).

Firms with limited technical capability are likely to face significant levels of resistance to technological change, have difficulty with routine system updates, and be extremely susceptible to simple operational disruptions (Petrova, 2025). Conversely, the CBT SME's strong internal technical competency enables it to easily analyze sophisticated digital infrastructures, eliminate setup errors and develop the baseline confidence to execute significant digital transformation efforts (Hisham et al., 2025).

Environmental Pressure

Environmental pressure refers to external forces that require an adjustment of the usual activities of a firm, based on the environmental pillar of the TOE model (Chiew & Cheah, 2025). Rural firms are particularly vulnerable to systemic pressure within the tourism business in three ways:

- **Digital-Native Tourists on the Rise:** Tourism is undergoing a significant demographic shift. Modern tourists are part of a digital native generation and they require immediate confirmation when making an online booking, respond to brief text messages, and amenities that ensure seamless interaction transitions, especially mobile payment options (Walewangko et al., 2026). Those are standards rural operators must meet.
- **Asymmetric Competitive Rivalry:** Big institutional hospitality organizations are increasingly employing Digital Marketing & automated distribution tactics. This forces small business in rural tourism into a position of having to increase their digital profile straight away just enough not to be so totally disengaged with the market (Mohamad, 2024).
- **Volatile Macro Environment:** A high level of external stress arises from sudden and unexpected shocks. These can range from macroeconomic downturns to abrupt regulatory policy shifts, to unexpected public health and safety restrictions. Such hurdles mean that the business will need profound, tech-driven operational agility (You et al., 2025).

Conceptual Framework and Research Propositions

Structural Path Model and Operational Matrix

This conceptual paper presents a structural concept to directly relate a firm with respect to its internal abilities and external market dynamics, that will lead an entity towards long term sustainability. Our model analyses Technical Capability (the internal technological axis) and Environmental Pressure (the external environmental axis) not in isolation, but as independent

drivers. Importantly, the model argues that these two variables do not lead to Digital Resilience by default. Rather, their influence passes through one of the most critical mediating engines our industry has ever known: Strategic Digital Adoption. This is the only adoption mechanism which then turns baseline tech tools and outward market frictions into a powerful, defending long capacity of resilience.

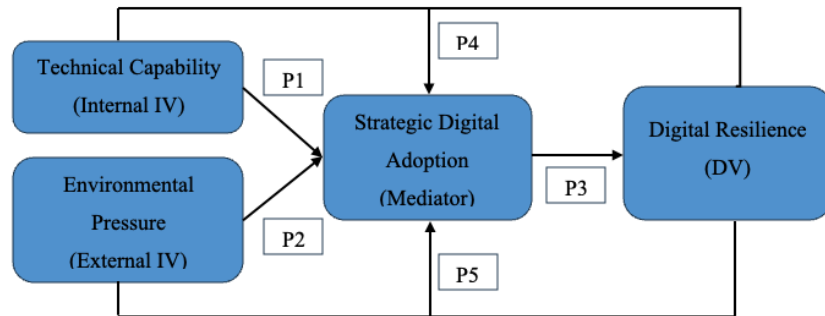


Figure 1: Theoretical Path Model

Source: Authors' own conceptualisation (2026).

Variable Definition and Operational Matrix

Table 1: Variable Definition and Operational Matrix

Variable Name	Construct Dimension	Conceptual Operationalization	Supporting Source Foundations
Technical Capability (Independent Variable) Technological (TOE) Baseline digital literacy	cellular connectivity stability	internal hardware availability	software management competence
Environmental Pressure (Independent Variable) Environmental (TOE) Intensity of market competition	digital requirements of travellers	state digitalization directives	regional macroeconomic volatility. Mohamad (2024)
Strategic Digital Adoption (Mediating Variable) Dynamic Capability (DCT – Seizing) Alignment of digital tools with business goals	utilization of cloud analytics	integration of reservation workflows	formalized digital risk management. Petropoulou et al. (2024)
Digital Resilience (Dependent Variable) Dynamic Capability (DCT – Reconfiguring) Operational continuity during external crises	agility to pivot marketing channels	data recovery capacity	post-crisis business innovation. Kocijan and Detelj (2025)

Source: Authors' own compilation (2026).

Development of Research Propositions

Technical Capability and Strategic Digital Adoption

The relation between internal resources and actual technology adoption is the basis of studies populating the organizational growth literature. Funding for CBT SMEs continues to face challenges. For a successful digital transition, there must be internal technological capabilities (Mohamad Yusman Ammeran & Abdul Latip, 2024). Naturally, a basic lack of digital literacy and consistent connectivity and operational technology will see a complicated digital system from a perspective of where skepticism and terror meet. This lack of knowledge translates to low organizational buy-in. High-end IT investments stagnate or congeal into glorified, stand-alone backend tools (Petrova, 2025).

However, building an IT proficiency in-house radically alters that perception of what a local business can do with technology. The digital skills training also allows the villages' coordinators and homestay managers to graduate from basic transactional apps to be on par with complex data-driven systems (Hisham et al., 2025). With these capabilities in place, operators can use integrated booking engines and secure cloud networks and can invest in digital analytics to draw insights from data on visitor trends. This structural shift is what turns them from passive consumers of technology into strategic actors who understand how to connect their digital investments to broader priorities for survival. This internal mechanism is the basis for the first proposition:

Proposition 1 (P1): *Internal Technical Capability significantly and positively influences Strategic Digital Adoption among CBT SMEs in Selangor.*

Environmental Pressure and Strategic Digital Adoption

Transformations in organizations of any kind, and that includes micro-enterprises, never take place in a vacuum. For example, from an external perspective of the TOE framework, small enterprises' adoption depends to a large extent on their external environment including market factors and aggressive competition (Chiew & Cheah, 2025). In the super-competitive Selangor tourism industry, this is very much a reality that most local operators struggle to adapt to and hence are literally forced to be in an ever-evolving change journey just to keep pace with ageing demographics of consumers who are now being replaced with much younger digital-dominant traveller generations. Tourists today expect the ideal digital life to be considered a given with quick booking confirmations and seamless all-digital payment options (Walewangko et al., 2026). The net effect is that the broader tourism industry is digitalizing around them, with rural micro- and small firms who rely on conventional, analog communication channels facing immediate, fundamental market disconnect.

This pressure is compounded by growing competition from larger, institutional hospitality companies, which pushes community-based firms to accelerate their digital transformation (Mohamad, 2024). Rural operators can see the effective digital marketing their competitors in commercial lodges are using, including automated guest-management systems and virtual tours aimed at securing international markets, and they understandably feel pressure to keep pace. This external pressure changes the meaning of digital integration entirely: it is no longer a luxury that improves efficiency but a condition of staying in business. Sustained market pressure of this kind therefore compels operators to embed digital operations across their organizations simply to remain competitive. That brings us squarely to our second contention:

Proposition 2 (P2): External Environmental Pressure significantly and positively influences Strategic Digital Adoption among CBT SMEs in Selangor.

Strategic Digital Adoption and Digital Resilience

A key insight of Dynamic Capabilities Theory is that a firm must continuously reconfigure its core assets and internal processes to ensure long-term survival in a turbulent market (Teece et al., 1997). In practice, strategic digital adoption is how that capacity for reconfiguration is put into action. For a CBT SME, full digital integration is not merely the adoption of technology; it also provides an adaptive operational cushion against unexpected external shocks (Setyawan et al., 2026). An operator running a cloud-based booking engine, for example, can access visitor data and reservation workflows immediately, regardless of how badly local infrastructure has been damaged, whether by a human-made or a natural disaster (Petrova, 2025).

This kind of purposeful digital adoption gives micro-firms the agility they need to weather an economic shock, and there is evidence that considerable value can follow from this deliberate approach. Strategically aligned operators can respond quickly when physical travel is halted (Sembeto et al., 2026; Suryani & Dwiputra, 2025), for example by adjusting their marketing, launching virtual cultural experiences, or using data-driven insights to target new segments of domestic travellers. The value of deep digital integration is that a crisis need not put the firm on the defensive. Instead, the firm can draw on its digital assets to identify and capture new revenue streams while adapting to shifting market conditions in real time. This brings us directly to our 3rd point:

Proposition 3 (P3): Strategic Digital Adoption significantly and positively influences the development of Digital Resilience among CBT SMEs in Selangor.

The Mediating Architecture of Strategic Digital Adoption

It is predicated on the fundamental proposition that internal technical capabilities and external pressures (and threats), in isolation, cannot create sustained economic resilience through a digital lens. Generally speaking, a firm with advanced digital literacy or strong bandwidth does not, by itself, gain much protection against a random macro-economic shock (Petrova, 2025). Raw tech assets, when deployed in an untargeted and unplanned way rather than purposefully, are found to be under-utilised or often non-functional. How it works is that a corporation embeds its own technology deep into the critical operations of the business. This, indeed, translates into re-engineering operations and safeguarding critical data resources through technology assets, and reviewing consumer touch points on the digital side (Yang & Ming, 2024). Strategic digital adoption activates dormant technology resources, converting them into a living dynamic capability for survival.

It is more than simply a matter of a corporation having solid external components that create its strength. With volatile consumer reactions and high rivalry in the market, firms that lack a reasoned response plan are often driven toward operational instability, or toward investing recklessly in precautionary measures or fear-induced technology investments (Suryani & Dwiputra, 2025). Lacking a consistent mediating frame, robust environmental challenges often lead to chaotic adoption patterns, inadequate digital tools for local actors and a lack of buffer against external shocks. Strategic digital adoption (Hokmabadi et al., 2024) is the primary means for those firms to systematically and intentionally channel the energy of these enormous

market dynamics into operational returns. Ultimately, firms can therefore successfully translate their long-term plans into sound practices for protecting operations against any shifts in passenger behaviour patterns, continuing to minimise disruption from competitors unwilling to adjust quickly enough, and handling macro-level disasters. These important mediation links guide us to our last two propositions:

Proposition 4 (P4): Strategic Digital Adoption significantly mediates the structural relationship between Technical Capability and Digital Resilience among CBT SMEs in Selangor.

Proposition 5 (P5): Strategic Digital Adoption significantly mediates the structural relationship between Environmental Pressure and Digital Resilience among CBT SMEs in Selangor.

Discussion

Theoretical Contributions

This conceptual framework makes various useful contributions to the domains of hospitality management, entrepreneurship and digital transformation research. First, it complements the conventional TOE framework with a structural framework with the dynamic and resource-reconfiguring view of Dynamic Capabilities Theory (Chiew & Cheah, 2025; Teece et al., 1997). Historical TOE research has been extensively focused on uncovering the static factors driving technology adoption. However, this framework extends the predictive power of the model to evaluate long-term post-adoption survival and resilience metrics in highly volatile business environments (Kocijan & Detelj, 2025).

Second, this paper addresses a major gap in small business literature by shifting the primary research focus away from large, corporate hospitality chains toward micro-scale, community-led enterprises (Senbeto et al., 2026). By identifying Strategic Digital Adoption as a vital mediating variable, the framework provides a clear explanation of the internal mechanisms through which resource-constrained enterprises transform raw technological inputs into dynamic, protective capabilities (Setyawan et al., 2026). By emphasizing this structural distinction, the study differentiates temporary technological adoption from deeply embedded, strategy-driven digital resilience. Ultimately, this nuance establishes a robust conceptual framework for future empirical research within developing economies.

Managerial Implications for Selangor CBT Operators

The framework also serves as a practical guide for CBT coordinators, homestay cluster leaders, and rural entrepreneurs in Selangor. Its central argument is that reactive, ad-hoc IT purchases are a dead end: they do little to help a firm survive in today's turbulent operating environment. Managers should therefore not simply adopt the kind of isolated digital applications described by Yang and Ming (2024) but should pursue a far more systematic level of digitization across the whole organization.

This transformation depends on some enabling infrastructure. Mohamad Yusman Ammeran and Abdul Latip (2024) recommend that rural firms first assess the reliability of their internet connection and evaluate basic digital solutions before moving to more complex software. This baseline should be established before management centralizes reservation data, transitions to cloud-based financial tools, and introduces formal risk measures (Petrova, 2025). Putting this

groundwork in place makes two things possible. First, it stabilizes day-to-day operations. Second, it allows these small firms to adjust their marketing strategies as needed, access data when they require it, and maintain a plan for responding to emergencies.

Policy Roadmap for State Tourism Bodies

This framework provides good practical applications for policymakers, state authorities and tourism development organizations such as Tourism Selangor, Selangor State Economic Planning Unit (UPEN) and MOTAC to improve the way regional development plans are designed. Moreover, this paradigm accommodates historically public interventions that were primarily concerned with the delivery of one-off technology grants or basic introductory digital literacy seminars (Mohamad, 2024). While these initiatives improved baseline tool usage, they never provided operators with the strategic competencies to build long-term company resilience.

State initiatives should emphasize sustainable growth by establishing localized digital mentorship networks that provide continuous, practical support to rural homestay operators, guiding them from basic tool use to advanced data analytics and cloud asset management (Petrova, 2025). Also, efficient digital risk management and security measures tailored to the resource constraints of micro-enterprises, protecting them from operational data loss and cyber threats (Petrova, 2025). Finally, to the development of collaborative digital tourism ecosystems that connect rural CBT operators directly to data infrastructure at the state level, supporting community enterprises to make use of real-time market data to shield themselves from macroeconomic shocks (Setyawan et al., 2026).

Conclusion, Methodological Framework, and Future Research

Conclusion

It is important for small-and-medium companies (SMEs) involved in community-based tourism (CBT) in Selangor to build up their strong digital resilience for long-lasting operation and economic sustainability. This conceptual article addresses an important gap in the current tourism literature by distinguishing between the use of basic technology and intentional digital adoption. By integrating the structural perspective of the TOE framework with the dynamic capability's perspective, we show that internal technical competencies and external market forces do not necessarily lead to long-term firm survival. They only reap their benefits with a cohesive, holistic digital approach. This approach is based on deep operational integration, data security and strategic flexibility that enables the rural micro-enterprises with critical competences to survive and grow in the face of extreme market upheavals.

Alignment with the Sustainable Development Goals (SDGs)

This study aligns with the United Nations Sustainable Development Goals (SDGs), particularly SDG 8 (Decent Work and Economic Growth), SDG 9 (Industry, Innovation and Infrastructure), and SDG 11 (Sustainable Cities and Communities). By strengthening the digital resilience of community-based tourism SMEs, the proposed framework supports inclusive and sustained economic growth for rural micro-entrepreneurs in Selangor (SDG 8), promotes the adoption of resilient digital infrastructure and innovation among resource-constrained micro-enterprises

(SDG 9), and contributes to the long-term sustainability of rural and peri-urban communities whose livelihoods depend on community-based tourism (SDG 11).

Proposed Empirical Methodology

Further research should utilize a stringent quantitative methodological approach to test the conceptual framework we proposed. The following is a brief overview of the research. The target population comprised registered CBT operators, homestay cluster coordinators and localized eco-tourism firms in the state of Selangor, Malaysia. One can obtain a sampling frame from the official registry maintained by Tourism Selangor and MOTAC. Because community tourism is quite peculiar, a purposive or stratified random selection should be used by the researchers to avoid misrepresentation/misidentification of the coastal/inland tourism districts. It is advised that the primary data be obtained using structured self-administered survey questionnaires. The measurement items should be derived from the accepted academic measurements and measured on a 5-point Likert scale (Setyawan et al., 2026). The technical competency constructs were adapted from Mohamad Yusman Ammeran and Abdul Latip (2024); the environmental pressure scales from Mohamad (2024); the strategic adoption scales from Petropoulou et al. (2024) and the digital resilience dimensions from Kocijan and Detelj (2025).

The collected empirical data should be evaluated using Partial Least Squares Structural Equation Modelling (PLS-SEM) (Setyawan et al., 2026). This analytic technique is highly beneficial for testing complex mediating interactions with several stages in small to moderate samples. This makes it appropriate for circumstances where research on micro-enterprises is desired. The analysis will be done in two parts. First, the measuring model will be assessed for valid item reliability and discriminant validity. Second, the path coefficients and statistical significance of Propositions 1 to 5 will be tested in the structural model.

Future Avenues of Inquiry

Along with the quantitative methodology, the future academicians might investigate and develop this framework for numerous important ways such as longitudinal evaluations. Longitudinal studies can be conducted before, during, and after a significant economic or environmental catastrophe to track the evolution of digital resilience capacities of a CBT SME across time (Hokmabadi et al., 2024). Moreover, qualitative case studies can also be used to capture the distinctive human experiences, cultural impediments, and community leadership dynamics that affect strategic technological advances in rural communities (Senbeto et al., 2026). And lastly, introduce the specific moderating variables in the structural model such as owner-manager age demographics, localized infrastructural quality variations or direct access to international development funding. The latter tries to enhance the prediction capacity of the framework for different developing economies (Suryani & Dwiputra, 2025; You et al., 2025).

-
- Acknowledgements:** The authors would like to express their sincere gratitude to Management and Science University (MSU) for providing the necessary resources and support throughout the course of this research. Special appreciation is extended to colleagues and peers who contributed valuable insights and constructive feedback, which greatly enhanced the quality of this paper.
- Funding Statement:** No Funding
- Conflict of Interest Statement:** The authors declare that there is no conflict of interest regarding the publication of this paper. All authors have contributed to this work and approved the final version of the manuscript for submission to the Advanced International Journal of Business, Entrepreneurship and SMEs (AIJBES).
- Ethics Statement:** This study did not involve any human participants, animals, or sensitive data requiring ethical approval. The authors confirm that the research was conducted in accordance with accepted academic integrity and ethical publishing standards.
- Author Contribution Statement:** All authors made significant contributions to this conceptual paper. Zakmalisa Erna Md Zaki developed the core concept and methodology and provided overall supervision. Khairun Najiah Ahmad, Norzuwana Sumarjan, and Nur Shahirah Mior Shariffudin carried out the literature synthesis, built the conceptual framework, and prepared the manuscript draft. All authors reviewed the final manuscript critically and approved it before submission.
-

References

- Chiew, K.-Z., & Cheah, J. S. S. (2025). Reassessing ICT adoption among Malaysian SMEs: A post-COVID-19 thematic literature review using TOE framework. *Journal of the Community Development in Asia*, 8(2), 249–265.
- Duchek, S. (2020). Organizational resilience: A capability-based conceptualization. *Business Research*, 13(1), 215–246. <https://doi.org/10.1007/s40685-019-0085-7>
- Hisham, Y. D. K., Abdul Rashid, N., Musa, H., Mohd Yusof, S. W., Al-Shami, S. A. H., & Anggraini, R. (2025). The relationship between dynamic capabilities and Industry 4.0 in sustaining ICT service industry SMEs in Malaysia. *Journal of Technology Management and Technopreneurship*, 13(3). <https://doi.org/10.54554/jtmt.2025.13.03.010>
- Hokmabadi, H., Rezvani, S. M. H. S., & de Matos, C. A. (2024). Business resilience for small and medium enterprises and startups by digital transformation and the role of marketing capabilities: A systematic review. *Systems*, 12(6), Article 220. <https://doi.org/10.3390/systems12060220>
- Johari, S., Mohamad, N., & Abu Talib, A. A. (2025). Hospitality without barriers: Rethinking accessibility for persons with disabilities (PWDs) in Malaysia. *International Journal for Studies on Children, Women, Elderly and Disabled*, 25, 1–9.
- Kocijan, I., & Detelj, K. (2025). Digital resilience of SMEs: Conceptual distinction and strategic factors in the context of disruptions. In *Proceedings of the Central European Conference on Information and Intelligent Systems (CECIIS 2025)* (pp. 283–290). Faculty of Organization and Informatics, University of Zagreb.
- Mohamad, N. (2024). Social media marketing adoption: Is it important for homestay operators in Malaysia? *Social and Management Research Journal*, 21(2), 65–78.
- Mohamad Yusman Ammeran, & Muhammad Safuan Abdul Latip. (2024). Influencing factors of digital transformation in developing economies: A case study of Malaysia's SME sector. *International Journal of Business and Society*, 25(2), 696–712. <https://doi.org/10.33736/ijbs.7623.2024>
- Mohamad, N., Pitra, A., & Wan Idris, W. Z. (2025). Transforming tourism services: The influence of artificial intelligence on travelers' experience. *Semarak International Journal of Future Tourism and Hospitality Management*, 2(1), 1–16. <https://doi.org/10.37934/sijfthm.2.1.116>
- Petropoulou, A., Angelaki, E., Rompogiannakis, I., Passas, I., Garefalakis, A., & Thanasas, G. (2024). Digital transformation in SMEs: Pre- and post-COVID-19 era: A comparative bibliometric analysis. *Sustainability*, 16(23), Article 10536. <https://doi.org/10.3390/su162310536>
- Petrova, L. (2025). *Mentoring and strategic partnerships for SMEs' cybersecurity resilience amid digital transformation* [Master's thesis, Jönköping University]. DiVA portal. <https://hj.diva-portal.org/smash/get/diva2:1965243/FULLTEXT01.pdf>
- Senbeto, D. L., Chuan, L., Biru, A., & Xiao, H. (2026). Navigating adversity: Exploring entrepreneurial resilience in small-scale homestays. *Journal of China Tourism Research*. Advance online publication. <https://doi.org/10.1080/19388160.2026.2626803>
- Setyawan, A. A., Setyawati, E., & Tyoso, J. S. P. (2026). Digital resilience framework for MSME development in facing global market volatility. *APTISI Transactions on Technopreneurship*, 8(1), 239–252. <https://doi.org/10.34306/att.v8i1.800>

- Sudin, M. S., & Mohamad, N. (2025). Factors affecting millennials' preference towards Airbnb accommodation in Klang Valley, Malaysia. *Pertanika Proceedings*, 1(4), 111–115. <https://doi.org/10.47836/pp.1.4.023>.
- Suryani, U., & Dwiputra, I. P. (2025). The impact of organizational innovation capability, organizational agility, and digital strategy on business resilience in food and beverage SMEs: The mediating role of adaptability and the moderating role of transformational leadership. *Indonesian Interdisciplinary Journal of Sharia Economics*, 8(2), 312–330.
- Teece, D. J. (2007). Explicating dynamic capabilities: The nature and microfoundations of (sustainable) enterprise performance. *Strategic Management Journal*, 28(13), 1319–1350. <https://doi.org/10.1002/smj.640>
- Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18(7), 509–533. [https://doi.org/10.1002/\(SICI\)1097-0266\(199708\)18:7<509::AID-SMJ882>3.0.CO;2-Z](https://doi.org/10.1002/(SICI)1097-0266(199708)18:7<509::AID-SMJ882>3.0.CO;2-Z)
- Tornatzky, L. G., & Fleischer, M. (1990). *The processes of technological innovation*. Lexington Books.
- Walewangko, E. N., Lopian, A. L. C. P., Mandagie, Y., & Sondakh, D. S. I. (2026). SME digitalization and marine ecotourism as levers for coastal community welfare: The role of local economic empowerment in North Minahasa Regency, Indonesia. *Tourism and Hospitality*, 7(1), Article 26. <https://doi.org/10.3390/tourhosp7010026>
- Yang, L. C., & Ming, C. W. (2024). Digital transformation and its effects on the financial performance of Malaysian SMEs. *Journal of Digitainability, Realism & Mastery (DREAM)*, 3(8), 21–32. <https://doi.org/10.56982/dream.v3i08.263>
- You, Y., Latada, F., Ziran, Z., & Donghai, H. (2025). Organisational resilience building in small and micro enterprises under the VUCA environment. *Environment-Behaviour Proceedings Journal*, 10(SI24), 257–263. <https://doi.org/10.21834/e-bpj.v10iSI24.6391>