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DIGITAL ENTREPRENEURIAL EMPOWERMENT AND MICROENTERPRISE SUCCESS: A REVIEW WITHIN THE CONTEXT OF KELANTAN, MALAYSIA

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Abstract:

In the rapidly evolving landscape of global business, the growth of small-scale ventures is increasingly dependent on the empowerment and inherent capabilities of the owner-manager. Despite rapid digitalisation, microenterprises in regional markets such as Kelantan continue to struggle with digital adoption. However, a significant theoretical and empirical gap exists regarding how localised socio-economic constraints influence the translation of digital tools into sustainable empowerment. This systematic literature review (SLR) addresses this gap by identifying the relationship between capabilities and the development of Digital Entrepreneurial Empowerment with a specific focus on the socio-economic context of microenterprises in Kelantan, Malaysia. The study examines the multifaceted dimensions of entrepreneurial empowerment, including innovation and technological capabilities. Through a review of existing systematic approaches, the study explores how this innovation and technological capabilities specifically translate into digital empowerment for micro-scale ventures in regional contexts. By employing the systematic approach, this study synthesises multifaceted dimensions of empowerment to explore how these factors collectively mitigate the unique challenges inherent in the Kelantan digital landscape. The review specifically seeks to rectify the lack of evidence-based insights

regarding the digital divide in emerging regional markets. The findings not only contribute a localised framework to the academic discourse on digital entrepreneurship but also provide strategic implications for policymakers and business support entities to foster a more resilient, digitally inclusive microenterprise sector. Ultimately, this review serves as a strategic resource to bridge the gap between theoretical empowerment and the practical digital success of regional entrepreneurs.

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Keywords:

Digital Entrepreneurial Empowerment, Digital Economy, Entrepreneurial Competencies, Microenterprises, Systematic Literature Review



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Introduction

In the landscape of entrepreneurship, specifically digital, the rise of digital knowledge has become increasingly significant, reshaping traditional business models and emphasising the crucial role of digital empowerment (Ferrerias et al., 2017; Gunartin et al., 2023; Kraus et al., 2019; Noorshella Che Nawi. et al., 2019; Paul et al., 2023; Satalkina & Steiner, 2020). As revealed by Schlaegel and Koenig (2014), the success of entrepreneurs is intrinsically related to their adeptness in navigating the digital ecosystem, highlighting the critical importance of capabilities.

This systematic literature review endeavours to enrich the understanding of digital entrepreneurial empowerment capabilities, encompassing dimensions such as capital, innovation, and technology, which collectively contribute to the empowerment of microenterprises.

Recent studies by Paul et al. (2023) accentuate the escalating significance of digital literacy in entrepreneurial pursuits, reinforcing the thematic focus of this study. Additionally, the insights from Schlaegel and Koenig (2014) emphasise the necessity of exploring the intricate interplay between technological innovation and entrepreneurial success, laying the foundation for understanding the specific capabilities demanded by the modern digital landscape.

This review extends previous contributions to provide a comprehensive analysis of the current state of knowledge regarding capabilities within microenterprises. Furthermore, recent research by Satalkina and Steiner (2020) delves into the role of digital technologies in empowering entrepreneurs, further affirming the relevance of digital capital within this scope. By integrating these perspectives, the review aims to identify gaps, challenges, and best

practices in the existing literature, offering a holistic understanding of the factors that shape empowerment and capabilities at the microenterprise level. This research occupies a vanguard position in contemporary discussions, providing valuable insights to the burgeoning field of digital entrepreneurship and establishing a foundation for future research and practical implications in nurturing empowered microenterprises in the digital era.

Literature Review

Conceptualisation of Digital Entrepreneurial Empowerment and Competency

The conceptualisation of Digital Entrepreneurial Empowerment (DEE) in Microenterprises involves a nuanced understanding of the dynamic interplay between digital skills, technological innovation, and entrepreneurial success. To ensure theoretical grounding, DEE is defined as a multidimensional construct comprising digital capabilities, innovation orientation and strategic autonomy. This is relevant to digital adoption by focusing on the owner-manager's capacity to exercise data-driven authority from a digital platform in uncertain environments. Digital Entrepreneurship, often referred to as cyberpreneurship, is the practice of starting enterprises that primarily generate revenue online in various uncertain environments (Abdullah et al., 2023; Mohd Nizam A.Badaruddin, 2018; Norhashim et al., 2018; Salini Aina Mamat. et al., 2018; Wan Safra Diyana Wan Abdul Ghani et al., 2015).

The global business landscape has witnessed unprecedented challenges and transformations in the wake of the COVID-19 pandemic. Amid these uncertainties, the impact of capabilities on the success of microenterprises has garnered increased attention. As businesses navigate the digital landscape to adapt to the “new normal”, understanding the role of digital empowerment and skills becomes imperative for sustained success. However, existing literature remains conceptually vague about the specific structural frameworks that drive this empowerment in resource-constrained areas like Kelantan.

Digital entrepreneurship leverages improvements in computer technology and the internet to conduct business, promote products, or perform transactions (Hazrina Hasbolah. et al., 2020; Tengku Fauzan Tengku Anuar et al., 2021; Vafaei-Zadeh et al., 2023) Therefore, improvements in technology have made a significant impact on entrepreneurial competencies, paving the way for the realisation of Industry 4.0 (figure 1).

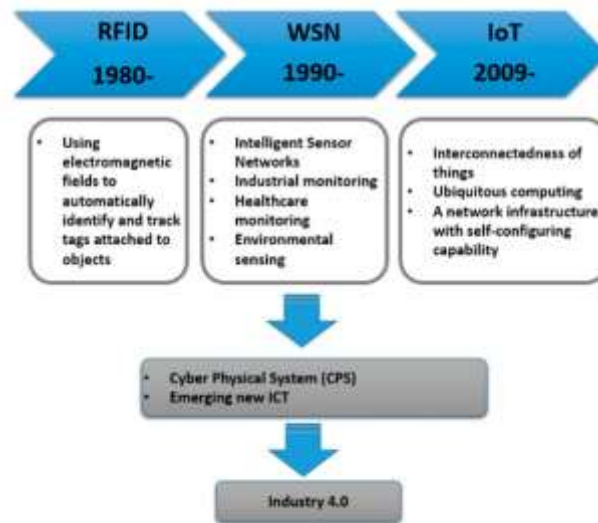


Figure 1: IoT Related Technologies Made a Significant Impact on Cyberpreneurship Competency and Paved the Way for The Realisation of Industry 4.0

Sources: Xu et al. (2018)

Furthermore, as Baptista et al. (2014) revealed, contemporary entrepreneurial ventures rely on capabilities that are vital in the digital landscape. This aligns with past literature that emphasises the intricate relationship between technological innovation and entrepreneurial success, reinforcing the importance of capabilities (Abidur et al., 2017; Iqbal et al., 2020; Mamun et al., 2018).

The theoretical framework also integrates the role of human, digital, and economic capital in entrepreneurial empowerment (Davidsson & Honig, 2003). Specifically, digital capital is recognised as a key component in overall entrepreneurial success, acting as the bridge between war technological access and the strategic empowerment required for microenterprise sustainability.

Methodology

This study adopts a Systematic Literature Review (SLR) approach to rigorously examine the existing body of knowledge regarding the capabilities that drive microenterprise success. The methodology follows the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines to ensure transparency and minimisation of researcher bias.

Identification

The systematic review approach comprises three major phases in selecting various eligible publications for this review. The initial phase focused on comprehensive keyword discovery to ensure a precise yet exhaustive search strategy. This process involved cross-referencing terminologies from previous literature. Previous literature aligns related to entrepreneurship, digital business, and microenterprises (Aziz, 2021; Davidsson & Honig, 2003; Hayrol Azril Mohamed Shaffril et al., 2021; Paul et al., 2023). As a result, specific search strings were developed for three primary high-impact databases: Scopus, ScienceDirect, and Web of Science (see Table 1). Through this rigorous identification process, a total of 3,936 records were initially retrieved (see Table 1)

Search Strategy

The search strategy was designed to capture a broad spectrum of literature relating to digital empowerment and microenterprise success within regional emerging markets. To ensure comprehensiveness, the search employed Boolean operators (AND, OR) to combine keywords representing three core pillars: (1) Digital/Cyber domain, (2) Entrepreneurial Empowerment/Competency, and (3) Microenterprises. The inclusion of these specific terms allowed the review to bridge the gap between global digital trends and the localised socio-economic context of Kelantan. The systematic search strategy, including the specific inclusion of terms related to 'Digital Entrepreneurial Empowerment' and 'Microenterprises' across selected databases, is summarised in Table 1.

Table 1: Database Search Strategy

Database	Search String (Keywords)
Scopus	TITLE-ABS-KEY ("Digital Empowerment" OR "Cyberpreneurship") AND ("Entrepreneurial Competency" OR "Capabilities") AND ("Microenterprises" OR "SMEs")
ScienceDirect	("Digital Entrepreneurship" OR "Cyberpreneurship") AND ("Empowerment") AND ("Success Factors" OR "Competency")
SpringerLink	"Digital Entrepreneurial Empowerment" AND "Microenterprise Success" AND "Malaysia"
Google Scholar	"Digital Entrepreneurial Empowerment" + "Microenterprise Success" + "Kelantan"
Total	

Research Design

The research design is structured as a multistage framework adapted from Satalkina and Steiner (2020), ensuring a systematic transition from raw data to conceptual determinants. This design is bifurcated into two primary phases: (1) the systematic extraction of data via the PRISMA protocol, and (2) the hierarchical clustering of initial nodes into an innovation system framework. This explicit approach enhances the reliability of the findings by filtering empirical evidence based on pre-defined eligibility criteria (see Figure 2) and the details reporting items for systematic reviews (see Figure 3).

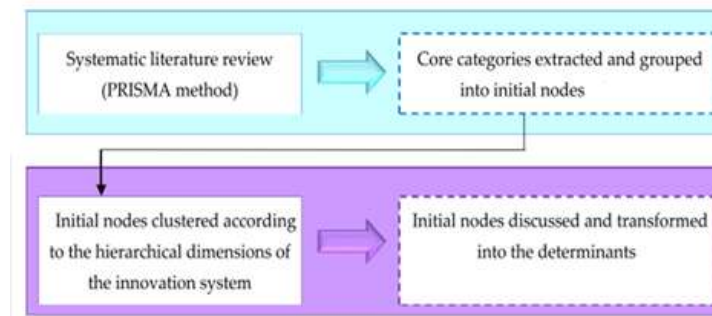


Figure 2: Research Design

Sources: Satalkina and Steiner (2020)

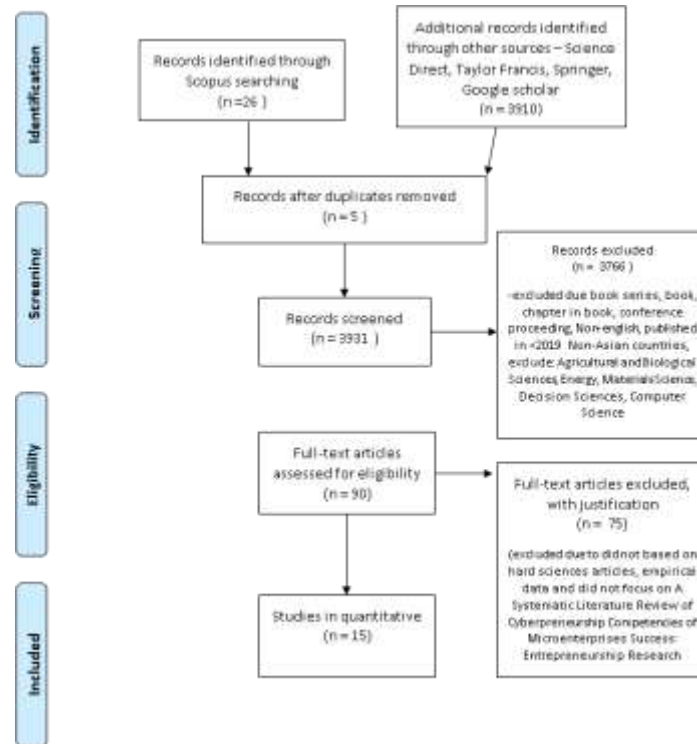


Figure 3: Preferred Reporting Items for Systematic Reviews

The PRISMA Selection Process

The PRISMA selecting process to ensure high-quality synthesis, as illustrated in Figure 3, the study employed a stringent four-stage filtering process:

- **Identification:** A total of 3,936 records were initially identified across the selected database.
- **Screening:** After the removal of duplicates, 3,931 records underwent title and abstract screening. At this stage, 3,766 records were excluded based on strict inclusion/exclusion criteria: only English-language peer-reviewed articles published between 2014, and the present were considered, with a specific focus on the Asian regional context.
- **Eligibility:** 90 full-text articles were assessed for alignment and excluded due to a lack of empirical evidence or a theoretical mismatch.
- **Inclusion:** The final selection includes 15 high-quality studies that provide the empirical basis of this review for the proposed localised framework.

Data Synthesis and Clustering Framework

Following the selection of the 15 studies, the data synthesis phase (Figure 3) was initiated to transform raw information into meaningful insights. This involved extracting variables related to digital success and categorising them into human, digital, and economic capital nodes. By mapping these determinants, the review identifies how specific innovation, and technological capabilities translate into actual empowerment for micro-scale ventures in resource-constrained landscapes like Kelantan.

Characteristics of Included Studies

The systematic review identified 15 key studies that provide empirical and theoretical evidence regarding the capabilities and success factors of microenterprises in the digital landscape. Table 2 presents a summary of these studies, highlighting their geographical context, core research focus, and the primary determinants identified.

Table 2: Summary of Included Quantitative Studies (n=15)

No	Author (Year)	Context/ Country	Research Focus	Key Determinants / Findings
1	Paul et al. (2023)	Global	Digital entrepreneurship research trends	Highlights the critical role of digital literacy and literacy-driven pursuits in entrepreneurship
2	Vafaei-Zadeh et al. (2023)	Malaysia	Cyber-entrepreneurial intention	Identifies technological attitude and subjective norms as key drivers for digital business adoption
3	Gunartin et al. (2023)	SMEs / General	Entrepreneurial competencies	Emphasizes entrepreneurial competencies as the foundational key to SME success
4	Satalkina & Steiner (2020)	Global	Digital entrepreneurship in innovation systems	Affirms the relevance of digital capital and the role of digital technologies in empowering entrepreneurs
5	Abdullah et al. (2023)	Malaysia	Performance and online learning adoption	Establishes links between knowledge, attitude, and performance in digital environments
6	Tengku Fauzan et al. (2021)	Malaysia	Cyberpreneurship for poverty eradication	Explores digital adoption capabilities as a tool for economic empowerment among marginalized groups
7	Iqbal et al. (2020)	Corporate	Entrepreneurial leadership and innovation	Examines how leadership affects employee innovative behavior and technological adaptation
8	Noorshella Che Nawi et al. (2019)	Malaysia	Social media as a business platform	Identifies factors influencing the adoption of social media for micro-business sustainability
9	Kraus et al. (2019)	Global	Digital business models	Highlights the shift toward digital knowledge as a prerequisite for reshaping traditional business models

No	Author (Year)	Context/ Country	Research Focus	Key Determinants / Findings
10	Mamun et al. (2018)	Malaysia	Competitive advantage in micro-enterprises	Identifies strategic capabilities and resources as sources of competitive advantage
11	Mohd Nizam (2018)	Malaysia (HEI)	Adoption of cyberpreneurship	Investigates internal and external factors affecting cyberpreneurship adoption among students
12	Ferrerias et al. (2017)	Global	Entrepreneurship competences in business	Systematizes core competences required for successful business planning and execution
13	Abidur et al. (2017)	Bangladesh	Technology acceptance in marginal strata	Focuses on technology acceptance and social innovation as success factors for micro-entrepreneurs
14	Baptista et al. (2014)	General	Human capital and early success	Distinguishes the impact of human capital on necessity vs. opportunity-based entrepreneurs
15	Schlaegel & Koenig (2014)	Meta-analysis	Determinants of entrepreneurial intent	Highlights the intrinsic link between adeptness in navigating digital ecosystems and entrepreneurial success

Discussion

The findings of this systematic literature review underscore a critical shift in the microenterprise landscape, where Digital Entrepreneurial Empowerment (DEE) serves as the primary catalyst for resilience and growth. Synthesising the included studies reveals that DEE is not a standalone event, but a variety of constructs conceptualised as the integration of digital capabilities, innovation orientation and strategic autonomy that enhances microenterprise competitiveness. This empowerment process is both structural and psychological.

Digital literacy has evolved from a technical skill into a critical mediator of an entrepreneur's psychological empowerment. In the specific context of Kelantan, where traditional business models are undergoing a digital transition, this review interprets global and regional literature to address localised constraints. The results suggest that when owner-managers master digital platforms, their perceived competency increases, which acts as a psychological driver for higher technology acceptance and more proactive strategic autonomy.

Furthermore, the integration of Industry 4.0 technologies, such as IoT and social media analytics, serves as a success determinant by bypassing traditional market barriers. Rather than viewing these as mere promotional tools, they are categorised as core technological capabilities that provide microenterprises with a competitive advantage in the regional digital landscape. This analytical focus shifts the discourse from general policy-driven concepts to specific

microenterprise competitiveness, identifying how data-driven authority allows regional ventures to navigate uncertain environments.

Conclusion

In conclusion, this review provides a rigorous synthesis of the factors influencing microenterprise in the digital era. By specifically addressing the theoretical and empirical gap regarding localised socio-economic constraints, this review establishes that digital capabilities and innovation orientation constitute the variety of constructs of DEE. Through the meticulous application of the PRISMA protocol to select high-quality studies, this research has successfully identified the intricate relationship between competencies and sustainable entrepreneurial success.

The findings move beyond generic descriptions of empowerment to provide an analytical conceptual framework that positions digital. This review clarifies the role of Kelantan as a primary lens for interpreting literature and demonstrating how localised constraints influence the efficacy of digital adoption. Consequently, this study contributes a more precise theoretical underpinning to the academic on digital entrepreneurship.

By conceptualising empowerment through the variety of capital, this study establishes a foundational framework for fostering success in the digital domain. Ultimately, this study serves as an evidence-based roadmap to rectify the digital divide in merging regional markets. It provides strategic insights for policymakers to transition from local concepts to the practical fostering of data-driven authority within the microenterprise sector. This research underscores the necessity of ongoing adaptation in the dynamic digital economy to ensure the long-term sustainability of the microenterprise sector.

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- Author Contribution Statement:** All authors contributed significantly to the development of this manuscript. Zailani Abdullah was responsible for the overall supervision of the study. Salini Aina Mamat handled the draft, literature review, conceptualisation, methodology, and interpretation of results. Hazrina Hasbolah and Tengku Fauzan Tengku Anuar contributed to the supervision of the manuscript. All authors read and approved the final version of the manuscript prior to submission.
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