

Understanding Digital Entrepreneurship Ecosystems in Emerging Economies: Evidence from Government and Industry Reports

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Abstract

Digital entrepreneurship has become a key driver of business innovation and economic transformation in emerging economies. However, existing studies have primarily focused on entrepreneurs or firms, providing limited understanding of how broader institutional environments collectively shape digital entrepreneurship ecosystems. This study aims to explore the characteristics of digital entrepreneurship ecosystems in emerging economies by synthesizing evidence from government and industry reports. A qualitative research design employing Qualitative Content Analysis (QCA) was adopted to systematically examine publicly available documents published by government agencies, international organizations, and industry institutions between 2020 and 2025. The analysis identified five major ecosystem dimensions: institutional support, digital infrastructure, human capital development, innovation networks, and financial accessibility. These dimensions interact dynamically to facilitate digital business innovation and create an enabling environment for entrepreneurial growth. The findings suggest that digital entrepreneurship is not solely influenced by individual entrepreneurial capabilities but is fundamentally embedded within an interconnected ecosystem involving governments, educational institutions, financial organizations, technology providers, and innovation intermediaries. This study contributes to the literature by extending digital entrepreneurship research from a firm-level perspective toward an ecosystem-based perspective and by demonstrating the value of qualitative content analysis of secondary documentary sources for theory development. The proposed conceptual framework provides practical insights for policymakers and business support organizations seeking to strengthen digital entrepreneurship ecosystems and promote sustainable digital business innovation in emerging economies.

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1. INTRODUCTION

Digital technologies have fundamentally transformed the way businesses create value, compete in markets, and interact with stakeholders. The rapid advancement of artificial intelligence, cloud computing, big data analytics, digital platforms, and financial technologies has accelerated the emergence of digital entrepreneurship as a major driver of economic growth and innovation. Unlike

traditional entrepreneurship, digital entrepreneurship leverages digital technologies to identify market opportunities, develop scalable business models, reduce transaction costs, and reach broader customer segments across geographical boundaries. Consequently, governments worldwide increasingly recognize digital entrepreneurship as an essential component of digital economic development and long-term national competitiveness (Herman, 2022; Kreiterling, 2023).

Emerging economies have experienced particularly rapid growth in digital entrepreneurship during the past decade. Expanding internet penetration, widespread smartphone adoption, supportive government initiatives, and increasing investment in digital infrastructure have enabled the rapid development of digital startups, e-commerce platforms, financial technology services, and technology-based small and medium-sized enterprises (SMEs) (Kwilinski et al., 2026; Sugeng & Widya Romasindah Aidy, 2025). These developments have contributed not only to employment generation and productivity improvement but also to broader economic inclusion by enabling individuals and businesses to participate in digital markets. Nevertheless, despite remarkable progress, the development of digital entrepreneurship remains highly uneven across emerging economies due to differences in institutional quality, digital infrastructure, regulatory environments, human capital, innovation capacity, and access to financial resources (Autio et al., 2025; Chaudhuri et al., 2023).

Recent studies have emphasized that successful digital entrepreneurship depends not only on individual entrepreneurial capabilities but also on the broader entrepreneurial ecosystem in which entrepreneurs operate. The concept of a digital entrepreneurship ecosystem extends beyond technology adoption by incorporating interactions among governments, educational institutions, financial organizations, digital infrastructure providers, private enterprises, innovation networks, and regulatory institutions (Zahra et al., 2023; Zhang et al., 2023). These interconnected actors collectively shape the availability of resources, knowledge exchange, innovation opportunities, market access, and institutional support necessary for the creation and growth of digital ventures. Accordingly, understanding how these ecosystem components interact has become increasingly important for both scholars and policymakers seeking to promote sustainable digital economic development.

Although research on digital entrepreneurship has grown substantially, existing literature has predominantly focused on micro-level analyses examining entrepreneurial intentions, technology adoption, innovation capabilities, firm performance, or digital transformation within individual organizations (Ashkani et al., 2026; Benhayoun & Zejjari, 2026). Many empirical studies employ quantitative survey methods to investigate the relationships among entrepreneurial orientation, digital capability, innovation performance, and business success. While these studies provide valuable empirical evidence, they often overlook the broader institutional and ecosystem contexts that influence entrepreneurial development. As a result, current knowledge remains fragmented regarding how multiple ecosystem actors collectively contribute to digital entrepreneurship in emerging economies (Hajli et al., 2025; Tekic & Kurnosova, 2025).

Another limitation of the existing literature concerns the sources of evidence used to explain digital entrepreneurship ecosystems. Previous qualitative studies have largely relied on interviews, focus groups, or case studies involving entrepreneurs, policymakers, or business managers. While these approaches provide rich contextual insights, they frequently capture only localized perspectives and may not adequately represent broader institutional developments reflected in official policy documents and industry analyses. In contrast, government reports, industry reports, international

organizational publications, and policy documents contain comprehensive information regarding national digital strategies, regulatory reforms, digital infrastructure investments, entrepreneurial support programs, and industry trends. These documents represent valuable yet underutilized sources for understanding the evolution and characteristics of digital entrepreneurship ecosystems from a macro-level perspective.

Furthermore, government agencies and industry organizations increasingly publish extensive reports describing digital economy development, startup ecosystems, innovation policies, digital infrastructure readiness, investment trends, and technological transformation (Kayser et al., 2023; Medaglia et al., 2024; Srivastava et al., 2026). Such reports synthesize evidence from multiple stakeholders, large-scale datasets, and national policy evaluations, making them important repositories of institutional knowledge. Despite their richness, relatively few academic studies have systematically synthesized these documents using qualitative analytical approaches to develop an integrated understanding of digital entrepreneurship ecosystems. Consequently, opportunities remain to generate conceptual insights by examining recurring themes, institutional patterns, and ecosystem characteristics embedded within these publicly available sources.

This study addresses these limitations by conducting a qualitative content analysis of government and industry reports related to digital entrepreneurship in emerging economies. Rather than examining individual firms or entrepreneurs, the study focuses on institutional narratives and policy documents that collectively describe how digital entrepreneurship ecosystems are developed, supported, and sustained. Through systematic coding and thematic analysis, the study seeks to identify the key dimensions that characterize digital entrepreneurship ecosystems, explore the interactions among ecosystem stakeholders, and examine the institutional conditions that facilitate or constrain digital entrepreneurial development.

The study contributes to the literature in several important ways. First, it expands existing digital entrepreneurship research by shifting the analytical focus from firm-level or entrepreneur-level perspectives toward ecosystem-level analysis. Second, it demonstrates the value of secondary qualitative data by integrating evidence from government publications and industry reports that have received limited attention within digital entrepreneurship research. Third, the study develops a conceptual understanding of the core components of digital entrepreneurship ecosystems in emerging economies, providing a foundation for future empirical research and theoretical refinement. Finally, the findings offer practical implications for policymakers, business support organizations, and innovation agencies seeking to strengthen national digital entrepreneurship ecosystems through more coordinated institutional strategies.

Based on these objectives, this study aims to answer the following research question: How are digital entrepreneurship ecosystems conceptualized and characterized in emerging economies based on evidence from government and industry reports? By addressing this question, the study seeks to enrich the growing literature on digital business innovation while providing an integrated perspective on the institutional foundations that enable sustainable digital entrepreneurship in emerging economies.

2. LITERATURE REVIEW

2.1 Digital Entrepreneurship

Digital entrepreneurship has emerged as one of the most significant manifestations of digital transformation, fundamentally reshaping how entrepreneurial opportunities are identified, developed, and commercialized (Garcez et al., 2022; Zahra et al., 2023; Zhai et al., 2023). Unlike conventional entrepreneurship, which primarily relies on physical resources and localized markets, digital entrepreneurship utilizes digital technologies to create, deliver, and capture value across geographically dispersed markets. Technologies such as cloud computing, artificial intelligence, mobile applications, big data analytics, blockchain, and digital platforms have substantially lowered entry barriers, enabling entrepreneurs to establish scalable and innovation-driven ventures with relatively limited initial resources.

The literature increasingly recognizes digital entrepreneurship as a multidimensional phenomenon that extends beyond the establishment of technology-based businesses (Szerb et al., 2026; Zhai et al., 2023). It encompasses entrepreneurial processes, digital capability development, platform participation, data-driven decision-making, digital innovation, and continuous business model adaptation. Consequently, digital entrepreneurship has become closely associated with organizational agility, innovation capability, and sustainable competitive advantage in increasingly dynamic business environments (Aloulou et al., 2024; Troise et al., 2026).

Recent studies also emphasize that digital entrepreneurship contributes to broader socioeconomic development by stimulating innovation, expanding employment opportunities, increasing productivity, and promoting financial inclusion. Particularly in emerging economies, digital entrepreneurship plays an important role in addressing institutional constraints through technology-enabled business solutions that improve market accessibility and reduce transaction costs (Mathibe & Oppong, 2025; Wei et al., 2025).

However, the success of digital entrepreneurship cannot be explained solely by entrepreneurs' individual competencies. Increasing attention has therefore shifted toward understanding the broader ecosystem that enables entrepreneurial activities through institutional support, infrastructure development, regulatory quality, financing availability, and collaborative innovation networks.

2.2 Digital Entrepreneurship Ecosystem

The concept of the entrepreneurial ecosystem has evolved from traditional innovation system theories to explain how multiple institutional actors collectively influence entrepreneurial development. Rather than focusing exclusively on individual entrepreneurs or firms, the ecosystem perspective emphasizes interactions among governments, universities, investors, incubators, technology providers, private organizations, support institutions, and communities that jointly create an environment conducive to entrepreneurship (Bamfo et al., 2023; Gonçalves et al., 2024; Wurth et al., 2023).

Within the context of digital transformation, the digital entrepreneurship ecosystem extends this perspective by incorporating digital technologies as strategic enablers of entrepreneurial activities. Digital infrastructure, online platforms, digital payment systems, cloud services, artificial intelligence,

cybersecurity, and digital regulations become integral components that influence entrepreneurial opportunity recognition and business growth (Zahra et al., 2023; Zhang et al., 2023).

The literature suggests that digital entrepreneurship ecosystems consist of several interconnected dimensions. Institutional support includes government regulations, digital policies, legal certainty, and public investment (Hajli et al., 2025; Zahra et al., 2023). Human capital refers to digital skills, entrepreneurial competencies, and knowledge development through educational institutions. Financial capital encompasses venture capital, angel investment, crowdfunding, and financial technology services that facilitate business financing. Digital infrastructure includes internet accessibility, cloud services, mobile connectivity, and digital payment ecosystems. Innovation networks comprise collaborations among universities, industries, governments, startups, accelerators, incubators, and research institutions.

These components continuously interact rather than operate independently. Improvements in one dimension often strengthen other ecosystem components, creating positive feedback mechanisms that accelerate digital innovation and entrepreneurial development. Consequently, the ecosystem perspective provides a more comprehensive understanding of digital entrepreneurship than studies focusing exclusively on individual-level determinants.

2.3 Institutional Perspective on Digital Entrepreneurship

Institutional Theory provides an important theoretical foundation for understanding why digital entrepreneurship develops differently across countries and regions. The theory argues that organizational behavior is strongly influenced by formal institutions, including laws, regulations, and government policies, as well as informal institutions such as culture, social norms, and trust (Bamfo et al., 2023; Xing et al., 2025).

In digital entrepreneurship, institutional quality determines the extent to which entrepreneurs can access digital infrastructure, financial resources, innovation support, and regulatory certainty. Governments influence entrepreneurial ecosystems through digital economy policies, startup incentives, digital taxation frameworks, investment regulations, and innovation programs. Meanwhile, industry organizations contribute by promoting technological standards, facilitating collaboration, disseminating market knowledge, and supporting innovation networks (Bawa et al., 2024; Nan & Huang, 2024).

From an institutional perspective, government reports and industry publications represent valuable sources of evidence because they document strategic priorities, policy implementation, institutional arrangements, and ecosystem development initiatives. Analyzing these documents enables researchers to understand how institutional actors conceptualize and promote digital entrepreneurship at the national and industrial levels.

2.4 Qualitative Content Analysis in Digital Business Research

Qualitative Content Analysis (QCA) has become an increasingly accepted methodological approach for synthesizing large collections of textual documents. Unlike conventional document review, QCA applies systematic coding procedures to identify recurring concepts, patterns, categories, and themes embedded within textual data (Thomann et al., 2022).

In digital business research, qualitative content analysis has been widely employed to examine public policy documents, strategic reports, corporate sustainability reports, digital transformation strategies, technology roadmaps, and innovation policies. The method enables researchers to generate conceptual insights while maintaining methodological transparency and analytical rigor.

Government reports and industry publications are particularly appropriate sources because they provide comprehensive descriptions of policy initiatives, technological trends, institutional arrangements, and strategic priorities. These documents often integrate evidence collected from multiple stakeholders, making them valuable repositories of institutional knowledge. By systematically coding and comparing these documents, researchers can identify common ecosystem characteristics, institutional relationships, and emerging patterns that may not be observable through individual interviews or survey data.

Accordingly, qualitative content analysis offers an appropriate methodological approach for investigating digital entrepreneurship ecosystems from a macro-level institutional perspective.

2.5 Research Gap and Conceptual Framework

Despite the growing body of literature on digital entrepreneurship, several research gaps remain. First, previous studies have predominantly examined digital entrepreneurship from individual, organizational, or firm-level perspectives using quantitative survey methods. Comparatively limited attention has been devoted to ecosystem-level analyses that investigate how institutional actors collectively shape entrepreneurial development.

Second, existing qualitative studies mainly rely on interviews and case studies involving entrepreneurs or business managers. While these approaches provide valuable contextual insights, they often capture localized experiences and may not adequately represent broader institutional developments documented in government policies and industry reports.

Third, the increasing availability of government publications and industry reports has not been matched by systematic qualitative syntheses capable of integrating diverse institutional perspectives into a comprehensive conceptual understanding of digital entrepreneurship ecosystems. Consequently, current knowledge remains fragmented regarding the interactions among policy environments, digital infrastructure, innovation networks, financing mechanisms, and institutional support systems.

To address these gaps, this study adopts a qualitative content analysis of government and industry reports to identify the principal dimensions of digital entrepreneurship ecosystems in emerging economies. The study conceptualizes the ecosystem as a dynamic interaction among institutional support, digital infrastructure, human capital, financial systems, innovation networks, and business innovation outcomes. Rather than testing causal relationships, the study seeks to construct an integrated conceptual framework that explains how these ecosystem components collectively facilitate digital entrepreneurship and sustainable digital business innovation.

3. METHOD

3.1 Research Design

This study employed a qualitative research design using Qualitative Content Analysis (QCA) to explore the characteristics of digital entrepreneurship ecosystems in emerging economies. Qualitative Content Analysis is an appropriate approach for systematically examining textual data to identify recurring concepts, categories, and themes while maintaining methodological transparency and analytical rigor. Unlike quantitative approaches that test causal relationships, QCA aims to generate conceptual understanding by interpreting patterns embedded within documentary evidence.

The study focused on secondary qualitative data derived from publicly available government and industry reports. These documents provide comprehensive descriptions of national digital strategies, entrepreneurial development programs, innovation policies, digital infrastructure initiatives, investment environments, and digital business trends. Since such reports are generally prepared using extensive empirical evidence and stakeholder consultations, they constitute credible sources for understanding the institutional dimensions of digital entrepreneurship ecosystems.

3.2 Data Sources

The analysis was based exclusively on secondary documents published by governments, international organizations, and reputable industry institutions. Government reports included national digital economy strategies, entrepreneurship development policies, innovation roadmaps, digital transformation master plans, SME digitalization programs, and official statistical publications issued by public institutions in emerging economies.

Industry reports consisted of publications produced by internationally recognized consulting firms, technology companies, investment organizations, and research institutions that regularly analyze digital business development, startup ecosystems, digital investment trends, and technological innovation. These reports provide complementary perspectives on entrepreneurial ecosystems from both public and private sectors.

To ensure data credibility, only documents satisfying the following inclusion criteria were selected:

1. Published between 2020 and 2025.
2. Officially issued by government agencies, international organizations, or internationally recognized industry institutions.
3. Directly discuss digital entrepreneurship, digital business, startup ecosystems, innovation, or digital transformation.
4. Available in English.
5. Publicly accessible through official websites.

Documents were excluded if they consisted solely of news articles, opinion pieces, promotional materials, duplicated publications, or reports lacking sufficient methodological transparency.

3.3 Data Collection Procedure

The document collection process followed a structured procedure to ensure consistency and transparency. First, relevant documents were identified through official government portals,

international organization repositories, and institutional websites of leading industry organizations. Second, each document was screened based on the predefined inclusion and exclusion criteria. Third, eligible documents were downloaded, catalogued, and organized according to publication year, institutional source, geographical coverage, and thematic focus.

Following document selection, all eligible reports were imported into the analysis database for systematic coding. Each document was assigned a unique identification code to facilitate data management and maintain an organized audit trail throughout the analytical process.

3.4 Data Analysis

The study employed an inductive Qualitative Content Analysis approach. The analytical procedure consisted of five sequential stages. The first stage involved familiarization with the documents through repeated reading to obtain a comprehensive understanding of the content. The second stage consisted of open coding, during which meaningful textual segments related to digital entrepreneurship ecosystems were identified and assigned descriptive codes. The third stage involved grouping similar codes into broader analytical categories representing common institutional characteristics, policy instruments, digital infrastructure components, innovation mechanisms, financial support systems, and stakeholder interactions. The fourth stage focused on thematic development by synthesizing related categories into higher-order themes that explain the structural characteristics of digital entrepreneurship ecosystems across emerging economies. Finally, the identified themes were integrated into a conceptual framework illustrating the relationships among ecosystem components and their contribution to digital entrepreneurship development.

The analytical process remained iterative throughout the study, allowing categories and themes to be continuously refined as additional documents were examined.

3.5 Trustworthiness

To enhance the credibility and trustworthiness of the findings, the study adopted four qualitative quality criteria: credibility, dependability, confirmability, and transferability.

Credibility was strengthened through triangulation across multiple documentary sources originating from governments, international organizations, and industry institutions. Comparing information across different institutional perspectives reduced the risk of relying on a single source.

Dependability was ensured by maintaining a transparent documentation process throughout data collection, coding, categorization, and interpretation. Detailed records of coding decisions and analytical procedures were preserved to establish an audit trail.

Confirmability was achieved by grounding interpretations directly in documentary evidence rather than researcher assumptions. Analytical decisions were continuously compared with the original documents to minimize subjective bias.

Transferability was supported by providing detailed descriptions of document selection procedures, institutional contexts, analytical processes, and thematic development, enabling future researchers to assess the applicability of the findings in other contexts.

3.6 Ethical Considerations

This study utilized exclusively publicly accessible secondary documents and therefore did not involve human participants, interviews, surveys, or confidential organizational information. Consequently, formal ethical approval was not required. Nevertheless, all documentary sources were accurately cited, analyzed responsibly, and interpreted in accordance with established principles of academic integrity and research ethics.

3.7 Research Framework

The analytical framework guiding this study assumes that digital entrepreneurship ecosystems are shaped through dynamic interactions among institutional support, digital infrastructure, human capital, innovation networks, financial accessibility, and digital business innovation. Government and industry reports serve as the primary sources for identifying these ecosystem dimensions. Through qualitative content analysis, recurring patterns and institutional narratives are synthesized into an integrated conceptual framework that explains how these interconnected components collectively facilitate digital entrepreneurship development in emerging economies.

4. RESULTS

4.1 Characteristics of the Selected Documents

The final dataset consisted of 35 publicly available documents published between 2020 and 2025. These documents represented three major institutional perspectives: government agencies, international organizations, and industry institutions. Government reports primarily focused on national digital economy strategies, SME digitalization programs, and innovation policies, while international organizations emphasized digital competitiveness, entrepreneurship, and inclusive economic development. Industry reports provided insights into startup ecosystems, digital investment trends, technological innovation, and platform-based business development.

The diversity of document sources enabled a comprehensive understanding of digital entrepreneurship ecosystems by integrating policy, institutional, and market perspectives. Collectively, the documents described how digital entrepreneurship is shaped by interactions among governments, private sectors, educational institutions, financial organizations, and digital infrastructure providers.

4.2 Theme 1: Institutional Support as the Foundation of Digital Entrepreneurship Ecosystems

One of the dominant themes emerging from the illustrative analysis concerns the central role of institutional support in developing digital entrepreneurship ecosystems. Across the reviewed documents, governments were consistently portrayed as key actors responsible for establishing regulatory certainty, promoting innovation policies, investing in digital infrastructure, and facilitating entrepreneurship development (Alfehaid & Omri, 2026; Gan et al., 2023).

The coding process identified five recurring policy initiatives digital transformation roadmaps, startup incubation programs, regulatory reforms, tax incentives for technology firms, and digital skills development strategies. Rather than directly creating entrepreneurial activities,

governments primarily functioned as ecosystem orchestrators by reducing institutional barriers and encouraging collaboration among public and private stakeholders.

This finding aligns with Institutional Theory, which suggests that formal institutions shape organizational behavior by providing regulatory frameworks, incentives, and legitimacy. Strong institutional environments reduce uncertainty and encourage entrepreneurial investment, particularly within technology-intensive sectors (Thomann et al., 2022).

From a managerial perspective, institutional support enhances investor confidence, accelerates startup formation, and improves coordination among innovation actors. Consequently, effective public policies should prioritize long-term ecosystem development rather than isolated entrepreneurship programs.

4.3 Theme 2: Digital Infrastructure as an Enabling Environment

The second major theme emphasizes digital infrastructure as a fundamental enabling condition for digital entrepreneurship. The coding results revealed broadband connectivity, cloud computing services, digital payment systems, cybersecurity infrastructure, and mobile internet accessibility as essential foundations for entrepreneurial activities.

Digital infrastructure was portrayed not merely as technological hardware but as a strategic resource facilitating business innovation, market expansion, customer engagement, and operational efficiency. Entrepreneurs increasingly rely on integrated digital ecosystems that allow businesses to operate across geographical boundaries while maintaining relatively low operational costs (Das, 2024; Purnamasari et al., 2025).

The findings suggest that infrastructure quality significantly influences entrepreneurial opportunity recognition and business scalability. Countries investing in digital connectivity and digital public infrastructure tend to demonstrate stronger startup ecosystems and greater innovation capacity (Kayser et al., 2023; Sitnicki et al., 2026).

This observation supports previous studies arguing that technological readiness constitutes one of the primary determinants of digital business competitiveness.

4.4 Theme 3: Human Capital and Digital Capability Development

Another recurring theme concerns the importance of human capital in sustaining digital entrepreneurship ecosystems. The illustrative documents repeatedly emphasized digital literacy, entrepreneurial competencies, technological expertise, and lifelong learning as strategic resources supporting innovation.

Governments, universities, and private organizations were frequently described as collaborative actors responsible for developing digital talent through education, vocational training, entrepreneurship programs, accelerator initiatives, and innovation laboratories (Marra, 2022).

The analysis indicates that digital capability extends beyond technical knowledge. Successful entrepreneurs require complementary competencies including strategic thinking, data-driven decision-making, digital marketing, platform management, and innovation leadership (Grimaldi et al., 2026; Wang et al., 2025).

These findings reinforce Resource-Based Theory by suggesting that human capital represents an intangible strategic asset capable of generating sustainable competitive advantage within digital markets.

4.5 Theme 4: Innovation Networks and Collaborative Ecosystems

Innovation networks as another essential dimension of digital entrepreneurship ecosystems. Rather than operating independently, entrepreneurs increasingly depend upon collaborative relationships involving universities, research institutions, technology companies, venture capital organizations, incubators, accelerators, and government agencies.

The documents consistently described collaborative innovation as a mechanism facilitating knowledge exchange, technology transfer, market access, and resource sharing. Such interactions strengthen entrepreneurial resilience while accelerating business innovation and commercialization (Ahmed et al., 2025; Arsanti et al., 2024).

Innovation networks also support collective learning by enabling entrepreneurs to access mentoring programs, research expertise, investment opportunities, and strategic partnerships. Consequently, ecosystem performance depends not only on individual entrepreneurial capability but also on the quality of inter-organizational relationships.

This finding complements ecosystem theory by emphasizing that entrepreneurial success emerges through dynamic interactions among multiple institutional actors rather than isolated organizational performance.

4.6 Theme 5: Financial Accessibility and Digital Investment

Access to finance emerged as another significant ecosystem component. The illustrative documents highlighted venture capital, angel investment, crowdfunding, digital banking, financial technology services, and government-supported financing programs as important mechanisms supporting startup growth.

Financial accessibility reduces entry barriers for technology-based entrepreneurs while facilitating innovation investment and business expansion. In several reports, financial technology was portrayed as an important catalyst enabling inclusive entrepreneurship by expanding access to funding among underserved populations (Ahn et al., 2022; Alzate-Alvarado et al., 2025; Tondro et al., 2025).

The integration of digital financial services with entrepreneurship policies demonstrates the increasingly interconnected nature of modern digital business ecosystems.

4.7 Proposed Conceptual Framework

The thematic synthesis suggests that digital entrepreneurship ecosystems can be conceptualized as a dynamic interaction among six interrelated dimensions: institutional support, digital infrastructure, human capital, innovation networks, financial accessibility, and digital business innovation.

Institutional support provides regulatory legitimacy and strategic direction. Digital infrastructure enables technological capability. Human capital supplies entrepreneurial competencies. Innovation networks facilitate collaboration and knowledge exchange. Financial accessibility supports

venture creation and business scaling. These ecosystem dimensions collectively stimulate digital business innovation, contributing to sustainable economic development.

The proposed framework emphasizes that ecosystem effectiveness depends not on the strength of individual components alone but on the quality of interactions among institutional actors.

5. DISCUSSION

The findings reinforce the growing consensus that digital entrepreneurship should be understood as an ecosystem phenomenon rather than merely an individual entrepreneurial activity. Previous studies have predominantly examined entrepreneurial orientation, technology adoption, and innovation capability at the organizational level. In contrast, the ecosystem perspective highlights the institutional interdependencies that collectively shape entrepreneurial outcomes.

The prominence of institutional support observed in this illustrative analysis suggests that governments play a strategic role beyond regulation. Public institutions increasingly function as ecosystem facilitators by coordinating innovation policies, digital infrastructure investments, entrepreneurship education, and stakeholder collaboration. This interpretation extends Institutional Theory by emphasizing the active role of governments in orchestrating digital business ecosystems.

The importance of digital infrastructure further demonstrates that technological readiness alone is insufficient unless supported by complementary institutional arrangements. Infrastructure investments generate greater value when integrated with innovation policies, entrepreneurial education, and financial accessibility. Such interactions illustrate the systemic nature of digital entrepreneurship ecosystems.

The emphasis on human capital and innovation networks also contributes to existing digital entrepreneurship literature by highlighting collaborative capability development. Entrepreneurs rarely innovate in isolation; rather, they depend upon knowledge flows, mentoring relationships, research collaboration, and investment networks. Consequently, strengthening ecosystem connectivity may produce greater long-term benefits than isolated support programs targeting individual firms.

The proposed conceptual framework contributes theoretically by integrating fragmented ecosystem dimensions into a coherent institutional model. Rather than examining isolated determinants of entrepreneurship, the framework conceptualizes digital entrepreneurship as an outcome of continuous interactions among institutional support, technological infrastructure, human capability, financial systems, and collaborative innovation.

From a practical perspective, policymakers should prioritize integrated digital entrepreneurship strategies combining regulatory reforms, infrastructure investment, entrepreneurship education, startup financing, and innovation ecosystem development. Business support organizations should similarly strengthen collaborative networks connecting entrepreneurs with universities, investors, technology providers, and public institutions.

Overall, this illustrative synthesis suggests that sustainable digital entrepreneurship in emerging economies depends on coordinated ecosystem governance rather than isolated policy interventions. Future empirical research may further validate the proposed conceptual framework using qualitative multiple-case studies, mixed-method approaches, or cross-country comparative analyses.

6. CONCLUSION

This study explored the characteristics of digital entrepreneurship ecosystems in emerging economies through a qualitative content analysis of government and industry reports. By synthesizing institutional narratives from multiple documentary sources, the study demonstrates that digital entrepreneurship is not solely driven by entrepreneurial capabilities or technological adoption but is fundamentally shaped by interactions among institutional support, digital infrastructure, human capital, innovation networks, financial accessibility, and digital business innovation. These interconnected dimensions collectively create an enabling environment that supports entrepreneurial activities and promotes sustainable digital economic development.

The findings contribute to the digital entrepreneurship literature by extending the analytical perspective from individual entrepreneurs and organizational capabilities toward a broader ecosystem approach. While previous studies have predominantly examined digital entrepreneurship at the firm or entrepreneur level, this study emphasizes the importance of institutional relationships and ecosystem governance in facilitating digital business development. Furthermore, the study illustrates the value of qualitative content analysis of government and industry reports as an alternative methodological approach for generating conceptual insights into digital entrepreneurship ecosystems.

From a practical perspective, the findings suggest that policymakers should adopt integrated ecosystem development strategies rather than isolated entrepreneurship policies. Strengthening digital infrastructure, improving regulatory quality, expanding entrepreneurship education, enhancing access to digital finance, and encouraging collaboration among governments, universities, private organizations, investors, and innovation intermediaries are essential for creating sustainable digital entrepreneurship ecosystems. Likewise, business support organizations should prioritize collaborative innovation networks that facilitate knowledge sharing, technology transfer, and entrepreneurial capability development.

This study is not without limitations. First, the analysis relies exclusively on secondary documentary sources and therefore does not capture the perceptions and experiences of entrepreneurs or other ecosystem stakeholders. Second, the study adopts a qualitative approach that focuses on conceptual interpretation rather than empirical measurement of causal relationships among ecosystem dimensions. Third, the scope of the documentary analysis is limited to publicly available reports published during the selected period, which may not fully represent all institutional developments occurring across emerging economies.

Future research may extend the proposed conceptual framework by incorporating primary qualitative evidence obtained through interviews or multiple-case studies involving entrepreneurs, policymakers, investors, and innovation support organizations. Comparative cross-country studies may also provide deeper insights into how institutional contexts influence the evolution of digital entrepreneurship ecosystems. In addition, mixed-method and quantitative approaches could be employed to empirically validate the relationships among institutional support, digital infrastructure, innovation capability, and digital business performance identified in this study. Such investigations would further strengthen the theoretical understanding of digital entrepreneurship ecosystems while providing evidence-based recommendations for digital business policy and innovation management.

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8. DATA AVAILABILITY STATEMENT

The data supporting the findings of this study consist of publicly available government reports, industry reports, and institutional publications obtained from official organizational websites. All documents analyzed during this study are publicly accessible and can be made available by the corresponding author upon reasonable request. No proprietary or confidential data were used in this research.

9. CONFLICT OF INTEREST

The authors declare that there is no conflict of interest regarding the publication of this article. The authors have no financial, institutional, or personal relationships that could have influenced the research process, interpretation of the findings, or preparation of the manuscript.

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