African Scientific Journal
ISSN : 2658-9311
Vol : 03, Num 32 Octobre 2025

# Entrepreneurial pathways and technological innovation: A theoretical framework for understanding the dynamics of technology-driven venture creation.

Auteur 1 : GOUMGHAR Said.
Auteur 2 : OUAHRAOUI Fatima.
Auteur 3 : FIKRI Majda.
Auteur 4 : ZOUBIR Faical.

**GOUMGHAR Said,** PhD in Management Science
Université Ibn Zohr – ENCG Agadir, Maroc
Laboratoire de Recherche en Management Digital, Innovation et Logistique.

**OUAHRAOUI Fatima,** PhD Professor
Université Ibn Zohr – ENCG Agadir, Maroc
Laboratoire de Recherche en Management Digital, Innovation et Logistique.

**FIKRI Majda,** PhD Professor
Université Ibn Zohr – ENCG Agadir, Maroc
LISIMA – FP Taroudannt

**ZOUBRI Faical,** PhD Professor
Université Ibn Zohr – EST Agadir, Maroc

**Déclaration de divulgation :** **L'auteur n'a pas connaissance de quelconque financement qui pourrait affecter l'objectivité de cette étude.**

**Conflit d'intérêts :** **L'auteur ne signale aucun conflit d'intérêts.**

**Pour citer cet article :** **GOUMGHAR .S, OUAHRAOUI .F, FIKRI .M & ZOUBRI .F (2025). « Entrepreneurial pathways and technological innovation: A theoretical framework for understanding the dynamics of technology-driven venture creation », African Scientific Journal « Volume 03, Num 32 » pp: 0278 – 0297.**

**DOI : 10.5281/zenodo.17257975**

AFRICAN SCIENTIFIC JOURNAL
MANAGEMENT AND ECONOMIC DEVELOPMENT

African Scientific Journal
ISSN : 2658-9311
Vol : 03, Num 32 Octobre 2025

**Abstract**

This paper develops an integrative theoretical framework to account for the dynamics of technology-driven venture creation. Grounded in a conceptual methodology that draws on an extensive review of the relevant literature, it seeks to move beyond fragmented accounts of entrepreneurship, innovation, and context. The framework synthesizes three central constructs, technology entrepreneurship, the entrepreneurial ecosystem, and digital transformation. It conceptualizes the entrepreneurial process as a dynamic and non-linear trajectory informed by effectual reasoning, while demonstrating how digital transformation and ecosystem resources function as enabling forces. Central to this model is the proposition of a co-emergent relationship in which entrepreneurial action, technological change, and environmental resources are mutually constitutive. This conceptualization offers a more refined understanding of how opportunities are identified, constructed, and exploited within technology-intensive settings. Several theoretical contributions emerge. For entrepreneurship research, the framework provides a holistic and context-sensitive lens that situates entrepreneurial dynamics within technological and systemic environments. For innovation studies, it reaffirms the entrepreneur's role as the principal agent of technological change and diffusion. Practical insights also follow. Entrepreneurs are encouraged to adopt adaptive, effectual strategies that capitalize on digital tools and ecosystemic resources rather than rigid causal planning. Policymakers are urged to design multifaceted entrepreneurial ecosystems rather than isolated support measures. For educators, the framework highlights the need for curricula that cultivate adaptability and technological literacy. Collectively, this work establishes a robust conceptual foundation for future empirical inquiry and guidance for navigating the complexities of technology-driven entrepreneurship in the digital era.

**Keywords :** Technology Entrepreneurship, Entrepreneurial Ecosystems, Digital Transformation, Innovation, Venture Creation

African Scientific Journal
ISSN : 2658-9311
Vol : 03, Num 32 Octobre 2025

## Introduction

The acceleration of technological change has fundamentally altered the landscape of new venture creation, making the intersection between entrepreneurial processes and technological innovation a central concern for both scholars and practitioners (Autio et al., 2018; Nambisan, 2017). While entrepreneurship research has traditionally focused on the individual entrepreneur or the venture as the primary unit of analysis, the increasing prominence of artificial intelligence, blockchain, and platform technologies demands a more sophisticated understanding of how technological artifacts and infrastructures co-evolve with entrepreneurial action (Srinivasan & Venkatraman, 2018). This theoretical tension between the social dynamics of entrepreneurship and the material realities of technology constitutes the core problematic that motivates the present study.

Over the past decade, a growing body of work has examined how digital technologies reshape entrepreneurial processes (Briel et al., 2018; Sahut et al., 2021). Yet these contributions remain fragmented across multiple disciplinary boundaries, ranging from information systems to strategic management and innovation studies. Consequently, we lack an integrative framework capable of explaining how entrepreneurial trajectories unfold within technology-intensive contexts, and how different technological affordances enable or constrain specific pathways of venture creation. Specifically, three critical gaps emerge from the extant literature.

First, although stage-based models of entrepreneurship (e.g., McMullen & Dimov, 2013) provide valuable insights into the temporal progression of ventures, they seldom account for the recursive and non-linear influences of technological artifacts (Garud, Kumaraswamy, & Karnøe, 2022). The assumption that entrepreneurs merely "adopt" technologies at discrete stages overlooks the continuous co-shaping between technological possibilities and entrepreneurial agency (Leonardi, 2013).

Second, innovation diffusion research has emphasized the characteristics of technologies (Rogers, 2003) and the structure of networks (Valente, 2022), but has paid limited attention to how entrepreneurs themselves navigate technological uncertainty and complexity throughout their journey (Ferrari et al., 2020). Third, while the entrepreneurial ecosystem perspective stresses the importance of contextual factors (Spigel, 2017), it remains unclear how technological infrastructures such as APIs, cloud services, or data protocols function as generative mechanisms that enable new entrepreneurial configurations (Baldwin & Woodard, 2009).

African Scientific Journal
ISSN : 2658-9311
Vol : 03, Num 32 Octobre 2025

These gaps point to a fundamental question: How can we conceptualize the entrepreneurial journey in a manner that simultaneously captures (a) the temporal unfolding of venture creation processes and (b) the recursive, socio-technical dynamics through which technologies and entrepreneurs co-evolve? Addressing this question requires a theoretical framework that transcends the traditional separation between "social" and "technical" domains, and instead treats entrepreneurial action and technological innovation as mutually constitutive phenomena (Orlikowski, 2000).

Accordingly, the objectives of this article are threefold. The first objective is to synthesize fragmented insights from entrepreneurship, innovation, and technology management literatures into a coherent conceptual foundation. Building on this synthesis, the second objective is to develop an integrative theoretical framework that articulates the recursive relationships between entrepreneurial processes and technological innovation across different stages of the venture creation journey. The third objective is to delineate the boundary conditions and propositions that guide future empirical investigations, thereby advancing both theoretical understanding and practical applications.

By pursuing these objectives, this study makes several contributions. Theoretically, it extends the entrepreneurship literature by integrating socio-technical perspectives into the study of venture creation processes, thereby offering a more nuanced account of how technological artifacts and infrastructures shape, and are shaped by, entrepreneurial action. Practically, the proposed framework provides entrepreneurs, investors, and policymakers with analytical tools to anticipate and leverage technological dynamics throughout the entrepreneurial journey. Methodologically, the article demonstrates how abductive reasoning can be employed to reconcile divergent theoretical traditions, thus exemplifying a rigorous approach to theory building in management research.

The remainder of this article proceeds as follows. The next section conducts a systematic literature review to map the conceptual terrain and identify theoretical tensions. Section III develops the integrative framework, articulating its core constructs, relationships, and propositions. Section IV discusses theoretical and practical implications, while Section V outlines future research directions. A concluding section summarizes the study's contributions and limitations.

African Scientific Journal
ISSN : 2658-9311
Vol : 03, Num 32 Octobre 2025

## 1. Entrepreneurial journey theories

The conceptualization of entrepreneurial pathways has evolved from linear, stage-based frameworks to dynamic, context-dependent models that capture the multifaceted nature of venture creation. Early scholarship, notably by Churchill and Lewis (1983), advanced *stage-based models* depicting entrepreneurship as a progression through discrete phases such as existence, survival, success, and resource maturity each characterized by specific managerial challenges and resource requirements. While these models provided heuristic value for practitioners, they faced criticism for oversimplifying the non-linear, iterative reality of entrepreneurial processes (Gartner, 1985). Subsequent research, influenced by process theories (Van de Ven & Poole, 1995), emphasized the recursive and adaptive nature of venture development, where founders oscillate between opportunity exploration and exploitation amid environmental feedback loops (McMullen & Dimov, 2013).

Concurrently, Sarasvathy's (2001) introduction of *effectuation and causation* dichotomized entrepreneurial decision-making logics. Causation, rooted in rational choice theory, involves systematic planning and goal-driven actions (e.g., identifying target markets before resource allocation). Effectuation, conversely, leverages available means (identity, knowledge, networks) to co-create opportunities with stakeholders, embracing uncertainty as a resource rather than a constraint (Sarasvathy et al., 2014). This paradigm shift highlighted the role of entrepreneurial agency in shaping not merely responding to environments, particularly in technology-intensive contexts where predictive certainty is elusive (Fisher, 2012).

The *entrepreneurial ecosystems perspective* further contextualized venture creation by examining the interplay between individual agency and macro-level structures. Isenberg (2010) characterized ecosystems as comprising six domains: policy, finance, culture, supports, human capital, and markets. Subsequent work refined this view by analyzing how digitalization transforms ecosystem interdependence (Sussan & Acs, 2017), enabling platform-based interactions that democratize access to resources while intensifying competitive dynamics (Nambisan et al., 2019). Nevertheless, this literature grapples with methodological challenges in measuring ecosystem effects, often relying on case studies or proxy indicators that limit generalizability (Autio et al., 2018).

Critically, these theories exhibit varying sensitivities to temporal dynamics. Stage-based models imply temporal linearity, while effectuation and ecosystem frameworks accommodate asynchronous, path-dependent trajectories (Lévesque & Stephan, 2020). However, scant attention

African Scientific Journal
ISSN : 2658-9311
Vol : 03, Num 32 Octobre 2025

has been devoted to *entrepreneurial time perception* how founders' subjective experiences of time (e.g., urgency, patience) influence strategic pivots (Wood et al., 2021). This omission is problematic given rising interest in "slow entrepreneurship" (Chen et al., 2020) and the accelerated tempos of digital innovation.

## 2. Technological innovation frameworks

### i. Innovation Diffusion Theory

Rogers' (2003) *innovation diffusion theory* (IDT) remains a cornerstone for understanding how technological novelties propagate through social systems. IDT posits that adoption rates follow an S-curve, driven by five perceived attributes: relative advantage, compatibility, complexity, trialability, and observability. These attributes influence adopter categories (innovators, early adopters, etc.), with communication channels (e.g., mass media, interpersonal networks) facilitating knowledge transfer (Valente, 1996). While IDT has been applied extensively from agricultural tools (Rogers, 2003) to AI systems (Kapoor et al., 2018) its limitations are increasingly apparent. Critics argue that the theory underemphasizes *power dynamics* and institutional forces that accelerate or constrain diffusion (Greenhalgh et al., 2004). For instance, in healthcare, regulatory policies may override perceived attributes in determining technology uptake (Fleuren et al., 2004). Additionally, IDT's pro-innovation bias assumes that adoption is inherently beneficial, overlooking cases where technologies exacerbate inequalities or disrupt social fabrics (Rogers, 2003). Recent extensions incorporate contextual factors, such as cultural values (Straub, 2009) and digital infrastructure (Venkatesh et al., 2016), yet the core model retains a linear, user-centric perspective that struggles to capture iterative co-creation in open innovation ecosystems (Chesbrough, 2003).

Rogers's model identifies five categories of adopters, based on their propensity to adopt an innovation relative to the average:

1. **Innovators (2.5%):** These are pioneers, adventurous and risk-takers. They are the first to adopt new ideas and technologies, often for experimentation.
2. **Early Adopters (13.5%):** Often opinion leaders within their community, they are more prudent than innovators but quickly perceive the benefits of the innovation.
3. **Early Majority (34%):** Deliberate and pragmatic, they adopt the innovation once it has been validated by early adopters. They are sensitive to evidence of success and benefits.

African Scientific Journal
ISSN : 2658-9311
Vol : 03, Num 32 Octobre 2025

4. **Late Majority (34%):** Skeptical and resistant to change, they only adopt the innovation due to peer pressure or economic necessity.
5. **Laggards (16%):** Traditionalists and the last to adopt, they are wary of innovation and only adopt it when all other options have disappeared.

Rogers identified five key characteristics of an innovation that influence its rate of adoption:

- **Relative advantage:** To what extent is the innovation perceived as better than the idea or product it replaces?
- **Compatibility:** Is the innovation consistent with the existing values, experiences, and needs of potential adopters?
- **Complexity:** To what extent is the innovation difficult to understand and use?
- **Trialability:** Can the innovation be tried out on a limited basis?
- **Observability:** To what extent are the results of the innovation visible to others?

These factors, combined with communication channels (e.g., mass media vs. interpersonal communication) and the context of the social system, determine the speed of diffusion. The theory of diffusion of innovations is widely used in marketing, public health, and innovation management to predict the adoption of new products and technologies. A related concept, popularized by Geoffrey Moore (1991), is the "chasm," which represents the difficulty for an innovation to transition from adoption by early adopters to the early majority. This is a crucial challenge for many technology start-ups.

**ii. Disruptive innovation theory**

Christensen's (1997) *disruptive innovation theory* (DIT) explains how entrants with inferior technologies displace established incumbents by targeting overlooked market segments. DIT hinges on two mechanisms: *low-end disruption* (offering affordable alternatives to price-sensitive customers) and *new-market disruption* (creating markets where none existed). Classic examples include Toyota's entry into the U.S. automobile market (Christensen, 1997) and Netflix's challenge to Blockbuster (Downes & Nunes, 2014). However, DIT has faced empirical and conceptual critiques. King and Baatartogtokh (2015) found that only 9 of 77 purported disruptions aligned with Christensen's criteria, highlighting definitional ambiguities.

Moreover, DIT's firm-centric focus overlooks ecosystem-level interactions, such as how platform architectures enable or hinder disruption (Gawer & Cusumano, 2014). Scholars have also

African Scientific Journal
ISSN : 2658-9311
Vol : 03, Num 32 Octobre 2025

questioned its applicability to digital contexts, where "big bang disruptions" (Downes & Nunes, 2014) can rapidly obsolete industries without following DIT's gradual trajectory.

**iii. Technology readiness and adoption models**

The *technology readiness and adoption model* (TRAM) integrates individual psychological traits with technology acceptance frameworks. Parasuraman's (2000) *technology readiness index* (TRI) measures four dimensions: optimism, innovativeness, discomfort, and insecurity. High-TRI individuals exhibit greater propensity to adopt technologies, interacting with *perceived usefulness* and *ease of use* (Davis, 1989) to predict behavioral intentions (Venkatesh et al., 2003). TRAM's strength lies in its micro-level focus on user heterogeneity, explaining why even superior technologies face adoption barriers (e.g., AI skepticism among older demographics) (Parasuraman & Colby, 2015).

Nevertheless, the model has been critiqued for static conceptualization: it does not account for how repeated interactions or social influences dynamically shape readiness (Bagozzi, 2007). Furthermore, in organizational contexts, TRAM extensions like the *unified theory of acceptance and use of technology* (UTAUT) incorporate facilitating conditions and social influence (Venkatesh et al., 2003), yet often neglect institutional constraints such as data privacy regulations (Dwivedi et al., 2019).

## 3. Intersection of entrepreneurship and technology

The confluence of entrepreneurship and technology has catalyzed the emergence of *technology entrepreneurship* as a distinct domain, characterized by the identification and exploitation of opportunities rooted in scientific or technological advancements (Shane & Venkataraman, 2000). Unlike traditional entrepreneurship, it involves navigating high technical uncertainty, prolonged R&D cycles, and specialized knowledge barriers (Bailetti, 2012). This conceptualization underscores the *dual role of the entrepreneur* as both innovator and venture leader, requiring competencies spanning technical expertise, market foresight, and resource orchestration (Mosey et al., 2017).

*Digital transformation* further reconfigures entrepreneurial opportunities by democratizing access to tools (e.g., cloud computing, AI) that reduce entry costs while intensifying competition (Nambisan, 2017). Platforms like Shopify or AWS enable "lean" digital ventures to scale rapidly, yet they also create dependencies that constrain strategic autonomy (Tauscher & Laudien, 2018). The literature highlights two divergent opportunity types: *digital-enabled* (existing opportunities

African Scientific Journal
ISSN : 2658-9311
Vol : 03, Num 32 Octobre 2025

amplified by technology) and *digital-necessitated* (opportunities arising from technological disruption) (Nambisan et al., 2019). However, research has yet to fully address how *algorithmic opacity* (e.g., in AI-driven markets) affects opportunity evaluation or ethical decision-making (Martin, 2019).

*Innovation-driven entrepreneurship* (IDE) represents a paradigm where continuous innovation not just initial disruption sustains competitive advantage. IDE ventures leverage dynamic capabilities (Teece, 2014) to align R&D, user feedback, and ecosystem partnerships in rapidly evolving sectors (e.g., biotech, fintech). This contrasts with "efficiency-driven" models focused on incremental process improvements (Acs et al., 2017). While IDE frameworks emphasize agility and ambidexterity (O'Reilly & Tushman, 2013), they often underestimate the cognitive toll of persistent innovation on founder well-being (Cardon & Patel, 2015). Moreover, cross-national studies reveal that IDE's prevalence is moderated by institutional factors, such as intellectual property regimes and venture capital availability (Bruton et al., 2009), though cultural variables (e.g., uncertainty avoidance) remain underexplored.

Critically, this triad reveals a shared vulnerability: the literature often prioritizes successful cases, neglecting *failed technology ventures* that could reveal critical boundary conditions (Eggers & Song, 2015). Additionally, the *gender gap* in technology entrepreneurship persists, with women founders facing systemic barriers in funding and networks (Jennings & Brush, 2013), yet few frameworks explicitly address intersectional challenges.

## 4. Conceptual and theoretical foundations

The development of a robust theoretical framework necessitates a clear articulation of its foundational elements, including the key constructs, their definitions, and the theoretical boundaries within which the framework operates. This section lays the groundwork by establishing the conceptual building blocks that will be integrated into the proposed model.

- **Epistemological choice**

The epistemological stance underpinning this research aligns with a constructivist paradigm, emphasizing the socially embedded and context-dependent nature of entrepreneurial processes. By adopting a conceptual and theory-building approach, the study recognizes that opportunities, technologies, and ecosystems do not exist as objective givens but are co-constructed through human action and interpretation. This position is particularly suitable for exploring the dynamic

African Scientific Journal
ISSN : 2658-9311
Vol : 03, Num 32 Octobre 2025

and emergent character of technology-driven entrepreneurship, where meaning and practice are continuously negotiated (Lincoln, Lynham, & Guba, 2011).

- **Key constructs and definitions**

The proposed framework centers on three primary constructs: Technology Entrepreneurship, Digital Transformation, and Entrepreneurial Ecosystems.

**Technology entrepreneurship** is defined as the process of creating and growing new ventures that leverage technological or scientific advancements to develop novel products, services, or business models (Bailetti, 2012). This construct goes beyond simple technology adoption; it involves the strategic exploitation of technology as a core competitive advantage. It is inherently about managing the uncertainties associated with bringing a new, often unproven, technological solution to the market.

**Digital transformation** refers to the deep and fundamental changes in an organization's business activities, processes, competencies, and models to fully leverage the opportunities of digital technologies and data (Fitzgerald et al., 2014). For the purpose of this framework, it is viewed not just as a firm-level phenomenon but as a macro-environmental condition that reshapes industries and creates new spaces for entrepreneurial activity. It is the technological landscape in which modern entrepreneurship unfolds.

An **entrepreneurial ecosystem** is the interconnected set of actors, institutions, and relationships that collectively foster the formation and growth of new ventures (Spigel, 2017). This construct encompasses the human capital (e.g., talent pool), financial capital (e.g., venture capitalists), knowledge infrastructure (e.g., universities), and support mechanisms (e.g., incubators, government policies) that enable entrepreneurship. The ecosystem is the contextual environment that either facilitates or constrains the entrepreneurial journey.

- **Theoretical boundaries**

The framework is situated at the nexus of entrepreneurship theory, innovation studies, and strategic management. Its theoretical boundaries are deliberately drawn to exclude individual-level psychological traits of the entrepreneur (e.g., risk tolerance) as a primary focus, instead concentrating on the interplay between technology, the entrepreneurial process, and the external environment. The framework does not seek to explain the internal operations of a firm but rather its emergence and growth within a specific technological and systemic context. It is bounded by the phenomena of technology-driven new venture creation, distinguishing it from traditional small

African Scientific Journal
ISSN : 2658-9311
Vol : 03, Num 32 Octobre 2025

business management. Furthermore, the model is primarily applicable to high-growth, innovation-driven firms, as opposed to lifestyle businesses or small-scale self-employment. The temporal scope is focused on the early stages of venture creation and scaling, where the interaction with the digital and ecosystemic environment is most pronounced.

- **Proposed integrative framework**

Building upon the established conceptual foundations, this section proposes an integrative framework that synthesizes the constructs of Technology Entrepreneurship, Digital Transformation, and Entrepreneurial Ecosystems. The model posits that the entrepreneurial journey is not a linear process but a dynamic interaction between the entrepreneur's actions, the transformative digital landscape, and the supportive or constraining elements of the surrounding ecosystem.

## 5. Framework components and relationships

The proposed framework is composed of three interconnected dimensions:

1. **The entrepreneurial action dimension:** This represents the dynamic process of opportunity recognition, resource mobilization, and venture creation. It aligns with Sarasvathy's (2001) effectuation theory, where the entrepreneur uses available means to co-create an outcome.
2. **The digital transformation dimension:** This acts as a powerful enabler and a constant source of new opportunities. It influences the entrepreneurial process by providing a digital infrastructure (e.g., cloud computing, AI) and creating new market spaces (e.g., platform economies).
3. **The entrepreneurial ecosystem dimension:** This provides the context for entrepreneurial action. Its components such as access to talent, capital, and mentorship either accelerate or impede the entrepreneurial journey.

The core relationship proposed by the framework is that the entrepreneurial journey, conceptualized as a continuous process of effectuation and opportunity creation, is directly shaped by the state of Digital Transformation and the quality of the Entrepreneurial Ecosystem. The digital landscape offers a palette of resources and opportunities that an effectual entrepreneur can combine with the resources and networks available in the ecosystem. For instance, the availability of open-source software (Digital Transformation) combined with a robust network of developers and

African Scientific Journal
ISSN : 2658-9311
Vol : 03, Num 32 Octobre 2025

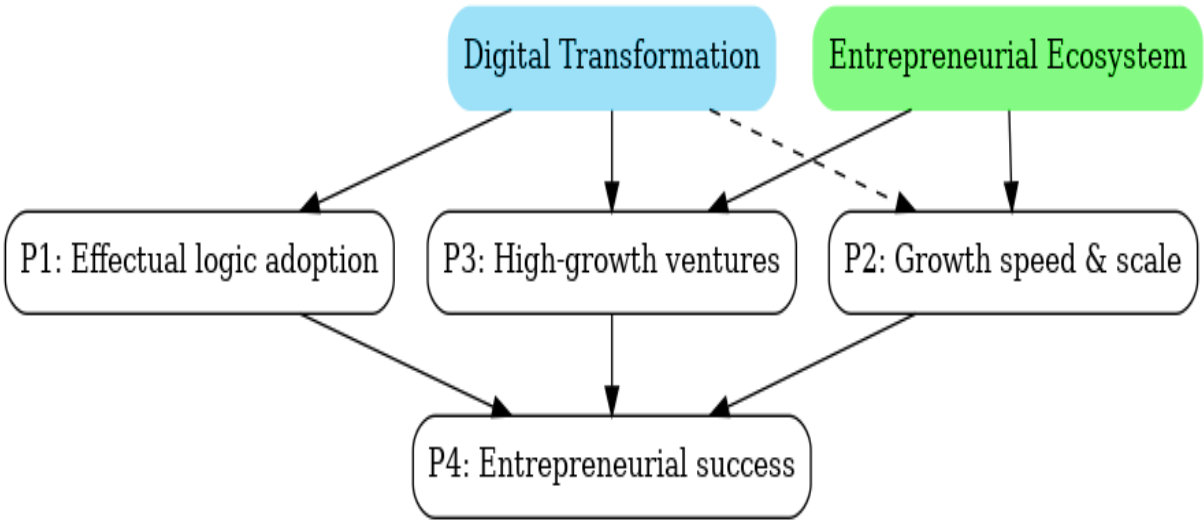
mentors (Entrepreneurial Ecosystem) can dramatically lower the barriers to entry for a new technology venture.

**Propositions development**

Based on these relationships, a series of propositions can be developed to guide future research:

- **Proposition 1:** The degree of an entrepreneur's adoption of effectual logic is positively moderated by the level of digital transformation within their industry, as digital technologies increase ambiguity and render traditional causal planning less effective.
- **Proposition 2:** A supportive entrepreneurial ecosystem (e.g., access to venture capital and skilled labor) positively influences the speed and scale of a technology venture's growth, particularly when leveraging digital transformation opportunities.
- **Proposition 3:** The interaction between an advanced digital transformation landscape and a well-developed entrepreneurial ecosystem will lead to a higher rate of high-growth technology venture creation compared to environments where one or both of these factors are underdeveloped.
- **Proposition 4:** Entrepreneurial success, measured by venture survival and growth, is contingent on the entrepreneur's ability to strategically integrate digital tools and leverage ecosystem resources.

**Figure 01 : Visual representation of the model**




**Source** : Authors

African Scientific Journal
ISSN : 2658-9311
Vol : 03, Num 32 Octobre 2025

The visual model would be a three-dimensional diagram. At its center is the "Entrepreneurial Journey," depicted as a continuous, non-linear path. This path is enclosed within a sphere representing the "Entrepreneurial Ecosystem." Various nodes within this sphere would represent key ecosystem components (e.g., universities, investors, government policies). A layer of a translucent, dynamic mesh would surround the sphere, representing the "Digital Transformation." This mesh would have points of light or energy flows representing specific technologies (e.g., AI, blockchain). The path of the entrepreneurial journey would be shown to interact with and be shaped by both the nodes of the ecosystem and the flows of the digital transformation mesh. Arrows would illustrate the relationships described in the propositions.

## 6. Theoretical Contributions

The proposed integrative framework makes several significant contributions to both entrepreneurship theory and the broader innovation literature.

- **Advances to entrepreneurship theory**

Firstly, the framework moves beyond a singular focus on the entrepreneur's internal process by embedding the entrepreneurial journey within a dynamic, multi-dimensional context. While previous models, such as the stage-based or even effectuation approaches, have provided valuable insights, they have often treated the external environment as a static backdrop. Our model explicitly positions Digital transformation and the entrepreneurial ecosystem as active forces that shape the entrepreneurial process itself. This provides a more nuanced understanding of how opportunity is not just discovered or created but is also co-emergent with technological and systemic conditions. It suggests that a deep understanding of these external dimensions is as critical to entrepreneurial success as the entrepreneur’s personal skills or approach.

- **Contributions to innovation literature**

Secondly, the framework contributes to innovation literature by linking the micro-level actions of the entrepreneur with the macro-level phenomena of digital transformation. Most innovation studies tend to focus either on firm-level strategies for innovation or on the diffusion of innovation across a population. Our model bridges this gap by illustrating how the actions of individual entrepreneurs, guided by an effectual logic, are the very mechanisms through which macro-level digital changes are operationalized and exploited. It positions technology entrepreneurship as a key driver of innovation diffusion and systemic change, highlighting that the "how" of innovation is fundamentally tied to the "who" (the entrepreneur) and the "where" (the ecosystem and digital

African Scientific Journal
ISSN : 2658-9311
Vol : 03, Num 32 Octobre 2025

landscape). This framework thus provides a new lens for studying the dynamics of technological change through the lens of entrepreneurial action.

- **Practical Implications**

The theoretical framework, while academic in nature, has tangible and actionable implications for a wide range of stakeholders, from individual entrepreneurs to policymakers.

**For entrepreneurs and practitioners**

For entrepreneurs, the framework serves as a strategic roadmap that goes beyond a simple business plan. It encourages a shift from a purely causal, product-centric mindset to a more effectual, context-aware approach. Entrepreneurs are advised to not only focus on their initial idea but to actively map and leverage the digital transformation trends in their industry. This includes understanding the potential of emerging technologies like AI, blockchain, or the Internet of Things to create new value propositions. Moreover, the framework emphasizes the critical importance of actively engaging with their local entrepreneurial ecosystem. This means not just seeking funding but building relationships with mentors, attending networking events, and collaborating with universities and other startups. The message is clear: success is not solely about a brilliant idea or a great team; it is about the strategic integration of one's actions within a supportive ecosystem and a digitally-enabled environment.

**For policymakers and educators**

For policymakers, the framework provides a rationale for moving beyond generic economic development strategies. Instead of simply offering tax incentives, they should focus on cultivating the specific components of a robust entrepreneurial ecosystem. This includes investing in research and development, fostering a culture of collaboration, and establishing legal and financial infrastructures that are conducive to technology-driven startups. The framework underscores that the digital economy requires policies that facilitate the flow of data, talent, and capital. For educators, the framework suggests a re-evaluation of entrepreneurship curricula. Traditional business school models that heavily rely on case studies of established companies and causal planning methods may be insufficient. Instead, education should focus on teaching effectual logic, encouraging students to experiment with emerging technologies, and providing them with hands-on opportunities to engage with their local entrepreneurial communities. This approach will better prepare the next generation of entrepreneurs to navigate and thrive in the complex, digitally-driven world.

African Scientific Journal
ISSN : 2658-9311
Vol : 03, Num 32 Octobre 2025

## Conclusion

This paper has systematically dissected the intricate relationship between entrepreneurial pathways, technological innovation, and the broader environmental context, culminating in the proposal of a novel integrative framework. We began by reviewing the foundational literature on entrepreneurial journey theories, technological innovation frameworks, and the critical intersection of these two domains. This review highlighted a significant gap in the existing body of knowledge: while various models have illuminated individual facets of entrepreneurship and innovation, a comprehensive framework that explicitly integrates the entrepreneur's journey, the enabling force of digital transformation, and the contextual influence of the entrepreneurial ecosystem remained underdeveloped. Our work addresses this theoretical void by synthesizing these three distinct, yet deeply interconnected, constructs into a cohesive model.

The proposed theoretical framework posits that the entrepreneurial journey is not a simple, linear process but a dynamic, co-emergent phenomenon. Driven by an effectual logic, the entrepreneur's pathway is continuously shaped by the ambient conditions of digital transformation and the quality of the entrepreneurial ecosystem. We argue that digital transformation is not merely a backdrop but an active force that creates new opportunities and reshapes the competitive landscape. Simultaneously, the entrepreneurial ecosystem provides the essential resources, networks, and institutional support that either accelerate or constrain the venture creation process. By conceptualizing the relationship as a continuous, dynamic interaction, our model provides a more nuanced understanding of how opportunity is not just discovered or created but is actively realized through the strategic interplay between entrepreneurial action, technological shifts, and environmental resources. This perspective offers a significant theoretical advance, moving beyond a fragmented view to offer a more holistic and contextually aware lens for entrepreneurship research.

The practical implications of this framework are substantial and extend to various stakeholders. For aspiring and current entrepreneurs, the model serves as a strategic compass, encouraging a shift from rigid, plan-based approaches to a more adaptive, effectual mindset. It highlights the imperative of not only identifying a market need but also of strategically leveraging emerging digital technologies and actively engaging with the local entrepreneurial community to build a sustainable venture. For policymakers and urban planners, the framework provides a clear directive for fostering economic growth: focus on cultivating a multifaceted and well-resourced

African Scientific Journal
ISSN : 2658-9311
Vol : 03, Num 32 Octobre 2025

entrepreneurial ecosystem. This includes investing in key components such as a skilled talent pool, accessible venture capital, and a supportive regulatory environment. Finally, for educators, the model suggests a re-evaluation of current entrepreneurship curricula. Instead of solely teaching business planning, programs should emphasize adaptability, network building, and a deep understanding of how to harness technological change.

While the framework provides a robust conceptual foundation, it also opens up numerous avenues for future research. Empirical studies are needed to test the propositions and explore the nuances of the relationships between the constructs. For example, future work could investigate how different types of digital technologies (e.g., blockchain versus artificial intelligence) influence the entrepreneurial process differently, or how institutional voids in certain ecosystems might be mitigated by a high degree of digital readiness. By continuing to build upon this integrative approach, we can not only deepen our academic understanding of technology-driven venture creation but also provide actionable insights for individuals and organizations striving to innovate and thrive in the ever-evolving digital age. This work represents a crucial step toward a more integrated and comprehensive theory of entrepreneurship.

African Scientific Journal
ISSN : 2658-9311
Vol : 03, Num 32 Octobre 2025

## BIBLIOGRAPHIE


- Acs, Z. J., et al. (2017). The lineages of the entrepreneurial ecosystem approach. Small Business,Economics, 49(1),,1–10.
- Autio, E., et al. (2018). Digital affordances, spatial affordances, and the genesis of entrepreneurial ecosystems. Strategic Entrepreneurship Journal, 12(1), 72–95.
- Autio, E., Nambisan, S., Thomas, L. D. W., & Wright, M. (2018). Digital affordances, spatial affordances, and the genesis of entrepreneurial ecosystems. Strategic Entrepreneurship Journal, 12(1), 72–95.
- Bagozzi, R. P. (2007). The legacy of the technology acceptance model and a proposal for a paradigm shift. Journal of the Association for Information Systems, 8(4), 244–254.
- Bailetti, T. (2012). Technology entrepreneurship: Overview, definition, and distinctive aspects. *Technology Innovation Management Review*, *2*(2), 5–12.
- Bailetti, T. (2012). Technology entrepreneurship: Overview, definition, and distinctions. *Technology Innovation Management Review*, 2(2), 5-12.
- *Bailetti, T. (2012). Technology entrepreneurship: Overview, definition, and distinctions.* Technology Innovation Management Review*, 2(2), 5-12.*
- Baldwin, C. Y., & Woodard, C. J. (2009). The architecture of platforms: A unified view. In A. Gawer (Ed.), Platforms, markets and innovation (pp. 19–44). Edward Elgar.
- Briel, F., Davidsson, P., & Recker, J. (2018). Digital technologies as external enablers of new venture
- Bruton, G. D., et al. (2009). Institutional theory and entrepreneurship: Where are we now and where do we need to move in the future? *Entrepreneurship Theory and Practice*, *33*(3), 421–440.
- Cardon, M. S., & Patel, P. C. (2015). Is stress worth it? Stress-related health and wealth trade-offs for entrepreneurs. *Applied Psychology*, *64*(2), 379–420.
- Chen, J. S., et al. (2020). Slow down to speed up: A review of the literature on slow entrepreneurship. *Journal of Business Venturing Insights*, *14*, e00182.
- Chesbrough, H. W. (2003). *Open innovation: The new imperative for creating and profiting from technology*. Harvard Business Press.

African Scientific Journal
ISSN : 2658-9311
Vol : 03, Num 32 Octobre 2025


- Christensen, C. M. (1997). *The innovator's dilemma: When new technologies cause great firms to fail*. Harvard Business Review Press.
- Churchill, N. C., & Lewis, V. L. (1983). The five stages of small business growth. *Harvard Business Review*, *61*(3), 30–50.
- D. J. (2010). How to start an entrepreneurial revolution. *Harvard Business Review*, *88*(6), 40–50.
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, *13*(3), 319–340.
- Downes, L., & Nunes, P. F. (2014). Big-bang disruption. *Harvard Business Review*, *92*(3), 44–56.
- Dwivedi, Y. K., et al. (2019). Re-examining the unified theory of acceptance and use of technology (UTAUT): Towards a revised theoretical model. *Information Systems Frontiers*, *21*(3), 719–734.
- Eggers, J. P., & Song, L. (2015). Dealing with failure: Serial entrepreneurs and the costs of changing industries between ventures. *Academy of Management Journal*, *58*(6), 1785–1803.
- Fisher, G. (2012). Effectuation, causation, and bricolage: A behavioral comparison of emerging theories in entrepreneurship research. *Entrepreneurship Theory and Practice*, *36*(5), 1019–1051.
- Fitzgerald, M., Kruschwitz, N., Bonnet, D., & Welch, M. (2014). Embracing digital technology: A case study approach to understanding digital transformation. *MIT Sloan Management Review*, 55(2), 1-12.
- *Fitzgerald, M., Kruschwitz, N., Bonnet, D., & Welch, M. (2014). Embracing digital technology: A case study approach to understanding digital transformation.* MIT Sloan Management Review*, 55(2), 1-12.*
- Fleuren, M., et al. (2004). Determinants of innovation within health care organizations: Literature review and Delphi study. *International Journal for Quality in Health Care*, *16*(2), 107–123.
- Gartner, W. B. (1985). A conceptual framework for describing the phenomenon of new venture creation. *Academy of Management Review*, *10*(4), 696–706.

African Scientific Journal
ISSN : 2658-9311
Vol : 03, Num 32 Octobre 2025


- Gawer, A., & Cusumano, M. A. (2014). Industry platforms and ecosystem innovation. *Journal of Product Innovation Management*, *31*(3), 417–433.
- Greenhalgh, T., et al. (2004). Diffusion of innovations in service organizations:
- Jennings, J. E., & Brush, C. G. (2013). Research on women entrepreneurs: Challenges to (and from) the broader entrepreneurship literature? *Academy of Management Annals*, *7*(1), 663–715.
- Kapoor, K. K., et al. (2018). Advances in social media research: Past, present and future. *Information Systems Frontiers*, *20*(3), 531–558.
- King, A. A., & Baatartogtokh, B. (2015). How useful is the theory of disruptive innovation? *MIT Sloan Management Review*, *57*(1), 77–90.
- Lévesque, M., & Stephan, U. (2020). It's time we talk about time in entrepreneurship. *Entrepreneurship Theory and Practice*, *44*(2), 163–184.
- Lincoln, Y. S., Lynham, S. A., & Guba, E. G. (2011). *Paradigmatic controversies, contradictions, and emerging confluences, revisited*. In N. K. Denzin & Y. S. Lincoln (Eds.), *The SAGE Handbook of Qualitative Research* (4th ed., pp. 97–128). Sage.
- Martin, K. (2019). Ethical implications and accountability of algorithms. *Journal of Business Ethics*, *160*(4), 835–850.
- McMullen, J. S., & Dimov, D. (2013). Time and the entrepreneurial journey: The problems and promise of studying entrepreneurship as a process. *Journal of Management Studies*, *50*(8), 1481–1512.
- Mosey, S., et al. (2017). *Entrepreneurship and technology innovation management*. Routledge.
- Nambisan, S. (2017). Digital entrepreneurship: Toward a digital technology perspective of entrepreneurship. *Entrepreneurship Theory and Practice*, *41*(6), 1029–1055.
- Nambisan, S., et al. (2019). Digital innovation management: Reinventing innovation management research in a digital world. *MIS Quarterly*, *43*(1), 223–238. O'Reilly, C. A., & Tushman, M. L. (2013). Organizational ambidexterity: Past, present, and future. *Academy of Management Perspectives*, *27*(4), 324–338.
- Parasuraman, A. (2000). Technology readiness index (TRI): A multiple-item scale to measure readiness to embrace new technologies. *Journal of Service Research*, *2*(4), 307–320.

African Scientific Journal
ISSN : 2658-9311
Vol : 03, Num 32 Octobre 2025


- Parasuraman, A., & Colby, C. L. (2015). An updated and streamlined technology readiness index: TRI 2.0. *Journal of Service Research*, *18*(1), 59–74.
- Rogers, E. M. (2003). *Diffusion of innovations* (5th ed.). Free Press.
- Sarasvathy, S. D. (2001). Causation and effectuation: Toward a theoretical shift from economic inevitability to entrepreneurial contingency. *Academy of Management Review*, *26*(2), 243–263.
- Sarasvathy, S. D. (2001). Causation and effectuation: Toward a theoretical shift from economic inevitability to entrepreneurial contingency. *Academy of Management Review*, 26(2), 243-263.
- *Sarasvathy, S. D. (2001). Causation and effectuation: Toward a theoretical shift from economic inevitability to entrepreneurial contingency.* Academy of Management Review*, 26(2), 243-263.*
- Sarasvathy, S. D., et al. (2014). An effectual approach to international entrepreneurship: Overlaps, challenges, and provocative possibilities. *Entrepreneurship Theory and Practice*, *38*(1), 71–93.
- Shane, S., & Venkataraman, S. (2000). The promise of entrepreneurship as a field of research. *Academy of Management Review*, *25*(1), 217–226.
- Spigel, B. (2017). The relational organization of entrepreneurial ecosystems. *Entrepreneurship Theory and Practice*, 41(1), 49-72.
- *Spigel, B. (2017). The relational organization of entrepreneurial ecosystems.* Entrepreneurship Theory and Practice*, 41(1), 49-72.*
- Straub, E. T. (2009). Understanding technology adoption: Theory and future directions for informal learning. *Review of Educational Research*, *79*(2), 625–649.
- Sussan, F., & Acs, Z. J. (2017). The digital entrepreneurial ecosystem. *Small Business Economics*, *49*(1), 55–73.
- Systematic review and recommendations. *The Milbank Quarterly*, *82*(4), 581–629. Isenberg,
- Tauscher, K., & Laudien, S. M. (2018). Understanding platform business models: A mixed methods study of marketplaces. *European Management Journal*, *36*(3), 319–329.

African Scientific Journal
ISSN : 2658-9311
Vol : 03, Num 32 Octobre 2025


- Teece, D. J. (2014). The foundations of enterprise performance: Dynamic and ordinary capabilities in an (economic) theory of firms. *Academy of Management Perspectives*, *28*(4), 328–352.
- Valente, T. W. (1996). *Network models of the diffusion of innovations*. Hampton Press.
- Van de Ven, A. H., & Poole, M. S. (1995). Explaining development and change in organizations. *Academy of Management Review*, *20*(3), 510–540.
- Venkatesh, V., et al. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly*, *27*(3), 425–478.
- Venkatesh, V., et al. (2016). Unified theory of acceptance and use of technology: A synthesis and the road ahead. *Journal of the Association for Information Systems*, *17*(5), 328–376.
- Wood, M. S., et al. (2021). The entrepreneurial journey: A review and research agenda. *Entrepreneurship Theory and Practice*, *45*(6), 1654–1689.