

## UNDERSTANDING DIGITAL ENTREPRENEURSHIP: A THEORETICAL PERSPECTIVE

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**Abstract:** *This paper explores the multifaceted nature of digital entrepreneurship, tracing its evolution alongside the digital transformation of the broader economy. Entrepreneurship research has expanded to encompass a wide range of theoretical perspectives. It outlines the evolution of theoretical perspectives in entrepreneurship studies, shifting from a focus on individual characteristics to a broader emphasis on environmental, social, and institutional factors. The paper highlights the diversity of methodological approaches utilized in entrepreneurship research, ranging quantitative, qualitative, and computational techniques. The advent of the internet opened the door for e-commerce in the 1990s, followed by the rise of Web 2.0 social platforms in the 2000s, further empowering entrepreneurs through user-generated content and the power of networks. The current phase of digital entrepreneurship is characterized by data-driven platforms, sophisticated algorithms, and the blurring of physical and digital boundaries. Theoretical frameworks, including innovation theory, resource-based views, lean startup methodologies, and institutional perspectives, aid in understanding the opportunities and challenges within this dynamic field. Digital entrepreneurship is presented as a dynamic force reshaping the modern economy. The paper traces the evolution of digital entrepreneurship through three key phases: the emergence of e-commerce in the 1990s, the rise of Web 2.0 social platforms in the 2000s, and the current dominance of data-driven platforms. The ongoing digital revolution has profoundly altered the entrepreneurial landscape, demanding new skills, strategies, and models for success. The COVID-19 pandemic further accelerated digital adoption across businesses and society. The paper underscores the significance of digital entrepreneurship within the context of technological advancement, institutional shifts, and evolving market dynamics.*

**Keywords:** *digital entrepreneurship; Web 2.0; data-driven platforms*

**JEL Classification:** *L26; M13; O33.*

### 1. Introduction

Understanding the complex phenomenon of entrepreneurship, a key driver of innovation and economic growth, requires a multifaceted approach. This paper delves into the rich theoretical foundations of entrepreneurship research, exploring a spectrum of perspectives. These include neoclassical economics with its focus on market equilibrium, behavioural theories examining individual motivations, resource-based views emphasizing strategic

resource utilization, and the role of institutional and social networks in shaping entrepreneurial outcomes.

The technological advancement, particularly the rise of the internet and subsequent digital innovations, has profoundly transformed the entrepreneurial landscape. This transformation has given birth to the dynamic field of digital entrepreneurship, where businesses leverage digital technologies to create new products, services, and business models. This paper investigates the theoretical underpinnings, unique characteristics, and transformative impact of digital entrepreneurship on industries, individual empowerment, and economic growth.

To gain a holistic understanding of entrepreneurship in the digital age, this paper also examines the diverse methodological toolkit employed by researchers. This includes quantitative approaches for analysing trends, qualitative methods for deep insights into entrepreneurial behaviours, and computational techniques for examining large-scale digital datasets. By exploring these theoretical and methodological foundations, we can gain a comprehensive understanding of the forces shaping entrepreneurship in our rapidly evolving digital world.

## **2. Theoretical and Methodological Approaches in Entrepreneurship Research**

Entrepreneurship as a field of research has expanded substantially in recent decades. Theoretical perspectives have focused on the characteristics and behaviors of individual entrepreneurs as factors in the formation and growth of new firms. Over time, entrepreneurship literature has evolved to encompass broader questions about how environmental, organizational, institutional, and social factors shape entrepreneurial processes and outcomes (Carlsson et al., 2013). Entrepreneurship research has become more diverse, with researchers now employing a wider range of theories, methodologies, and real-world contexts.

From a theoretical perspective, several theories stand out in the analysis of entrepreneurship, its determinants, and its impact. Neoclassical economics focuses on how entrepreneurship contributes to market equilibrium through arbitrage and balancing supply and demand (Casson, 1982), and the entrepreneur is a rational optimizer. Contrarily, Austrian economics views entrepreneurship as a disruptive force that challenges the market status quo, with entrepreneurs driving dynamic change through innovation (Schumpeter, 1934). Behavioral theories delve into the psychological traits, cognitive biases, and motivations that differentiate entrepreneurs from other economic actors (Baron, 1998). Resource-based perspectives emphasize how entrepreneurs strategically leverage unique combinations of assets to achieve competitive advantage and value creation (Alvarez and Barney, 2004). Institutional theories dissect how formal and informal institutions shape the incentives and constraints encountered within the entrepreneurial sphere (Baumol, 1990; North, 1990). Social network perspectives focus on the ways in which an entrepreneur's embeddedness within social structures and communities influences their access to opportunities, resource mobilization, and entrepreneurial success (Aldrich and Zimmer, 1986). These theoretical perspectives illustrate the multifaceted nature of entrepreneurship as a socio-economic phenomenon. While neoclassical views highlight its role in market equilibrium and Austrian views its disruptive potential, behavioral and resource-based views emphasize the individual entrepreneur's psychological attributes and strategic use of resources. Additionally, institutional and social network theories underscore the influence of external environments on entrepreneurial outcomes. Understanding these various perspectives is important for a comprehensive analysis of entrepreneurship and its role in driving economic and social change.

The analysis of entrepreneurship also applies a methodological approach. Entrepreneurship research leverages a spectrum of methodologies to provide comprehensive insights. Quantitative approaches like statistical analysis and surveys illuminate macro-level trends and entrepreneurial attitudes, while qualitative methods such as case studies, ethnography, and grounded theory offer in-depth understanding of entrepreneurs' behaviors and strategies. Additionally, action research allows for direct intervention and support, while computational analysis utilizes data science techniques to analyze large entrepreneurial datasets. This methodological diversity empowers researchers to generate a holistic view of the complex entrepreneurial landscape (Neergaard and Ulhoi, 2007).

### **3. Entrepreneurship in the Era of Digitization**

Digital entrepreneurship has emerged as a dynamic subset of entrepreneurship, encompassing the creation of new ventures within the digital space. These ventures harness the power of the internet, mobile technology, big data, AI, and other digital capabilities to drive innovation and growth. As a dynamic research stream, the study of digital entrepreneurship draws upon a diverse range of theoretical underpinnings. Thus, according to the innovation theory, digital entrepreneurship often revolves around the development and commercialization of innovative products, services, or business models, drawing upon concepts from innovation theory (Bailetti, 2012). The resource-based theory explains how digital entrepreneurs effectively leverage unique digital resources, such as data, platforms, and networks, to gain competitive advantages, aligning with the resource-based view (Acs et al., 2009). Also, according to Ries (2011), lean startup approaches, emphasizing iterative, user-driven strategies for digital business model development. Institutional theory analyzes the role of regulations and norms in shaping the entrepreneurial environment (Giones and Brem, 2017). Social network theory emphasizes the importance of collaboration and connections (Autio et al., 2018). Also, the cognitive processes and decision-making patterns of digital entrepreneurs influence their venture creation and growth strategies, aligning with entrepreneurial cognition research. Digital entrepreneurship represents a transformative force in the modern economy, driven by technological advancements and the ever-evolving digital landscape. The theoretical frameworks outlined above provide a foundation for understanding the dynamics, challenges, and opportunities shaping this burgeoning field.

The study of digital entrepreneurship employs a diverse array of methodological approaches. The most common methods found in the literature review are those that include statistical analyses that measure digital entrepreneurship using population-level data (Koellinger, 2008; Sussan and Acs, 2017); surveys gathering individual and organizational data on digital capabilities and behaviors (Higón, 2012; Kraus, et al., 2018); in-depth case studies examining how digital ventures operate within specific contexts (e.g., Kollmann, 2006; Nambisan, 2017); ethnographic studies exploring cultures and interactions within the digital entrepreneurship space (Lange, 2006); and computational techniques that analyze online artifacts to study digital entrepreneurial dynamics (e.g., Whelan, et al., 2010; Arora, et al., 2016). As the field continues to evolve, mixed-methods approaches will likely become even more valuable for providing multi-level insights into the processes and contexts that shape digital entrepreneurial outcomes.

The rapid digital transformation of business, communication, and society over the past decades has profoundly shaped the evolution of entrepreneurship. Traditional entrepreneurial processes, models, and practices have required adaptation to the new realities of an intensely digitized, networked world. This paper delves into how the ongoing digital revolution has transformed key aspects of entrepreneurship, leading to the

emergence of novel ventures, business models, skillsets, strategies, and digitally driven value creation methods. The analysis explores this evolution in three phases: the 1990s with the rise of e-commerce (Laudon and Traver, 2014), the 2000s with the explosion of Web 2.0 social media platforms (von Hippel, 2009; Kaplan and Haenlein, 2010), and the current shift towards data-driven, platform-based entrepreneurship. This digital transformation encompasses waves of technology adoption, institutional impacts, evolving skill requirements, peer-to-peer collaboration, the blurring of physical and digital boundaries, and the ongoing disruption of established businesses. A relevant factor is how digitization alters entrepreneurial contexts, opportunities, resources, processes, and value creation. This evolution reveals the interdependent, socially constructed nature of entrepreneurship within broader technological, economic, and social systems. The changes brought about by digital technologies have necessitated new entrepreneurial capabilities, mindsets, and models – but also allow ventures to scale and internationalize at unprecedented speed. Navigating this new digital landscape remains imperative for competitiveness.

The 1990s witnessed the initial transformation of the entrepreneurial landscape as the internet opened for commercial use, ushering in a focus on e-commerce and the basic adoption of digital tools. Key developments included the lifting of commercialization restrictions in 1995, enabling entrepreneurial ventures in cyberspace (Lécuyer and Brock, 2006). E-commerce startups seized opportunities in online retail, auctions, marketplaces, payments, and digital content distribution, with iconic firms like Amazon, eBay, and PayPal establishing themselves (Laudon and Traver, 2014). Businesses began adopting software and digital communication tools (email, websites), often integrating them into traditional models rather than driving strategic change (Amit and Zott, 2001). Enthusiasm fueled speculative investment, exemplified by the dotcom bubble (Goldfarb, et al., 2007). Alongside this, institutions navigated extending regulations to the digital realm (Litan and Rivlin, 2001). While this period revealed the potential of digital connectivity, technological limitations in speed and user experience hindered the full potential of e-commerce. This pioneering period revealed new avenues for exploiting digital connectivity, but technological limitations in terms of speed, user experience, and convenience constrained e-commerce and digital integration possibilities. Competencies, business models, and institutions remained only partially adapted to the nascent digital era. In this emerging digital environment, entrepreneurial opportunities largely focused on utilizing basic websites for e-commerce, advertising, informational content, and digital media distribution (Laudon and Traver, 2014). However, limited bandwidth, small user bases, a lack of online payment infrastructure, and immature web interfaces restricted more complex entrepreneurship during this pioneering period. Consequently, business models and institutions remained partially adapted to the emerging digital era.

The early 2000s saw a profound reshaping of the entrepreneurial landscape driven by Web 2.0 technologies, fostering interactive social platforms, user-generated content, and multifaceted digital marketplaces. Social networks like Facebook, YouTube, Twitter, and messaging apps emerged, connecting billions of users worldwide and enabling the viral growth of digital entrepreneurs through network effects (Kaplan and Haenlein, 2010). These platforms shifted power to users and peer-to-peer content creation. They democratized content creation and eliminated geographical constraints. User-centered innovation became ubiquitous (von Hippel, 2009), and crowdsourcing, reviews, and collaboration expanded dramatically. During this phase, multifaceted platforms like Uber, Airbnb, UpWork facilitated exchanges between distinct audiences while reshaping industries (Parker, et al., 2016). Reputation systems fostered trust in these disruptive peer-to-peer models. Agile development, lean startup approaches, and hacking emerged as entrepreneurial skills adapted to the accelerated cycles of digital products (Ries, 2011). Speed and flexibility

became even more crucial. Cryptocurrencies and blockchain also sought to decentralize finance and commerce, expanding digital institutional structures. New governance models based on consensus algorithms emerged. Web 2.0 massively extended digital integration into entrepreneurial ecosystems and business models, while simultaneously enabling new digitally savvy competitors (Mills, 2007). Incumbents in many sectors underestimated these effects. These shifts gave rise to iconic platform-based entrepreneurial ventures like Airbnb, Uber, Square, Spotify, and Twitter. User engagement became essential for value creation.

The current landscape of digital entrepreneurship exhibits an increasing reliance on intelligent algorithms, big data analytics, artificial intelligence, Internet of Things connectivity, and dominant platforms. Developments include platform giants like Alphabet, Amazon, Meta, and Alibaba, leveraging network effects and employing sophisticated algorithms that utilize massive datasets to dominate markets. Startups are increasingly building on top of their platforms. Advanced analytics and machine learning underpin personalization, recommendations, predictive modeling, price optimization, and other applications that generate competitive advantages (Court, 2015). The physical-digital convergence expands through sensors, 5G networks, geolocation, augmented reality, robotics, and 3D printing. Connected intelligent products become ubiquitous. While the growth of the gig economy and the rise of decentralized technologies like blockchain offer new opportunities, entrepreneurs must also grapple with the ethical implications of these technologies, addressing concerns surrounding job security, data privacy, and cybersecurity (Manyika et al., 2016; Reyna et al., 2018).

The COVID-19 pandemic and associated public health restrictions have further catalyzed the digitalization of entrepreneurial activities: video conferencing, e-commerce, remote work, and other online modalities have become essential as physical interactions declined during lockdowns and social distancing protocols (Bartik et al., 2020). Many traditional SMEs were forced to rapidly pivot online, swiftly adopting e-commerce and digital communication capabilities to survive (Salah and Ayyash, 2024). This compressed years of change into months. New digitally enabled startups emerged in telehealth, online education, food and grocery delivery, digital events, remote services, and other pandemic-adapted sectors. Existing platforms like Zoom, Shopify, and Amazon experienced surging growth. Venture funding flows continued to grow strongly as digital startups attracted investor interest based on resilient performance while traditional sectors struggled (Gupta and Wing, 2021). Online activity became the default for many routines.

#### **4. In conclusion**

Entrepreneurship research has evolved into a rich and multidisciplinary field. The focus has expanded from a narrow view of individual entrepreneurs to encompass the complex interplay of psychological, social, economic, and institutional forces that shape entrepreneurial activity. This shift, along with the adoption of diverse research methodologies, allows for a more nuanced and comprehensive understanding of entrepreneurship as a driver of innovation, economic growth, and social change. The ongoing progression of the digital revolution has systematically transformed entrepreneurial processes, strategies, and business models over the past three decades. Web 2.0 and current data-driven platforms have profoundly altered the ecosystemic context in which entrepreneurs operate and compete. As digital penetration continues into society and the economy, developing digitally-based leadership, competencies, and business models represents an essential mandate for entrepreneurs to capitalize on the opportunities unlocked by technological innovation. The pandemic has provided an additional push to digital adoption, underscoring this imperative. Strategic integration of digital capabilities into all entrepreneurial activities is essential for 21st-century competitiveness.

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