

The Mechanism of Digital Technology Empowering the Sustainable Growth of User Entrepreneurship

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Abstract: With digital technologies advancing, the capability dilemma of user entrepreneurship can be resolved, promoting continual growth of entrepreneurship. This paper draws on the theory of enterprise growth to categorize user entrepreneurship growth into three stages: entrepreneurial ideation, survival, and maturity. The study explores how digital technology empowers user entrepreneurship growth through different forms of empowerment. In the ideation stage, digital technology improves opportunity identification efficiency by resolving the capability dilemma of user information screening and commercial ideation through community interaction. In the survival stage, digital technology transforms the value creation approach by resolving the capability dilemma of user personalized production and differentiation. Finally, in the maturity stage, digital technology expands the value realization approach by breaking through the capability dilemma of user market expansion and branding.

Keywords: Digital Technology Empowerment; User Entrepreneurship; Entrepreneurial Ability; Sustainable Growth

1. Introduction

In recent years, the rise of digital platforms and open innovation environments has provided greater opportunities for users to commercialize their innovative products or services (Nambisan et al., 2018; Bi & Liu, 2022). The significant impact of digital technologies, including big data and artificial intelligence, is transforming the landscape of user entrepreneurship. By overcoming the capability dilemmas faced by users, digital technology empowers them to sustain and scale their entrepreneurial ventures.

This study draws on enterprise growth theory (Mao, 2009; Teece, 2019) to categorize user entrepreneurship into three stages: entrepreneurial conception, survival, and maturity. It investigates how digital technology empowers users' entrepreneurial growth by overcoming capability dilemmas and promoting the complete process of entrepreneurship. Specifically, digital technology enables efficient opportunity recognition and commercialization conception through community interaction in the conception stage, empowers value creation by overcoming personalized production and differentiation dilemmas in the survival stage, and expands value realization approaches by breaking through market expansion and branding dilemmas in the maturity stage.

The study contributes to the theory and management practices of user entrepreneurship by exploring how digital technology promotes entrepreneurial growth. The findings offer guidance for policymakers, entrepreneurs, and investors to leverage digital technologies to foster sustainable entrepreneurship.

2. Literature review

2.1 User entrepreneurship

User entrepreneurship has become a popular concept in recent years due to the rise of digital platforms and open innovation environments. User entrepreneurship refers to the process by which users, who are not traditional entrepreneurs, commercialize their innovative products or services (Agarwal & Shah, 2014; Escobar et al., 2021). User entrepreneurship is often driven by the user's desire to solve a problem they encounter, and the potential to create a new market or disrupt an existing one (Oo et al., 2019; Srivastava et al., 2022). User entrepreneurship has attracted much attention due to its potential to drive innovation and economic

growth.

2.2 Entrepreneurial ability

Entrepreneurial capability is a critical factor in the success of user entrepreneurship. Entrepreneurial capability includes the skills, knowledge, and mindset necessary for successful entrepreneurship. Entrepreneurial capability is particularly important for user entrepreneurs, who may lack the formal education or training that traditional entrepreneurs possess. User entrepreneurs often face capability dilemmas, such as the ability to recognize opportunities, create value, and access markets (Holzmann et al., 2017; Brem et al., 2019). These dilemmas can limit their ability to grow and succeed.

2.3 The sustainable growth of user entrepreneurship is empowered by digital technology

Digital technology has empowered user entrepreneurship for sustainable growth by overcoming their ability dilemmas through various forms of empowerment (Nambisan, 2017; Modgil et al., 2022). User entrepreneurship's ability dilemmas have been addressed through digital technology in the stages of entrepreneurial ideation, survival, and maturity, allowing for more efficient and effective opportunity identification, value creation, and value realization. This has been achieved through breaking through dilemmas in information screening and commercial idea construction, personalized production and differentiation, and market expansion and branding. Ultimately, leveraging digital technology enables sustainable growth of user entrepreneurship.

3. Digital technology's role in empowering sustainable growth in user entrepreneurship

3.1 Analysis of the capability dilemma in user entrepreneurial growth

3.1.1 The capability dilemma in the entrepreneurial ideation stage

To address the challenge of identifying viable business opportunities in the entrepreneurial ideation stage, users often lack the skills, knowledge, and resources needed to effectively identify market gaps, develop innovative ideas, and evaluate the feasibility of those ideas. The capability dilemma in this stage is caused by the lack of access to information, expertise, and funding. Digital technology can be used to empower users to overcome this dilemma. Through online communities and platforms, users can access valuable information, collaborate with experts and peers, and gain exposure to funding opportunities. Additionally, digital technology can improve the efficiency and accuracy of market research and opportunity evaluation, enabling users to make more informed decisions.

3.1.2 The capability dilemma in the entrepreneurial survival stage

The capability dilemma in the entrepreneurial survival stage is caused by the lack of access to necessary skills, experience, and support, which prevents users from effectively managing their businesses. To address this challenge, digital technology can be used to empower users. By utilizing online training programs, mentoring platforms, and business networks, users can access the knowledge and support they need to manage their businesses effectively. Additionally, digital technology can provide tools and resources to streamline business processes and improve efficiency, which can help users to maximize their limited resources.

3.1.3 The capability dilemma in the entrepreneurial maturation stage

In the entrepreneurial maturation stage, users face the challenge of scaling their businesses and expanding market reach, which is hindered by the capability dilemma arising from the lack of resources, networks, and expertise. Digital technology can empower users to overcome this dilemma by providing access to funding, strategic partnerships, and market insights through online platforms. Moreover, digital technology facilitates access to new markets through e-commerce platforms, social media, and online advertising.

3.2 Digital technology's role in empowering sustainable growth in user entrepreneurship

3.2.1 Digital technology empowerment at the user's entrepreneurial ideation stage

At the ideation stage, digital technology can help users overcome the capability dilemma of information screening and commercial ideation through community interaction. Digital technology can enhance the efficiency of opportunity recognition and empower opportunity identification. Big data analytics and machine learning algorithms can help users screen massive amounts of information to identify relevant and valuable opportunities. Social media platforms and online forums can facilitate community interaction and collaboration, enabling users to exchange ideas and receive feedback from potential customers and partners. Through digital technology empowerment, users can refine their business concepts and develop innovative solutions that meet market demands.

3.2.2 Digital technology empowerment at the user's entrepreneurial survival stage

In the survival stage, users can overcome the capability dilemma of personalized production and differentiation through digital technology. Value creation can be facilitated by changing the way products and services are produced and delivered. For instance, personalized and customized production can be enabled by 3D printing technology, allowing users to create unique products that cater to specific customer needs and preferences. Additionally, online marketplaces and e-commerce platforms can be utilized by users to reach a broader audience and sell their products or services globally. Digital marketing tools, such as search engine optimization and social media advertising, can also enhance visibility and attract more customers for users.

3.2.3 Digital technology empowerment at the user's entrepreneurial maturation stage

At the maturation stage, digital technology can help users overcome the capability dilemma of market expansion and branding. Digital technology can enable value realization by expanding the channels for value delivery and enhancing the reputation and recognition of the user's brand. E-commerce platforms, such as Amazon and Alibaba, can enable users to sell their products globally and reach new markets. Digital marketing tools, such as email marketing and influencer marketing, can help users build their brand awareness and reputation. Social media platforms can also be leveraged to engage with customers and receive feedback, enabling users to continuously improve their products and services.

4. Conclusion and discussion

Digital technologies, including big data and artificial intelligence, is transforming the landscape of user entrepreneurship. This study employs the theory of enterprise growth to categorize user entrepreneurship into three stages: entrepreneurial conception, survival, and maturity. It explores how digital technology can empower entrepreneurial growth at each stage, thereby overcoming the ability dilemmas faced by users and promoting sustained growth.

This study contributes to the literature on digital technology and entrepreneurship by identifying the ability dilemmas of user entrepreneurship and examining how digital technology can empower entrepreneurial growth. It provides a systematic framework for understanding the growth process of user entrepreneurship. Entrepreneurs can use digital platforms, digital manufacturing technologies, and digital marketing strategies to overcome ability dilemmas and promote entrepreneurial growth. Policymakers and investors can also support and finance user entrepreneurship. Future research should explore the impact of different digital technologies on user entrepreneurship and investigate the interplay between digital technology and other factors, such as entrepreneurial mindset and social capital, through longitudinal studies.

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