

A Model Study of Corporate Digital Entrepreneurship

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Abstract—With the development of digital technology, traditional entrepreneurial activities are changing; digital technology-driven entrepreneurial activities are gradually becoming a new trend. This study integrates the established views of corporate entrepreneurship and digital entrepreneurship, puts forward the new concept of corporate digital entrepreneurship, explains it in terms of theoretical connotation and practical logic, and constructs the conceptual framework and basic model of corporate digital entrepreneurship. The study enriches the research on corporate entrepreneurship in the digital scenario and provides management reference for the high-quality development of enterprises in the digital era.

Keywords—corporate digital entrepreneurship, conceptual framework, basic model

I. INTRODUCTION

Corporate entrepreneurship is the act of developing and utilizing entrepreneurial opportunities to expand into new businesses or new markets based on maintaining existing businesses and competitive advantages; it has become an effective path for enterprises to resolve growth crises and gain sustainable competitive advantages (Joshi *et al.*, 2019). Through corporate entrepreneurship, firms are able to proactively break the mold, be sensitive to opportunities, and creatively organize transactions between factors of production in order to create surplus value (Jones & Butler, 1992). The application of digital technologies such as artificial intelligence, cloud computing and big data analytics is forcing companies to transform their operations and management styles to compete more efficiently in the marketplace through corporate transformation and upgrading. In fact, with the advent of the digital age, corporate entrepreneurial activities have become richer and more diversified, and the effects brought about by entrepreneurship have become more influential. Corporate entrepreneurship, with enterprises as the main body, is driving the upgrading and upgrading of the entrepreneurial wave (Nambisan, 2017).

The rapid progress of digital technology requires enterprises to break the original development logic and adopt new value creation methods to promote the

development of enterprises, i.e., corporate digital entrepreneurship. However, there are significant differences between corporate entrepreneurship in the digital era and traditional entrepreneurial activities: on the one hand, traditional corporate entrepreneurship lacks the exploration of digital elements embedded in corporate entrepreneurial activities (Wang *et al.*, 2015); on the other hand, digital entrepreneurship involves more inquiry at the individual level, and lacks the exploration of entrepreneurial behavior at the organizational level (Geissinger *et al.*, 2019). Therefore, this study integrates the established perspectives of digital entrepreneurship and corporate entrepreneurship, proposes the concept of corporate digital entrepreneurship, constructs a conceptual framework and basic model of corporate entrepreneurship, and enriches the theoretical knowledge of corporate entrepreneurship in the digital era.

II. CORPORATE DIGITAL ENTREPRENEURSHIP

A. Corporate Entrepreneurship

Originating in the 1970s, corporate entrepreneurship initially focused on entrepreneurial activities carried out within a company to create and add new business, or to promote innovation, change and renewal initiatives (Westfall, 1969). By the 1980s, it gradually became a separate field of study encompassing the themes of strategy and entrepreneurship. In the 1990s, corporate entrepreneurship has become an important means of improving internal business processes and structures through the creation of new knowledge and ideas, the facilitation of new business outcomes to improve internal business processes and structures, and the creation of market-driven products and services that are designed to improve the performance of the organization (Zahra, 1991). Entering the 21st century, corporate entrepreneurship revitalizes the organization in a purposeful and sustained manner by shaping an individually identifiable strategy through the identification and exploitation of entrepreneurial opportunities, at a time when the focus is on sustained competitive advantage of the firm in the marketplace (Ireland *et al.*, 2009). This means that as soon as the external environment changes, the firm will adopt a corresponding adaptive strategy to pursue opportunities. Thus, firms that adopt corporate entrepreneurship as a

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core strategy are able to compete favorably over the long term, to outperform competitors, and to take advantage of environmental uncertainty in order to maintain competitiveness and create value. With the proliferation and integration of digital technologies, the external environment of the firm has changed dramatically. Corporate entrepreneurship as an important means of resource identification and utilization needs to be continuously matched with the external environment. This means that in the digital era, the development of digital technology has brought new adjustments to corporate entrepreneurship and given it new organizational connotations.

B. Digital Entrepreneurship

Digital entrepreneurship involves combining digital technologies with assets, services or businesses (Kraus *et al.*, 2019). Therefore, any phenomenon that applies digital technologies to entrepreneurial activities can be called digital entrepreneurship. The manifestations of digital technologies in the entrepreneurial arena include, first, digital artifacts as part of a new product or service that can provide specific functionality and value to the user (Kallinikos *et al.*, 2013), while at the same time unlocking a vast array of opportunities for different industries as it is broadly integrated with products and services (Porter & Heppelmann, 2014); second, digital platforms as a set of shared and common services and architectures that provide entrepreneurs with a rich array of opportunities, including complementary products and services opportunities (Zahra & Nambisan, 2011); and finally, digital infrastructure can provide communication, collaboration, and computing power that greatly supports innovation and entrepreneurship, allowing for more diverse participation at all stages.

Digital entrepreneurship integrates various elements of digital technologies and entrepreneurial activities, both the application of digital technologies to value creation and the partial or total digitization of entrepreneurial activities. The emergence of new digital technologies affects all aspects of innovation and entrepreneurship: on the one hand, digital technologies make the entrepreneurial process and outcomes looser, bringing greater unpredictability to development (Huang *et al.*, 2017); on the other hand, the sources of resources needed to identify and utilize entrepreneurial opportunities are broader and more diverse, leading to different degrees of entrepreneurial approaches (Aldrich, 2014). In conclusion, entrepreneurial activities focusing on the application of digital technologies and the exploitation of digital opportunities will certainly be an important option for organizational change and innovation.

C. A Conceptual Framework for Corporate Digital Entrepreneurship

Corporate entrepreneurship aims to change the competitive landscape or revitalize a company's business; it is the main vehicle for adapting to the external environment and gaining a competitive advantage (Teng, 2007). With the advent of the digital era, digital technology has had a profound impact on corporate

entrepreneurship: on the one hand, the development of new technologies can reduce the cost of corporate entrepreneurship; on the other hand, new digital technologies may change the decision-making process and make it more efficient. Therefore, companies can fully utilize the positive effects of technological facilities and internal processes by implementing a digital corporate entrepreneurship strategy, which may increase the relevance and interdependence between businesses.

In essence, corporate entrepreneurship is a dynamic adjustment behavior carried out by enterprises in response to changes in the environment, and its purpose is to achieve a match between the organization and the environment, which involves both the identification and development of entrepreneurial opportunities and the dynamic adjustment of strategic decisions (Burgers & Covin, 2016). Therefore, this study synthesizes the theoretical perspectives of corporate entrepreneurship and digital entrepreneurship to construct the conceptual framework of corporate digital entrepreneurship, and considers corporate digital entrepreneurship as an organizational innovation and value creation process in which incumbent firms, in order to adapt to rapidly changing internal and external environments, utilize digital technology to create and seize new entrepreneurial opportunities in order to gain, maintain, or strengthen competitive advantages (Li *et al.*, 2023). It covers three aspects: digital strategy, digital innovation and digital business development: digital strategy embodies the strategic renewal with the application of digital technology as the core, and is the digitalization of the organization's strategic intent and development vision. Digital innovation refers to the product, process and organizational innovation of enterprises using digital technology, and is the digital entrepreneurship in the functional areas of enterprises. Digital business development refers to the activity or process of creating new digital products or services by means of intrapreneurship, venture capital or mergers and acquisitions.

III. FOUR MODELS OF CORPORATE DIGITAL ENTREPRENEURSHIP

This study understands corporate digital entrepreneurship as the use of digital technologies (digital platforms, infrastructures, and components) to carry out organizational innovation and value-creating activities in existing or brand new businesses, which is essentially the commercial use of innovations in digital technologies and the transformation of value at the enterprise level. This study categorizes corporate digital entrepreneurship into four modes, defender, rebuildler, enabler, and adventurer, based on two types of digital technologies, Incremental and Breakthrough, and two forms of corporate digital entrepreneurship, Along an Existing Industry and Breaking into an Entirely New Industry.

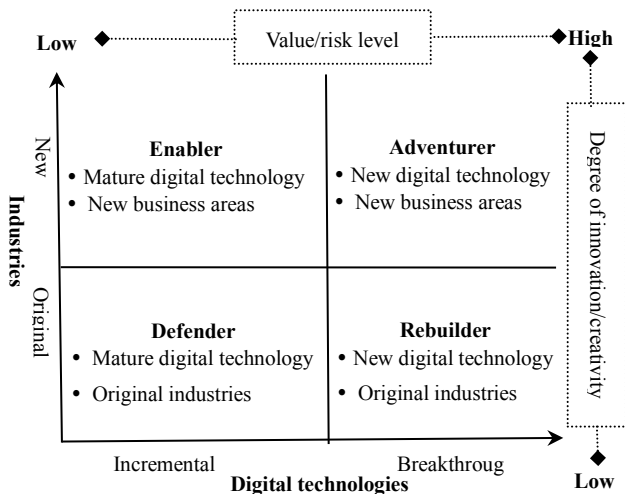


Fig. 1. Four models of corporate digital entrepreneurship.

A. The Defender Mode

The defender model refers to the use of mature digital technology by enterprises to carry out organizational innovation and value creation on existing industries. In terms of digital technology, it emphasizes the results of progressive digital technology innovation to reduce costs and improve efficiency as the principle of innovation, thus under the defender model, enterprises do not have high requirements for digital technology resources; more emphasis on how to maintain the stability of the existing business in the business and the consolidation of the existing market position, often through the application of the existing resources, to achieve the level of innovation in the production, operation, sales and other levels. For example, compared with the digital enterprise, for the service industry, manufacturing and other industries, such as enterprises, subject to industry characteristics and cost issues and other factors constraints, often through the progressive digital technology innovation to realize enterprise development and competition. Thus, the application of the defender model for corporate digital entrepreneurship can give companies a cost advantage and less risk, helping them to compete in a fierce market.

B. The Rebuilder Model

The Rebuilder model refers to the introduction and use of new digital technologies by a company in an existing industry to carry out organizational innovation and value creation, and ultimately drive change in the industry. Enterprises that choose the rebuilder model for their digital ventures have the following characteristics: first, they are able to lead the development of the industry, occupy a dominant position in the development of the industry, and have the ambition to promote the development of the industry; second, they should also have sufficient resources and strong capabilities to apply and promote the development of new digital technologies in the industry as a whole. Companies such as Tencent and Huawei, often have strong resource bases and capabilities, and are industry leaders, able to transform their businesses through new digital technologies and lead the industry in innovation and value creation.

Therefore, the companies that carry out digital entrepreneurship under the Rebuilder Model are not only concerned about their own growth, but also have the ability and resource base to empower the development of the industry and become a benchmark for the development of the industry. The rebuilder model is a high-level form of corporate digital entrepreneurship based on existing industries, which can realize high value creation and corporate innovation, and become an important strategic means to achieve corporate development.

C. The Enabler Model

The enabler model refers to the introduction of continuously improved digital technologies into a new industry by a company to realize new business development within the new industry, emphasizing the application of the company's existing digital technologies to the new industry to realize new ways of value creation, and thus realizing the expansion of the company's market scope. Corporate entrepreneurship under the enabler model has the following characteristics: on the one hand, companies need to have mature digital technologies that are compatible with other industries; on the other hand, companies apply these digital technologies to other industries to digitize the industries, form digital ecosystems, and help the industries create value networks. For example, Haier, Mashang Consumer Finance and a series of other enterprises promote mature digital technologies through digital platforms to provide digital services to enterprises, which often possess different natures and come from different industries, and utilize the compatible features of digital technologies to realize the development of their own enterprises. Therefore, enterprises using the enabler model for corporate digital entrepreneurship emphasize the continuous improvement of digital technologies and the formation of systematic technological solutions that enable them to form highly replicable and adaptable digital business models, thus helping them to transcend their existing development trajectories and open up new paths of business.

D. The Adventurer Model

The adventurer mode refers to the enterprise jumping out of the existing industry, applying brand new digital technology to the new industry for new business development, and forming a new development path for the enterprise. The motivation for enterprises to choose the adventurer mode to carry out corporate digital entrepreneurship includes: firstly, due to the limitations of the development of the enterprise industry, which makes the enterprise lack of development prospects, and is forced to choose a new industry for development; secondly, driven by the internal and external factors of the enterprise, in order to seize the opportunity in a timely manner, the enterprise applies the digital technology to carry out entrepreneurial activities in a new industry. For example, the new energy and lithium battery industries, which are supported by policies, as well as some service and manufacturing industries have opened up new industries through new digital

technologies, and by competing in new industries, they have helped companies gain a competitive advantage. The digital entrepreneurship of the company under the adventurer model, while realizing a new face of the company, also puts severe demands on organizational resources, so it is accompanied by a high degree of risk while possessing a high degree of creativity and innovation.

IV. CONCLUSION

By integrating the established views of corporate entrepreneurship and digital entrepreneurship, this study develops a new concept of corporate digital entrepreneurship and enriches the connotation study of corporate entrepreneurship in the digital era; and based on the two types of digital technologies, progressive and breakthrough, and the two types of value creation modes, along the existing industry and the opening up of a whole new industry, it classifies corporate digital entrepreneurship into four modes: defender, reshaper, enabler, and venturer, which further elucidates the logic of corporate digital entrepreneurship, and provides a theoretical guideline for carrying out corporate entrepreneurship in the digital era.

This study has the following theoretical contributions: on the one hand, it develops a new concept of corporate digital entrepreneurship and enriches the connotation study of corporate entrepreneurship in the digital era; on the other hand, it divides corporate digital entrepreneurship into four modes, namely, Defender, Reinventor, Enabler, and Risk Taker, which further elucidates the basic logic of corporate digital entrepreneurship, and provides theoretical guidelines for conducting corporate digital entrepreneurship.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

AUTHOR CONTRIBUTIONS

Wei Li led the overall structure of this paper; Xiaolin Zhu completed the writing of this paper; both authors had approved the final version.

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