

Exploring the Effects of Relational Resources and Digital Capability on Entrepreneurial Performance Based on the Mediating Role of Value Creation Innovation: A Conceptual Study

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Abstract

The aim of this study is to investigate how Chinese small and medium-sized enterprises can enhance their entrepreneurial performance by improving their relational resources and digital capability. While previous research indicates that relational resources and digital capability may not always have a direct impact on entrepreneurial performance, this study proposes a new research framework based on the value creation theory. This framework treats relational resources and digital capability as independent variables, with entrepreneurial performance as the dependent variable. Value creation innovation is introduced as a mediating variable to examine its role in mediating the relationships between relational resources, digital capability, and entrepreneurial performance. The measurement tools were constructed using mature measurement scales to ensure the reliability of research findings. The study's findings contribute to theoretical research on entrepreneurial performance in Chinese small and medium-sized enterprises, providing a solid foundation for future empirical studies.

Keywords: Relational Resources, Digital Capability, Entrepreneurial Performance, Value Creation Innovation

Introduction

Chinese small and medium-sized enterprises (SMEs) are crucial to China's economic development. However, they have faced significant challenges in recent years. Since the beginning of 2020, various factors, including the economic impact of the COVID-19 pandemic, surging raw material prices, and regulatory hurdles, have severely affected the operational activities of Chinese SMEs (Huajing Industrial Economic Research Institute, 2023).

Furthermore, Chinese SMEs face limitations in mobilising internal and external resources for collaboration, and their ability to leverage digital technology for value creation remains relatively weak (Huating Industrial Economic Research Institute, 2023). These unfavourable internal and external circumstances have hindered the entrepreneurial performance of Chinese SMEs during their developmental journey. To comprehensively address these difficulties, the Chinese government has implemented measures to support SME development. Guidelines have been issued to enhance competitiveness through stronger credit support mechanisms, diversified financing channels, and reinforced intellectual property protection policies. Furthermore, in accordance with China's Government Work Report for 2024, the plan is to establish several national manufacturing innovation centres and general technology platforms. This will facilitate SME integration into industrial chains, supply chains, and value chains while promoting their digital transformation (China Government Website, 2024). Meanwhile, SMEs in China must rely on their own development strategies for innovative value creation amidst this challenging situation. However, there is a lack of academic research on the factors that influence value creation innovation in Chinese small and medium-sized enterprises (SMEs) and how entrepreneurial performance can be improved through value creation innovation. Therefore, this study aims to explore how relational resources and digital capability impact value creation innovation and entrepreneurial performance, as well as the mediating role of value creation innovation in influencing entrepreneurial performance.

Literature Review

Value Creation Theory

Treacy and Wiersema (1993) proposed three strategies for creating value: product leadership, operational excellence, and customer intimacy. Product leadership focuses on providing innovative solutions, operational excellence prioritises cost reduction and efficiency improvement, while customer intimacy emphasises personalisation and building strong customer relationships. The aim of these strategies is to gain a competitive advantage by offering high-performance products or services at low costs or tailored to individual customer needs. Zacharias et al. (2016) further expanded on these strategies by emphasizing the significance of capabilities in both value creation and capture processes. Value creation encompasses exploration (developing new products), exploitation (optimizing existing products), and adaptation (meeting specific customer requirements). Value capture involves leveraging market assets to attract and retain customers.

Some scholars argue that understanding value creation from the customer's perspective is crucial (Ulaga et al., 2001). Eggert et al. (2018) highlight the potential for value creation in business relationships. Value is determined by customers based on their perceived utility and is created through a collaborative process involving both consumers and businesses (Eggert et al., 2018). Digital technology has elevated the role of customers in the business environment, making customer value leadership essential in creating value. Conversely, some scholars examine value creation from the company's perspective. Kumar and Reinartz (2016) argue that companies must dynamically adjust resource allocation to markets, customers, and products to create value. To facilitate product and service promotion and adoption, companies must enhance customer acceptance of their value propositions. In the context of digitization, value creation has transformed into a co-creation model between companies and customers, with a focus on value networks and customer experience, resulting in new

business models (Kumar & Reinartz, 2016). Digital interactive platforms offer an open-ended development model for value creation, allowing for diversification among entities involved.

Relational Resources

Relational resources are the resources that a company acquires by establishing stable, mutually beneficial, and trust-based relationships with external stakeholders, such as suppliers, customers, and partners. These resources reflect the ability of an enterprise to mobilise internal and external collaborative resources (Fu, 2015; Karia et al., 2015). In recent years, scholars have conducted several studies on the relationship between relational resources and value creation innovation. Research has explored the mechanisms by which relational resources influence value creation innovation. It is suggested that these resources can promote value creation innovation by enhancing variables such as absorptive capacity, learning ability, and creative capability within a company (Fu, 2015). Ziólkowska (2014) analysed the impact of different types of relational resources, such as supplier, customer, and partner relationships, on value creation and innovation.

Based on the theoretical foundations of previous research, this study classifies the impact of relational resources on value creation innovation into three categories: research based on Resource-Based Theory (RBT), research based on Dynamic Capability Theory (DCT), and research based on Social Network Theory (SNT). Research based on RBT suggests that relational resources are important strategic assets for firms. They provide scarce, valuable, irreplaceable, and difficult-to-imitate resources, thereby enhancing their competitive advantage and innovation capability (Hitt et al., 2016). Research based on DCT suggests that relational resources are essential dynamic capabilities for firms. These resources enable firms to perceive, acquire, integrate, transform, and utilize external resources to promote value creation and innovation (Srivastava et al., 2015). Research based on SNT also argues that relational resources are crucial network capital within a firm's social network. Relational resources are crucial for enhancing a firm's social influence and innovation capability (Amit & Zott, 2020). It is important to note that subjective evaluations have been excluded, and the language used is clear, objective, and value-neutral. The text adheres to conventional structure and formal register, with precise word choice and grammatical correctness. This study also recognizes Karia et al.'s (2015) proposal of measuring relational resources through three dimensions related to coordination cooperation, information sharing, and communication skills.

Digital Capability

The digital economy is currently the driving force behind innovation in various industries. Its core element, digital capability, has transformed the way information is accessed, processed, and disseminated, as well as the logic, patterns, and value of business activities (Khin & Ho, 2018). Digital capability refers to the skills, talents, and expertise in digital technology required for managing new product development in enterprises (Khin & Ho, 2018). Not only does it enrich the presentation of information, but it also enhances its convenience and shareability. Furthermore, it significantly strengthens enterprises' ability to capture market information, understand customer needs, select partners, and test innovative solutions. Additionally, it helps enterprises expand markets more effectively, optimize business processes, and integrate various resources (Zott & Amit, 2017). However, digital capability also makes the operating environment more complex and uncertain, intensifying market competition and prompting companies to constantly pursue breakthroughs and changes to

adapt to ever-changing market demands and customer expectations. In this process, value creation becomes more diverse, personalized, and collaborative (Foss & Saebi, 2017).

Digital capability has blurred business boundaries, enabling cross-industry, cross-domain, and cross-regional collaborative innovation and cooperation. This drives enterprises to build innovative ecosystems based on platforms, networks, and communities, and enables broader and deeper collaboration possibilities (Nambisan et al., 2017). Matarazzo et al. (2021) investigate the impact of digital transformation on the customer value creation process in small and medium-sized enterprises. The authors analyse how digital technologies improve customer experiences through four dimensions: information, entertainment, social interaction, and sensory appeal. They also facilitate customer engagement and co-creation of value. Khin and Ho (2018) developed a measurement scale for digital capability and confirmed empirically that it is a crucial factor in achieving entrepreneurial performance. In summary, there is a strong association between digital capability, value creation, innovation, and entrepreneurial performance.

Value Creation Innovation

According to Clauss (2017), value creation innovation refers to the way in which companies use internal and external resources and capabilities to create value along the value chain. This encompasses four dimensions: new capabilities, new technologies or equipment, new processes or structures, and new partnerships. New capabilities refer to the management and organizational activities that companies need to cultivate and leverage in order to adapt to changes in the external environment and restructure their internal resources. New technologies or equipment pertain to the technological resources and equipment used by companies to develop new products or services or improve existing business models. New processes and structures are the means by which various activities within a company's operational system are interconnected, determining the efficiency and innovativeness of its business model. Finally, new partnerships involve relationships between companies and external resources such as suppliers, customers, or competitors. These relationships can bring about relational benefits and synergistic effects (Clauss, 2017).

Nuryakin et al. (2018) conducted a study on the relationship between relational capability, market knowledge capability, value creation, and performance of small and medium-sized enterprises (SMEs). They used structural equation modeling (SEM) to test their hypotheses and found that value creation plays a mediating role in this relationship. Shou et al. (2017) also investigated the relationship between relational resources, innovation capability, and firm performance. Structural equation modeling was used to analyze data from 203 third-party logistics companies in China. The results indicate that innovation capability fully mediates the relationship between relational resources and firm performance. Relational resources do not directly impact firm performance but rather influence it through innovation capability. Jiang et al. (2023) investigated how digital platform capabilities enhance innovation performance of SMEs through value co-creation. The findings suggest that the relationship between digital platform capabilities and innovation performance is partially mediated by value co-creation. Digital platform capabilities are a manifestation of digital capability, while value co-creation represents innovative forms of value creation. Digital capabilities help firms overcome resource constraints, improving the efficiency and success rate of value creation innovations, thereby promoting entrepreneurial performance improvement. In summary, there is a close association between value creation, innovation, and relational resources, digital capability, as well as entrepreneurial performance.

Entrepreneurial Performance

Entrepreneurial performance is a topic of great interest to entrepreneurs, investors, governments, and society (Zhu et al., 2020). However, there is no consensus on the concept, content, and measurement criteria of entrepreneurial performance. Researchers have defined and analyzed it from various perspectives and levels. In their systematic review, Zhu et al. (2020) analysed the development and theoretical evolution of domestic research on entrepreneurial performance in China. The study revealed dynamic trends and the current status of research in this area. Chinese scholars typically use two types of indicators to study entrepreneurial performance: financial and non-financial indicators. Sariwulan et al. (2020) suggest that combining financial indicators with non-financial ones can provide a more comprehensive reflection of entrepreneurial performance. They also propose that entrepreneurial performance is a manifestation of the growth processes of small to medium-sized enterprises, which includes increases in production capacity, sales volume, and corporate profits. Furthermore, Firmansyah et al. (2023) discovered that entrepreneurial performance encompasses various aspects, including not only the ability to sustain business operations but also comprehensive considerations across dimensions such as management, products, and markets. Finally, Iqbal et al. (2023) proposed that entrepreneurship can be measured by various indicators, such as financial performance, business growth, innovation, and job creation opportunities.

In conclusion, entrepreneurial performance is the result of entrepreneurial activities during enterprise growth. Research has shown that combining financial and non-financial indicators can provide a more comprehensive reflection of entrepreneurial performance (Sariwulan et al., 2020). Entrepreneurial performance involves considering various dimensions such as management, products, markets, and profits. Sariwulan et al. (2020) developed a measurement scale to assess entrepreneurial performance by integrating individual and organizational performance. The scale includes items that align with the objectives of this study.

Conceptual Framework

This study presents a conceptual framework (Figure 1) to address the research gap in value creation innovation and entrepreneurial performance. The aim is to investigate the factors that influence value creation innovation and its mediating effect on the entrepreneurial performance of Chinese small and medium-sized enterprises (SMEs). The study involves selecting and determining independent, mediating, and dependent variables. This paper examines the relational resources of enterprises, including both external and internal resources, which reflect their ability to mobilise resources flexibly (Karia et al., 2015). Digital capability typically originates from external sources, allowing enterprises to transform external resources into their own abilities to adapt to environmental changes through the introduction of third-party partners or digital technologies. This demonstrates proactive transformation and enhanced adaptive capacity (Khin & Ho, 2018). The conceptual framework of this study is based on the value creation theory. According to this theory, businesses create value through exchanges of goods and services in the market. Additionally, commercial relationships themselves represent significant potential for value creation (Eggert et al., 2018). This research studies value creation innovation as a mediating variable to provide a more detailed explanation of how relational resources and digital capability impact

entrepreneurial performance of Chinese SMEs (Clauss, 2017). Furthermore, this study measures entrepreneurial performance as an overall dimension for Chinese SMEs due to the substantial uncertainty and complexity involved in its measurement (Sariwulan et al., 2020).

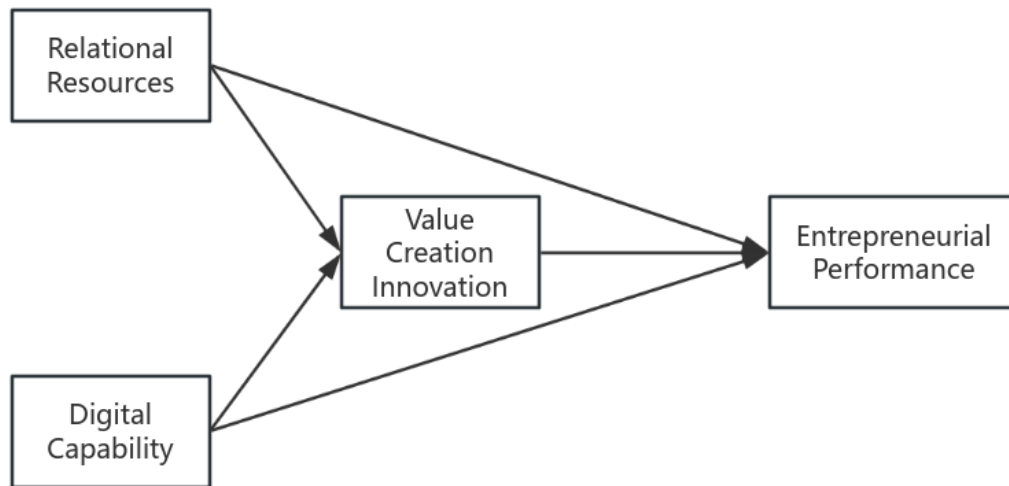


Figure 1: Conceptual Framework

Measurement Instrument

This study examines the relationship between relational resources, digital capability, value creation innovation, and entrepreneurial performance of Chinese small and medium-sized enterprises (SMEs), with a focus on their business processes. The questionnaire employs a Likert 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree). This study includes two independent variables: relational resources and digital capability, a mediating variable of value creation innovation, and a dependent variable of entrepreneurial performance. Table 1 summarizes the measurement tools for these variables. Relational resources comprise three measurement items, digital capability includes five measurement items, value creation innovation comprises nine measurement items, and entrepreneurial performance includes eight measurement items. These measurements are adapted from Karia et al. (2015), Khin and Ho (2018), Clauss (2017), Sariwulan et al. (2020).

Table 1
Measurement Items and Source

No.	Measurement item	Source
Relational Resources		
RR1	Our company establishes close coordination or collaboration with business partners.	Adapted from Karia et al. (2015)
RR2	Our company commits to share information among business partners.	
RR3	Our company inclines to recruit staff with good communication skill.	

Digital Capability		
DC1	Our company have the capability to apply essential digital technologies.	Adapted from Khin & Ho (2018)
DC2	Our company have the ability to discover digital opportunities.	
DC3	Our company are capable of responding to digital transformation.	
DC4	Our company possess the capacity to master cutting-edge digital technologies.	
DC5	Our company have the competence to utilize digital technologies for developing new products, services, or processes.	
Value Creation Innovation		
VCI1	Our employees constantly receive training in order to develop new competences.	Adapted from Clauss (2017)
VCI2	Relative to our direct competitors, our employees have very up-to-date knowledge and capabilities.	
VCI3	Our company keep the technical resources of our company upto-date.	
VCI4	Relative to our competitors our technical equipment is very innovative.	
VCI5	Our company were recently able to significantly improve our internal processes.	
VCI6	Our company utilise innovative procedures and processes during the manufacturing of our products.	
VCI7	Our company are constantly searching for new collaboration partners.	
VCI8	Our company regularly utilise opportunities that arise from integration of new partners into our processes.	
VCI9	New collaboration partners regularly help us to further develop our business model.	
Entrepreneurial Performance		
EP1	Our company are experiencing increased production capacity.	Adapted from Sariwulan et al. (2020)
EP2	Our company are experiencing an increase in sales volume.	
EP3	Our company are adding a new business unit.	
EP4	Our company have new product innovations.	
EP5	Customers with good loyalty increase.	
EP6	Our company provide after-sales service for customer satisfaction.	
EP7	The annual sales target Our company set was reached.	
EP8	Our company have increased operating profit.	

Conclusions and Recommendations

This study examines the mediating role of value creation innovation in the impact of relational resources and digital capability on entrepreneurial performance in Chinese small and

medium-sized enterprises (SMEs). The study hypothesizes that both relational resources and digital capability have a positive relationship with entrepreneurial performance, while also positively affecting value creation innovation. Furthermore, it is assumed that value creation innovation has a positive relationship with entrepreneurial performance. Therefore, it serves as a mediator between relational resources, digital capability, and entrepreneurial performance. This study aims to discover how value creation innovation can help SMEs respond to market competition and changing consumer demands by enhancing their core competitiveness for sustainable growth and development. However, this study has limitations that require further field investigations and data analysis to expand the scope of research subjects and samples, thus increasing its generalizability and representativeness. Based on the research findings, the Chinese government should provide policy support and incentive measures to increase support for SMEs in terms of relational resources and digital capability. Moreover, companies should develop clear strategies for creating value through innovation, with defined goals and plans, while leveraging influencing factors such as relational resources and digital capability to improve entrepreneurial performance.

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