

# Digital Platform Capability, Value Co-Creation, and SME Digital Transformation Performance: A Moderated Mediation Model

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**Abstract:** To explore how SMEs utilize digital platform capability to enhance digital transformation performance, this study, based on dynamic capability theory and value co-creation theory, takes Chinese SMEs as the research object and employs hierarchical regression analysis to investigate the mechanism through which digital platform capability influences their digital transformation performance, revealing the mediating role of value co-creation and the moderating role of local policy perception. The results indicate that (1) digital platform capability has a positive effect on the digital transformation performance of SMEs. (2) value co-creation partially mediates the relationship between digital platform capability and digital transformation performance. (3) local policy perception positively moderates both the relationship between digital platform capability and value co-creation, as well as the mediating effect of value co-creation in the link between digital platform capability and digital transformation performance. The findings not only extend the boundaries of existing theoretical research and enrich the perspectives on digital transformation but also offer new theoretical insights into how SMEs can leverage digital platforms to establish communities of interest and improve their digital transformation performance.

**Keywords:** Digital platform capability, value co-creation, local policy perception, digital transformation performance.

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## 1. Introduction

In the current digital era, cloud computing, big data, the Internet of Things (IoT), and other emerging digital technologies are flourishing. The digital economy, with data as the key production factor and digital technology as the core driving force, is rapidly emerging as a new engine for promoting the high-quality development of China's economy and society<sup>[1]</sup>. The rapid advancement of digital technology has provided a new breakthrough for the transformation and upgrading of traditional enterprises. Consequently, more and more enterprises are leveraging digital technology to transform their business models, thereby driving corporate transformation and development<sup>[2]</sup>. At the same time, the uncertainty in the external environment has forced enterprises to seek new growth opportunities. The 2020 outbreak of the COVID-19 pandemic had a significant impact on the global economy, leading to a decline in the world's economic growth rate. Against this backdrop of an international financial environment characterized by high uncertainty, complexity, and volatility, companies need to build their competitive advantage by empowering production, operations, and transformation through advanced digital technologies<sup>[3]</sup>. Therefore, in this era of opportunities and challenges, digital transformation is no longer a multiple-choice question for enterprise diversification but a mandatory question for survival in competition. Enterprises must find the appropriate transformation path and quickly adapt to the dynamic needs of the external market to gain an advantage in the new round of fierce competition<sup>[4]</sup>.

China's SMEs are the largest and most dynamic group of enterprises in the country and are an important force in promoting the sustainable development of the national economy. However, when facing digital transformation, most SMEs exhibit the "three nots" phenomenon: "don't want to change", "don't dare to change", and "can't change". Firstly,

some SMEs, due to cultural conservatism and cognitive inertia, find it difficult to adapt to the new digital way of working. They prefer to maintain the status quo with little change, resulting in the "don't want to change" situation. Secondly, SMEs are relatively scarce in capital, talent, and technology, which makes it challenging for them to afford the substantial costs associated with digital transformation. Although they have the intention to transform, they are hindered by the pressure of reality, leading to the "don't dare to change" situation<sup>[5]</sup>. Lastly, SMEs lack the capability to operate related resources to create value and struggle to find the right path for digital transformation, resulting in the "can't change" situation. Therefore, how to promote the digital transformation of SMEs has become a hot topic in both academic and practical circles.

Digital platforms provide enterprises with new ways to access, exchange, and organize resources, completely breaking down the boundaries and traditional paths of enterprise value creation. This enables SMEs to co-create value with suppliers, users, and other economic agents, while also reducing the transaction costs associated with the delivery and operation of enterprise information resources. Existing studies have begun to explore the operational mechanisms of digital platforms within digital ecosystems and their impact on the development of SMEs. Wu Jiang (2023) suggests that during the process of digital transformation, SMEs can leverage third-party digital platforms and digital technologies to empower their business development, improve internal processes, and thus enhance operational efficiency<sup>[6]</sup>.

Dynamic capability theory advocates that enterprises can construct specific dynamic capabilities to effectively address the rapidly changing external environment<sup>[7]</sup>. Digital platform capability is a higher-order dynamic capability that enterprises construct using digital platforms in the context of the digital economy. Digital platform capability refers to the

ability of an enterprise to combine the resources obtained within the digital platform with the enterprise's internal and external resources to form unique resources through the creation of new complementary modules<sup>[8]</sup>. This capability not only helps enterprises cope with the fast-changing external environment but also enables the integration of high-quality resources for internal delivery. For SMEs, which are inherently resource-constrained, digital platform capability can assist in building unique resources and knowledge during the digital transformation process<sup>[9]</sup>. This enables enterprises to engage with other stakeholders within the digital platform and co-create value, thereby facilitating the digital transformation of SMEs.

However, while the digital platform provides enterprises with better access to external resources and information, SMEs alone cannot ensure digital transformation. Enterprises need to leverage digital platform capability to collaborate with stakeholders, including customers, suppliers, digital service providers, and government, within the platform. By doing so, they can orchestrate the accessed resources and information, thereby creating the capabilities and value necessary for the enterprise's survival and development, and facilitating its digital transformation. Thus, value co-creation may play a significant role in the relationship between digital platform capability and SMEs' digital transformation performance.

In addition, the digital transformation of enterprises is also inseparable from the policy support of local governments. Local policy perception refers to the extent to which SMEs perceive the content, effects, and policy environment of local government policies related to the digital economy and digital transformation. Compared to central policies, local policies tend to be more targeted and specific, and the systems and resources provided by local policies can be directly absorbed and utilized by enterprises<sup>[10]</sup>. Therefore, SMEs' accurate understanding of local policies can help them utilize digital platforms and respond to government policies for value creation, thus completing digital transformation.

In summary, this study selects SMEs as the research subjects, based on dynamic capability theory and value co-creation theory, introduces value co-creation as a mediating variable and local policy perception as a moderating variable, and explores in-depth the boundary conditions under which digital platform capability affects the digital transformation performance of SMEs. This helps to further clarify how SMEs can leverage digital platform capability for value creation, thereby promoting digital transformation.

## **2. Theoretical Foundations and Research Hypotheses**

### **2.1. Digital Platform Capability and Digital Transformation Performance**

The road to digital transformation for SMEs currently faces the realities of high transformation costs, lack of resources, and insufficient capabilities, which necessitates reliance on third-party digital platforms for digital transformation. As a higher-order dynamic capability, digital platform capability enables SMEs to integrate and reconfigure internal and external resources using digital platforms. These capabilities can assist enterprises in leveraging digital technologies and data to enhance the digitalization of products and service processes, promote intelligent enterprise operations, and

facilitate business model innovation, thereby enhancing the performance of digital transformation<sup>[11]</sup>.

Digital platform integration capability refers to the ability of SMEs to use digital platforms to share information and integrate existing resources with stakeholders<sup>[12]</sup>. Firstly, the integration capability of digital platforms enables SMEs to rapidly integrate information about products and services, understand consumer needs and preferences, and flexibly adjust their production plans to improve resource utilization efficiency and achieve significant changes in the production of products and services. At the same time, integrating internal and external resources means that enterprises can open up data interoperability channels, accelerate the rate of information transmission, promote the dissemination of digital resources and digital technology within the organization, and achieve overall intelligent operations<sup>[13]</sup>. Additionally, sharing and integrating resources with other stakeholders within the platform can enhance the embeddedness of SMEs and partners, reduce the cost of acquiring external resources, and help enterprises accurately seize digital opportunities and conduct digital transformation activities. Furthermore, if other enterprises have already undergone digital transformation, SMEs can leverage the integration capability to acquire and integrate excellent transformation knowledge and experience, thereby improving their digital transformation performance.

The reconfiguration capability of digital platforms refers to the ability of SMEs to utilize the modular structure and standardized interfaces of digital platforms to reconfigure existing resources and create new heterogeneous resources<sup>[14]</sup>. Firstly, the modular structure of the platform enables enterprises to rapidly match the multiple personalized needs of customers, improve their flexibility and quick response capabilities, and propose targeted diversified customer solutions, thereby achieving intelligent innovation in the entire process of enterprise products and services, from production to marketing<sup>[15]</sup>. Secondly, the reconfiguration capability of digital platforms enables the upgrading and updating of single functional modules to achieve breakthrough innovations, allowing enterprises to focus resources on optimizing key functions at a lower cost and promote the rapid iteration of products and services to achieve digital transformation<sup>[16]</sup>. Finally, SMEs can embed themselves in various eco-value networks as multi-platform participants to achieve efficient data interconnection and reduce supply chain costs for product and service production, delivery, and marketing<sup>[17]</sup>, which in turn facilitates the realization of digital transformation performance. Therefore, the following hypotheses are proposed:

Hypothesis H1a: Digital platform integration capability has a positive effect on digital transformation performance.

Hypothesis H1b: Digital platform reconfiguration capability has a positive effect on digital transformation performance.

### **2.2. The Mediating Role of Value Co-Creation**

SMEs can quickly collect customer demands using the integration capability of digital platforms, and enable deep customer participation in the value creation process by optimizing the enterprise's product and service processes<sup>[18]</sup>. At the same time, the integration capability can accelerate information flow within the industrial chain, reduce information acquisition costs by collecting industry-related information, and enable SMEs to directly connect with

suppliers, distributors, and other partners on the platform<sup>[19]</sup>. This fosters an environment of information transparency and rapid efficiency for value co-creation activities. Finally, the integration of internal and external resources by enterprises can share business risks with stakeholders and promote value co-creation behaviors through the construction of a community of interests.

SMEs utilizing digital platform reconfiguration capability can integrate customer demands and flexibly adjust their production plans through the modular design of digital platforms, enabling customers to directly participate in the production process of products and services, thus promoting value co-creation between customers and enterprises. At the same time, SMEs with high digital platform reconfiguration capability can accurately identify valuable partners and resource-rich digital platforms, and share resources with other enterprises via the standardized interface features of digital platforms. This enables enterprises to build a widely linked relationship network at a lower cost, achieving interconnection and win-win symbiosis within the service ecosystems, and promoting value co-creation behavior among SMEs<sup>[20]</sup>. Therefore, the following hypothesis is proposed:

Hypothesis H2a: Digital platform integration capability has a positive effect on value co-creation.

Hypothesis H2b: Digital platform reconfiguration capability has a positive effect on value co-creation.

SMEs can hardly cope with digital transformation on their own given their existing resources and technology base and must cooperate with various stakeholders to co-create new value. The theory of value co-creation posits that value creation has transcended the traditional unidirectional value chain model, shifting towards the sharing, integration, and reconfiguration of resources through value networks. This shift enables SMEs to establish robust value network relationships, access network resources, and co-create value with other diverse value subjects, facilitating the smooth progression of the digital transformation process<sup>[21][22]</sup>. Therefore, value co-creation in SMEs has a significant contribution to digital transformation performance.

Specifically, first, by facilitating frequent communication between SMEs and stakeholders, value co-creation can accurately capture market demand, facilitate the identification of business scope and rapid adjustment of product strategies and service models, construct accurate and targeted digital strategies, and realize the digitization of enterprise products and services<sup>[23]</sup>. Second, value co-creation facilitates dialogues with large enterprises within the platform, enabling the acquisition of rich digital experiences and key resources, which can be transformed into their digital transformation process. This not only provides reference value but also promotes the formation of a digital atmosphere within the enterprise, giving SMEs more incentives to promote digital transformation. In addition, value co-creation can provide a risk buffer for the enterprise's digital transformation, reducing pressure and uncertainty due to technological updates and market competition by mitigating the risk and uncertainty of the enterprise's digital transformation<sup>[24]</sup>. Finally, value co-creation increases the transparency of information between enterprises, helping them to quickly establish trust and cooperation, overcome information silos, and work together to carry out digital transformation and gain performance. Therefore, the following hypotheses are proposed:

Hypothesis H3: Value co-creation has a positive effect on digital transformation performance.

It can be concluded from the above study that SMEs can utilize digital platform capability to integrate and reconstruct heterogeneous resources, prompting them to engage in value co-creation behaviors, such as information sharing, collaboration, interaction, and risk sharing with stakeholders within the digital platform. This, in turn, leads to improved operational efficiency, business model innovation, and product and service upgrading, thereby enhancing digital transformation performance. Therefore, the following hypotheses are proposed:

Hypothesis H4a: Value co-creation mediates the relationship between digital platform integration capability and digital transformation performance.

Hypothesis H4b: Value co-creation mediates the relationship between digital platform reconfiguration capability and digital transformation performance.

### 2.3. The Moderating Role of Local Policy Perception

As a major force guiding the development of SMEs, the government can formulate relevant policies and regulations that have a disruptive impact on the market environment. Local policies refer to the specific policy details formulated and implemented by local governments under the guidance of the central government, according to the actual situation of each region. Compared to central policies, local policies can be directly applied to enterprises, making them more targeted and adaptable. Local policy perception refers to the extent to which enterprises perceive the usefulness and ease of use of local government policies related to digital technology empowerment<sup>[25]</sup>. The extent to which SMEs perceive and respond positively to local digitalization policies affects their ability to utilize digital platforms, big data, and other technologies to improve business operations, build friendly cooperative relationships, and promote value-creating behaviors. This, in turn, positively affects enterprise talent innovation, new product development, digital innovation, and transformation<sup>[26][10]</sup>.

Specifically, when SMEs understand and positively respond to the digitization-related laws and regulations formulated by the government, they can obtain more market opportunities, funds, and digital technologies, develop more user groups and new business opportunities, and promote enterprise value co-creation. At the same time, a positive response to digitization policies can promote the implementation of SMEs' digital strategies, cultivate the digital awareness and competence of employees, and provide a guarantee for the enterprises' ability to build a wide range of cooperation networks. Finally, SMEs still face certain costs and risks when using digital platforms to carry out value co-creation activities with their partners. Government policies help SMEs by regulating activities such as capital transactions, data transmission, and property rights disputes within digital platforms, thereby providing a more efficient and stable environment for value co-creation activities. Therefore, the following hypothesis is proposed:

Hypothesis H5a: Local policy perception positively moderates the relationship between digital platform integration capability and value co-creation.

Hypothesis H5b: Local policy perception positively moderates the relationship between digital platform reconfiguration capability and value co-creation.

Local policy perception not only affects SMEs' ability to utilize digital platforms for integrating and reconfiguring

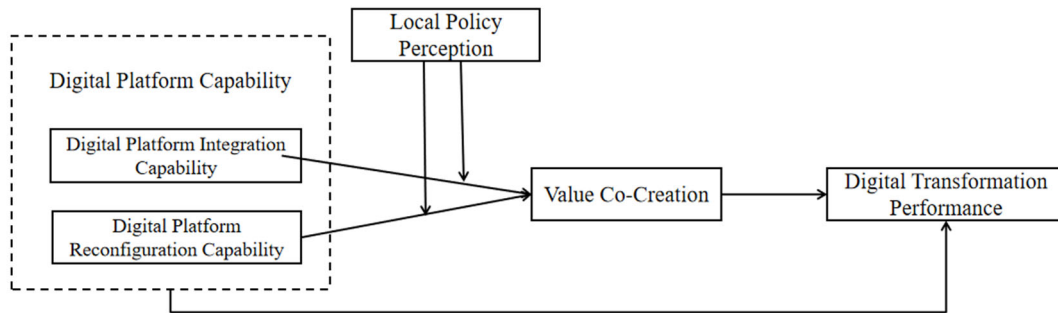
heterogeneous resources to facilitate value co-creation with stakeholders but also further promotes the digital transformation process of enterprises. Specifically, when enterprises perceive that the digital policies proposed by the local government can bring rapid improvements in capital, technology, and knowledge, they will transform these resources into key business activity scenarios<sup>[25]</sup>, thereby helping them embark on the path of digital transformation. At the same time, the government develops various digital platforms, encourages SMEs to engage in extensive market competition, and provides clear transformation strategy plans for SMEs<sup>[6]</sup>, facilitating enterprises to share resources and create value with other subjects in the supply chain. This enables them to respond faster to market demand, promotes the digitization of enterprises' product and service processes, improves operational efficiency, and lowers costs, thereby bringing about innovations in business models and obtaining digital transformation performance. If SMEs do not pay attention to the content of the policy or do not actively cooperate with the initiatives proposed by the policy, it will lead to enterprises not being able to fully leverage the

awareness, resources, and capacity enhancements brought by the policy advantages. This results in losing the priority of information access and the key position within the digital platform, and there are also limitations in thinking, insufficient digital capacity, and management stagnation in enterprises with weak perceptual ability. These enterprises are unable to collaborate with other stakeholders to create value with an open and sharing mindset, leading to stagnation on the road to digital transformation. Therefore, the following hypothesis is proposed:

Hypothesis H6a: Local policy perception positively moderates the mediating role of value co-creation between digital platform integration capability and digital transformation performance.

Hypothesis H6b: Local policy perception positively moderates the mediating role of value co-creation between digital platform reconfiguration capability and digital transformation performance.

In summary, the theoretical model of this study is presented in Figure 1.



**Figure 1.** Research Model

### 3. Research Design

#### 3.1. Sample Selection and Data Collection

This paper explores the influence mechanism of digital platform capability on the performance of digital transformation of small and medium-sized enterprises (SMEs) and adopts the method of sending questionnaires online to collect data. The data samples come from middle and senior managers of Chinese SMEs who are already utilizing digital platforms to promote the digital transformation of their enterprises. The data collection period was from June to August 2024, with a total of 385 questionnaires collected, of which 350 were valid. Among the data samples: nature of the enterprise, 26.6% are state-owned enterprises, 36.6% are private enterprises, 18.6% are wholly foreign-owned enterprises, 12% are Sino-foreign equity joint ventures, and 6.6% are others; years of experience, 14.6% of the enterprises are 0~5 years old, 59.7% of the enterprises are 6~10 years old, and 25.7% of the enterprises have more than 10 years of experience; size of the enterprise In terms of enterprise size, enterprises with 0~100 employees accounted for 12.6%, 101~300 employees accounted for 14.3%, 301~500 employees accounted for 37.4%, 501~1000 employees accounted for 30%, and more than 1,000 employees accounted for 5.7%; at the industry level, the manufacturing industry and the software industry accounted for the largest share of the total, both of which were more than 20%, while

the retail industry accounted for 18.6%, the construction industry accounted for 12%, and the agricultural industry accounted for 12%, with the agricultural industry accounting for more than 10 years. The construction industry accounted for 12%, agriculture, forestry, animal husbandry, and fishery industries accounted for 10.3%, and other types of industries accounted for less than 10%.

#### 3.2. Measurement of Variables

The variable scales used in this study are well-established and frequently used in a wide range of domestic and international studies. In this study, the Likert-5 scale was used, ranging from 1 ('Strongly Disagree') to 5 ('Strongly Agree').

(1) Digital Platform Capability: The scale, developed concerning the study of Cenamor et al. (2019), contains 8 items<sup>[8]</sup>. Representative questions include: "The enterprise's digital platform can access data from partners' IT systems" and "The standards adopted by the enterprise's digital platform are widely recognized and accepted by the majority of partners"

(2) Digital Transformation Performance: The scale, compiled with reference to the studies of Warner (2019) and Shen (2022), contains 9 items<sup>[27][28]</sup>. Representative questions include: "The enterprise has upgraded existing products and services using digital technology" and "The enterprise has realized agile R&D using digital technology"

(3) Value Co-Creation: The scale, compiled concerning the

studies of Prahalad and Ramaswamy (2004), Ren Jifan et al. (2014), and Du Danli et al. (2021), contains 12 items<sup>[29][30][31]</sup>. Representative items include: “Enterprises communicate and coordinate responsibilities and rights with partners to ensure the operation of digital platforms” and “Enterprises exchange dialogues with partners whenever possible”

(4) Local Policy Perception: Referring to the scales compiled by Hsu et al. (2014) and Fifi Yu (2024), it contains 4 items<sup>[32][25]</sup>. Representative questions include: “Local government policies encourage businesses to use digital technologies for their operations” and “Local Government Policies Guarantee Legitimacy in the Use of Digital Technology by Businesses”

(5) Control Variables: Referring to existing studies, this study considers the nature of the enterprise, the number of years of establishment, the size of the enterprise, and the industry to which it belongs as control variables.

## 4. Data Analysis

### 4.1. Common Method Biases

To avoid the problem of common method bias that may

result from having the same respondent complete all the question items, this study examined the data using the Harman single-factor test. The results showed that the explained variance of the first principal component extracted by factor analysis was 35.701%, less than the 40% threshold. Additionally, the multiple factors explained a total of 74.403% of the variance, indicating that the data of the present study did not suffer from serious common method bias.

### 4.2. Reliability Analysis and Validity Analysis

In this study, SPSS 26.0 and AMOS 24.0 software were used to assess the reliability and validity of the data, and the specific results are presented in Table 1. The results show that the Cronbach's Alpha coefficients for all variables exceeded 0.8, the average variance extracted (AVE) values exceeded 0.5, and the factor loading values exceeded 0.8. These results indicate that the variables in this study have good reliability and validity.

**Table 1.** Results of Reliability and Validity Analysis

| Variable                                    | Items | Cronbach's Alpha coefficient | AVE    | CR     |
|---------------------------------------------|-------|------------------------------|--------|--------|
| Digital Platform Integration Capability     | 4     | 0.865                        | 0.616  | 0.8651 |
| Digital Platform Reconfiguration Capability | 4     | 0.857                        | 0.5997 | 0.8569 |
| Value Co-Creation                           | 12    | 0.866                        | 0.6228 | 0.9519 |
| Local Policy Perception                     | 4     | 0.887                        | 0.618  | 0.8661 |
| Digital Transformation Performance          | 9     | 0.866                        | 0.6228 | 0.9369 |

To assess the structural validity of the scale, AMOS 24.0 was used to conduct a validation factor analysis. The results showed that the five-factor model fit the data optimally, with all fit indices ( $X^2/DF=1.191$ ,  $RMSEA=0.023$ ,  $IFI=0.985$ ,

$TLI=0.983$ ,  $CFI=0.985$ ) meeting the standard values. This indicates that the model fits the collected data well and is suitable for subsequent hypothesis testing.

**Table2.** Validation Factor Analysis Results

| Model               | Factor                    | $X^2/DF$ | RMSEA | IFI   | TLI   | CFI   |
|---------------------|---------------------------|----------|-------|-------|-------|-------|
| Five-Factor Model   | DPIC, DPRC, VCC, LPP, DTP | 1.191    | 0.023 | 0.985 | 0.983 | 0.985 |
| Four-Factor Model   | DPIC+DPRC, VCC, LPP, DTP  | 2.031    | 0.054 | 0.929 | 0.909 | 0.919 |
| Three-Factor Model  | DPIC+DPRC+VCC, LPP, DTP   | 4.556    | 0.101 | 0.708 | 0.685 | 0.706 |
| Two-Factor Model    | DPIC+DPRC+VCC+LPP, DTP    | 5.088    | 0.108 | 0.663 | 0.637 | 0.661 |
| Single-Factor Model | DPIC+DPRC+VCC+LPP+DTP     | 5.531    | 0.114 | 0.549 | 0.625 | 0.598 |

Note: DPIC denotes Digital Platform Integration Capability, DPRC denotes Digital Platform Reconfiguration Capability, VCC denotes Value Co-Creation, LPP denotes Local Policy Perception, and DTP denotes Digital Transformation Performance.

### 4.3. Correlation Analysis

In this study, SPSS 26.0 was used to analyze the relevant data, and the correlation coefficients between the variables are shown in Table 3. The results show that: Digital platform integration capability is significantly positively correlated with digital transformation performance ( $r=0.528$ ,  $P<0.01$ ); Digital platform reconfiguration capability is significantly positively correlated with digital transformation performance ( $r=0.542$ ,  $P<0.01$ ); Digital platform integration capability is significantly positively correlated with value co-creation ( $r=0.512$ ,  $P<0.01$ ); Digital platform reconfiguration capability is significantly positively correlated with value co-creation ( $r=0.541$ ,  $P<0.01$ ); Value co-creation is significantly positively correlated with digital transformation performance ( $r=0.642$ ,  $P<0.01$ ). These results provide a solid basis for subsequent hypothesis testing.

### 4.4. Hypothesis Testing

#### 4.4.1. Main Effect and Mediation Effects Test

To test the hypothesized model, this study uses SPSS 26.0 to test the main and mediating effects, and the results of the hierarchical regression analysis are presented in Table 4. As shown in Model 1, digital platform integration capability significantly positively affects digital transformation performance ( $\beta=0.529$ ,  $p<0.001$ ). As shown in Model 2, digital platform reconfiguration capability significantly positively affects digital transformation performance ( $\beta=0.545$ ,  $p<0.001$ ). In summary, H1a and H1b are supported. As shown in Model 6, digital platform integration capability significantly positively affects value co-creation ( $\beta=0.51$ ,  $p<0.001$ ). As shown in Model 7, digital platform reconfiguration capability significantly positively affects value co-creation ( $\beta=0.545$ ,  $p<0.001$ ). In summary, H2a and

H2b are supported.

**Table 3.** Correlation Analysis Results

| Variable    | Mean | SD    | 1      | 2      | 3      | 4      | 5      | 6      | 7      | 8      | 9 |
|-------------|------|-------|--------|--------|--------|--------|--------|--------|--------|--------|---|
| 1. Nature   | 2.36 | 1.183 | 1      |        |        |        |        |        |        |        |   |
| 2. Years    | 2.11 | 0.626 | 0.004  | 1      |        |        |        |        |        |        |   |
| 3. Size     | 3.02 | 1.085 | 0.006  | 0.026  | 1      |        |        |        |        |        |   |
| 4. Industry | 4.11 | 2.169 | .140** | -0.007 | -0.012 | 1      |        |        |        |        |   |
| 5. DPIC     | 3.31 | 0.986 | 0.032  | -0.008 | -0.003 | -0.037 | 1      |        |        |        |   |
| 6. DPRC     | 3.34 | 0.963 | -0.004 | 0.028  | -0.042 | -0.001 | .436** | 1      |        |        |   |
| 7. VCC      | 3.42 | 0.786 | -0.004 | 0.001  | 0.062  | -0.088 | .512** | .541** | 1      |        |   |
| 8. LPP      | 3.33 | 1.027 | 0.06   | -0.055 | 0.047  | -0.002 | .455** | .475** | .584** | 1      |   |
| 9. DTP      | 3.35 | 0.834 | 0.006  | -0.018 | 0.007  | 0      | .528** | .542** | .642** | .528** | 1 |

Note: \*\* denotes p less than 0.01.

As shown in Model 3, value co-creation significantly positively affects digital transformation performance ( $\beta=0.649$ ,  $p<0.001$ ), supporting Hypothesis H3. As shown in Model 4, the regression coefficient of digital platform integration capability on digital transformation performance decreases from 0.529 to 0.269, yet remains significant ( $p<0.001$ ). This indicates that value co-creation partially mediates the relationship between digital platform integration

capability and digital transformation performance. As shown in Model 5, the regression coefficient of digital platform reconfiguration capability on digital transformation performance decreases from 0.545 to 0.273, yet remains significant ( $p<0.001$ ). This indicates that value co-creation partially mediates the relationship between digital platform reconfiguration capability and digital transformation performance. In summary, H4a and H4b are supported.

**Table 4.** Main Effects and Mediation Effects Results

| Variable Type         | Variable     | Digital Transformation Performance |           |           |           |           | Value Co-Creation |           |
|-----------------------|--------------|------------------------------------|-----------|-----------|-----------|-----------|-------------------|-----------|
|                       |              | Model 1                            | Model 2   | Model 3   | Model 4   | Model 5   | Model 6           | Model 7   |
| Control Variable      | Nature       | -0.014                             | 0.008     | 0.001     | -0.008    | 0.003     | -0.011            | 0.01      |
|                       | Years        | -0.013                             | -0.034    | -0.017    | -0.015    | -0.025    | 0.003             | -0.017    |
|                       | Size         | 0.01                               | 0.031     | -0.032    | -0.022    | -0.011    | 0.063             | 0.084     |
|                       | Industry     | 0.021                              | -0.001    | 0.056     | 0.056     | 0.043     | -0.067            | -0.088    |
| Independent Variable  | DPIC         | 0.529***                           |           |           | 0.269***  |           | 0.51***           |           |
|                       | DPRC         |                                    | 0.545***  |           |           | 0.273***  |                   | 0.545***  |
| Intermediary Variable | VCC          |                                    |           | 0.649***  | 0.51***   | 0.499***  |                   |           |
|                       | R2           | 0.28                               | 0.296     | 0.417     | 0.47      | 0.468     | 0.271             | 0.308     |
|                       | $\Delta R^2$ | 0.279                              | 0.296     | 0.416     | 0.28      | 0.172     | 0.259             | 0.297     |
|                       | F            | 26.742***                          | 28.982*** | 49.112*** | 50.648*** | 50.387*** | 25.576***         | 30.635*** |

Note: \*\*\*p less than 0.001; coefficients in the table are standardized regression coefficients.

To further validate the mediating effect of value co-creation, this study used the Process 4.1 plug-in in SPSS 26.0 software with a sample size of 5000, a 95% confidence interval, and Model 4, and employed the Bootstrap method for further testing. The results show that the indirect effect of digital platform integration capability on digital transformation performance through value co-creation is 0.220, while the direct effect is 0.228, and the confidence interval of the regression coefficient does not include 0. Therefore, value co-creation partially mediates the relationship between digital

platform integration capability and digital transformation performance. Furthermore, the indirect effect of digital platform reconfiguration capability on digital transformation performance through value co-creation is 0.236, while the direct effect is 0.236, and the confidence interval of the regression coefficient does not include 0. Thus, value co-creation partially mediates the relationship between digital platform reconfiguration capability and digital transformation performance. In conclusion, Hypotheses H4a and H4b are again supported.

**Table 5.** Mediation Effect Test Results

| Path         | Effect          | Effect Size | SEM   | Boot LLCI | Boot ULCI | Percentage |
|--------------|-----------------|-------------|-------|-----------|-----------|------------|
| DPIC→VCC→DTP | Indirect Effect | 0.22        | 0.029 | 0.167     | 0.281     | 49.11%     |
|              | Direct Effect   | 0.228       | 0.041 | 0.148     | 0.303     | 50.89%     |
|              | Total Effect    | 0.448       | 0.036 | 0.375     | 0.518     |            |
| DPRC→VCC→DTP | Indirect Effect | 0.236       | 0.03  | 0.181     | 0.297     | 50.00%     |
|              | Direct Effect   | 0.236       | 0.042 | 0.154     | 0.318     | 50.00%     |
|              | Total Effect    | 0.472       | 0.036 | 0.402     | 0.541     |            |

#### 4.4.2. Moderating Effects Test

To explore the moderating role of local policy perception, this study constructs the interaction terms of digital platform

integration capability and digital platform reconfiguration capability with local policy perception after centering. The analysis sequentially introduces control variables,

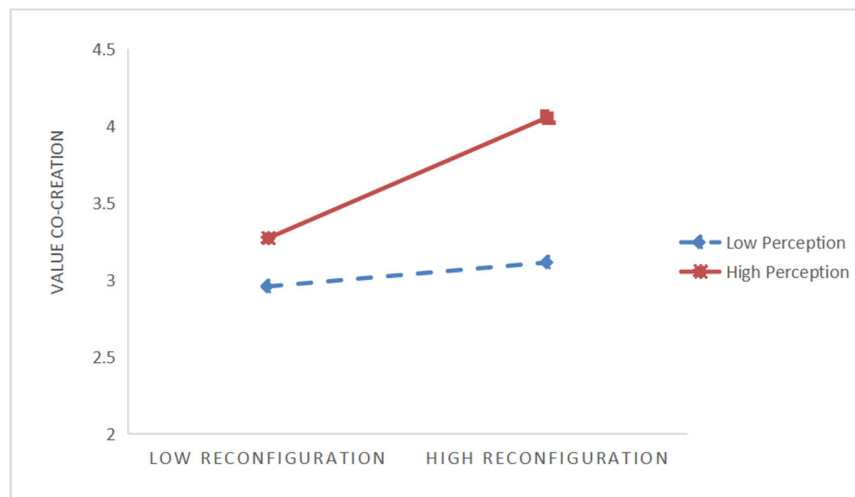
independent variables, and moderating variables, and finally introduces the interaction terms. The test results are presented in Table 6. As shown in Model 9, the regression coefficient of the interaction term between digital platform integration capability and local policy perception is 0.159 ( $p < 0.001$ ), indicating that local policy perception positively moderates the effect of digital platform integration capability on value

co-creation. In Model 10, the regression coefficient of the interaction term between digital platform reconfiguration capability and local policy perception is 0.190 ( $p < 0.001$ ), indicating that local policy perception positively moderates the effect of digital platform reconfiguration capability on value co-creation. Therefore, Hypotheses H5a and H5b are supported.

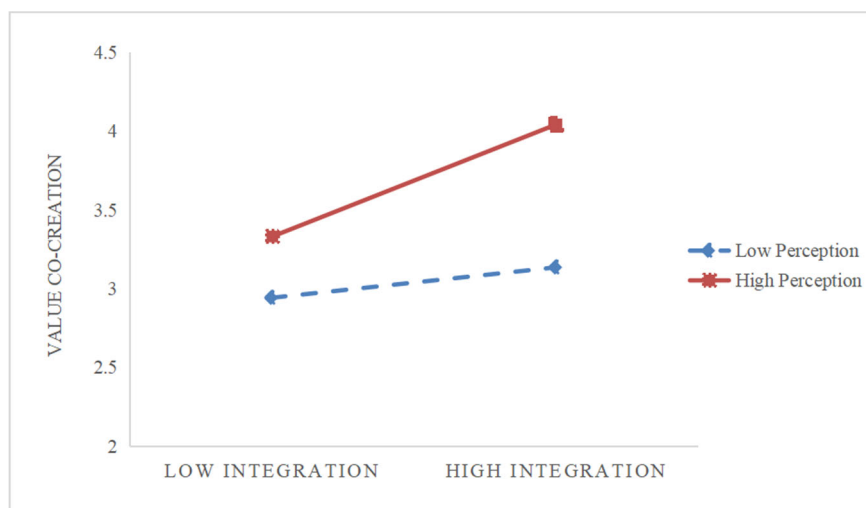
**Table 6.** Moderating Effect Test Results

| Variable Type        | Variable       | Value Co-Creation |           |           |           |
|----------------------|----------------|-------------------|-----------|-----------|-----------|
|                      |                | Model 8           | Model 9   | Model 10  | Model 11  |
| Control Variable     | Nature         | -0.031            | -0.021    | -0.016    | -0.005    |
|                      | Years          | 0.027             | 0.017     | 0.013     | 0.013     |
|                      | Size           | 0.041             | 0.048     | 0.055     | 0.062     |
|                      | Industry       | -0.071            | -0.062    | -0.084    | -0.071    |
| Independent Variable | DPIC           | 0.309***          | 0.283***  |           |           |
| Moderator Variable   | DPRC           |                   |           | 0.344***  | 0.294***  |
|                      | LPP            | 0.445***          | 0.424***  | 0.419***  | 0.407***  |
| Interaction Term     | DPIC*LPP       |                   | 0.159***  |           |           |
|                      | DPRC*LPP       |                   |           |           | 0.19***   |
|                      | R <sup>2</sup> | 0.426             | 0.45      | 0.442     | 0.474     |
|                      | $\Delta R^2$   | 0.415             | 0.024     | 0.43      | 0.032     |
|                      | F              | 42.482***         | 39.959*** | 45.213*** | 44.003*** |

Note: \*\*\*p less than 0.001; coefficients in the table are standardized regression coefficients.



**Figure 2.** The Moderating Role of Local Policy Perception on Digital Platform Reconfiguration Capability and Value Co-Creation



**Figure 3.** The Moderating Role of Local Policy Perception on Digital Platform Integration Capability and Value Co-Creation

To more intuitively illustrate the moderating effect, this study plotted the moderating effect of local policy perception on the relationship between the two dimensions of digital platform capability and value co-creation, respectively, as shown in Figure 2 and Figure 3. The results show that as local policy perception increases, the positive effect of digital platform integration capability on value co-creation becomes stronger, and the positive effect of digital platform reconfiguration capability on value co-creation also becomes stronger. Therefore, Hypotheses H5a and H5b are again supported.

#### 4.4.3. Moderated Mediation Effects Test

To prove the existence of a moderated mediation effect in the research model, this study uses the Process 4.1 plug-in in SPSS 26.0 software to conduct the test (sample size of 5,000, 95% confidence interval, Model 7), and the specific results are presented in Table 7.

The results show that when local policy perception is low, the mediation effect of value co-creation between digital platform integration capability and digital transformation

performance is 0.050, with the confidence interval not containing 0, indicating a significant mediation effect. When local policy perception is high, the mediation effect increases to 0.192, with the confidence interval still not containing 0, further confirming the significant mediation effect. Therefore, Hypothesis H6a is supported. When local policy perception is low, the mediating effect of value co-creation between digital platform reconfiguration capability and digital transformation performance is 0.039, with 0 included in the confidence interval, indicating a non-significant mediating effect. However, when local policy perception is high, the mediating effect of value co-creation between digital platform reconfiguration capability and digital transformation performance increases to 0.208, with 0 not included in the confidence interval, indicating a significant mediating effect. Therefore, Hypothesis H6b is partially supported, as the mediating effect of value co-creation between digital platform reconfiguration capability and digital transformation performance is significant only when local policy perception is higher.

**Table 7.** Moderated Mediation Effects Test Results

| Path         | Moderator Variable                   | Effect Size | SEM    | Boot LLCI | Boot ULCI |
|--------------|--------------------------------------|-------------|--------|-----------|-----------|
| DPIC→VCC→DTP | Low Local Policy Perceptions(M-1SD)  | 0.0497      | 0.0247 | 0.0014    | 0.0989    |
|              | Medium Local Policy Perceptions(M)   | 0.1209      | 0.0218 | 0.0798    | 0.1654    |
|              | High Local Policy Perceptions(M+1SD) | 0.192       | 0.0314 | 0.134     | 0.2563    |
| DPRC→VCC→DTP | Low Local Policy Perceptions(M-1SD)  | 0.0385      | 0.0274 | -0.0152   | 0.0929    |
|              | Medium Local Policy Perceptions(M)   | 0.123       | 0.0217 | 0.082     | 0.1674    |
|              | High Local Policy Perceptions(M+1SD) | 0.2076      | 0.0296 | 0.1503    | 0.2663    |

## 5. Conclusion and Discussion

### 5.1. Conclusion

This study draws the following findings: Two dimensions of digital platform capability—digital platform integration capability and digital platform reconfiguration capability—positively affect digital transformation performance. Value co-creation partially mediates the relationship between digital platform capability and digital transformation performance, indicating that digital platform integration capability and digital platform reconfiguration capability contribute to digital transformation performance by facilitating firms' value co-creation behaviors. Local policy perception positively moderates both the direct effect of digital platform capability on value co-creation and the mediating role of value co-creation between digital platform capability and digital transformation performance.

### 5.2. Management Insights

In the era of the digital economy, the digital transformation of enterprises is becoming increasingly urgent. Small and medium-sized enterprises (SMEs) leverage digital platforms to overcome experiential and resource limitations, swiftly initiating and executing their digital transformation. This approach enables them to better adapt to market competition and achieve high-quality development more rapidly. Therefore, this study proposes the following recommendations:

Firstly, SMEs should proactively engage in digital platforms and enhance their digital platform capability. SMEs should align their business characteristics and needs to select appropriate digital platforms for collaboration, while

leveraging their flat organizational structure to integrate and reconfigure resources, thereby enhancing organizational agility and responsiveness to market demands. This will enable them to seize transformation opportunities more swiftly<sup>[33]</sup>. Furthermore, business managers should focus on recruiting and training digital talents, increasing the enterprise's digital infrastructure, and building a conducive digital environment. They should also cultivate employees' dynamic capabilities, such as knowledge absorption, data analysis, and innovation. This will promote the integration of information resources, broaden marketing channels, and facilitate organizational change in SMEs.

Secondly, SMEs should actively engage in value co-creation with other stakeholders. SMEs should leverage leading enterprises in their industry to engage in active dialogue and establish close strategic partnerships. This not only enables them to gain advanced transformation experience but also helps broaden their access to resources. Moreover, building trust with other stakeholders facilitates risk sharing among SMEs, reduces the cost of privacy leakage when enterprises share resources and thereby encourages SMEs to engage more actively in value co-creation behaviors.

Finally, SMEs should foster a strong government-enterprise relationship and enhance their policy perception capabilities to actively respond to the opportunities presented by government policies. SMEs should closely monitor digitization-related policy documents and guidelines issued by national and local governments, and thoroughly interpret the specific requirements and standards of the policies to accurately grasp the policy guidance. By doing so, they can explore potential market opportunities and fully leverage the technologies, resources, and market opportunities obtained

through policy responsiveness.

### 5.3. Research Limitations and Future Prospects

This study has the following limitations: First, the data collected via questionnaires in this study are cross-sectional, which only reflects the situation of enterprises during a specific period. Therefore, future studies could employ multiple research methods to conduct multi-temporal investigations, such as secondary data analysis, case studies, and interviews, to explore the impact mechanisms of digital platform capabilities on different stages of digital transformation. Second, the research perspective of this study is relatively narrow. Future studies could combine insights from other related fields to conduct cross-level research at the individual, team, and external environment levels. For example, introducing independent and mediating variables such as managerial traits, employee behavior, team heterogeneity, and green policies could help explore the influencing factors of digital transformation. Finally, this study focuses exclusively on SMEs and does not account for industry-specific or enterprise-nature-specific factors. Future studies could focus on a specific type of organization to explore the specific path of its digital transformation, thereby enhancing the applicability of the findings.

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