

## Article

# Impact of Digital Strategic Orientation on Organizational Performance through Digital Competence

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**Abstract:** In the era of the digital economy, enterprises need a comprehensive digital transformation of strategy, business, organization, competence, and operation. However, being limited themselves to the development of digital technology, previous studies mainly focused on the development and application of digital technology, single case studies, and multi-case studies of digital transformation. Few researchers systematically studied the digital transformation mechanism at the organizational level. Therefore, this study explored the relationship between a strategic orientation and organizational performance through digital competence at the organizational level. To accomplish the task, this study basically constructed the dimensions of digital competence according to core competence theory. Digital competence contains three hub-factors: digital infrastructure, digital integration, and digital management. This study collected 160 questionnaires from Chinese enterprises and analyzed the data using SmartPLS 3. This study analyzed the positive relationship between digital strategic orientation, digital competence, and organization performance. This study identified the importance of digital competence through the empirical analysis of enterprises that are undergoing digital transformation or had completed a digital transformation. Therefore, enterprises need to pay attention to the impact of digital competence on organizational performance. Digital competence is a reshaping of corporate resources when facing a turbulent digital environment. Moreover, digital competence can ultimately achieve value delivery through the improvement of enterprise organizational performance.

**Keywords:** customer orientation; competitor orientation; technology orientation; digital infrastructure; digital integration; digital management; organizational performance



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## 1. Introduction

At the beginning of 2020, the sudden COVID-19 pandemic put the economies and societies of all countries in the world through a severe test [1]. According to the International Monetary Fund World Economic Outlook report of the World Bank, the total global economy in 2020 was approximately USD 84.538 trillion, which is USD 2.061 trillion less than that in 2019. However, in 2020, China's GDP was CNY 101,598.6 billion, an increase of 2.3% over the previous year. China is also the only major economy in the world to achieve positive economic growth in 2020. During the special period of fighting the epidemic, the development of a digital economy has played an important role in stabilizing economic and social operations. The new generation of information technology has been widely used in epidemic prevention and control, production, and living security, while the popularization of new digital formats, new models, and new applications has accelerated, all showing the value and potential of the digital economy [2]. There is no doubt that China was the first country to discover and pay attention to COVID-19. The severe impact of the epidemic has forced enterprises to try and think deeply about digital transformation and strengthen their concept of digital transformation [3]. Although telecommuting has solved the problem of collaboration among employees during the epidemic, the epidemic has made enterprises

more fully aware of the need to complete collaboration between employees and machines, machines and machines, enterprises and enterprises, and enterprises and customers to truly realize digitalization [4].

There are many studies, solutions, best practices, and forums reported in the literature that are related to digital transformation in the academic world. For example, researchers report that digital transformation is a company transformation that develops new business models [5] and that digital transformation creates and obtains value by implementing new business architecture [6]. However, most of the research is only an update of digital technology and tool applications, or even just a presentation of new concepts. The studies attempt to solve enterprise problems from one side of enterprise operation, rarely involving organizational strategy and process management. However, the digital transformation of enterprises is a complex process involving many production factors, such as enterprise resources, technology, knowledge, and management, and it is necessary to solve such problems at the organizational level. Therefore, this study aimed to explore the mechanism of digital transformation and analyze the relationship between digital transformation and organizational performance.

There were three main research questions in this study: (1) What are the influencing factors of digital competence? (2) What is digital competence? (3) What is the relationship between digital competence and organizational performance? This study constructed the dimensions of digital competence according to core competence theory. In the context of core competence theory, digital competence contains three hub-factors: digital infrastructure, digital integration, and digital management. Moreover, this study developed measurement items of digital competence based on previous core competence research.

In order to answer the above research questions, we review digital transformation, the influencing factors of digital competence, and theories related to digital transformation in the second section. In the third section, models and hypotheses are proposed. The fourth section is an empirical analysis. This study collected 160 questionnaires from Chinese enterprises and analyzed the data using SmartPLS 3. This study analyzed the positive relationship between digital strategic orientation, digital competence, and organization performance. In the final sections, the implications and study limitations are discussed, after which conclusions are presented.

This study has both theoretical and practical significance in the field of digital competence research. This study builds the dimension of digital competence on the basis of previous research and verifies through empirical analysis that digital competence positively impacts on organizational performance. At the same time, by exploring the digital transformation mechanism, this study provides enterprises with a digital transformation methodology, which can help enterprises focus on promoting the implementation of digital transformation projects.

## 2. Literature Review

### 2.1. Digital Transformation

In recent years, digital transformation has been an important phenomenon in the research of knowledge management, including the consideration of the significant changes in society and industry resulting from the use of digital technology. Companies are looking for various methods of digital transformation at the organizational level and are moving towards a strategic direction as they try to achieve better organizational performance [7].

In this complex and uncertain business era, the impact of digital technology has been experienced everywhere, and digitization is the greatest certainty in the future. In the era of the digital economy, all businesses will be digitized, and consumption and industry are facing the need for comprehensive digital upgrading. However, the vast majority of previous studies focused on digital transformation through the use of digital technology to improve the performance of companies. Digital technologies include digital artifacts, digital infrastructures, and digital platforms, such as social networking, mobile communication, data analytics, cloud computing, and IoT (Internet of Things) platforms

and ecosystems [8]. For practitioners, it is necessary to combine insights on information systems, corporate strategies, and operations management to make reasonable decisions on digital transformation within a whole organization.

Digitization leads to collaborative enterprise organization and operation, agile business processes, intelligent management decision making, and integrated industrial ecology, reshaping the logic of enterprise operations. Digital transformation is a company transformation that develops new business models [9]. Digital transformation creates and obtains value by implementing new business architecture [6]. The use of IT is transformative, leading to fundamental changes in existing business processes, routines, and capabilities, enabling enterprises to enter new markets or withdraw from current markets [10]. Digital transformation utilizes digital technology to achieve cross-border interactions with suppliers, customers, and competitors [11]. Therefore, due to digital technology, digital transformation is closely related to the strategic change of business models. To match the need for increased capabilities in the digital era, these objective realities have forced enterprises to pay more and more attention to the development of digital competence for digital transformation.

## *2.2. Influencing Factors of Digital Competence*

By reviewing the previous research on digital transformation, we found that the main factor influencing digital transformation is the digital strategy orientation. Digital strategy is to use digital resources to create value to affect the enterprise's business strategy. The ability to build a digital enterprise architecture in large extent relies on a clear digital strategy, one that is supported by a culture of transformation and innovation cultivated by leaders [12]. Previous researches have shown that there are three main aspects of strategic orientation that directly affect digital competence: customer orientation, competitor orientation, and technology orientation [13–16].

Customer orientation means that the use of digital terminals as the best carrier to integrate customer's key journeys, realize B2C end-to-end interaction, support customized personalized products, accurately collect insight into customer needs, remove intermediary links, and improve operational efficiency and customer experience [17]. In other words, in the digital age, it is necessary to anchor the critical point of customers through digital terminal products and turn customers into users. Digital terminal products should answer three core questions: Who are the users? What is the application scenario? Can they help users solve any problems? Digital terminal products include external users on the C end, channel users at B end, and internal users at E end. The application scenario of digital terminal products is the customer critical point of C, B and E, different clients have different customer critical point.

The boundaries between industries and resources, with the development of the digital age, are no longer clear, thus giving enterprises a huge market to create space. Therefore, enterprises in the digital era are not competing in a fixed resource field, and digital technology gives more possibilities for innovation. Enterprises, customers, and partners in different industries form a new digital ecosystem [18]. The goal of participants in this ecosystem is to gain growth space rather than simply seize the growth space of others. When competitors in the same industry respond to each other's digital strategies, innovation is often replaced by imitation, that is, multiple competitors have adopted similar products and service delivery methods and use similar business models to obtain benefits. In this case, enterprises need to obtain more market share than competitors to have room for survival.

Technology orientation means that the system of enterprise, with the development of digital technology, is dynamically reconstructed with changes in enterprise needs, and the use of generalization and modular development is used to build on the basis of changes in the internal and external environments and market requirements of the enterprise. Enterprises can configure and customize their own systems according to their needs and further implement flexible and optimized combinations in time according to the progress

of tasks [19]. Digital transformation can not only effectively improve the market reaction speed of enterprises, but also greatly improve the efficiency, reduce the product cost and resource consumption, and effectively improve the competitiveness of enterprises [20].

### 2.3. Theories Related to Digital Transformation

The goal of the enterprise is to maximize the value and interests, which is achieved by developing the core competitiveness of the enterprise and optimizing the value chain [21]. The purpose of the digital transformation of enterprises is to formulate long-term development strategies, design reasonable organizational structures, optimize value chain networks, and develop unique core competitiveness, so as to make enterprises win in the global market competition [7]. Therefore, the theories related to digital transformation mainly include resource-based view and core competence theory.

The resource-based view has a profound connection with the digital transformation of enterprises. The resource-based view affirms the importance of the digital transformation strategy of enterprises, and believes that redundant resources are beneficial to the implementation of the digital transformation strategy of enterprises [22]. Moreover, the resource-based view affirms the value of customers as unique resources to the digital transformation of enterprises and believes that the degree of customer involvement determines the performance of digital transformation [8] because customers participate in resource sharing, which promotes the integration of operational resources and management resources and ultimately enhances the market value of the enterprise through the creation of heterogeneous resources. At the same time, the resource-based view points out that the resource allocation of enterprises needs to match the development stage of the digital transformation of enterprises. It believes that organizations need to reintegrate, build, and configure their resources and capabilities in a changing external environment and finally form new unique resources to ensure the competitive advantage of enterprises [23]. Moreover, one of the most important themes in the digital economy era is the reconstruction and switching of digital infrastructure and the reconstruction of business ecology based on new digital infrastructure. For enterprises, resources such as chips, algorithms, data, software, networks, knowledge, sensors, databases, and cloud platforms are becoming more and more important for the long-term development of enterprises.

According to core competence theory, the essence of enterprise competition is to see who can better and more efficiently allocate research and development and resources. In every link of research and development, design, procurement, production, distribution, and service, enterprises are facing the problem of how to optimize resource allocation and improve efficiency. The essence of digital transformation solutions, such as Industry 4.0, industrial Internet, etc., lies in the automatic flow of data to eliminate the uncertainty of complex systems to improve the efficiency of resource allocation [24]. The transformation and upgrading of enterprises requires new digital competence to innovate and develop. The integration of digital technology and enterprises will bring about a shift in paradigms and a change of business models, as well as the reconstruction of business systems and innovation capability [7].

For enterprises, no matter whether they start digital transformation or not, no matter how hard and fast they promote digital transformation, they will face risks and uncertainties. It is not that there is no risk without investment, but that the risk without investment may be greater. The driving force of digital transformation is not because it can be expected, but because the costs and risks of non-transformation are still difficult to be accepted. Therefore, the driving force of digital transformation is not the choice of CIOs, CDOs, and CEOs, but from the CIOs, CDOs, and CEOs of competitors.

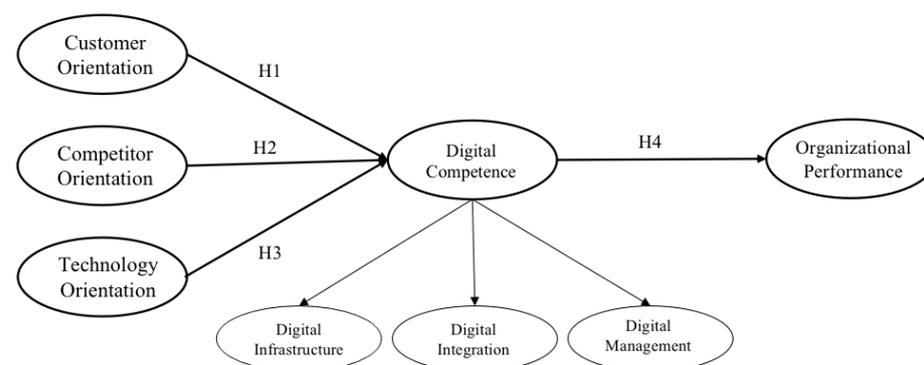
### 3. Research Model and Hypotheses

In the current digital environment, the company's strategy is to support the company's transformation and focus on the upgrading of its digital strategy [12]. However, the implementation of the strategy requires the company to use resources and competency of

development capability to improve performance [25]. Therefore, in order to find out how the company's strategy affects organizational performance through their competence, the research model on digital competence is suggested.

This study proposes strategic orientation as an influencing factor on digital transformation for companies to strengthen their competitiveness. This study analyzes the impact on a company's digital competence according to its strategic orientation and also analyzes the impact on organizational performance according to its digital competence. The objective of this study is to empirically investigate the relationship between strategic orientation and organizational performance through its digital competence.

As shown in Figure 1, based on resource-based theory and core competence theory, this study proposes the research model of strategic orientation (customer orientation, competitor orientation, and technology orientation) influencing organizational performance through digital competence (digital infrastructure, digital integration, and digital management).



**Figure 1.** Research model.

### 3.1. Strategic Orientation and Digital Competence

The existing research has fully proven the importance of strategic orientation and its relationship with digital competence. Mithas et al. [13] pointed out that an enterprise's digital strategy affects digital business resources, especially in a highly competitive environment. Matt et al. [14] emphasized the importance of customer orientation, competitor orientation, and technology orientation in digital transformation strategies, and how they affect the digital transformation process. Holotiuik et al. [15] investigated the key success factors of digital business strategies, and emphasized the importance of enterprises deploying digital resources according to digital business strategies. Sebastian et al. [16] explained how large-scale old enterprises establish a digital strategy orientation and develop digital competence to respond to digital transformation. Robert et al. [26] claimed that in the face of digital challenges, the digital work that enterprises need to do include formulating a digital strategy that suits them and allocating resource and competence in accordance with the digital strategy. Vial [8] also emphasized the importance of strategic orientation and digital resource capabilities in the process of enterprise digitalization. Therefore, we propose the following research hypotheses:

**Hypothesis 1.** *Customer orientation has a positive impact on digital competence.*

**Hypothesis 2.** *Competitor orientation has a positive impact on digital competence.*

**Hypothesis 3.** *Technology orientation has a positive impact on digital competence.*

### 3.2. Digital Competence and Organizational Performance

Based on the theory of core competence, this study develops digital competence to cope with the digital environment based on the original IT competence, which consists of three dimensions: digital infrastructure, digital integration, and digital management.

Bharadwaj [27], based on the resource-based view, explores the IT competence and organizational performance in empirical research, dividing IT core resources into tangible IT infrastructure, IT human resources, and intangible IT resources. Wade et al. [28] used a multidimensional typology is utilized to analyze the attributes of IT resources sorted into outside-in, spanning, and inside-out processes to sustain a competitive advantage over time. Kim et al. [29] believes that IT competence is the enterprise's ability to use IT technology to effectively manage information. Choi et al. [30] proposed that IT competence includes IT human resources, IT infrastructure, and IT vendor management. Firms must reduce costs and maximize performance through effective management of IT resources. Zhang et al. [31] proposed that IT competence enable enterprises to effectively integrate and support different system components under changing business processes. Yu et al. [32], based on the resource-based view and core competence theory, states that IT competences were constructed from both aspects of IT flexibility and IT management and empirically analyzes the relationship between IT competence and performance. Therefore, we propose the following research hypothesis:

**Hypothesis 4.** *Digital competence has a positive impact on organizational performance.*

## 4. Research Design

### 4.1. Measurement

The survey items of all variables in the questionnaire are measured by Likert's 5-level indicator, where 1 means completely inconsistent and 5 means very consistent. The measurement of customer orientation (CUO) refers to the scale of Lu et al. [33], the measurement of competitor orientation (COO) refers to the scale of Yu et al. [32], and the measurement of technology orientation (TO) refers to the scale of Ng et al. [20]. The measurement of digital infrastructure (INF) refers to the scale of Reitz et al. [34], the measurement of digital integration (INT) refers to the scale of Boer et al. [35], the measurement of digital management (MAN) refers to the scale of Ravichandran et al. [36], and the measurement of organizational performance (OP) refers to the scale of Tanriverdi et al. [37]. The operational definition and measurement are shown in Table 1.

### 4.2. Data Collection

In order to investigate the digital transformation at the organizational level, this study collects data from enterprises that are undergoing digital transformation and have made some achievements. The questionnaire is mainly in the form of electronic questionnaires and the survey objects are middle senior managers of enterprises. As of April 2021, a total of 160 valid questionnaires have been obtained for this study. The statistics of respondents are shown in Table 2.

**Table 1.** Operational definition and measurement.

Factor	Operational Definition	Measurement
Customer Orientation	The extent to which the company has sufficient understanding of their target customers in order to create superior value for them continuously.	<ol style="list-style-type: none"> <li>1. Competitive advantage is based on understanding customers' needs.</li> <li>2. Business objectives are driven primarily by customer satisfaction.</li> <li>3. Frequently and systematically measure customer satisfaction.</li> <li>4. Pay close attention to after-sales service for customer satisfaction.</li> <li>5. Continuously try to discover our customers' additional needs of which they are unaware.</li> </ol>
Competitor Orientation	The extent of competition in the company's industry.	<ol style="list-style-type: none"> <li>1. Employees regularly share competitor information.</li> <li>2. Always discuss on competitor's behavior and action.</li> <li>3. Regularly discuss competitor's strategies.</li> <li>4. Rapidly respond to competitive actions that threaten us.</li> <li>5. Target opportunities for competitive advantage.</li> </ol>
Technology Orientation	The extent to which the company inclines to introduce or use new digital manufacturing operation technologies in transformation.	<ol style="list-style-type: none"> <li>1. Proactive in the development of new technologies.</li> <li>2. Use sophisticated technologies in our new product development.</li> <li>3. New products are always at the state of the art of technology.</li> <li>4. Technological innovation is readily accepted in our program/project management.</li> <li>5. Based on the results of technological innovation it has been accepted by our organization.</li> </ol>
Digital Infrastructure	The company owns and utilizes digital-related infrastructure.	<ol style="list-style-type: none"> <li>1. Digital infrastructure can satisfy the business needs.</li> <li>2. Digital application can satisfy the business needs.</li> <li>3. Digital infrastructure can rapidly respond the requests in business process.</li> <li>4. Digital infrastructure can easily support the changes in business process.</li> <li>5. Digital staff has adequate knowledge and skill of digital services to support the changes.</li> </ol>
Digital Integration	The company's integration of digital-related diverse strategies, technologies and knowledge resources.	<ol style="list-style-type: none"> <li>1. Integrate business strategy into digital strategy using digital platform.</li> <li>2. Integrate all data within various departments using database platform.</li> <li>3. Integrate software applications in all departments using IS application platform.</li> <li>4. Access data from all departments at any time.</li> <li>5. Freely share and utilize data from other departments, including partners and customers.</li> </ol>
Digital Management	The company's management of digital-related skills and experience.	<ol style="list-style-type: none"> <li>1. Digital staff quickly learn and apply new digital technologies.</li> <li>2. Digital staff apply digital system skills and knowledge.</li> <li>3. Digital staff quickly solve the problems of digitalization.</li> <li>4. Digital plan can be applied to solve the internal and external problems of the company.</li> <li>5. Maintain digital systems suitable for changed process when the need arises.</li> </ol>
Organizational Performance	The overall performance of organizational goals through digital transformation.	<ol style="list-style-type: none"> <li>1. Higher return on investment.</li> <li>2. Higher market share.</li> <li>3. Achieved higher customer satisfaction.</li> <li>4. Improved competitive advantage among competitors.</li> <li>5. The brand image of our company has been improved.</li> </ol>

Table 2. Demographic statistics.

Item	Category (N = 162)	Frequency	Percentage
Position	Manager	30	18.75
	Senior Manager	78	48.75
	Executive (CEO, CMO, CFO, CIO)	52	32.50
Established	Within 5 years	13	8.13
	Within 5–10 years	30	18.75
	Within 10–15 years	76	46.87
	More than 15 years	41	26.25
Main Industry Type	Automobile	30	18.75
	Machine and Equipment	22	13.75
	Electronics	35	21.88
	Chemical industry	3	1.88
	Textile and Clothing	28	17.50
	Food and Beverage	19	11.86
	Medical and Medicine	17	10.63
	Logistics and Distribution	2	1.25
	Others	4	2.50
Employees	Less than 100	15	9.38
	100–300	23	14.38
	300–2000	49	30.62
	2000–10,000	38	23.75
	More than 10,000	35	21.86
Digital Transformation Objectives (multiple response)	To meet customer needs and customer satisfaction	107	66.88
	To speed up decision making and delivery	97	60.63
	To sustain competitive advantage	93	58.13
	To diminish production and process cost	94	58.75
	To enhance operational efficiency	99	61.88
	To facilitate new product development	84	52.50
	Others	23	14.38

## 5. Data Analysis

### 5.1. Test of the Measurement Model

Using Smart PLS3 to test the reliability and validity, the results are shown in Table 3. Cronbach's  $\alpha$  of all variables is greater than 0.8, the internal consistency of the measurement items is high, and the reliability test is passed. The factor loading of all items exceeds 0.7, the combined reliability value (CR) of each variable is greater than 0.8, and the average variance extraction (AVE) is greater than 0.5, indicating that the questionnaire has high convergence validity [38]. The questionnaire is composed of a mature scale. The two-way translation method and the industry expert evaluation method are used to ensure the validity of the questionnaire. Therefore, there is no ambiguity in the questionnaire distribution process [39]. Moreover, as shown in Table 4, in the factor loading comparison of the first-order and second-order factors, the second-order factors are all larger than the first-order factors. Therefore, digital competence should use second-order construct [40]. As shown in Table 5, all constructs have a good discriminant validity as the indicators' outer loadings on their own constructs were all higher than all their cross loadings with other constructs.

**Table 3.** Factor loadings, AVE, CR, and Cronbach's Alpha values.

Factor	Items	Loadings	AVE	CR	Cronbach's Alpha
Customer Orientation	cuo1	0.844	0.710	0.925	0.898
	cuo2	0.816			
	cuo3	0.837			
	cuo4	0.866			
	cuo5	0.850			
Competitor Orientation	coo1	0.811	0.629	0.894	0.852
	coo2	0.832			
	coo3	0.769			
	coo4	0.774			
	coo5	0.775			
Technology Orientation	to1	0.844	0.707	0.924	0.896
	to2	0.864			
	to3	0.846			
	to4	0.856			
	to5	0.793			
Digital Infrastructure	inf1	0.845	0.665	0.930	0.912
	inf2	0.824			
	inf3	0.816			
	inf4	0.836			
	inf5	0.766			
	Inf6	0.825			
	Inf7	0.749			
Digital Integration	int1	0.858	0.707	0.944	0.931
	int2	0.881			
	int3	0.840			
	int4	0.783			
	int5	0.857			
	int6	0.843			
	int7	0.827			
Digital Management	man1	0.842	0.658	0.931	0.913
	man2	0.822			
	man3	0.778			
	man4	0.818			
	man5	0.757			
	man6	0.761			
	man7	0.897			
Organizational Performance	op1	0.709	0.552	0.860	0.799
	op2	0.749			
	op3	0.734			
	op4	0.771			
	op5	0.756			

AVE = Average Variance Extracted; AVE = Average Variance Extracted; CR = Composite Reliability.

### 5.2. Test of the Structural Model

To evaluate the structural model of our theoretical framework, we examined construct collinearity, the coefficient of determination ( $R^2$ ), the significance of path coefficients, and the direct and mediation effects [41]. The  $R^2$  score for the digital competence was 0.752, and for the organizational performance it was 0.301. In addition, the tested model has been expanded to examine construct collinearity, and the results were excellent. All of the variance inflation factor (VIF) values were far below five, which further shows that multicollinearity is not an issue for our model/data [42]. The significance of the path coefficients was calculated by using a bootstrapping algorithm with 5000 subsamples for a two-tailed test [43]. The numbers and significance of path coefficients can be seen in Figure 2 and Table 6.

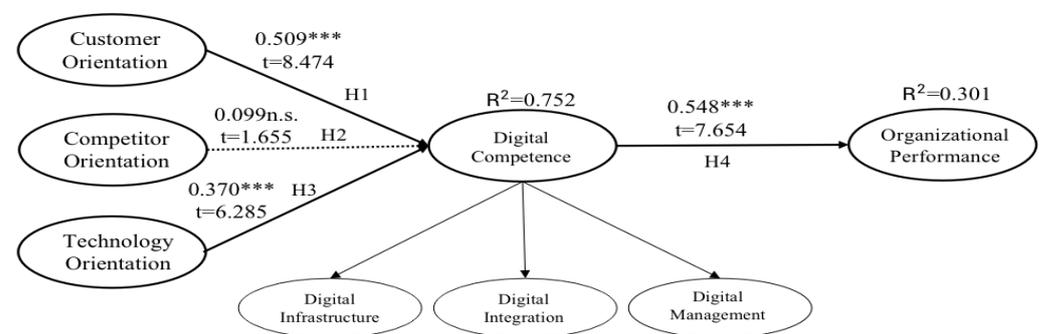
**Table 4.** Factor loading comparison of first-order and second-order factors.

Construct	Items	2nd Order Factor Loading	Construct	Items	1st Order Factor Loading
Digital Infrastructure	inf1	0.845	Digital Competence	inf1	0.750
	inf2	0.824		inf2	0.727
	inf3	0.816		inf3	0.732
	inf4	0.836		inf4	0.748
	inf5	0.766		inf5	0.716
	inf6	0.825		inf6	0.733
	inf7	0.749		inf7	0.629
Digital Integration	int1	0.858	Digital Competence	int1	0.752
	int2	0.881		int2	0.719
	int3	0.840		int3	0.725
	int4	0.783		int4	0.702
	int5	0.857		int5	0.739
	int6	0.843		int6	0.702
	int7	0.827		int7	0.774
Digital Management	man1	0.842	Digital Competence	man1	0.681
	man2	0.822		man2	0.647
	man3	0.778		man3	0.677
	man4	0.818		man4	0.701
	man5	0.757		man5	0.642
	man6	0.761		man6	0.645
	man7	0.897		man7	0.769

**Table 5.** Discriminant validity.

	CUO	COO	TO	INF	INT	MAN	OP
CUO	0.843						
COO	0.588	0.793					
TO	0.662	0.537	0.841				
INF	0.784	0.516	0.731	0.809			
INT	0.642	0.553	0.661	0.653	0.842		
MAN	0.684	0.484	0.570	0.662	0.568	0.811	
OP	0.470	0.429	0.561	0.478	0.562	0.388	0.743

CUO = Customer Orientation; TO = Technology Orientation; INF = Digital Infrastructure; INT = Digital Integration; MAN = Digital Management; OP = Organizational Performance.



\*\*\* $p < 0.001$ , ns-not significant.

**Figure 2.** The result of data analysis in the research model.

**Table 6.** Hypothesis testing results.

Hypothesis	Path	Coefficient	<i>p</i>	T	Result
H1(+)	Customer Orientation → Digital Competence	0.509	0.000 ***	8.475	Accept
H2(+)	Competitor Orientation → Digital Competence	0.099	0.098 ns.	1.655	Reject
H3(+)	Technology Orientation → Digital Competence	0.370	0.000 ***	6.286	Accept
H4(+)	Digital Competence → Organizational Performance	0.548	0.000 ***	7.654	Accept

\*\*\*  $p < 0.001$ , ns—not significant.

### 5.3. Test of the Digital Competence Mediating Effects

According to the results of the data analysis, competitor orientation has no significant impact on digital competence, so digital competence has no mediating effect between competitor orientation and organizational performance (COO→DC→OP). In this study, there is two mediating effects (CUO→DC→OP, TO→DC→OP), in order to verify whether digital competence has mediating effect between strategic orientation and organizational performance, we test the mediating effects. The results show that the VAF value of digital competence is 35.41% (CUO→DC→OP), that is, digital competence has a partial mediating effect between customer orientation and organizational performance. The results show that the VAF value of digital competence is 35.43% (TO→DC→OP), and digital competence has a partial mediating effect between technology orientation and organizational performance (see Table 7).

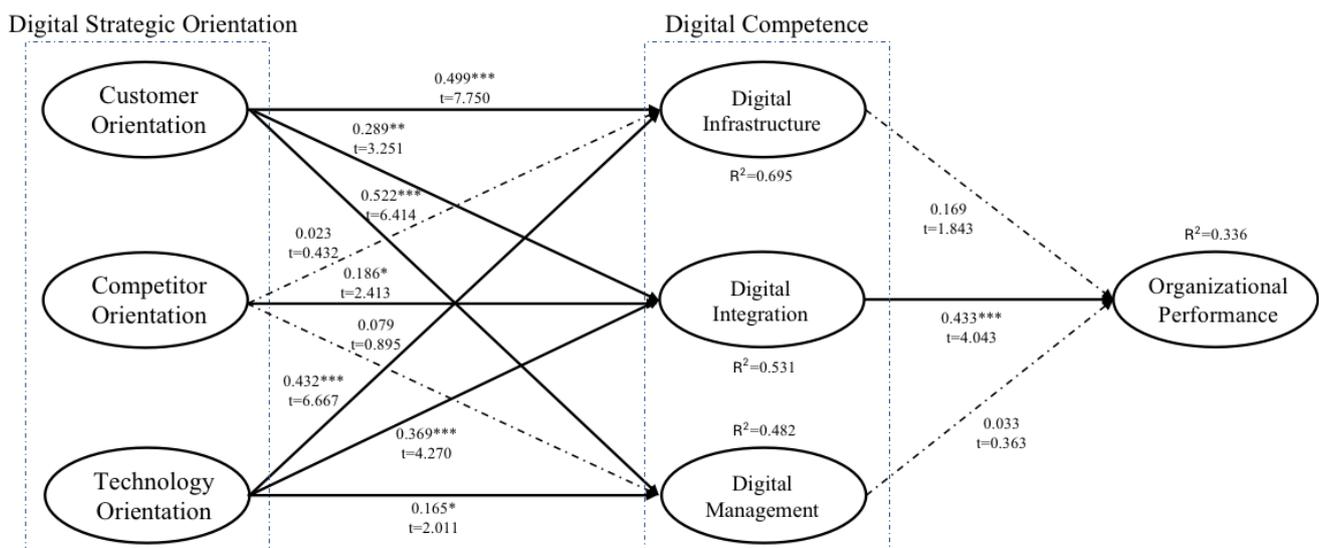
**Table 7.** Mediation effect of digital competence.

Path	Direct Effect	Indirect Effect	Total Effect	VAF	Mediation Type Observed
Customer Orientation → Digital Competence → Organizational Performance	0.509 (8.475)	0.279 (6.239)	0.788	35.41%	Partial Mediation
Competitor Orientation → Digital Competence → Organizational Performance	0.099 (1.655) ns.	-	-	-	No Mediation
Technology Orientation → Digital Competence → Organizational Performance	0.370 (6.286)	0.203 (4.495)	0.573	35.43%	Partial Mediation

VAF > 0.80 full mediation,  $0.20 \leq \text{VAF} \leq 0.80$  partial mediation, VAF < 0.20 no mediation. ns—not significant.

### 5.4. Additional Analysis

In order to find the relationship between strategic orientation, digital competence, and organizational performance, this study appends the analysis of the impact between those variables. As shown in Figure 3, the results of the path analysis show that among customer orientation, competitor orientation, and technology orientation, customer orientation has the greatest impact on digital management (path coefficient = 0.522, *t* value = 6.414) and a huge impact on digital infrastructure (path coefficient = 0.499, *t* value = 7.750). Competitor orientation only has impact on digital integration (path coefficient = 0.186, *t* value = 2.413). Technology orientation has the greatest impact on digital infrastructure (path coefficient = 0.432, *t* value = 6.667) and a huge impact on digital integration (path coefficient = 0.369, *t* value = 4.270). Among the digital competences, digital integration has only significant impact on organizational performance (path coefficient = 0.433, *t* value = 4.043).



\*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$ , ns—not significant.

**Figure 3.** Additional analysis of digital competence.

## 6. Discussion

### 6.1. Implications

This study explores the mechanism of strategic orientation on organizational performance through digital competence in the context of the digital transformation of enterprises. Through the empirical test, the following three points of academic implications are mainly obtained. First of all, through empirical analysis, it is confirmed that the customer and technology orientations have positive impacts on digital competence, which is consistent with the results of previous studies. Vial [8] also emphasized the importance of the digital strategic orientation and digital resource capabilities in the process of enterprise digitalization. Matt et al. [14] emphasized the importance of customer orientation and technology orientation in digital transformation strategies. Robert et al. [26] claimed that in the face of digital challenges, the digital work that enterprises need to do includes formulating a digital strategy that suits them and allocating resource and competence in accordance with the digital strategy. However, different from the previous literature review of Vial [8], Matt et al. [14], and Robert et al. [26], this study uses the method of empirical analysis to verify the importance of customer and technology orientation strategies for enterprise resource allocation and competence development.

Second, customer orientation (path = 0.509,  $t = 8.474$ ) has a greater positive impact on digital competence than technology orientation (path = 0.370,  $t = 6.285$ ). Therefore, customer orientation is very important for enterprises rather than technology orientation. Beckers et al. [17] claims that customer orientation means the use of digital terminals as the best carrier to integrate customers' key journeys, realize B2C end-to-end interaction, support customized personalized products, accurately collect insight into customer needs, remove intermediary links, and improve the operational efficiency and customer experience. In addition, customer orientation is more important than technology orientation for digital competence. Compared with other previous research, such as Beckers et al. [17], this study provides clearer evidence through data analysis that enterprises with limited configurable resources should first focus on customer orientation, then on technology orientation and other strategies based on their own conditions. In other words, enterprises need to not only be customer-centric and accurately grasp customer needs, but can also develop and define customer demand scenarios of their own through advanced digital technology.

Third, through empirical analysis, it is confirmed that digital competence positively affects organizational performance, which is consistent with the findings of Ravichandran et al. [36]; that is, enterprises have developed new digital resource competence by formulating digital strategy and digital transformation is conducive to increasing organizational performance. Compared with other empirical research on the relationship between competence and performance and combined with the resource-based view, this study explores the relationship between strategic orientation and organizational performance through digital competence in the digital environment and reveals the influencing factors of digital competence. Through digital transformation, enterprises not only realize the optimization of resources, such as demand, design, R&D, production, and marketing, but also realize the real-time, accurate, and efficient optimization pursued by Industry 4.0 to a certain extent.

Moreover, this study has the following practical implications. First of all, for enterprises, it is necessary to pay attention to the strategic orientation. Hoffman et al. [18] claimed that customers not only guide the direction of digital transformation of enterprises by actively sharing demand information but also promote the integration of digital resources of enterprises by directly participating in enterprise service innovation activities. In other words, customers are not only the information source of the enterprise but are also the value co-creators of the enterprise. Therefore, it is an economical and efficient resource use strategy to use all available resources to meet customer needs to the maximum.

Second, enterprises also need to pay attention to the impact of new digital technology on existing resources. Using the technological trend of the explosion of digital transformation technology such as AI, big data, cloud computing, and the IoT, enterprises can realize the evolution of resources from local optimization to global optimization, business synergy from within the enterprise to the expansion of the industrial chain, the upgrading of competition mode from single enterprise competition to ecosystem competition, and the deepening of industrial division from product-based division to knowledge-based division.

Third, digital competence is the reshaping of corporate resources under the turbulent digital environment, which is consistent with the results of Yu et al. [32]. The goal is to narrow the gap between customer demand and technological innovation and the enterprise's own capabilities. Digital competence will eventually show the improvement of enterprise organizational performance. Compared with Internet enterprises, other enterprises need to pay more attention to the flexible use of digital infrastructure, the integration of digital resources, and the strengthening of digital management. To match the ability needs of the digital era, these objective realities have forced enterprises to pay more and more attention to the development of digital competence.

## 6.2. Limitations and Future Research

This study discusses the influence mechanism of digital strategy orientation on organizational performance through digital competence, but this study still has the following four limitations, which need to be further improved in future research. First, this study has the limitation of a small sample size. In the future, it is necessary to analyze the relationship between digital strategy orientation, digital competence, and organizational performance by increasing the number of samples. Second, this study has conducted research on Chinese enterprises. For enterprises in different countries, different social and economic environments, whether the influencing factors of their digital transformation are the same, and whether there are cross-cultural differences still need to be further examined in future studies. Third, this study explores the mechanism of digital strategy orientation on organizational performance through digital competence. In the future, we need to examine what digital dynamic capability is in the digital environment and what is the relationship with performance. Fourth, due to the limited literature review and the methodology, it is necessary for future research to strengthen the literature review and methodology and explain the answers to research questions more accurately.

## 7. Conclusions

This study aims to explore the mechanism of digital transformation and analyze the relationship between digital transformation and organizational performance. This study basically constructs the dimensions of digital competence according to the core competence theory. The digital competence contains three hub-factors: digital infrastructure, digital integration, and digital management. This study finds the importance of digital competence through empirical analysis of enterprises that are undergoing digital transformation or have completed their digital transformation. This study tests the positive impacts of digital competence on organizational performance through empirical analysis. Finally, this study provides enterprises with digital transformation methodology, which helps enterprises focus on promoting the implementation of digital transformation projects.

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