The Impact of Enterprise Digital Transformation on the Technological Innovation Capability of Enterprises

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Abstract—The important force of economic development is technological innovation, and the important main body of the economy is each enterprise, the rapid development of digital information technology for enterprises to realize the digital transformation, to improve the technological innovation capacity of enterprises has brought opportunities. This paper is based on 2010. This paper empirically analyzes the impact of enterprise digital transformation on enterprise technological innovation ability based on the micro-data of listed enterprises in Jiangsu, Zhejiang and Shanghai of Shanghai and Shenzhen A-shares in 2020. The study shows that: (1) enterprise digital transformation can promote the improvement of enterprise technological innovation ability; (2) enterprise digital transformation affects enterprise technological innovation ability by improving enterprise R&D investment and alleviating enterprise financing constraints; (3) there is heterogeneity of enterprise type and nature of enterprise shareholding in the impact of enterprise digital transformation on enterprise technological innovation ability. Based on the above conclusions, high-quality promotion of enterprise digital transformation projects, support for enterprise R&D investment, the creation of a favorable financing environment, and the customization of targeted policies according to the heterogeneity of enterprises can help to further promote the enterprise digital transformation to promote the improvement of enterprise technological innovation capacity.

Keywords—enterprise digital transformation, financing constraints, enterprise innovation capability

I. INTRODUCTORY

The report of the 20th Party Congress clearly puts forward, "The great significance of innovation for the development of China's market economy, emphasizes the main position of enterprises in innovation, and enhances the vitality of innovation and increases the investment in innovation and research and development as a lasting driving force for development." Market competition in the context of the digital era is intensifying, the life of new products is decreasing, and the requirements for the ability of enterprise R&D and innovation are constantly being raised (Duan *et al.*, 2023).

Enterprise digital transformation provides a new development momentum for future development, which is conducive to the improvement of enterprise resource allocation efficiency and productivity level, and can effectively mitigate the impact of external environmental shocks (Lang *et al.*, 2021), and also provides enterprises with the ability to carry out efficient analytical decision-making, such as big data analytics that can provide enterprises with insights about overseas markets, consumers, and competitors, and help them achieve relevance discovery and value mining to improve product innovation (Hong *et al.*, 2022). Enterprise digital transformation coordinates and arranges the limited

resources of the enterprise through the use of digital technology, improves resource allocation and operational efficiency, and enhances the quality of the enterprise's internal control operations (He and Qu, 2022), and at the same time reduces the threshold of innovation resources (Dai *et al.*, 2023) to ensure that the operation reduces costs and increases efficiency and boosts innovation activities.

The possible marginal contributions of this paper are mainly reflected in the following two aspects: firstly, it explores the theoretical mechanism by which enterprise digital transformation affects enterprise technological innovation capability, and finds that enterprise digital transformation improves enterprise technological innovation capability by increasing enterprise R&D investment as well as alleviating enterprise financing constraints; secondly, it investigates the heterogeneous impact of enterprise digital transformation on enterprise technological innovation capability, and examines the impact of enterprise digital transformation on enterprise technological innovation capability in terms of the type of nature of the enterprise and the Secondly, it investigates the heterogeneous impact of enterprise digital transformation on enterprise technological innovation capacity, from the perspective of enterprise nature type and whether it is a high-tech industry, and explores the heterogeneity of enterprise digital transformation affecting enterprise technological innovation capacity, with the aim of providing theoretical and practical basis for enterprise digital enterprise technological transformation to promote innovation capacity improvement.

This paper is structured as follows: the first part is the literature review; the second part is the formulation of the research hypothesis; the third part is the research design; the fourth part is the empirical analysis and the fifth part is the identification test of the mechanism pathway to provide an empirical analysis for the verification of the previous hypotheses; and the sixth part is the conclusion of the study and the policy recommendations.

II. LITERATURE REVIEW

A. Measurement of Enterprise Digital Transformation

Chinese scholars have been continuously exploring the measurement method of enterprise digital transformation, Zhang (2020) through the questionnaire survey to the actual person in charge of the enterprise as the object of research, research on the basic information of the enterprise as well as the enterprise staff's cognition of the digital transformation of the enterprise and the demand, etc., in order to measure the level of application of the enterprise's digital transformation, the lack

of relevant statistical data, and the use of empirical evidence to study the impact of digital transformation on enterprises has been facing a lot of difficulties. Due to the difficulty of measuring digital transformation and the lack of relevant statistics, the use of empirical paradigm to study the impact of digital transformation on enterprises has been facing many difficulties. Some scholars have made useful attempts at quantitative analysis, He and Liu (2019) determine whether enterprises have carried out digital transformation through the announcement information, and use the "0-1" variable to represent it, however, this treatment cannot portray the "intensity" of the enterprise's digital transformation. However, this treatment cannot portray the "intensity" of enterprise digital transformation, which may lead to the distortion of the estimation of the effect of enterprise digital transformation. The first two methods above are difficult to effectively reflect the whole picture of enterprise digital transformation, and have a certain subjectivity and one-sidedness. Wu et al. (2021) use word frequency statistics through crawler technology to capture enterprise digital transformation related keywords in annual reports for statistics, and the frequency of their related keywords appearing in annual reports can greatly reflect this strategic tendency of enterprises, so this paper will use this method to measure the degree of enterprise digital transformation.

B. Impact of the Digital Transformation of Enterprises on Their Technological Innovation Capacity

Enterprise digital transformation can improve information asymmetry between markets, accelerate interconnectivity between enterprises, and improve resource utilization efficiency by sharing equipment and services between enterprises in the supply chain through the new business model of "sharing economy" and "cloud data" (Fan et al., 2022), can reconfigure the business model of enterprises, create flexible organizations, and improve the enterprise resource integration capability and operational efficiency, thus helping enterprises to better integrate internal and external resources, and more effectively manage the learning cost of the innovation process and the cost of information collection (Miao et al., 2024), the enterprise digital transformation will integrate the scattered information and resources of the enterprise, optimize the connection between supply and demand, and fully enhance the future operational efficiency of the enterprise, and then improve the efficiency of the enterprise, which in turn will lead to the improvement of its future operational efficiency. enterprises' future operational efficiency, which in turn enables enterprises to realize higher marginal innovation output (Shen et al., 2010), thus promoting the improvement of their technological innovation capability.

In the study on the mechanism of enterprise digital transformation affecting the technological innovation capability of enterprises, it is found that enterprise digital transformation is promoted by reducing transaction costs (Fan *et al.*, 2022), building an innovation ecology that unites multi-dimensional innovation subjects such as enterprises, research institutes and universities (Huang and Song, 2023), etc.

In summary, firstly, the existing research mostly focuses on the enterprise digital transformation on enterprise innovation performance and innovation efficiency and other aspects to explore, few research on enterprise technology innovation; secondly, on the enterprise digital transformation on enterprise technology innovation and on the enterprise digital transformation on enterprise technology innovation ability of the impact mechanism exploration there is a certain lack of, therefore, this paper on the enterprise digital transformation on enterprise technology innovation ability Therefore, this paper explores the impact of enterprise digital transformation on enterprise technological innovation capability and the heterogeneity of its impact, and discusses its impact mechanism in depth.

III. FORMULATION OF THE RESEARCH HYPOTHESIS

A. Enterprise Digitization to Promote Enterprise Technological Innovation Capacity through Increased Enterprise R&D Investment

Innovation is characterized by high investment, high risk, high barriers and high uncertainty, and information asymmetry also induces a series of problems. Digital transformation is a necessary means for enterprises to expand market influence, optimize factor allocation and achieve innovation and upgrading, while digital transformation requires a large number of ICT equipment and professional talents and other hardware and software inputs, therefore, the enterprise digital transformation through its unique profit guarantee mechanism and cost control mechanism (Ji et al., 2023) reduces the output of other costs, which gives R & D investment a stronger support and thus promotes the improvement of enterprise technology innovation capability. support, which in turn promotes the enhancement of the enterprise's technological innovation capability. Both closed and open innovation inputs can improve the ability of enterprises to use ICT, thus improving the technological innovation performance of SMEs (Wang et al., 2023).

This paper proposes Hypothesis H1: Firms' digital transformation affects firms' technological innovativeness by increasing firms' R & D investment.

B. Digital Transformation of Enterprises Enhances Their Technological Innovation Capacity by Easing Financing Constraints

Digital transformation not only enables enterprises to significantly reduce their own costs in information dissemination, data processing and information acquisition, but also eases the information asymmetry between enterprises and banks, broadens their external financing channels, eases their financing constraints from both internal and external perspectives, and empowers their innovation activities from the financial side (Pan and Gao, 2022). The R&D investment of enterprises needs stable and continuous support of exogenous funds, so when the threshold of external financing faced by enterprises is reduced, their funds for innovation investment will be more sufficient (Hua et al., 2022), and the digital transformation of enterprises, as a strategy for the in-depth integration of the "real economy + digital science and technology", will largely improve the speed and flow efficiency of information processing, and stimulate the innovation activities of enterprises (Pan and Gao, 2022). The digital transformation of enterprises, as a

strategy of deep integration of "real economy + digital technology", will largely improve the speed and efficiency of information processing and flow, stimulate innovation potential, and solve the problem of unsustainable development of technological innovation ability of enterprises due to financing problems (Wang *et al.*, 2022).

This paper proposes hypothesis H2: Firms' digital transformation affects firms' technological innovation capabilities by alleviating firms' financing constraints.

Based on Hypothesis H1 and Hypothesis H2, this paper proposes Hypothesis H3: Digital transformation of enterprises can promote the improvement of technological innovation ability of enterprises.

IV. RESEARCH DESIGN

A. Econometric Modeling

Based on the theoretical analysis and research hypotheses above, in order to verify the impact of enterprise digital transformation on the technological innovation capability of enterprises, this paper draws on the benchmark regression (Duan *et al.*, 2023) model as follows:

$$RD_{i,t} = \beta_0 + \beta_1 DIGT_{i,t} + \beta_2 Controls + \sum Year + \sum Industry + \varepsilon_{i,t}$$
 (1)

where β_0 is a constant term, and β_i (i = 1, 2, 3, ..., n) are the regression coefficients of the explanatory variables, the explanatory variables subscripts i and t indicates that the first sample unit in the year's value, and $\epsilon_{i,t}$ is the random error term. where RD_{i,t} denotes the level of corporate innovation, the DIGT denotes the degree of digital transformation, and Controls denotes each control variable.

In order to verify the influence mechanism of enterprise digital transformation on enterprise technological innovation capability, this paper refers to Wen and Ye (2014), and constructs a mediation effect model to test the mediation role of enterprise technological innovation capability and alleviation of financing constraints as follows:

where the coefficients of equation (2) are the independent variables on the dependent variable the total effect of the dependent variable; the coefficient of equation (3) is the total effect of the independent variable on the mediating variable effect; the coefficient of equation (4) is the total effect of the independent variable on the dependent variable after controlling for the effect of the mediator variable. The coefficient of equation (4) is the effect of the independent variable on the dependent variable after controlling for the effect of the mediator variable on the dependent variable; the coefficient of equation (4) is the effect of the mediator variable is the effect of the mediator variable on the dependent variable after controlling for the effect of the independent variable; the coefficient is the effect of the mediating variable on the dependent variable after controlling for the effect of the independent variable; the coefficient is the effect of the independent variable coefficient is the effect of the independent variable on the dependent variable after controlling for the effect of the mediating variable is the direct effect of the independent variable on the dependent variable after controlling for the effect of the mediating variable; the coefficient coefficient is the regression residual.

In this paper, we refer to Zeng and Li (2024) who use

firms' observed annual R&D investment as a mediator variable to validate the mechanism path of firms' digital transformation to improve firms' technological innovation capability through increasing R&D investment. At the same time, we adopt the index as a measure of financing constraints to verify that the digital transformation of enterprises improves their technological innovation capacity by alleviating financing constraints.

B. Description of Variables

1) Explained variables

The explanatory variable in this paper is the firm's technological innovation capability ($RD_{i,t}$). This paper measures the technological innovation capability of enterprises from the perspective of their technological output. Referring to the treatment of Duan *et al.* (2023) the natural logarithm after adding 1 to the number of patent applications.

2) Core explanatory variables

The core explanatory variable is the FTA establishment policy (DIGT_{i,t}). The level of enterprise digital transformation is measured based on the keyword information in annual reports. Use python software to write code to obtain the annual reports of enterprises in various industries, convert the samples into readable text format, refer to the reference keyword itinerary lexicon proposed by Wu *et al.* (2021), and ultimately sum up and take the logarithm of the captured keywords.

3) Control variables

Table 1. Description of variables				
Variant	Variable name	Symbolic representation	Measurement method	
Explanatory variable	Technological innovation capacity of enterprises	RDi, t	Number of patent applications + 1 to take logarithms	
Core explanatory variables	Degree of enterprise digital transformation	DIGT	Total number of feature word frequencies + 1 takes the logarithm	
	Enterprise size	Size	Natural logarithm of total assets for the year	
Control variable	Company age	Age	Current year-Year of listing +1	
	Return on net assets	ROE	Net profit/average net worth	
	Industry concentration	HHI	This sector accounts for the total market	
	R&D investment	/	Enterprise observation annual R&D investment	
Intermediary variable	Financing constraints	KZ	Construct indicators that include operating cash flow, cash dividends, Tobin's Q, cash holdings, and gearing.	

Regarding the selection of control variables, considering that other factors in the production and operation activities of enterprises will also have an impact on the digital transformation of enterprises, this paper selects enterprise size (Size), company age (Age), Return on Equity (ROE) and industry concentration (HHI) as control variables. The explanation of the variables included in this paper is specified through Table 1.

C. Data Description

The research object of this paper is 2010 2020 Chinese A-share listed companies in Shanghai and Shenzhen in Jiangsu, Zhejiang and Shanghai regions, through the establishment of micro enterprise level panel data for empirical analysis, in the study of sample selection, excluding the financial category, * companies and samples with missing key variables, mainly covering pharmaceutical manufacturing, automobile manufacturing, machinery manufacturing, information technology, retailing, etc. On this basis, the main continuous variables are reduced-tailed below 2% and above 98% to eliminate the influence of extreme values, and finally 1,796 samples of A-share listed companies are obtained. Among them, the various types of financial data of enterprises required for the study come from the database of Cathay Pacific and the annual report information of listed companies released to the public.

V. EMPIRICAL ANALYSIS

A. Baseline Regression

Based on the previous analysis, unbalanced panel data are used to conduct the benchmark regression, and the regression results are listed in Table 3. In the three columns, control variables and fixed effects are added in order to verify the impact of enterprise digital transformation on enterprise technological innovation capability more comprehensively. As can be seen in Table 3, the regression coefficient of DIGT in column (1) is 25.89 and passes the statistical significance test of 1%; the regression coefficient of DIGT in column (2) is 22.30 and passes the statistical significance test of 1%; and the regression coefficient of DIGT in column (3) is 4.532 (with a t-value of 2.42). From Table 2, it can be concluded that there is a positive correlation between the digital transformation of enterprises and their technological innovation capabilities, so hypothesis H3 is supported by empirical evidence.

Table 2. Regression results of FTA policies on digital transformation of

enterprises				
Variant	$\mathbf{RD}_{i,t}(1)$	$\mathbf{RD}_{i,t}(2)$	$\mathbf{RD}_{i,t}(3)$	
DIGT	25.89***	22.30***	4.532**	
	(15.61)	(13.49)	(2.42)	
C:		32.93***	16.84***	
Size		(16.75)	(4.97)	
1.00		-2.785	33.13*	
Age		(-0.44)	(1.73)	
		-70.59^{***}	-64.44^{***}	
ппі		(-3.73)	(-3.08)	
DOE		0.92	0.665	
ROE		(-9.70)	(0.665)	
Observations	7,846	7,836	7,624	
Time fixed effect	NO	NO	YES	
Individual fixed effect	NO	NO	YES	
	55.20***	-644.2^{***}	-372.0***	
_cons	(17.97)	(-14.96)	(-4.32)	
R2	0.0301	0.0656	0.7891	

Note: (1) *, **, and *** denote 10%, 5%, and 1% significance levels, respectively (2) t-statistics adjusted for clustering robust standard errors are in parentheses retained to two decimals, as in the table below.

B. Robustness Tests

1) Replacement of control variables

This paper refers to the practice of Li *et al.* (2020) to replace the control variables in the robustness test, adding the proportion of shares held by the top ten shareholders to the control variables, and at the same time, replacing the return on net assets with the total compensation ratio and gearing ratio, Column (1) of Table 3 shows that the regression coefficient for the degree of digital transformation of the firms (DIGT) is 4.539 and passes the statistical significance test of 5 percent, which further validates the robustness of the benchmark regression findings.

2) Equilibrium cross-section data checking

Referring to the method of selecting sub-sample regression in Cai *et al.* (2018), the observations that do not have a complete observation year are excluded and then regressed again, and the balanced cross-section data after the completion of the processing has a total of 3,660 sample data, and the sample content of each year is in the range of 366. From column (3) of Table 3, the regression coefficient of the degree of enterprises' digital transformation (DIGT) is 7.541 and passes the statistical significance test of 5% after excluding enterprises with incomplete observation years, which further validates the desirability of the previous regression after passing the stability test.

Table 3. Robustness tests				
Variant	Replacement of control variables (1)	Equilibrium cross-section data (2)		
DIGT	4.539** (2.42)	7.541** (2.36)		
Control variable	YES	YES		
Time fixed effect	YES	YES		
Individual fixed effect	YES	YES		
Observations	7,630	3,660		
_cons	-390.2*** (-4.42)	-717.2*** (-4.68)		
R2	0.7891	0.7350		

C. Heterogeneity Analysis

1) State-owned versus non-state-owned enterprises

Column (1) of Table 4 shows that the regression coefficient of the degree of enterprise digital transformation (DIGT) is 21.84 and passes the statistical significance test of 1%, and the regression coefficient of the degree of enterprise digital transformation (DIGT) of 2.134 does not pass the statistical significance test as shown in Column (2) of Table 4, so it can be clearly seen that the state-owned enterprises have more obvious effects on the technological innovation capacity of enterprises in the process of enterprise digital transformation than non-state-owned enterprises.

As state-owned enterprises have sufficient cash flow and innate policy advantages, in the digital transformation of enterprises can provide strong financial and policy protection, in terms of policy support, government subsidies, credit financing and other aspects of state-owned enterprises have a relative advantage, which makes the state-owned enterprises are subject to less competitive pressure in the industry background, can minimize other aspects of expenditure to increase the enterprise technology innovation investment efforts to improve the Innovation ability. The management mode, operation mechanism and enterprise culture of non-state-owned enterprises are more inclined to be imperfect, and their decisions to carry out digital production and activities will be relatively cautious and conservative, so the degree of digital transformation is low, and it is difficult to produce the welfare of enterprise technological innovation ability brought about by enterprise digital transformation.

2) Different business types

In terms of enterprise type, this paper categorizes enterprises into high-tech enterprises and non-high-tech enterprises. From columns (3) and (4) of Table 4, it can be concluded that both high-tech enterprises and non-high-tech enterprises have positive willingness for enterprise digital transformation. However, high-tech enterprises have high-quality digital infrastructure, sufficient capital, complete talent and strong risk resistance, and for non-high-tech enterprises, digital transformation of traditional industries has greater resistance than high-tech industries, including organizational structure, information asymmetry and digital matching. From the comparison of coefficients, the regression coefficient of high-tech enterprises (10.94) is significant at 1% level, and the regression coefficient of non-high-tech enterprises (2.254) is not significant.

Table 4. Analysis of heterogeneity results				
Variant	State enterprise (1)	Non-state enterprise (2)	High tech industry (3)	Non-high-tech industries (4)
DICT	21.84***	2.134	10.94***	2.254
DIGI	(3.18)	(1.17)	(3.22)	(0.97)
Control variable	YES	YES	YES	YES
Time fixed effect	YES	YES	YES	YES
Individual fixed effect	YES	YES	YES	YES
Observations	1,364	6,238	2,662	4,943
_cons	-1,846*** (-5.10)	-268.6*** (-3.1)	-625.1*** (-4.29)	-349.9*** (-3.08)
R2	0.7600	0.8063	0.6674	0.8290

VI. IDENTIFICATION TEST OF MECHANISM PATHWAYS

A. Improvement of the R&D Investment Path

Digital transformation, as a systematic project, requires enterprises to carry out comprehensive changes and restructuring in multiple dimensions such as strategy, resources, processes and talents. This all-round organizational change often transmits the effects of digital transformation to enterprise innovation performance through a series of internal empowerment mechanisms. Facing the new situation of digital economy, enterprises need to increase their investment in digital infrastructure, digital talents and digital R&D in order to strengthen the foundation of transformation and development (Li and Jiang, 2024).

In Table 5, it is found that firms' digital transformation contributes to a large extent to the improvement of firms' technological innovation capability by increasing R&D investment, with a regression coefficient of 4.532 in column (1) and significant at the 5% level. As shown in column (3),

R&D investment has a positive effect on the technological innovation capability of enterprises (the coefficient is 1.32e-07 significant at 1% level). This indicates that increasing R&D investment of enterprises can provide instrumental support for technological innovation of enterprises, thus improving the efficiency of enterprise innovation.

Table 5. Mechanism test results1				
Variant	$RD_{i,t}$ (1)	R&D investment (2)	$RD_{i,t}$ (3)	
DIGT	4.532** (2.42)	1.158e+07** (2.25)		
R&D			1.32e-07***	
investment			(30.86)	
Control variable	YES	YES	YES	
2000	-372.0^{***}	-1.582e+09***	-184.3**	
_cons	(-4.32)	(-6.67)	(-2.19)	
Fixed effect	YES	YES	YES	
R2	0.7891	0.7819	0.8177	
Observations	7624	7820	7,367	

B. Pathways to Alleviate Financing Constraints

The development of enterprise technological innovation needs to be supported by sufficient, safe and stable funds, and enterprise digital transformation can help financial institutions in the market to identify high-quality innovative enterprises, enhance the commercial credit value of enterprises, and improve the liquidity situation, so as to effectively alleviate the financing constraints, and improve the environmental conditions for enterprise technological innovation (Li *et al.*, 2022).

In Table 6, this paper finds that enterprise digital transformation can help alleviate financing constraints through the mechanism identification test, and the regression coefficient in column (3) is 2.785 and significant at the 1% level. The possible reasons for this are first, enterprise digital transformation relaxes the internal and external financing conditions for enterprises, thus reducing the constraints; second, enterprise digital transformation provides a more efficient financing environment for enterprises, which motivates enterprises to increase their financing investment. Finally, as shown in column (2), enterprise digital transformation presents a positive impact on the optimization of financing constraint environment (coefficient of 0.0359 and t-value of 3.66). This indicates that enterprise digital transformation can provide instrumental support for the opening of inter-enterprise financing environment and the relaxation of financing conditions, thus improving the efficiency and quality of enterprise financing and helping enterprises' technological innovation ability.

Variant	$\mathbf{RD}_{i,t}$ (1)	KZ (2)	$RD_{i,t}$ (3)
DIGT	4.532** (2.42)	0.0359* (3.66)	
KZ			2.785*** (3.19)
Control variable	YES	YES	YES
_cons	-372.0*** (-4.32)	-7.758* (-2.94)	-425.5*** (-4.32)
Fixed effect	YES	YES	YES
R2	0.7891	0.6516	0.8099
Observations	7624	8049	6577

VII. RESEARCH FINDINGS AND POLICY RECOMMENDATIONS

This paper examines a series of variables about the role of enterprise digital transformation on enterprise technological innovation capability by empirically analyzing the relevant data of listed companies in Shanghai and Shenzhen in Jiangsu, Zhejiang and Shanghai region to draw the following conclusions: (1) enterprise digital transformation helps to improve enterprise technological innovation capability, and the conclusion still holds after the robustness test. (2) Enterprise digital transformation is increasing R&D investment and alleviating financing constraints to affect enterprise technological innovation capability. (3) Heterogeneity analysis finds that enterprise digital transformation promotes the enhancement of enterprise technological innovation capability of both state-owned enterprises and non-state-owned enterprises, however, the impact on state-owned enterprises is far more significant than that on non-state-owned enterprises; at the same time, enterprise digital transformation has a very significant role in promoting the enhancement of technological innovation capability of high-tech enterprises.

Based on the above conclusions, this paper puts forward the following suggestions: First, actively improve the supporting facilities of digital technology, optimize the internal and external environment of enterprises, pay attention to the integration and development of digital technology and enterprise business, and use digital technology to innovate the internal governance mode of enterprises, so as to promote the synergistic development of various departments of enterprises. Second, we will steadily promote the establishment of a transparent financing system, alleviate the problem of moral risk caused by information asymmetry, increase the preferential credit policies for non-state-owned enterprises and non-high-tech enterprises, and strengthen the social responsibility of state-owned enterprises in promoting the development of the digital economy. Third, actively promote the digital transformation of all kinds of enterprises. The development of enterprises affects the healthy and orderly development of China's market economy, but only a small number of enterprises have realized the digital transformation, therefore, the government should actively increase incentives to create a better business environment and promote the high-quality development of the market economy. Fourth, strengthening network security and data protection: As digital transformation deepens, network security and data protection are becoming increasingly important. Enterprises should invest in cybersecurity technology and establish a comprehensive data protection mechanism to ensure the safety of corporate and customer data. Fifth, government departments should seize the characteristics of enterprises in different locations, natures, sizes and life-cycle stages and set up targeted policy support to help enterprises in the process of digital transformation for the promotion of innovation incentives.

CONFLICT OF INTEREST

The author declares no conflict of interest.

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