

An Exploration of Patient Capital on Enterprise Digital Transformation

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Abstract: This study examines the impact of patient capital on enterprise digital transformation based on data from A-share listed companies from 2014 to 2023 (32,665 observations). Patient capital is defined as stable equity (measured by the shareholding ratio of long-term institutional investors). Descriptive statistics and correlation analysis reveal that the shareholding ratio of institutional investors is significantly positively correlated with the degree of digital transformation ($\beta=0.015$, $p<0.05$), though the effect size is smaller than traditional factors such as firm size. The findings suggest that patient capital promotes enterprise digital transformation by mitigating information asymmetry and providing long-term financial support, with its mechanism linked to reducing managerial short-termism. These conclusions enrich the theory of enterprise innovation and provide empirical evidence for fostering patient capital and advancing digital transformation.

1. Introduction

The 2025 Government Work Report and others proposed that finance is the lifeblood of the national economy and an important component of a country's core competitiveness, and it is necessary to accelerate the digital transformation of enterprises and continuously strengthen patient capital. Digital transformation is a process in which enterprises use digital technologies (such as big data, artificial intelligence, cloud computing, etc.) to drive changes at the strategic and operational levels, aiming to reshape business models and enhance competitiveness [1][2]. It not only involves technological applications but also requires enterprises to make systematic adjustments in organizational structure, talent management, value creation, and other aspects [3][4]. In the process of digital transformation, if enterprises do not have sufficient resources or cannot adapt to the processes and structures required for digital transformation, digital transformation may have a negative impact on enterprises [5]. Patient capital focuses on long-term development, can provide a relatively stable environment for enterprise development, and promote the formation of higher cognitive affinity between enterprises and investors [6]. The cognitive affinity provided by patient capital is conducive to enterprises in acquiring innovative information and resources and reducing information asymmetry [7]. In addition, patient capital can transfer complex tacit knowledge rather than just surface knowledge [8], thereby better promoting enterprise transformation. In this context, this paper aims to study the relationship between patient capital and digital transformation.

2. Literature Review and Research Hypothesis

The Impact of Patient Capital on Digital Transformation

Patient capital refers to investments that adhere to long-term strategies, focusing on the growth of a firm's comprehensive advantages during decision-making [9]. It prioritizes substantial future returns over short-term gains [10] and demonstrates high risk tolerance. Therefore, patient capital not only exhibits risk-prevention advantages and long-term strategic orientation when enterprises face high risks [11], but also provides sustainable funding for long-term development, enabling firms to navigate various crises during growth [12]. This study exclusively explores the direct impact of stable equity on corporate digital transformation from the perspective of patient capital.

In recent years, digital transformation of enterprises has attracted increasing attention. The application of digital technologies such as big data and blockchain in various fields indicates that digital transformation empowers enterprises to pursue new development directions and continuously enhance their competitive advantages. Digital transformation has become the norm in corporate development and is regarded as a crucial component of change. Studies have shown that factors such as cognition, competitive pressure, organizational culture, information technology readiness, and strategic consistency significantly influence digital transformation [13]. However, many studies fail to recognize that digital transformation is a complex strategic activity rather than an overnight process [14]. Meanwhile, they overlook the characteristics of large investment, long cycle, and high risk in digital transformation, which require sustained financial support. Patient capital, which pursues long-term investment and can bear risks [15], can well meet the needs of enterprise digital transformation.

As a stabilizer for development, patient capital provides momentum for enterprise transformation, supports long-term development, and avoids information asymmetry. During digital transformation, enterprises strive to establish long-term and stable cooperative relationships, which enable them to obtain the knowledge and innovative details needed for transformation, clarify the transformation direction, and more purposefully improve their innovation capabilities [16]. As a bridge for information, patient capital reduces information asymmetry, lowers financing costs, and enhances confidence in transformation through communication. Based on the above analysis, the hypothesis is proposed: Patient capital can promote corporate digital transformation.

3. Research Design

Sample Selection and Data Processing: The data used in this study are all derived from the CSMAR database. The research samples consist of all A-share listed companies from 2014 to 2023. Samples of ST or *ST companies with abnormal operations and samples with missing or critical data are excluded. After relevant processing, a total of 32,665 observations are finally obtained.

Dependent Variable: Digital Transformation (DT)

There is no unified measurement method for corporate digital transformation. For example, Wu S, Li Y et al measure corporate digital transformation by constructing a calculation formula from six dimensions such as strategic leadership and technological drive at the enterprise level [17]; Fernandez-Vidal J et al collect data through 23 in-depth interviews with senior managers [18]. Most current literatures refer to the approach of Fletcher G and Griffiths M, constructing a digital transformation index system by collecting keywords related to digital transformation in processed databases and calculating the frequency of relevant words [14]. However, this study directly measures digital transformation by using the disclosed information in the database, employing the degree of digital transformation as the indicator for listed companies.

Explanatory Variable: Patient Capital (PC)

Patient capital is a form of long-term-focused investment. Referencing existing literature on its measurement, patient capital is categorized into relational debt and stable debt, with different

measurement methods for each. For example, Lin J Y and Wang Y et al divide institutional investors into high, medium, and low groups based on the average turnover rate, define the low-turnover group as stable institutional investors, and calculate the proportion of stable equity in total equity [15]. David et al. use the ratio of long-term liabilities to total liabilities of listed companies to measure relational debt [19], taking the sum of the two as an indicator of patient capital. This study measures patient capital by the proportion of long-term institutional investor holdings.

Control Variables: Referencing existing literature, the control variables selected in this paper are: duality of CEO and chairman (CEO-CD), firm size, return on net assets (ROE), debt-to-asset ratio (Debt), equity ratio (ER) and cash asset ratio (CAR).

4. Empirical Results

Descriptive Statistics

Table 1 presents the descriptive statistics of the main variables. The research sample consists of 32,665 observations in total. According to the data in the table: the average proportion of institutional investor holdings is 70.199, with a standard deviation of 122.080, a minimum value of 0.000, and a maximum value of 7385.940. The huge numerical difference reflects a high degree of dispersion in the proportion of institutional investor holdings among different samples. The average value of Digital Transformation Degree A is 1.436, with a standard deviation of 1.452, indicating that there are certain differences in the degree of digital transformation among the sample enterprises.

Table 1 Descriptive Statistics

	Number	Min	Max	Mean	Sta	Var
PC	32665	0.000	7385.940	70.199	122.080	14903.630
DT	32665	0.000	6.306	1.436	1.452	2.108
CEO-CD	32665	0.000	1.000	0.294	0.456	0.208
Size	32665	14.942	31.310	22.427	1.498	2.244
ROE	32665	-207.397	64.056	-0.004	2.139	4.577
Debt	32665	0.000	63.971	0.437	0.454	0.206
ER	32665	-236.323	416.253	1.354	5.636	31.760
CAR	32665	0.000	0.986	0.157	0.122	0.015

Table 2 Correlation Analysis

	PC	DT	CEO-CD	Size	ROE	Debt	ER	CAR
PC	1.000	0.015**	-0.036	0.194**	0.009	0.020**	0.020**	0.037**
DT		1.000	0.060**	0.076**	-.011*	0.006	0.020**	0.094**
CEO-CD			1.000	-.189**	0.008	-.072**	-.040**	0.059**
Size				1.000	0.017**	0.209**	0.154**	-.188**
ROE					1.000	-.034**	-.624**	0.032**
Debt						1.000	0.127**	-.183**
ER							1.000	-.087**
CAR								1.000

** The correlation is significant at the 0.01 level (two-tailed).

* The correlation is significant at the 0.05 level (two-tailed).

The empirical results in Table 2 show that the proportion of institutional investor holdings has a significant positive correlation with the degree of corporate digital transformation ($\beta=0.015$, $p<0.05$), supporting the hypothesis that stable debt promotes corporate digital transformation. However, the intensity of this effect is lower than that of traditional influencing factors such as firm size ($\beta=0.076$),

which may reflect that the role of institutional investors is more to identify existing transformation capabilities rather than directly drive them. It is worth noting that although the negative relationship between duality and digital transformation ($\beta = -0.036$) is not significant, it is consistent with the agency cost theory, suggesting that institutional investors may indirectly promote digital investment by alleviating managerial myopia.

5. Conclusion

Digital transformation of enterprises features a long cycle, high risks, and prominent information asymmetry, but promoting such transformation is essential for achieving high-level development. Using data from 2014 to 2023, this study explores the mechanism of patient capital's impact on corporate digital transformation. It finds that patient capital can effectively enhance digital transformation. The research not only enriches the theory of enterprise innovation but also provides insights for cultivating patient capital and promoting digital transformation.

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