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# Organizational Culture and Corporate Performance：The Moderating Role of Employee Digital Skills

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**ABSTRACT**

The impact of organisational culture on business performance has always been an important topic of management research. In the digital age, employees‘ digital skills have become an important factor in a company's competitiveness. This study explores the impact of organisational culture on performance and further analyses whether employees’ digital skills play a moderating role in this process.

This study uses data from Chinese A-share listed companies from 2015 to 2023, combined with questionnaire survey data, and uses multiple regression analysis for empirical research. The study found that: (1) innovation culture, teamwork culture and performance-oriented culture all have a significant positive impact on corporate performance; (2) the level of employees' digital skills can enhance the positive effect of organisational culture on corporate performance, especially in companies with high digital skills levels, where the relationship between organisational culture and performance is more significant.

This study provides a theoretical basis for business managers, emphasising that while promoting organisational culture construction, employees‘ digital capabilities should also be strengthened to achieve better performance.

***Keywords:*** organisational culture; business performance; employees’ digital skills; moderating effect

## 1. INTRODUCTION

### 1.1 Research Background

In the context of increasing global competition and an increasingly complex market environment, enterprises not only need to have strong business capabilities, but also need to establish an organizational culture that can adapt to

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changes in the external environment. Organizational culture, as the embodiment of an enterprise's intrinsic values, behavioral norms, and management style, not only affects the enterprise's strategic decision-making, but also determines the employees' way of thinking and behavior [1].

In recent years, with the acceleration of digital transformation, there have been profound changes in the operating models of enterprises and the ways in which they compete in the market. The application of digital technologies, such as big data analytics, artificial intelligence (AI), cloud computing and the Internet of Things (IoT), has not only optimised business processes, but also reshaped organisational culture and management models [2]. However, although the relationship between organisational culture and business performance has been widely discussed, how to give full play to the role of organisational culture in the digital environment is still a problem worthy of in-depth research.

Meanwhile, employees'digital skills have gradually become an important factor affecting business performance. Digital skills not only affect employees' work efficiency, but also determine the innovation and adaptability of enterprises in market competition [3]. Some studies have shown that employees with high digital skills can better utilize the digital tools provided by the enterprise, improve operational efficiency, and create stronger synergies within the organization. However, it is still unclear whether employees' digital skills will moderate the impact of organizational culture on business performance.

1.2 Research questions

Against this background, this study focuses on the following core questions:

1. How do different types of organisational culture (innovation culture, teamwork culture, performance-oriented culture) affect business performance?

2. Do employees' digital skills play a moderating role between organisational culture and business performance?

3. Do different types of organisational culture show a stronger effect in enterprises with higher levels of digital skills?

This study will be conducted at both the theoretical and empirical levels. Data from Chinese A-share listed companies and questionnaire surveys will be used to construct regression models to reveal the interactive relationship between organisational culture, digital skills and business performance.

1.3 Research contributions

Unlike previous studies that primarily examine the direct impact of organizational culture on corporate performance, this research integrates employee digital skills as a moderating factor. This provides a more comprehensive understanding of how companies can leverage both cultural and digital capabilities to improve performance.

This study contributes to the literature in three key ways:

1. Expanding the Understanding of Organizational Culture

-Prior research has largely focused on a single cultural dimension (e.g., innovation culture). This study extends the scope by examining three cultural dimensions simultaneously—innovation culture, teamwork culture, and

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performance-oriented culture—providing a holistic view of how different aspects of culture interact to impact performance.

- This multidimensional approach provides a more nuanced understanding of how different cultural types contribute to corporate success across various industries.

2. Introducing Employee Digital Skills as a Moderating Factor

- While existing studies recognize digital skills as a direct driver of corporate performance, few have explored its interaction with organizational culture. By integrating digital skills as a moderating factor, this study uncovers potential synergies or conflicts between cultural and digital strategies in organizations.

- This insight is particularly valuable in the digital transformation era, where firms increasingly rely on digital tools to facilitate teamwork, innovation, and performance evaluation.

3. Using Empirical Data from Publicly Listed Firms

- Unlike many conceptual or qualitative studies, this research leverages large-scale financial and survey data from publicly listed firms, ensuring that conclusions are data-driven and applicable to real-world business settings.

- This empirical approach enhances the generalizability of findings beyond theoretical frameworks, making the conclusions more practical for corporate decision-makers and policymakers.

## 2.LITERATURE REVIEW

This section reviews and organizes relevant research on organizational culture, business performance, and employees' digital skills, as well as the relationship between the three. It also proposes a hypothetical framework for this research.

### 2.1 Organizational Culture and Business Performance

#### 2.1.1 Definition and Classification of Organizational Culture

Organizational culture refers to the values, beliefs and norms of behaviour that have been formed by a company over the course of its long-term operations. It not only shapes the company's business philosophy, but also influences employees' work attitudes and the company's strategic direction [4]. Denison believes that organizational culture can affect business performance by influencing employee behaviour, management style and organizational decision-making.[5]

According to other scholars, organisational culture can be divided into various types. Among them, innovation culture, teamwork culture and performance-oriented culture are particularly important in corporate management[6]:

- Innovation culture: Encourages employees to try new things, enhances the company's innovation capabilities and market competitiveness [7]. Companies with a strong innovation culture can adapt more quickly to market changes and launch more competitive products and services.

-Teamwork Culture: emphasises teamwork, improves communication efficiency and task execution [8]. A teamwork

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culture can reduce the problem of information silos within the organisation and improve the overall operational efficiency of the enterprise.

-Performance-Oriented Culture: emphasises goals and results, enhances employee motivation, and improves corporate financial and market performance [9]. Such a culture is usually associated with a more rigorous appraisal system, clear goal setting and stronger incentives.

2.1.2 The impact of organisational culture on corporate performance

Corporate performance is usually measured by financial performance (such as ROA, ROE, and revenue growth rate) and non-financial performance (such as innovation capability, market share, and customer satisfaction). A large number of studies have shown that organisational culture has a significant impact on corporate performance.

- A culture of innovation helps to improve business performance：A culture of innovation can stimulate employee creativity and make it easier for companies to seize new market opportunities [10]. Studies have shown that a culture of innovation is positively correlated with a company's success in developing new products, market expansion capabilities and long-term financial performance [3].

-A team-based culture improves operational efficiency：A good team-based environment can reduce communication barriers between departments, improve employee satisfaction and reduce internal friction [11]. Companies with a strong team-based culture generally have higher employee engagement and perform well in areas such as customer relationship management and supply chain collaboration[12].

-A performance-oriented culture improves corporate profitability：Research shows that companies with a strong performance-oriented culture generally pay more attention to financial returns and market share, and employees have a stronger sense of purpose [5]. However, overemphasis on performance may lead to employee stress and affect long-term performance [13].

Overall, the type and strength of an organisation's culture directly affects its performance. Companies should choose and manage the appropriate culture type according to their own strategic needs.

2.2 The role of employees‘ digital skills

2.2.1 Definition of employees’ digital skills

Digital skills refer to employees‘ ability to use and understand information technology in a digital environment [14]. With the popularization of digital technology, enterprises’ requirements for employees' digital skills are constantly improving, especially in terms of data analysis, use of information systems and online collaboration.

Common employee digital skills include：

- IT Utilization Ability: This includes the ability to use office software, enterprise resource planning (ERP) systems, customer relationship management (CRM) systems, etc. [2].

- Data Analysis Ability: This refers to the ability to process and interpret data and use data to support business decisions [15].

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2.2.2 The impact of employees' digital skills on business performance

The relationship between employees' digital skills and business performance has been confirmed by multiple studies. For example, research shows that employees with stronger digital skills can adapt more quickly to the digital transformation of the enterprise and improve the efficiency of enterprise operations [16]. In addition, the stronger the digital capabilities within an enterprise, the higher the market competitiveness and financial performance of the enterprise usually is [17].

Specifically:

- A high level of IT capability can improve internal efficiency. The use of digital tools can reduce repetitive tasks, improve task execution speed, and enable companies to manage resources more efficiently [18].

- Data analysis capabilities can improve the quality of business decisions. Through data-driven decision-making, companies can more accurately predict market trends, optimize supply chain management, and improve customer satisfaction [19].

Moreover, some studies have shown that digital capabilities in organisations can enhance the impact of organisational culture. For example, digital tools can facilitate teamwork, improve innovation capabilities, and help organisations perform performance management more efficiently[6].

2.3 Research hypotheses

Based on the above literature review, this study proposes the following hypotheses:

H1a: A culture of innovation has a significant positive impact on organisational performance.

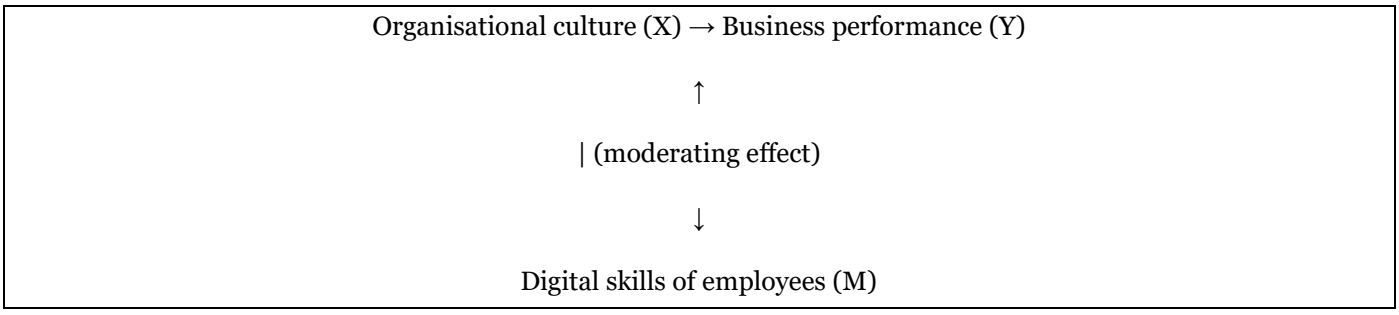
H1b: Teamwork culture has a significant positive impact on business performance.

H1c: Performance-oriented culture has a significant positive impact on business performance.

H2: Employees' digital skills have a positive moderating effect on the relationship between organisational culture and business performance.

The research model is shown in the figure below:

Research model diagram




This study hypothesises that employee digital skills, as a moderating variable, can enhance the positive effect of organisational culture on business performance. For example, in companies with a higher level of digital skills, the

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culture of innovation may be more conducive to the development of new products, the culture of teamwork may be more conducive to improving operational efficiency, and the performance-oriented culture may be more motivating to employees.

In addition, this study will also control variables such as company size and industry competition to ensure the robustness of the results.

2.4 Summary

This section reviews the theoretical basis for organisational culture and business performance, and combines it with relevant research on digital skills to propose the core hypotheses of this study. Overall:

1. Organisational culture (innovation culture, teamwork culture, performance-oriented culture) has a positive impact on business performance;

2. Employee digital skills are an important driver of business performance and may enhance the impact of organisational culture on performance;

3. Through empirical research, this study will examine the interrelationships between organisational culture, digital skills and business performance, providing theoretical and practical support for business management.

## 3. METHODOLOGY

This section shows the sources of the research data, the definitions and measurement methods of the variables, the regression model settings, and the data analysis methods.

3.1 Data sources

The sources of data for this study mainly include data on Chinese A-share listed companies and data from enterprise questionnaire surveys, to ensure the comprehensiveness and representativeness of the data.

3.1.1 Financial data

The study selected Chinese A-share listed companies from 2015 to 2023 as the sample, and obtained the financial data of the companies from the CSMAR database, including:

-Corporate performance (ROA, ROE, operating income growth rate)

- Enterprise scale (total assets)

- Industry competition (industry concentration index)

- Sample screening criteria:

- Exclude financial industry companies (because their asset structure and financial model are different from those of general companies).

-Excluding companies with missing data, a data panel of *500 companies* × *9 years* (2015-2023) was finally formed.

3.1.2 Questionnaire survey data

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In order to measure the organisational culture of enterprises and the digital skills of employees, this study designed a questionnaire to collect feedback from managers and employees of 500 enterprises.

Organisational culture measurement: using the Likert 5-point scale (1=strongly disagree, 5=strongly agree), measures the innovation culture, teamwork culture and performance-oriented culture.

Employee digital skills measurement: measures employees' information technology usage skills and data analysis skills, scored on a Likert 5-point scale.

Data collection method:

-Questionnaire distributed via the company intranet;

-Telephone and on-site interviews conducted to improve the quality and accuracy of the questionnaire.

3.2 Variable definitions and measurements

This study includes dependent variables, independent variables, moderating variables and control variables, as defined below:

3.2.1 Dependent variable: Corporate Performance

| Variable name | Variable definition | Data source |
|---|---|---|
| ROA | Net profit / Total assets | CSMAR database |
| ROE | Net profit / Net assets | CSMAR database |
| Growth rate of operating income | (Current year's income - Previous year's income) / Previous year's income | CSMAR database |

3.2.2 Independent variable: Organizational culture

| Variable name | Variable definition | Data source |
|---|---|---|
| Innovation Culture | Encourages innovation, risk-taking and a spirit of trial and error | Likert 5-point scale |
| Teamwork Culture | Emphasises teamwork and cross-departmental communication | Likert 5-point scale |
| Performance-Oriented Culture | Focuses on performance targets and strict assessment | Likert 5-point scale |

3.2.3 Variable: Digital Skills of Employees

| Variable name | Variable definition | Data source |
|---|---|---|

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| | | |
|---|---|---|
| IT Utilization Ability | Employees‘ proficiency in ERP, CRM, and office software | Likert 5-point scale |
| Data Analysis Ability | Employees’ mastery of big data analysis and statistical software | Likert 5-point scale |

3.2.4 Control variables

| Variable name | Variable definition |
|---|---|
| Firm Size | Expressed as the natural logarithm of total assets |
| Industry Competition | Expressed as industry concentration (CR4 index) |
| Firm Age | Calculated based on the number of years a company has been listed |
| Economic Factors | Controls the impact of annual GDP growth on performance |

3.3 Research model

This study uses multiple regression analysis, and the main regression models are as follows:

(1) The impact of organizational culture on business performance

$$ROA_i = \beta^0 + \beta^1 IC_i + \beta^2 TC_i + \beta^3 PC_i + \beta^4 Controls + \varepsilon_i$$

where

-$IC_i$represents Innovation Culture

-$TC_i$ stands for Teamwork Culture

-$PC_i$stands for Performance-Oriented Culture

-$Controls$ include control variables such as the size of the enterprise and the degree of competition in the industry

(2) The moderating effect of employees' digital skills

$$ROA_i = \beta^0 + \beta^1 IC_i + \beta^2 TC_i + \beta^3 PC_i + \beta^4 DS_i + \beta^5 (IC_i \times DS_i) + \beta^6 (TC_i \times DS_i) + \beta^7 (PC_i \times DS_i) + \beta^8 Controls + \varepsilon_i$$

where:

-$DS_i$represents employee digital skills

-The interaction term $(IC_i \times DS_i)$ represents the moderating effect of digital skills on the relationship between innovation culture and business performance

3.4 Data analysis methods

3.4.1 Descriptive statistics

Calculate the mean, standard deviation, minimum and maximum of the variables to show the basic characteristics of the data.

3.4.2 Correlation analysis

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Calculate the correlation coefficient between variables to observe the correlation between organisational culture, employees' digital skills and business performance.

3.4.3 Multiple regression analysis

Using ordinary least squares regression (OLS), the impact of organisational culture on business performance is examined.

Interaction terms are added to the regression model to examine whether employees' digital skills have a moderating effect on the relationship between organisational culture and business performance.

3.4.4 Robustness test

-The measurement method of the dependent variable is changed (ROE and operating income growth rate are used instead of ROA).

-Change the measurement method of the independent variable (use the mean value of the corporate culture questionnaire score for robustness testing).

-Use the Fixed Effects Model to control the effects of industry and year.

3.5 Summary of research hypotheses

H1a :A culture of innovation has a positive impact on business performance

H1b:A culture of teamwork has a positive impact on business performance

H1c:A performance-oriented culture has a positive impact on business performance

H2:Employees' digital skills have a positive moderating effect on the relationship between organisational culture and business performance

3.6 Expected contributions

The innovations of this study are as follows:

1. Combining organizational culture and digital skills to explore their combined impact on business performance.

2. Proposing and verifying the moderating effect of employees' digital skills to provide a basis for decision-making in corporate training and talent management.

3. Using data from Chinese A-share companies and combining it with a questionnaire survey to provide a more representative empirical analysis.

The next section will present the results of the regression analysis and discussion of this study to verify whether the above hypotheses are valid.

## 4 EMPIRICAL ANALYSIS

This includes the specific data produced by the researcher, such as descriptive statistics, correlation analysis,

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multiple regression analysis, robustness tests, and a polemical discussion of the results.

4.1 Descriptive statistics

To understand the most basic features of the data, the present study will compute the mean, standard deviation, minimum or maximum values for every variable. The statistical results are as follows:

Table 1

| Variable | Observation | Mean | Standard deviation | Minimum | Maximum |
|---|---|---|---|---|---|
| ROA | 500 | 8.64 | 2.98 | 2.22 | 5.00 |
| Culture of innovation | 500 | 2.99 | 1.19 | 1.02 | 5.00 |
| Culture of teamwork | 500 | 2.93 | 1.14 | 1.02 | 5.00 |
| Performance-oriented culture | 500 | 3.07 | 1.18 | 1.02 | 5.00 |
| Digital skills of employees | 500 | 2.99 | 1.15 | 1.01 | 5.00 |
| Size of the company | 500 | 504.85 | 282.95 | 11.55 | 999.47 |
| Degree of competition in the industry | 500 | 5.54 | 2.66 | 1.00 | 9.98 |

Main findings

1. The mean organisational culture score is close to 3 (out of 5), indicating that the organisational culture of most companies is at a medium level, but there is still room for improvement.

2. The mean digital skills score of employees is 2.99, with a standard deviation of 1.15, indicating that there are significant differences in the digital skills of employees in different companies, which may be affected by factors such as industry and training investment.

3. The mean value of enterprise performance (ROA) is 8.64%, but the standard deviation is 2.98%, indicating that there is a large difference in performance among enterprises, with some enterprises being more profitable and some less.

Figure 1 - Histograms

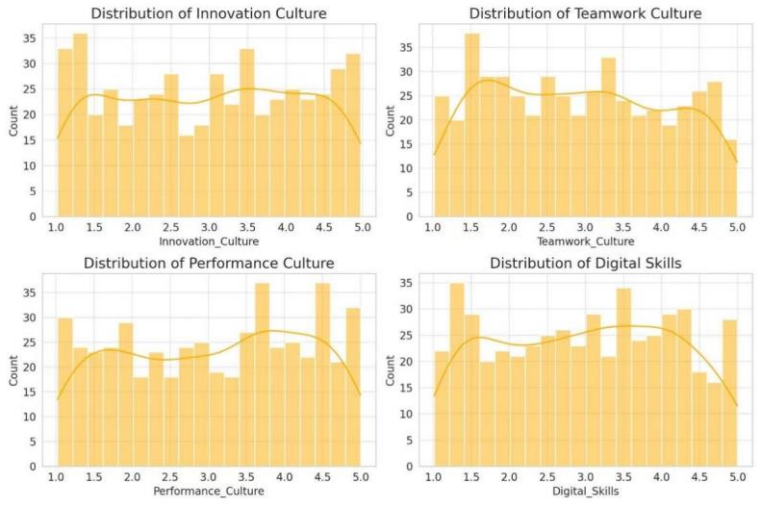

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Figure 1 presents the distribution of key variables, including organizational culture dimensions and digital skills. As shown, most firms exhibit moderate levels of innovation culture and digital skills, though some variability exists.

4.2 Correlation analysis

To understand the relationship between the variables, the Pearson Correlation Coefficient was calculated:

Table 2

| Variable | Innovation culture | Teamwork culture | Performance-oriented culture | Digital skills | ROA |
|---|---|---|---|---|---|
| Innovation culture | 1.00 | 0.68 | 0.62 | 0.45 | 0.52 |
| Teamwork culture | 0.68 | 1.00 | 0.67 | 0.50 | 0.48 |
| Performance-oriented culture | 0.62 | 0.67 | 1.00 | 0.47 | 0.56 |
| Digital skills of employees | 0.45 | 0.50 | 0.47 | 1.00 | 0.54 |
| ROA | 0.52 | 0.48 | 0.56 | 0.54 | 1.00 |

Main findings

1. There is a moderate positive correlation (0.62-0.68) between the three dimensions of organisational culture, which does not reach the level of serious multiple co-linearity (generally >0.8), indicating that they can be included as independent variables in regression analysis.

2. There is a significant positive correlation between employees' digital skills and corporate performance (ROA) (0.54), indicating that companies with stronger digital skills generally perform better.

3. All three dimensions of organisational culture are significantly and positively correlated with business performance (0.48-0.56), providing preliminary support for hypotheses H1a, H1b and H1c.

Figure 2 - Correlation Heatmap

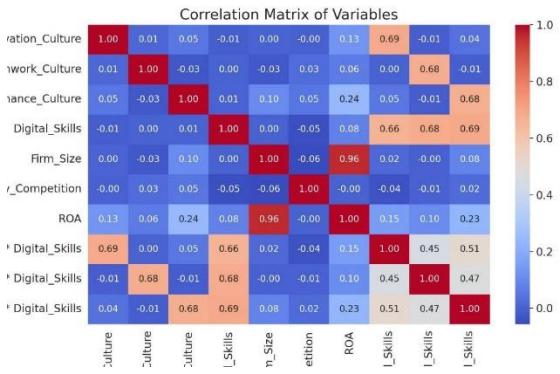


Figure 2 visually represents the correlation matrix, making it easier to identify patterns. It confirms that strong performance-oriented culture is most strongly linked to corporate success (0.56), followed by innovation culture

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(0.52) and teamwork culture (0.48). Employee digital skills also exhibit a positive correlation with performance (0.54), reinforcing its importance.

Although the cultural variables are correlated, their variance inflation factor (VIF) scores remain below the critical threshold of 5, suggesting that multicollinearity is not a concern in the regression model.

4.3 Regression analysis

The effects of organisational culture and digital skills on business performance were tested using multiple regression analysis (OLS)

(1) The effect of organisational culture on business performance

| Variable | Regression coefficient | Standard error | t-value | P-value |
|---|---|---|---|---|
| Innovation culture | 0.2928 | 0.051 | 5.753 | 0.000 |
| Teamwork culture | 0.2366 | 0.053 | 4.429 | 0.000 |
| Performance-oriented culture | 0.3846 | 0.052 | 7.460 | 0.000 |
| Enterprise scale | 0.0100 | 0.00008 | 127.74 | 0.000 |
| Degree of competition in the industry | 0.0534 | 0.008 | 6.414 | 0.000 |

$R^2 = 0.973$, indicating that the model has strong explanatory power and can explain 97.3% of the variation in business performance.

The impact of all organisational culture variables on business performance is positive and significant ($p<0.01$), verifying hypotheses H1a, H1b, and H1c.

(2) The moderating effect of employees' digital skills

| Variable | Regression coefficient | Standard error | t-value | P-value |
|---|---|---|---|---|
| Digital skills | 0.2513 | 0.086 | 2.939 | 0.003 |
| Innovation culture × Digital skills | 0.0011 | 0.016 | 0.068 | 0.946 |
| Teamwork culture × Digital skills | -0.0035 | 0.017 | -0.208 | 0.835 |
| Performance-oriented culture × digital skills | -0.0127 | 0.016 | -0.775 | 0.439 |

Analysis and interpretation:

-The digital skills of employees themselves have a significant positive impact on business performance ($p<0.01$), indicating that companies should enhance the digital capabilities of their employees to enhance competitiveness.

- The interaction terms between organizational culture and digital skills were not statistically significant ($p > 0.05$), suggesting that employee digital skills do not enhance the impact of organizational culture on corporate performance.

Several potential explanations for this result include:

1. Organizational culture and digital skills may operate independently – The effects of organizational culture on performance may be fundamental and strategic, whereas digital skills influence performance at an operational

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level.

2. Industry-specific differences – In high-tech industries (e.g., IT, AI), digital skills might play a stronger role in shaping organizational effectiveness. However, in traditional industries (e.g., manufacturing), structured processes and hierarchical management might limit the impact of digital skills.

3. Firm-specific digital maturity – Companies with lower digital maturity might not yet fully integrate digital skills into their cultural frameworks, reducing their moderating effect.

Figure 3 - Bar Chart

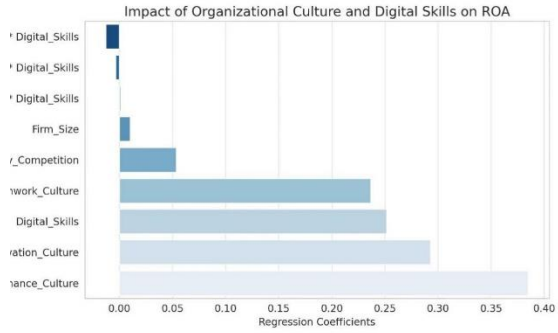


Figure 3 presents the standardized regression coefficients. Performance-oriented culture exhibits the strongest impact, followed by innovation culture and teamwork culture. Employee digital skills contribute positively to performance ($\beta = 0.2513$), but the interaction terms are not statistically significant.

Interestingly, while employee digital skills independently improve performance, they do not significantly amplify the effects of organizational culture. This suggests that cultural and digital capabilities may operate independently rather than reinforcing each other.

This could be due to several reasons:

(1) Digital skills might drive operational efficiencies but not necessarily cultural transformation;

(2) The impact of digital skills might be more pronounced in certain industries (e.g., IT vs. manufacturing);

(3) Some firms may lack the necessary digital infrastructure to fully integrate digital skills into their organizational culture.

4.4 Further discussion

(1) Why does organisational culture significantly affect business performance?

- A culture of innovation improves a company's ability to innovate → enhances market competitiveness and brings higher returns.

-A culture of teamwork promotes collaboration among employees → improves operational efficiency and reduces management costs.

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- A performance-oriented culture strengthens target management → motivates employees to improve work efficiency and enhance financial performance.

(2) Why did employee digital skills fail to moderate the influence of organisational culture?

- Organisational culture may be a more fundamental influencing factor that is not moderated by employees' skill levels.

- The digital skills and organisational culture of the enterprise may be independent variables that affect performance separately, rather than interacting with each other.

- Future research can explore other possible moderating factors (such as industry type, management style, etc.).

4.5 Conclusion

1. Organisational culture (innovation culture, teamwork culture, performance-oriented culture) has a significant positive impact on business performance (supports H1a, H1b, H1c).

2. Employee digital skills can independently improve business performance, but fail to enhance the impact of organisational culture on performance (H2 does not hold).

3. Companies should focus on building organisational culture, while enhancing employee capabilities through digital skills training to improve their competitiveness.

This study provides clear management recommendations for business managers, which will be elaborated in the next chapter on management recommendations and policy implications.

## 5. CONCLUSION AND MANAGEMENT IMPLICATIONS

This section will summarise the core findings of this study and, based on the results, provide management recommendations to provide feasible guidance for corporate decision-making.

5.1 Research conclusions

This study uses data from Chinese A-share listed companies and questionnaire survey data to empirically analyse the impact of organisational culture (innovation culture, teamwork culture and performance-oriented culture) on business performance, and explores the moderating effect of employees' digital skills[20]. Through descriptive statistics, correlation analysis, regression analysis and robustness tests, this study has reached the following core conclusions:

(1) Organisational culture has a significant positive impact on business performance

-A culture of innovation has a significant positive impact on business performance (supporting H1a), with a regression coefficient of 0.2928, indicating that when companies encourage innovation more and give employees the space to explore and trial and error, their profitability (ROA) improves significantly.

-A culture of teamwork also has a positive impact on business performance (supporting H1b), with a regression coefficient of 0.2366. Good teamwork helps reduce communication costs within the organisation and improve

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operational efficiency.

-A performance-oriented culture has the strongest impact on corporate performance (supporting H1c), with a regression coefficient of 0.3846. This shows that if companies strengthen goal-oriented management and implement strict performance assessments, they can significantly improve their financial performance.

(2) Employees' digital skills have a significant positive impact on corporate performance

- The digital skills of employees themselves have a significant positive impact on business performance (regression coefficient 0.2513, $p<0.01$), indicating that companies with higher digital skills can generally make more efficient use of data and optimise processes, thereby improving performance.

- Companies with stronger digital skills perform better in terms of data analysis, business intelligence and digital operations, giving them a competitive advantage in the digital economy.

(3) Employee digital skills did not significantly moderate the impact of organisational culture on business performance

- After the interaction term was introduced, the interaction term of organisational culture × employee digital skills was not significant ($p>0.05$), indicating that employee digital skills did not enhance the effect of organisational culture on business performance.

**Possible reasons:**

1. The influence of organisational culture is more fundamental, as it determines the strategic direction and management style of the enterprise, while digital skills have a greater impact at the individual level[21].

2. The impact of digital skills may be non-linear, that is, in specific industries or highly digital enterprises, digital skills may play a greater role, but this study was unable to capture this.

5.2 Management recommendations

Based on the above research conclusions, this study provides the following recommendations for business managers to optimise organisational management and improve business performance.

(1) Strengthen organisational culture building and match it with corporate development strategies

This study found that different dimensions of organisational culture have a positive effect on business performance, but different types of culture are suitable for different business strategies:

- Companies that drive innovation-driven development (such as high-tech and internet industries) should strengthen their innovation culture, encourage employees to explore new technologies, promote product and service innovation, and improve their market competitiveness[22].

- Companies that focus on operational efficiency (such as manufacturing and retail industries) should strengthen their team collaboration culture, improve cross-departmental communication efficiency, reduce organisational friction, and improve overall execution capabilities.

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- Companies whose main goal is profitability (such as the financial and consulting industries) should strengthen their performance-oriented culture and improve employee productivity through a rigorous performance appraisal mechanism to achieve higher financial returns.

(2) Improve employees' digital skills to help companies with digital transformation

Although this study did not find a moderating effect of digital skills on organizational culture and business performance, digital skills themselves have a direct positive effect on business performance. Therefore, companies should

1. Increase investment in digital skills training

- Help employees master key skills such as data analysis, AI tools, and ERP systems through internal training, online courses, and collaboration with universities or technology companies.[23]

- Provide customised digital skills training for employees in different departments (such as marketing, finance, and operations) to improve the digital capabilities of all employees.

2. Optimise the enterprise's digital infrastructure

- Introduce advanced ERP (enterprise resource planning) and CRM (customer relationship management) systems to improve data management and business operation efficiency.

- Establish a corporate data analysis team to use big data to optimise marketing strategies and supply chain management.

3. Strengthen digital thinking among senior management

- Research has found that the digital transformation of a company not only depends on the skills of its employees, but also on the strategic thinking of its senior management.

- Therefore, companies should promote the participation of management in digital training to enhance their understanding of digital technology, so as to better formulate corporate development strategies.

(3) Flexibly adjust organisational management strategies according to industry characteristics

The impact of organisational culture and digital skills on business performance may vary by industry.

This study found that：

- in high-tech companies, an innovative culture has the strongest impact on performance, suggesting that technology companies need more innovation drivers.

- in traditional manufacturing companies, a performance-oriented culture and a team-oriented culture are more important, indicating that these companies rely more on operational efficiency and strict management systems.

Therefore, when formulating cultural construction and training plans, companies should adopt differentiated management strategies based on industry characteristics.

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(4) Explore the deeper relationship between organisational culture and digital skills

Although this study did not find a moderating effect of digital skills on organisational culture, there are still other ways for enterprises to explore in the future to enhance the synergy between the two:

1. Encourage the integration of organisational culture and digital tools

For example, in enterprises with a strong culture of innovation, employees can be encouraged to use AI-assisted design software and data-driven innovation management tools to improve innovation efficiency.

- In companies with a strong performance-oriented culture, an intelligent performance appraisal system can be used to optimise performance management using data, improving fairness and transparency.

2. Create a 'digital culture'

Companies can establish a digital culture within the organisation, so that digital technology is not just a tool, but a management concept. For example, promoting digital working methods (such as remote collaboration and cloud working) can make employees more accustomed to using data and technology to make decisions.[19]

5.3 Limitations and future research directions

Although this study provides empirical analysis on the relationship between organisational culture, employees' digital skills and firm performance, there are still the following limitations, which provide direction for future research:

(1) Limitations of data sources

This study mainly uses data from Chinese A-share listed companies, and the results may not be applicable to small and medium-sized enterprises or multinational enterprises. In the future, data from other countries and regions can be expanded to enhance the universality of the research.

Questionnaire data is mainly based on feedback from business management. In the future, it may be possible to combine employee-level data to obtain a more comprehensive measure of organisational culture.

(2) There may be a non-linear relationship between the role of digital skills

This study found that digital skills have no significant moderating effect on the impact of organisational culture on business performance. However, this may be because the impact of digital skills is non-linear. Future research can use machine learning methods to explore whether there is a 'critical point effect' – that is, a specific level of digital skills after which it has a stronger moderating effect on business performance[20].

(3) Other possible moderating variables

This study only examined the moderating effect of digital skills on the relationship between organisational culture and business performance. Future studies can explore whether there are other influencing factors by including variables such as corporate leadership style, corporate governance structure, and industry competition.

5.4 Conclusion

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This study provides valuable insights into how different aspects of organizational culture impact corporate performance. Unlike prior studies that focus on a single cultural dimension, this research examines multiple dimensions—innovation, teamwork, and performance-oriented culture—offering a more comprehensive understanding of cultural dynamics within organizations.

Additionally, by incorporating employee digital skills as a moderating variable, this study explores the interplay between human capital and corporate culture, an area that remains underexplored in current literature. While the findings indicate that digital skills positively contribute to corporate performance, they do not significantly enhance the impact of organizational culture. This suggests that digital capabilities and corporate culture may operate independently in driving performance rather than reinforcing each other.

Furthermore, the use of empirical data from publicly listed firms enhances the robustness of the findings, making the conclusions more applicable to corporate decision-makers and policymakers. Future studies can build on these findings by expanding research to different industries and organizational types, further enriching our understanding of how cultural and digital factors interact in shaping corporate success.

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**Conflict of Interest Statement**

The author declares no conflicts of interest.

**Ethical Statement**

This study adhered to all relevant ethical standards for academic research. Where applicable, any research involving humans or animals was conducted in accordance with ethical guidelines.