

Can Assetization of Data Elevate Enterprise Information Disclosure Quality?

Yixuan Chen

*Tianjin University of Commerce, Tianjin, China
m15835236036@163.com*

Abstract. The assetization of data has transitioned from an optional strategy to a corporate imperative in the digital economy. It is crucial to explore its impact on the real economy. The analysis relies on A-share listed firms as the sample and employs the fixed effects model to evaluate how data assetization influences firm's disclosure quality. Findings reveal the relationship that data assetization significantly improves disclosure quality. Furthermore, moderating effect indicates that corporate governance acts as a positive moderator, strengthening the effect of data assetization on information disclosure quality. Heterogeneity analysis revealed that this impact is more prominent among private enterprises and manufacturing-sector firms. These findings deliver fresh insights into data asset management and disclosure practices, while also laying an evidence-based foundation for enhancing corporate disclosure quality and ensuring capital market stability.

Keywords: Data assetization, quality of information disclosure, fixed effect

1. Introduction

In the digital economy era, data has emerged as the fifth core factor of production [1]. A policy document titled *Opinions on Establishing a Data Foundation System for Optimizing the Function of Data Elements* — a move that signals China's market-driven reform of data elements has stepped into a new stage of institutional innovation."The Chinese data governance market reached 2 billion yuan in 2022 and is projected to surpass 8.7 billion yuan by 2027 [2]. Data assetization—defined as integrating data into production processes to enable its circulation, trading, and participation in distribution and value realization—is growing increasingly pivotal [3].

As a bridge connecting data assetization and value realization, information disclosure plays an irreplaceable role in the digital economy era. High-quality disclosure of data asset information is crucial for accounting information users to conduct comprehensive analysis of data asset value; it also underpins the sound development of the digital economy [4]. High-quality information disclosure is enhancing market transparency and boosting investor confidence. It also underpins the sound development of the digital economy.

According to existing research, academia has extensively discussed the issue of data asset recognition on balance sheets, but there is relatively little discussion on the impact of data assets on information disclosure. This paper aims to combine them, exploring whether data assetization can

improve the quality of information disclosure? What factors moderate the relationship between these two variables? And whether the relationship differs under different influencing factors?

2. Literature review

Data can be categorized into personal data, enterprise data, and government data based on the holding entity. This paper focuses on enterprise data, which can be naturally generated during daily operations or supplemented through external channels. Enterprise data assets refer to data resources legally controlled by the enterprise, with measurable costs, capable of bringing future economic benefits to the enterprise. Data assetization denotes the process by which data resources are converted into assets that can be quantified, traded, and recorded on financial statements, facilitated through stages including rights identification, valuation, and exchange [1]. Referencing the Chinese Social Sciences Net, measurement standards include the value-added method, cost method, and storage scale method [5]. In recent years, the positive effects of enterprise data assetization have garnered widespread academic attention such as data assetization can enhance enterprise new quality productivity [6], drive high-quality enterprise development [7], improve corporate performance [8] and promote enterprise transformation and upgrading [9].

Information disclosure is the process by which companies convey financial and non-financial information to stakeholders, aiming to reduce information asymmetry and promote resource allocation efficiency [10]. Internal factors include ownership structure [11], firm size [12], financial condition [13], corporate governance [14], etc. External factors include corporate social relationships [15], legal environment [16], government intervention [17], etc. Information disclosure quality has significant impacts on enterprises, reflected in influencing capital market efficiency and pricing functions [18], promoting corporate governance and reducing stock price crash risk [19], and enhancing ESG performance and sustainable development [20].

That said, current academic literature has yet to conduct in-depth analysis that links data assetization with the standard of corporate information disclosure. Against this backdrop, this paper makes three core contributions: First, it extends research on the economic implications of data assets while adding new insights into the drivers of information disclosure. Second, it incorporates corporate governance standards as a moderating variable to clarify the association between data assetization and the quality of corporate disclosures. Third, it offers practical guidance for elevating firms' information disclosure caliber and upholding capital market stability.

3. Theoretical analysis and research hypotheses

3.1. Relationship between DA and IDQ

From a theoretical perspective, the data assetization is influenced by the clarity of data rights confirmation, the rationality of valuation, and the activity level of the trading market, which affects the breadth, depth, and credibility of information disclosure. Firstly, data rights confirmation is a legal prerequisite for assetization. When the ownership of data is clear, enterprises can accurately define the scope, value and rights boundaries of data assets, ensuring that the disclosed information fully reflects the true status of the enterprise's data assets. However, the lack of rights confirmation will lead to disclosure ambiguity [21]. Secondly, the price signals formed in the trading market are the core basis for disclosing correlations [22]. If the valuation is reasonable, the value of the data assets disclosed by enterprises will be more accurate, enhancing the decision-making reference value of the information. Thirdly, under high transaction activity, more detailed and accurate information compels

information disclosure to be more standardized and complete. Meanwhile, an active trading market will also form industry-recognized disclosure standards, further enhancing the standard of information.

However, per the information Manipulation theory [10], management may take advantage of information asymmetry for profit. During the process of data assetization, problems such as ambiguous valuation techniques and complex transactions are prone to occur, leading to inconsistent assessment methods and opaque pricing logic. This results in the masking of key information, reduced readability, and damage to the accuracy, completeness, and understandability of information disclosure.

H1a: Data assetization improves corporate information disclosure quality.

H1b: Data assetization suppresses corporate information disclosure quality.

3.2. Moderating effect

Referencing Chen Deqiu and Hu Qing [23], high-granularity data support can significantly improve the effectiveness of capital allocation decisions, supervising management to standardize their behavior and improve corporate governance levels. Referencing Yi Zhihong et al. [14], the reasonable arrangement of corporate governance structure can promote information disclosure, making it more comprehensive and accurate while reducing risk costs and increasing standardization. The standardized processes formed through long-term data governance, enhances the credibility and decision-making value of disclosed information.

H2: Stronger corporate governance capacity amplifies the positive impact of data assetization on information disclosure.

4. Research design

4.1. Sample selection and data sources

This study uses A-share listed companies from the Shanghai and Shenzhen stock exchanges between 2007 and 2023 as the initial sample, applying several screening procedures: firms in the financial sector are excluded; ST and *ST companies are removed; observations with missing variable data are omitted; and to mitigate the influence of extreme values on empirical results, continuous variables are winsorized at the 1% and 99% percentiles. After these filtering steps, a final sample of 38,422 firm-year observations is obtained. The primary data source for this research is the CSMAR database.

4.2. Variable definition and measurement

Dependent Variable: Information Disclosure Quality (IDQ). Referencing Liu Guanchun et al. [24], this study gauges firms' disclosure quality via stock exchanges' annual ratings for sampled companies. Exchanges assess listed firms' disclosure annually against authenticity, timeliness, accuracy, completeness, and compliance; ratings range from A (Excellent) to D (Unqualified). Scores 4, 3, 2, 1 are assigned to these grades (higher scores = better quality). Referencing Xu Shoufu et al. [25], the KV index is an indicator measuring information disclosure quality; a lower KV index indicates better information disclosure quality. This paper uses this index for robustness tests.

Core Explanatory Variable: Data Assetization (DA). Referencing Li Shu et al. [26], this paper uses text analysis to measure enterprise data assets. Using "data", "digital", "information", and

"network" as seed words to construct a similar word set, it counts the frequency of 221 data asset-related words such as "data governance", "digital facilities", "information disclosure". Then, the measure for data assets (DA) is constructed as: $\ln(\text{Market Value} - \text{Fixed Assets} - \text{Financial Assets} - \text{Intangible Assets})$. As market value has two measurement methods: data assets obtained from market transaction prices (DA), and data assets obtained using the income method (DA_b). This paper uses DA for the main regression analysis and DA_b for robustness tests.

Control Variables: Based on the literature related to data assetization, this model introduces the following control variables: Nature of Property Rights (Soe), Firm Size (Size), Asset-Liability Ratio (Lev), Growth (Growth), Ownership Concentration (Top1), Board Size (Board), Proportion of Independent Directors (Indirect), Audit Firm Quality (Big4).

Moderating Effect Variable: Corporate Governance Level (Gov). This paper selects three measurement methods. Referencing Fang Hongxing et al. [27], since corporate governance includes incentive and supervision mechanisms, principal component analysis is conducted on incentive and supervision factors separately, and the first principal component is selected as the measure for the two corporate governance mechanisms, denoted as Gov1 and Gov2 respectively. Referencing Gu Naikang and Zhou Yanli [28], a comprehensive indicator of corporate governance level, Gov3, is obtained using principal component analysis.

4.3. Model

To examine how data assetization influence information disclosure quality, this paper builds the following model (1):

$$IDQ = \alpha_0 + \alpha_1 DA_t + \sum Control_t + \sum Firm + \sum Year + \varepsilon_t \quad (1)$$

IDQ is information disclosure quality, DA is data assetization, Controls represent control variables; Firm and Year stand for the respective fixed effects; ε represents the error term.

To verify how the moderates the link between data assetization and information disclosure quality, this paper builds the model (2):

$$IDQ_t = \beta_0 + \beta_1 DA_t + \beta_2 Gov_t + \beta_3 (DA_t \times Gov_t) + \sum Control_t + \sum Firm + \sum Year + \varepsilon_t \quad (2)$$

5. Empirical analysis

5.1. Descriptive statistics and correlation analysis

Table 1 summarizes the descriptive statistical outcomes for all variables. Among them, the mean value of the dependent variable, Information Disclosure Quality (IDQ), is 1.98, with a standard deviation of 1.62, suggesting sample firms' overall information disclosure quality is moderately high, though with some variability. For the explanatory variable Data Assets (DA), the mean stands at 22.75, with a standard deviation of 1.24; this indicates that the scale of data assets differs across enterprises, yet their overall distribution remains relatively centralized.

Turning to control variables, Firm Size (Size) has mean of 22.12 and standard deviation of 1.28, which points to the sample companies being relatively large-scale and showing a balanced distribution. In terms of corporate governance-related indicators, the average Proportion of

Independent Directors (Indirect) is 0.38, while the mean Board Size (Board) is 2.11—both figures align with the typical governance structure features of Chinese listed enterprises.

Table 1. Descriptive statistics

Type	Var	Measurement Method	Obs	Mean	SD	Min	Max
DV	IDQ	Stock Exchange Information Disclosure Assessment Rating	38,422	1.981	1.624	1	4
IV	DA	Text Analysis Method	38,422	22.754	1.240	19.366	29.092
CV	Soe	State-owned=1, Otherwise=0	38,422	0.290	0.454	0	1
CV	Size	Natural Logarithm of Total Assets	38,422	22.122	1.283	19.313	26.452
CV	Lev	Total Liabilities / Total Assets	38,422	0.405	0.206	0.028	0.934
CV	Growth	Financial Indicator Method	38,422	0.333	0.963	-0.926	17.108
CV	Top1	Shareholding Ratio of the Largest Shareholder	38,422	0.334	0.146	0.076	0.758
CV	Indirect	Natural Logarithm of Number of Board Members	38,422	0.378	0.054	0	0.600
CV	Big4	Number of Independent Directors / Number of Board Members	38,422	0.053	0.225	0	1
CV	Board	High Quality=1, Low Quality=0	38,422	2.106	0.197	0	2.708

5.2. Baseline regression

Table 2 outlines the baseline regression results for how data assetization and control variables affect information disclosure quality. Model (1), which incorporates control variables, yields a coefficient of 0.050 for Data Asset A—significant at the 5% level. After adding firm fixed effects (Model 2) and year fixed effects (Model 3) respectively, the coefficient for Data Asset A remains statistically significant. Model (4), which controls for firm-year fixed effects, reports a DA coefficient of 0.027 (still significant at the 2% level). The table shows that across all model configurations, the DA coefficient is positive and significant at the 1% level. All four models confirm a stable positive relationship between data assetization and information disclosure quality, supporting H1a.

Table 2. Baseline regression test

Variable	(1)	(2)	(3)	(4)
	IDQ	IDQ	IDQ	IDQ
DA	0.050*** (0.007)	0.035*** (0.009)	0.049*** (0.007)	0.027*** (0.010)
Soe	-0.086*** (0.007)	-0.012 (0.018)	-0.085*** (0.007)	-0.032* (0.018)
Size	-0.187*** (0.007)	-0.149*** (0.009)	-0.196*** (0.007)	-0.179*** (0.011)
Lev	0.833*** (0.016)	0.758*** (0.026)	0.846*** (0.017)	0.752*** (0.027)
Growth	-0.007** (0.003)	-0.017*** (0.003)	-0.005* (0.003)	-0.015*** (0.003)
Board	-0.138*** (0.019)	-0.050* (0.030)	-0.103*** (0.019)	-0.008 (0.030)
Big4	-0.174*** (0.014)	-0.104*** (0.027)	-0.174*** (0.014)	-0.105*** (0.027)
Top1	-0.443*** (0.020)	-0.818*** (0.043)	-0.417*** (0.021)	-0.665*** (0.045)

Table 2. (continued)

Inderect	-0.081 (0.066)	0.165* (0.093)	-0.050 (0.066)	0.195** (0.092)
Cons_	5.147*** (0.079)	4.504*** (0.144)	5.250*** (0.081)	5.222*** (0.172)
Company	No	Yes	No	Yes
Year	No	No	Yes	Yes
N	35821	35821	35821	35570
R ²	0.154	0.481	0.160	0.483

Standard errors in parentheses* p<0.1, ** p<0.05, *** p<0.01, The same applies to the following tables.

5.3. Robustness tests

Replacement of Dependent and Core Explanatory Variables: Table 3 (1) demonstrates that when Data Asset b (DA_b) as the core explanatory variable, its regression coefficient hits 0.027, significant at the 1% level. Table 3 (2) reveals that switching the dependent variable's measurement to the KV index results in a regression coefficient of 0.111, also significant at 1%.

Addition of Control Variables: Table 3 (3) adds Roa and Roe as new control variables; the regression coefficient stands at 0.029, significant at the 1% level.

Consideration of Time Series Correlation Issues: Referencing Xie Yanxiang et al [29]., the explanatory variable is lagged by one period to mitigate reverse causality issues in the regression. As shown in Table 3 (4), L.DA shows significance at the 1% level.

Change of Time Range: As mentioned in the introduction, leading to significant growth in China's data resources. Therefore, (5) selects data from 2021-2023 for analysis; at this time, the coefficient for Data Asset A is 0.045, significant at the 5% level.

All the above tests can prove that data assetization has a significant positive impact on information disclosure.

Table 3. Robustness tests

Variable	(1)	(2)	(3)	(4)	(5)
	IDQ	IDQ	IDQ	IDQ	IDQ
DA		0.111*** (0.022)	0.029*** (0.010)		0.045*** (0.022)
DA_b	0.027*** (0.010)				
L.DA				0.027*** (-0.01)	
Controls	Yes	Yes	Yes	Yes	Yes
Company	Yes	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes	Yes
N	35088	32579	36243	28743	11349
R ²	0.482	0.455	0.500	0.508	0.751

5.4. Heterogeneity tests

This study performs heterogeneity tests across two dimensions: firm ownership and industry type, with results in Table 4. For non-state-owned firms, the data asset coefficient is 0.085 (significant at 1%), while it is positive but insignificant for state-owned counterparts. In manufacturing, the coefficient is 0.052 (significant at 1%), yet positive but insignificant in non-manufacturing. These findings indicate that data assetization's positive effect on information disclosure quality is more pronounced in non-state-owned and manufacturing firms.

Table 4. Heterogeneity tests

Variable	(1)	(2)	(3)	(4)
	State-Owned	Non-State-Owned	Manufacturing	Non-Manufacturing
DA	0.018 (0.020)	0.085*** (0.012)	0.052*** (0.012)	0.001 (0.19)
Controls	Yes	Yes	Yes	Yes
Company	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes
N	11139	27283	26726	11696
R ²	0.536	0.466	0.465	0.549

5.5. Moderating effect

To verify data assetization's moderating role in information disclosure quality, this study uses corporate governance as the moderating variable. For result robustness, three corporate governance metrics are applied. Table 5 generates interaction terms between data assets and governance variables (Gov1, Gov2, Gov3; aligned with the three metrics). Their coefficients (0.009, 0.015, 0.010) are all 1%-level positive significant, indicating that stronger corporate governance amplifies data assetization's positive effect on information disclosure quality.

Table 5. Moderating effect

Variable	(1)	(2)	(3)
	IDQ	IDQ	IDQ
DA	0.115*** (0.010)	0.114*** (0.010)	0.127*** (0.011)
DA×Gov1	0.009*** (-0.004)		
DA×Gov2		0.015*** (-0.004)	
DA×Gov3			0.010*** (-0.004)
Company	NO	NO	NO
Year	YES	YES	YES
N	35801	36000	33921
R ²	0.044	0.049	0.051

6. Conclusion

This paper uses a firm-year fixed-effects model to study the influence of data assetization on information disclosure quality. Validation results demonstrate that data assetization exerts a notable positive impact on corporate information disclosure quality and it holds true after undergoing a series of verification. Heterogeneity analysis reveals that the influence of data assetization on information disclosure quality is more pronounced in private enterprises and the manufacturing industry when considering different firm natures and industry types. The moderating effect study finds that the enhancement of corporate governance level can markedly amplify the positive effect of enterprise data assetization on information disclosure quality. The above conclusions have the following research implications for enterprises:

Firstly, strengthen the construction of data assetization. A "Data Asset Special Team" can be established to manage core data, ensuring data accuracy and integrity. Strengthen the collaboration between the finance team and the data team, avoiding inaccurate disclosure content. Secondly, enhance the level of corporate governance. The management should clearly define the boundaries of their operational authority, such as the introduction of a larger proportion of independent directors and improving the firm's institutional system, to prevent overstepping their authority. Thirdly, make changes according to enterprise characteristics. State-owned enterprises need to reduce the impact of administrative intervention on the data assetization process. Non-manufacturing enterprises should increase investment in data technology, using technical means to achieve full-process traceability of data assets, thereby improving information disclosure quality.

References

- [1] OECD. (2023). OECD Digital Economy Outlook 2023. OECD Publishing, Paris. <https://doi.org/10.1787/9c3ed736-en>
- [2] Lili Chen. (2024). Data assetization and capital market information efficiency: evidence from Hidden Champion SMEs in China. *Future Business Journal*, 10(1), 110-110. <https://doi.org/10.1186/S43093-024-00401-W>.
- [3] Li H, Zhao L (2021) Data becomes a factor of production: evolution of characteristics, mechanisms, and value forms. *Shanghai Econ Res* 8: 48–59
- [4] Zhang Junrui & Zhang Long. (2025). Research on the Impact of Data Asset Information Disclosure on Customer Stability. *Journal of Management*, 22(08), 1566-1574.
- [5] Liu Taoxiong, Rong Ke & Zhang Yadi. (2023). Estimation of Data Capital and Its Contribution to China's Economic Growth—Based on the Perspective of the Data Value Chain. *Social Sciences in China*, (10), 44-64+205. <https://doi.org/CNKI: SUN: ZSHK.0.2023-10-003>.
- [6] Meng Hao, Lv Qing & Li Zheng. (2025). Data Assetization and the Development of Enterprise New Quality Productivity. *Nankai Journal (Philosophy and Social Sciences Edition)*, (03), 22-34. <https://doi.org/CNKI: SUN: LKXB.0.2025-03-003>.
- [7] Chen Fuyong & Zeng Xiao. (2025). "Data" Creating a New Engine: The New Path of Data Assetization Driving High-Quality Enterprise Development. *Economic Issues*, (06), 30-37. <https://doi.org/10.16011/j.cnki.jjw.2025.06.001>.
- [8] Gunasekaran, A., Papadopoulos, T., Dubey, R., & Wamba, S. F. (2017). Big data and predictive analytics for supply chain and organizational performance. *Journal of Business Research*, 70, 308–317. <https://doi.org/10.1016/j.jbusres.2016.08.004>
- [9] Lu Zheng, Zhou Ting, Wang Li & Liao Zujun. (2023). Data Assets and Enterprise Development—Empirical Evidence from Chinese Listed Companies. *Industrial Economics Research*, (04), 128-142. <https://doi.org/10.13269/j.cnki.ier.2023.04.002>.
- [10] Healy, P. M., & Palepu, K. G. (2001). Information asymmetry, corporate disclosure, and the capital markets: A review of the empirical disclosure literature. *Journal of Accounting and Economics*, 31(1–3), 405–440. [https://doi.org/10.1016/S0165-4101\(01\)00018-0](https://doi.org/10.1016/S0165-4101(01)00018-0)

- [11] Michelin, G., & Parbonetti, A. (2012). The effect of corporate governance on sustainability disclosure. *Journal of Management and Governance*, 16(1), 477–509. <https://doi.org/10.1007/s10997-010-9160-3>
- [12] Belkaoui, A. (2001). *Accounting theory*(5th ed.). Cengage Learning.
- [13] Wang Bin & Liang Xinxin. (2008). Corporate Governance, Financial Status and Information Disclosure Quality: Empirical Evidence from Shenzhen Stock Exchange. *Accounting Research*, (02), 31-38+95. <https://doi.org/CNKI: SUN: KJYJ.0.2008-02-006>.
- [14] Yi Zhihong, Jiang Fuxiu & Qin Yihu. (2010). Product Market Competition, Corporate Governance and Information Disclosure Quality. *Management World*, (01), 133-141+161+188. <https://doi.org/10.19744/j.cnki.11-1235/f.2010.01.015>.
- [15] Ren Hongda & Wang Kun. (2018). Social Relations and the Quality of Corporate Information Disclosure: A Text Analysis Based on Annual Reports of Chinese Listed Companies. *Nankai Business Review*, 21(05), 128-138. <https://doi.org/CNKI: SUN: LKGP.0.2018-05-015>.
- [16] He Pinglin, Sun Yulong, Ning Jing & Chen Liang. (2019). Executive Characteristics, Legal Environment and Information Disclosure Quality. *China Soft Science*, (10), 112-128. <https://doi.org/CNKI: SUN: ZGRK.0.2019-10-010>.
- [17] Khosroshahi, H., & Mohammadzadeh, M. (2019). Government intervention and corporate investment: Evidence from Iran. *Journal of Asian Economics*, 64, 101050. <https://doi.org/10.1016/j.asieco.2019.101050>
- [18] Zhang Zongxin & Teng Junliang. (2020). Can the Inquiry Reform under the Registration System Improve IPO Pricing Efficiency?—Based on the Perspective of the Sci-Tech Innovation Board Pilot Registration System Reform. *Shanghai Finance*, (08), 24-30. <https://doi.org/10.13910/j.cnki.shjr.2020.08.003>
- [19] Ma Hui & Chen Shenglan. (2022). Corporate Digital Transformation, Bad News Hiding, and Stock Price Crash Risk. *Accounting Research*, (10), 31-44. <https://doi.org/CNKI: SUN: KJYJ.0.2022-10-003>.
- [20] Chen Xiaoshan & Liu Hongduo. (2023). Does Investor Attention Affect the ESG Performance of Listed Companies?—Empirical Evidence from Online Search Volume. *Journal of Zhongnan University of Economics and Law*, (02), 15-27. <https://doi.org/10.19639/j.cnki.issn1003-5230.20230130.005>.
- [21] Zech, H. (2016). A legal framework for a data economy in the European Digital Single Market: Rights in data. *Journal of Intellectual Property Law & Practice*, 11(6), 460–470. <https://doi.org/10.1093/jiplp/jpw049>
- [22] OECD. (2021). *OECD Business and Finance Outlook 2021: AI in Business and Finance*. OECD Publishing. <https://doi.org/10.1787/ed2d25b7-en>
- [23] Chen Deqiu & Hu Qing. (2022). Research on Corporate Governance in the Digital Economy Era: Paradigm Innovation and Practical Frontiers. *Management World*, 38(06), 213-240. <https://doi.org/10.19744/j.cnki.11-1235/f.2022.0088>.
- [24] Liu Guanchun, Ye Yongwei & Zhang Jun. (2023). Tax Administration Independence and the Quality of Corporate Information Disclosure: A Quasi-Natural Experiment Based on the Merger of State and Local Tax Authorities. *Management World*, 39(06), 156-174. <https://doi.org/10.19744/j.cnki.11-1235/f.2023.0072>.
- [25] Xu Shoufu & Xu Longbing. (2015). Information Disclosure Quality and Capital Market Valuation Bias. *Accounting Research*, (01), 40-47+96. <https://doi.org/CNKI: SUN: KJYJ.0.2015-01-006>.
- [26] Li, S., Liu, Y., & Wang, Y. (2025). Data assets and corporate financialization: Empowering the real economy or adding fuel to the flames?. *Management World*, 41(1), 137–157.
- [27] Fang Hongxing & Jin Yunna. (2013). Corporate Governance, Internal Control and Inefficient Investment: Theoretical Analysis and Empirical Evidence. *Accounting Research*, (07), 63-69+97. <https://doi.org/CNKI: SUN: KJYJ.0.2013-07-009>.
- [28] Gu Naikang, & Zhou Yanli. (2017). Short Selling Mechanism, Corporate Governance and the Value of Corporate Cash Holdings. *Economic Research*, *52*(5), 893-896.
- [29] Xie Yanxiang, Deng Bowen, & Xia Xing. (2022). The "Quality Improvement" and "Efficiency Enhancement" Effects of Digital Transformation: Evidence from Chinese Manufacturing Enterprises. *Management Review*, 34(11), 328-344.