

The Impact of Pilot Applications of Electronic Accounting Archive Systems on the Information Disclosure Quality of Listed Companies

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Abstract. Under the background where the digital transformation of enterprises is deepening and the quality of information disclosure is becoming increasingly crucial for the development of the capital market; the policy pilot of the electronic accounting archive system provides an opportunity to study the economic consequences of technological application. This study focuses on this topic and explores its short-term impact on the quality of information disclosure by listed companies. As the sample, the study selected 39 A-share pilot-listed companies and analyzed the changes in the disclosure quality assessment scores of these companies before and after the pilot period, based on the pilot year and industry classification. The results show that, after the system was applied, the quality scores of most enterprises' information disclosure increased (indicating a decline in quality), with the decline rate of the early pilot enterprises in 2020 (33.3%), being much higher than that of the expanded pilot enterprises in 2022 (1.25%). Moreover, there was significant industry heterogeneity. The decline was the greatest in the scientific and technological service industry, the smallest in the financial industry, and only real estate industry had an improvement in quality. The research has broken through the traditional assumption that the immediate application of technology can enhance information transparency. It has revealed the short-term negative effects of digital transformation and provided important references for policy formulation and for enterprises to smoothly navigate through the transitional period.

Keywords: Digital transformation, electronic accounting archive system, information disclosure quality

1. Introduction

In the era of accelerated digital transformation, the quality of enterprise information disclosure has increasingly become a key factor which influences the efficiency of market operation and promotes the optimization of resource allocation. The traditional information disclosure model mainly relies on paper-based media, which has a series of shortcomings. The emerging electronic archive system has received support from national policies, as it is expected to improve the quality of information disclosure. Digital technology is penetrating into the field of financial accounting, promoting the

popularization of electronic accounting vouchers for enterprises, and forcing the digital transformation of archive management. In recent years, the National Archives Bureau has successively introduced policies and carried out multiple batches of pilot projects and acceptance inspections for electronic accounting archives, gradually promoting this management model from individual cases to a wider scale. The electronic accounting archive system integrates various digital technologies, enabling the electronic processing, storage and analysis of accounting data. It addresses the efficiency and cost issues of traditional manual operations for paper-based archives. Previous studies have generally predicted that the application of new technologies will immediately enhance the financial operational efficiency of enterprises. However, the complexity of enterprise governance in reality may lead to a gap between short-term results and the ideal. This study found that the application of the electronic archive system led to a decline in the quality of enterprise information disclosure in the short term, which contradicted the expectations.

This study takes the pilot application policy of the electronic archive system as the starting point, focusing on the impact of this policy on the assessment score of enterprise information disclosure quality. It innovatively conducts an independent study on the economic consequences of this technological system. It also revealed the possible hardships that enterprises may encounter during their digital transformation process, providing a reference for the design of future national policies and enterprise response plans.

This study will proceed by first conducting a literature review on the influencing factors and theoretical basis of information disclosure quality. Then, it will introduce the pilot policy of the electronic archive system. Subsequently, it will analyze and discuss the trends of information disclosure quality changes and their underlying causes for the pilot enterprises. Finally, it will summarize and look forward and provide suggestions for enterprises to smoothly navigate through the transitional period of pain.

2. Literature review

2.1. The influencing factors of information disclosure quality

The quality of information disclosure measures the authenticity, reliability and comprehensibility of the information that enterprises open to the public and the market. Higher quality of information disclosure indicates that the enterprise can enjoy a better reputation, which is of great significance for reducing the financing costs and litigation risks of the enterprise. When discussing the influencing factors of information disclosure quality, scholars mainly conduct research from two aspects: internal and external of the enterprise.

From an internal perspective, the factors influencing the quality of information disclosure include the corporate governance structure, financial conditions and so on. Existing studies have shown that the characteristics of the board of directors of an enterprise, the size of the enterprise, and the financial profitability of the enterprise have been proven to be related to the quality of information disclosure [1]. From an external perspective, both legal supervision and market supervision can exert constraints on the quality of information disclosure by listed companies [2]. In recent years, the application of information technology has gradually become a new variable that affects the quality of information disclosure. The application of information technology and the digital transformation of enterprises will improve the internal information environment of enterprises and enhance the quality of internal control. It will also effectively ensure the authenticity and reliability of financial data and reduce internal information asymmetry, contributing to the improvement of information disclosure quality in the long run [3]. The application of digital intelligence technology

will enhance the quality of corporate information disclosure by improving internal control [4]. The improvement of the degree of digital transformation of enterprises may enhance the quality of enterprise information disclosure [5].

The application of electronic systems is one of the feasible measures for enterprises to achieve digital transformation. Therefore, it is generally believed that the application of electronic systems will ultimately improve the quality of corporate disclosure. However, most existing studies have regarded the electronic accounting archive system as part of digital technology and have not fully explored its independent economic consequences. The short-term effects of this system may also differ from its long-term effects. This provides direction for subsequent research

2.2. Theoretical basis

Organizational change refers to the transformation, process reorganization and innovation carried out by enterprises to enhance their competitive edge. The pilot application of the electronic archive system is essentially an organizational change initiative [6]. Some external forces, such as policy and regulation changes and technological innovations, will drive organizational transformation, but some internal factors such as short-term cost issues and the inertia of the organizational structure will pose obstacles to the transformation [7].

Previous studies have indicated that the digital transformation of enterprises may bring about changes to the organizational structure and operational methods of these enterprises [8, 9]. Applying new digital and information technologies requires enterprises to invest more capital and incur additional costs [10]. The total amount of investment made by enterprises in various aspects is limited. The application of the early electronic archive system may lead to hidden management costs, which have occupied the investment of enterprises for information disclosure, thereby reducing the quality of enterprise information disclosure.

3. Case study and analysis

This study is based on the list of pilot enterprises for electronic accounting vouchers' reimbursement, entry and archiving released by the National Archives Administration in 2020 and 2022. A total of 39 A-share listed companies were selected as the research subjects, and they were grouped according to the pilot years (2020/2022) and the 2012 industry classification standard of the China Securities Regulatory Commission. The study selected data from 2017 to 2024, covering the 3-7 years before the pilot and the 1-4 years after the pilot, in order to meet the time span requirements for the temporal analysis. The score for the assessment of information disclosure quality is derived from CSMAR and is based on a 1–4-point scale (1 point = excellent, 4 points = unqualified). The higher the score, the lower the quality of information disclosure. The basic information of the enterprises is sourced from CSMAR. By analyzing the impact of the pilot application of the electronic accounting archive system on the quality of information disclosure of listed companies, the policy effect is evaluated.

3.1. Classification based on pilot year

This study first classified 40 listed companies based on the pilot year and investigated the temporal changes in the quality of listed companies' information disclosure before and after the implementation of the pilot program. In the early stage of 2020, there were 5 pilot enterprises, and in 2022, there were 34 expanded pilot enterprises. Specifically, the year when the pilot program begins

is set as the base year (denoted as 0), the years before the implementation of the pilot program are sequentially set as -1, -2, etc., and the years after the implementation of the pilot program are sequentially set as 1, 2, etc. Based on this, the average score of the information disclosure quality assessment for this batch of sample enterprises was calculated year by year. This can directly reflect the overall impact of the electronic archive system on the quality of enterprise information disclosure. The results are shown in the Figures below.

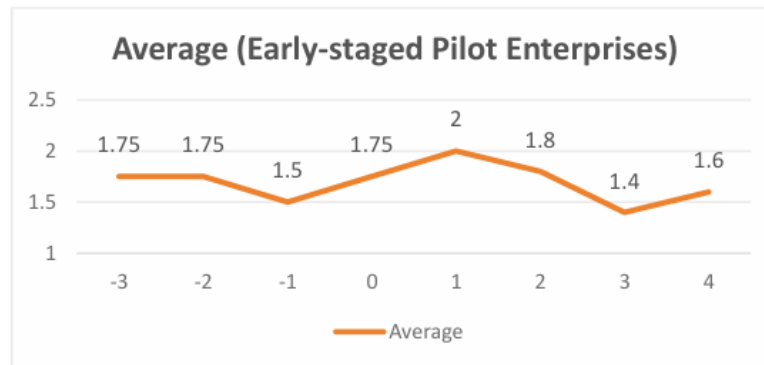


Figure 1. Mean score of information disclosure quality assessment for early pilot enterprises

Based on the situation of the pilot enterprises in the early stage of 2020 (Figure 1), the average quality score of enterprise disclosure before the application of the electronic archive system for the three years (-3 to -1 years) fluctuated slightly within the range of 1.5 to 1.75. It rebounded to 1.75 in the year of application. In the first year after the application, it increased to 2.0, rising by 0.5 compared to the previous year before the pilot (1.5), reaching the highest level during the research period. Then, the average score gradually declined, and in the fourth year (4 years), it slightly rose to 1.6. Overall, it shows a trend of a significant increase in scores in the early stage of application, which means that the quality of information disclosure has significantly declined, followed by fluctuations and a subsequent decline.

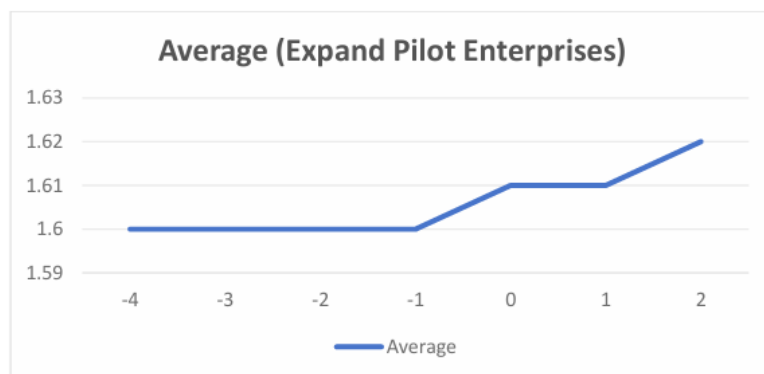


Figure 2. Mean score of information disclosure quality assessment for expanded pilot enterprises

Based on the situation of the expanded pilot enterprises in 2022 (Figure 2), the average score of enterprise disclosure quality before the application of the electronic archive system for the four years (-4 to -1 years) remained stable at 1.60. In the year of application and the subsequent two years (0 to 2 years), it rose to 1.61 and 1.62 respectively. Although the increase was relatively small, it showed a continuous and steady upward trend, contrasting with the stable state before the application. That

is to say, the application of the electronic archive system led to a slight decline in the quality of enterprise disclosure.

From the perspective of the decline rate, the score of the pilot enterprises one year after the pilot program (2.0) was 0.5 higher than that one year before the pilot (1.5), indicating a 33.3% decrease in the quality of information disclosure. The score of the pilot enterprises two years after the pilot program (1.62) only increased by 0.02 compared to the score before the pilot, with a decrease rate of 1.25%. The short-term impact of expanding pilot enterprises was significantly smaller than that of the early pilot enterprises.

3.2. Classification based on the industry of listed companies

In this study, the 40 selected companies were classified by industry. It compared the average changes in the information disclosure quality assessment scores before and after the implementation of the electronic archive system in each industry. The specific results are shown in Table 1.

Table 1. Mean scores of disclosure quality for listed companies in different industries before and after pilot

Industry	Average before pilot	Average after pilot
C (Manufacturing industry)	1.734	1.735
D (Electricity, heat, gas and water production and supply industry)	1.538	1.636
F (Wholesales and retail trade)	1.500	1.750
I (Information transmission, software and information services industry)		2.000
J (Financial industry)	1.280	1.297
M (Science research and technical services)	1.000	2.000
K (Real estate industry)	2.000	1.667
Q (Health and social work)	1.600	2.000

Overall, for most industry enterprises, after applying the electronic archive system, the score for information disclosure quality has increased, which means that the overall quality of information disclosure has declined. The mean values of industry D, F, M and Q have shown significant improvement, while the improvement in industry C and J has been relatively gradual. However, industry K, which is the real estate industry, has experienced abnormal fluctuations in its mean value, making it the only industry with a decrease in score. In summary, the application of the electronic archive system has led to a temporary decline in the quality of information disclosure in most industries.

It is worth noting that the effectiveness of the system varies significantly across different industries. The quality of financial information disclosure has seen the smallest decline (0.017), as financial enterprises have a solid foundation in informatization and their financial staffs have high digital literacy, resulting in low costs for the transition between old and new systems. The real estate industry is the only sector that has seen an improvement in quality. This might be due to the fact that during the pilot period, the real estate industry was subject to strict disclosure regulations. As a result, enterprises strengthened their disclosure management simultaneously as they implemented the system, thereby offsetting the impact of the transformation. The decline was the most significant in the field of scientific research and technical services (1.0). This was due to the small scale of enterprises in this industry and insufficient digital transformation resources, leading to greater organizational resistance to system implementation and transformation.

3.3. Interpretation of results

The long-term application of electronic archive systems in the field of finance can enhance financial work efficiency and data quality, ultimately improving the quality of information disclosure. However, short-term application leads to a decline in this aspect. This phenomenon can be explained by two theories: organizational change and resource occupation. From the perspective of organizational change theory, this system pilot is a policy-driven organizational transformation that will alter the financial processes and working models of the enterprise. Financial staff need to adapt to the new system and break away from their previous work habits, which may increase errors and reduce operational efficiency. Moreover, the transition between the old and new systems is difficult to achieve smoothly. In addition, the adaptation costs, such as staff training, increase the short-term costs of the enterprises and reduce their financial profits. Listed companies are prone to manipulate their financial statements to mitigate the impact of costs, thereby lowering the quality of information disclosure.

From the perspective of the resource congestion theory, enterprises have limited resources. The introduction of a new system requires the allocation of human and financial resources for tasks like debugging and operation maintenance, which diverts the financial staff's energy from fulfilling information disclosure duties. At the same time, during the transition period between the old and new systems, a large amount of data entry and verification work is carried out, resulting in insufficient resource allocation for information disclosure, thereby reducing the efficiency of financial work and the authenticity and reliability of information disclosure.

Furthermore, there are differences in the fluctuation of disclosure quality among enterprises at different pilot stages. The fluctuations of early pilot enterprises are much greater than those of the enterprises in the expanded pilot program in 2022. The reason is that early enterprises lacked practical experience and the system technology was not yet mature, while expanding pilot enterprises could draw on the previous experience to form response strategies. Moreover, later the system technology became more mature. The National Archives Bureau issued detailed implementation guidelines, and the government provided initial training, significantly reducing the transformation costs for enterprises. At the same time, as the scope of the pilot expanded, the supervision shifted to system coverage with a more moderate approach, all of which significantly reduced fluctuations in the quality of information disclosure.

4. Conclusion

This study focuses on the impact of the pilot of electronic file system on the information evaluation quality of listed companies and finds that the application of this system leads to the decline of the information disclosure quality of most enterprises in a short period of time, which challenges the traditional assumption that "information technology must improve information transparency". The core reasons are the resistance of organizational change, the crowding-out effect of resources and the mismatch between technology and organizational ability, which makes it difficult to achieve substantive transparency.

The effect of information technology and digital transformation is lagging behind, which requires the process of resource redistribution, organizational capacity improvement and technical adaptation. In order to accelerate the positive effect, enterprises should take the system as a management standard tool, carry out digital skills training for financial personnel before landing, and do a good job in connecting the old and new systems. Reasonable allocation of resources, the formation of a special group to ensure professionalism. The government can issue standardized

landing guidelines, formulate pilot requirements for industry differentiation, provide special subsidies for industries with weak information foundation, and allow enterprises to adjust flexibly.

There are limitations in this study. The sample size of this paper is small, and the conclusion is not universal enough. Only case studies and descriptive statistics are used, lacking control variables and causal identification; There is no difference in the basis of enterprise informatization. In the future, scholars can expand the sample range, include more pilot enterprises, adopt the double difference method for empirical test, and explore the adjustment mechanism such as technical adaptability.

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