

Analysis of the impact of the use of cloud computing on the construction of accounting informatisation in MD Group

Huang Qipu

Yuxi Normal University, Yuxi, Yunnan, 653100, China

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Abstract: Cloud computing technology is now widely used in accounting to aid enterprises in their transformation and upgrade of accounting informatisation, thereby enhancing their sustainable development. However, enterprises face challenges stemming from this new technology that require timely and effective solutions. In this study, MD Group, an early adopter of accounting informatisation in the home appliance industry, is examined to analyze its successes and shortcomings in integrating cloud computing into its accounting processes. The analysis reveals issues in the enterprise's accounting informatisation construction, including underutilization of cloud pool data, high uncertainty in cross-regional data fusion, and a lack of management awareness. To address these issues, recommendations are proposed, such as enhancing the utilization of cloud pool data, reducing cross-regional data fusion complexity, and improving management awareness. These measures are aimed at providing valuable insights for similar enterprises facing similar challenges.

1. Introduction

In the digital era, cloud computing stands as a significant technology utilized by enterprises to handle financial data, facilitate the implementation of accounting information systems, reduce construction costs, and enhance the efficiency of financial operations. Consequently, it contributes to the overall development of enterprises by enabling improved financial workflow and operational efficacy.

2. The impact of cloud computing on the construction of enterprise accounting information technology

2.1 The positive impact of the use of cloud computing on the construction of accounting informatisation

1) Cloud computing greatly facilitates the work of accountants in enterprise accounting. Cloud computing platforms usually provide real-time sharing and collaboration tools, which enable accountants from different enterprises to access and edit financial data, documents and reports at the

same time, realising real-time collaborative editing by multiple people, and enabling team members to instantly view, modify and exchange data. Compared with the traditional working model, cloud computing brings a new working experience for enterprises, largely reduces unnecessary work processes, and overall improves work efficiency.[1]

2) Cloud computing for enterprises to save costs in the construction of accounting information technology. With the help of cloud computing, enterprises in the construction of accounting information technology does not need to inject a large amount of money for infrastructure construction in the early stage, the latter also do not have to spend too much money on operation and maintenance costs, only according to their actual demand and use of the amount of fees incurred can be paid, which reduces a lot of unnecessary expenditure for the enterprise so that the enterprise can be saved out of the funds used to strengthen their own strength and competitiveness.

3) Cloud computing enhances the utilization of accounting information resources by enabling all departments to contribute data to a shared pool during enterprise operations. Through the implementation of passwords and permissions, authorized personnel can access relevant data, facilitating streamlined access to information. By leveraging cloud computing technology, businesses can eliminate the traditional "data silos" that hinder communication between departments, resulting in a more seamless flow of data. This enhanced data sharing capability enables organizations to make more informed and accurate decisions, ultimately improving decision-making processes.[2]

2.2 Negative impact of the use of cloud computing on the construction of accounting information technology

1) The use of cloud computing at a certain level makes the enterprise accounting information data security risk factor increases. The positive impact of the use of cloud computing is obvious, but the negative impact should not be underestimated, in the use of cloud computing, the more prominent negative impact is the data risk and security issues.

2) The use of cloud computing on the financial personnel requirements are also increasing. Cloud computing model applied to enterprises, financial accountants original traditional ideas and working methods will be destroyed, information technology model changes, business process changes make it difficult for accountants to adapt to, resistance to the psychological emergence.[3]

3. The current situation of MD Group's use of cloud computing to build accounting informatisation

3.1 Company Profile

Established in 1968, MD Group is headquartered in Beijiao Town, Shunde District, Foshan City, Guangdong Province. The Group operates primarily within the home appliance industry while also venturing into smart home solutions, building technology, industrial technology, as well as robotics and automation.[4] This diversified portfolio enables MD to offer a wide range of products and services, forming a business matrix centered on addressing both ToC and ToB markets. To guide its business development, MD Group upholds the four strategic axes of "technological leadership, direct user engagement, digital innovation, and global expansion." Emphasizing cloud computing advancements, the Group commits itself to comprehensive intelligence and digitalization, driving the realization of the transformative vision of "One MD, One System, One Standard." With over 200 subsidiaries worldwide, 35 R&D centers, and 35 major production facilities, MD Group boasts extensive global business networks spanning more than 200 countries and regions. Notably, the Group has established the most comprehensive industrial chain in China encompassing air

conditioners, refrigerators, washing machines, microwave ovens, and dishwashers.[5]

3.2 History of MD Group's Accounting Informatisation Construction

In 1994, MD Group first prioritized enterprise information construction as a strategic focus. This initiative included the introduction of the MRP II system, which facilitated efficient order information management, tracking, and production scheduling. The introduction of this system optimized purchasing processes, enhanced material consumption control, and improved production and sales responsiveness. It enabled the Group to achieve synchronized supply, production, marketing, and sales through timely and accurate information dissemination, ensuring efficient coordination of production and cost management. In 2003, MD Group invested in implementing the ERP system, integrating finance, sales, and production information. This integration significantly enhanced internal operational and organizational management, propelling the Group's revenue to new heights. From 2012, MD Group launched the "632 Strategy" focusing on the goal of "Three Unifications": Unified Processes, Data, and IT System. This strategic initiative safeguarded the Group's financial management and operational software through process, data, and system unification. Consequently, the Group achieved enhanced financial operation, management analysis, and data standardization. Post-2015, MD Group embraced the "Internet+" mode to adapt to the evolving information landscape. The optimization and advancement of the "632" strategy led to the comprehensive adoption of the "T+3" model. By 2020, MD Group redefined its development strategy with a core focus on "comprehensive digitalization and intelligence." Emphasizing "Big Intelligence, Mobile, Cloud, and the Internet of Things", MD Group leveraged digitalization and intelligence as essential pillars. This approach facilitated financial sharing, data forecasting, and the establishment of a dual-engine management paradigm blending human expertise with financial resources. Integrating artificial intelligence and 5G technologies further streamlined financial processes including budgeting, purchasing, sales, accounting, and taxation. Additionally, MD Group designed a bespoke supply chain management system aligned with its unique characteristics and business model to achieve industry-finance integration objectives.

3.3 Effectiveness of MD Group's use of cloud computing in accounting informatisation

3.3.1 Business Processing Efficiency Improvement

In 2022, the Group comprehensively promoted the OKP system, promoted goal management and collaboration, improved the collaboration platform, and continued to stimulate organisational vitality by taking efficiency optimisation as the key hand, which increased the efficiency of financial and other functional processes by 30%, and the efficiency of OA office system processes by 50%. The combination of cloud computing and MD Group's accounting information system saves the enterprise unnecessary letting manpower, based on the cloud native platform of financial management model for MD Group's business processing efficiency in the industry's leading to provide a guarantee.

3.3.2 Financial performance improvement

Since 2015, there has been a consistent upward trend in MD Group's operating income, accompanied by a continuous growth in net profits. As evidenced by the 2022 financial statements, MD Group's operating income has surged to 343.9 billion yuan, with net profits reaching a record high of 29.81 billion yuan. Remarkably, despite challenges faced by the home appliance industry, MD Group's accounts receivable turnover rate has seen a consistent rise year after year. This resilience can be attributed to the pivotal role played by information technology infrastructure,

which significantly enhanced MD Group's business strategies during this period.

4. Promoting the financial transformation of the company

After the continuous transformation and upgrading of the enterprise, the finance staff of MD Group has transitioned from repetitively dealing with basic data and abandoning the traditional accounting-type model. They now utilize cloud computing technology to focus on decision-making and deployment, aiming to create an integrated financial development model known as "strategy + business + sharing." By unifying the financial data of the head office and subsidiaries, conducting accounting analysis, tax planning, financial forecasting, and surplus management, the company moves one step closer to achieving its strategic goal of comprehensive information interoperability, business opportunity sharing, and channel sharing. This shift enables the financial management function to be fully leveraged, leading to a transformation towards management analysis. The construction of the cloud computing platform further enhances this transformation by facilitating real-time integration of financial data from the head office and subsidiaries. This integration reduces the need for extensive communication among financial personnel, while the implementation of a standardized and unified system streamlines data management for stakeholders and provides crucial technical support for efficient decision-making processes.

5. Problems in MD Group's use of cloud computing to build accounting informatisation

5.1 Incomplete utilisation of data information in the cloud pool

Although MD Group has effectively implemented cloud computing technology in its accounting information system, the full utilization of data in the cloud pool remains a challenge. Key issues include incomplete data sources in shops and the dispersion of data uploads from subsidiaries to MD head office's cloud pool. The absence of a unified and complete account collection and payment system in most shops results in a situation where revenues from WeChat Pay, Alipay, and other payment methods are only consolidated periodically. This practice leads to unregistered or omitted financial data, creating discrepancies in group accounting. Consequently, the incomplete construction of MD Group's three-in-one system, integrating business operations, systems, and data, remains a root cause of data underutilization. The imperfect implementation of the three-in-one system leads to financial information silos among different business units, hindering data sharing. Additionally, the lack of a standardized financial system further diminishes data and information utilization within the cloud pool.

5.2 High uncertainty of cross-regional data integration

MD Group's use of cloud computing to build accounting information technology has been relatively robust in the domestic development, but at present MD Group is constantly expanding its business overseas, with business involving more than 200 countries and regions such as North America, South America, Europe, Asia, Africa and Oceania. Subsidiaries around the world are affected by the corresponding economic policies, environment and international situation, there is a high degree of uncertainty in the financial data transmitted to the head office through the cloud, and these uncertainties increase the rate of discrepancies in MD Group's overseas data, leading to inaccuracies in the data fused to the head office from each region.

The finance department of MD Group is required to make significant judgments when accruing income tax expenses in each region where the Group is subject to pay corporate income tax. Any discrepancies between the final determination of these tax matters and the initially recorded amount

could greatly impact the income tax expenses and deferred income tax for the current year or quarter. However, despite leveraging cloud computing support, MD Group's current accounting information system lacks the capability to issue early warning alerts for such discrepancies. This limitation renders the system unable to effectively mitigate financial losses resulting from geographical inconsistencies. Therefore, there is an urgent need for further upgrades and reforms in MD Group's accounting information system to enhance resource allocation for global accounting informatization in alignment with the enterprise's development strategy. This will facilitate seamless information flow both domestically and internationally, maximizing the potential of on-demand deployment of cloud computing technology. The enhanced system should address the existing inefficiencies to ensure proactive management of tax matters and optimization of financial processes.

5.3 Inadequate Cognition of Enterprise Management

In the transformation process of MD Group, a key aspect is the focus on industrial transformation, wherein the strengths lie in economic market operation and company management. However, an area of weakness is the inadequate recognition of cloud computing's role in accounting informationization. The analysis of MD Group's annual reports from the previous three years indicates a belief within the management that enhancing accounting information technology simply requires the adoption of new technologies, equipment, and systems for transformation and upgrading. Nevertheless, there is a lack of a comprehensive strategic framework for accounting information technology to effectively leverage cloud computing data and information for creating additional value for the enterprise. This oversight diminishes the operational significance of the accounting information system, treating it merely as an infrastructure rather than a strategic tool. Consequently, a lack of clarity exists in terms of the strategic positioning of different internal modules, leading to a disproportionate emphasis on accounting and monitoring functions while neglecting the critical role of strategic decision-making information for enterprise operation and management. This oversight has resulted in the phenomenon of the Dongshi effect within MD Group's accounting information system, highlighting a disconnect between accounting systems and enterprise management practices.

6. Use of cloud computing to optimise the MD Group accounting information technology construction measures

6.1 Comprehensively improve the utilisation of data and information in the cloud pool

The main task of accounting informatisation in the "14th Five-Year Plan" is to accelerate the establishment of the data standards system and promote the construction of accounting data governance capacity. This involves integrated planning, development, and implementation of accounting data standards covering the input, processing, and output of the accounting information system. These initiatives lay the groundwork for the digital transformation of accounting. It is recommended that enterprises follow a three-step approach in constructing their accounting information systems, starting from the lowest level of shops. This process includes enhancing the input, processing, and output links of the system, as well as training relevant personnel to prevent unregistered accounts and data omissions. The goal is to ensure that all shop data uploaded to the cloud pool by the accounting information system is complete, standardized, and reliable, allowing for efficient analysis and processing using cloud computing technology. This, in turn, enables businesses and decision-makers to utilize accounting data effectively and efficiently for decision-making purposes. In the context of building a financial data cloud platform, valuable

insights can be drawn from the HE Group Digital Intelligence Financial Sharing System within the same industry. The HE Group has established a "1 channel + 6 clouds + 2 protection" system that not only guarantees the comprehensiveness and reliability of shop business data but also facilitates direct interactions between the enterprise and the user through various accounts such as shop accounts, Haier accounts, online virtual accounts, and user accounts. By creating store accounts, Haier accounts, online virtual accounts, and others, data related to order flow, capital flow, goods flow, credit limits, etc., can be aggregated. This allows for the unified supervision of business data, centralized resource management, and fosters a complete and reliable data source, ultimately improving the utilization rate of data stored in the cloud pool.

6.2 Reduce the uncertainty of cross-regional data fusion

With the development of economic globalisation, many enterprises are now expanding their business overseas, and in the integration of cross-regional data issues, the first step is to establish an accounting information platform that meets the business needs of the enterprise, and try to make the financial data of all regions uploaded to the cloud, and to achieve online sharing of data through the support of mobile Internet technology, and the second step is to pay attention to the cultivation of the financial personnel, improve the strength of the financial team, and help the Financial personnel to fully understand the policies and regulations of the business of each region of the enterprise, to break the limitations of enterprise accounting information technology in time and space, and to make full use of the convenience that cloud computing technology can bring, to achieve the efficient construction of information technology, and to reduce the uncertainty of data integration.

6.3 Enhance the cognition of enterprise management

Cloud computing and other technologies for enterprise transformation and upgrading is the trend, enterprise managers must first break the traditional thinking, through transformation and upgrading to promote the growth of enterprise economic value. In order to fully leverage the potential of cloud computing technology in business operations, effective management support is essential. The strategic direction of a company is fundamentally shaped by its management's mindset, necessitating a comprehensive understanding of the opportunities and challenges presented by cloud computing technology. Management must contemplate how to utilize cloud computing to facilitate the transformation and enhancement of the enterprise's accounting information technology. By drawing lessons from other enterprises' transformation experiences, businesses can tackle the issue of reluctance or hesitation towards adopting new technology. This involves addressing concerns such as resistance to change, fear of innovation, inertia, and uncertainty regarding decision-makers. Furthermore, post-investment in system development, it is crucial for enterprises to establish a strategic framework for advancing accounting information technology. This entails setting up a financial cloud database and harnessing technologies like cloud computing to thoroughly explore, analyze, and utilize data. Emphasizing the importance of financial data and information, businesses can move away from a reliance solely on building infrastructure and instead focus on maximizing the benefits of cloud computing for streamlining data analysis processes. By leveraging data insights to comprehend the industry's current landscape, identify market trends, and ascertain customer demands accurately, enterprises can allocate resources wisely to fortify their market position. This strategic approach not only facilitates informed decision-making but also drives the enterprise's transformation and upgrade endeavors.

7. Conclusion

In the backdrop of cloud computing, MD Group is enhancing accounting processes by integrating information technology with enterprise operations. Specifically, MD Group is developing its financial system to align with strategic objectives, fostering talent according to industry demands, and utilizing cloud computing to bolster operational security. This approach aims to leverage accounting information technology effectively, thereby enhancing the enterprise's value and contributing to sustainable growth. Consequently, this strategy serves as a valuable case study for other enterprises seeking to optimize their operations and technological capabilities.

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