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Intelligent Financial Digital Transformation and Performance Transmission: A Case Based on the Transnational Group of Chuanhua Zhilian Dual Business Models

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Abstract. In the context of the digital economy, multinational corporations that combine manufacturing and logistics formats generally face governance challenges such as multiple account sets separation, multi-currency accounting, and fragmented business and financial perspectives. This article takes the Chuanhua Zhilian dual format multinational group as a research sample to explore the implementation logic and performance transmission mechanism of intelligent financial digital transformation in composite enterprises. Research has found that dual format multinational enterprises need to establish a hierarchical intelligent financial system consisting of a "unified data hub - scenario-specific RPA - vertical financial AI". Among them, vertical financial AI can directly optimize business structure and improve profitability, while front-end general business intelligence only has operational empowerment. It further reveals three pathways through which digital tools deliver economic benefits via cost reduction, cross-border risk mitigation and strategic business-structure adjustment for multinational conglomerates.This article clarifies the functional boundaries and hierarchical implementation logic of different digital tools, providing theoretical support and practical paradigms for the financial digitalization construction of similar overseas enterprises.

Keywords: Intelligent Finance, Robotic Process Automation, Generative Artificial Intelligence , Dual format Group, Performance transmission

1. Introduction

The digital economy drives systematic changes in enterprise management models [1]. In this context, financial digitization and intelligence have become the core path for enterprises to improve quality and efficiency, and prevent cross-border risks. Multinational corporations that combine chemical manufacturing and highway logistics often face typical pain points such as strong business heterogeneity, separation of domestic and foreign accounts, complex multi-currency accounting, and inconsistent financial data. The traditional manual financial accounting model has low efficiency, lagging risk warning, and vague performance attribution, so it cannot adapt to the needs of global

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and diversified business development. There have been many empirical results in the current academic community on the transformation of intelligent finance, Robotic Process Automation (RPA) and Artificial Intelligence (AI) financial applications, and digital performance transmission [2]. However, most research focuses on local enterprises with a single business format, and there is relatively insufficient case studies on the hierarchical implementing mechanism, digital tool functional boundaries, and cross-border performance transmission for "manufacturing + logistics" dual business format overseas enterprises.

Based on this, this article selects Chuanhua Zhilian as the case study object to adopt a longitudinal single case study method [3], combining the enterprise's digital transformation process from 2023 to 2025, official RPA quantitative landing data, and public financial indicators [4]. This article systematically outlines the path of hierarchical intelligent financial construction, distinguishes the differentiated application scenarios of various digital tools, and dissects the performance transmission mechanism of digital transformation in cost control, risk mitigation, and business optimization. This article uses real quantitative data to concretize digital empowerment value, enriches the theory of intelligent financial transformation for composite multinational enterprises, and provides practical reference for the digital construction of similar dual format overseas enterprises.

2. Literature review

Digital technology drives the iterative upgrade of financial governance from traditional decentralized manual accounting models to intelligent integrated systems [5]. Digital transformation is not simply about piling up software tools, but a systematic restructuring of enterprise management systems, reshaping financial business processes, data governance, risk control, and decision-making systems. It can effectively resolve governance pain points such as multiple accounts sets, separation of business and finance, and inconsistent accounting standards at home and abroad in composite multinational groups [1]. Existing research divides intelligent finance into two levels: basic business processing and high-level management decision-making, and extracts a three-layer technical architecture of "data foundation - RPA process automation - artificial intelligence decision-making": the bottom layer consolidates the data foundation to break down data silos, the middle layer RPA undertakes standardized repetitive business, and the top layer AI outputs high-level financial analysis and decision-making solutions. This architecture emphasizes the hierarchical division of labor and scenario adaptation of the group's digital construction [6-8]. Digital intelligence tools can be divided into general business intelligence and vertical financial artificial intelligence. The latter is suitable for professional financial scenarios such as exchange rate analysis, cross-border risk control, and performance decomposition, and its application value for multinational groups has been verified [9]. There are hierarchical differences in the realization of digital value in finance, with low-level automation tools optimizing process efficiency and high-level intelligent tools empowering business analysis and value decision-making. This mainly affects enterprise performance through three paths: RPA replacing manual labor to compress labor and transaction costs; Digital tools enable real-time monitoring and early warning, hedging against exchange rates, overseas accounts, and cross-border financial and tax risks; Financial artificial intelligence relies on data from the central platform to break down the performance of multiple entities and optimize resource allocation [7, 8, 10].

There are still shortcomings in existing research. Research is mostly conducted around local enterprises with a single business format, lacking cases of multinational corporations with dual business formats; Insufficient analysis of scenario adaptation for layered tools, failure to clarify the boundaries between the two types of intelligent tools, and lack of logic for cross-border enterprise

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implementation; Performance transmission analysis rarely includes cross-border indicators, making it difficult to open the digital value black box of composite enterprises. Therefore, this article adopts a case study to supplement and improve the relevant theories of hierarchical intelligent finance and cross-border performance transmission.

3. Case overview and research design

This article selects Chuanhua Zhilian as a research case, which has typicality and data feasibility. Firstly, the business model is typical. The enterprise has dual main businesses of chemical manufacturing and road logistics, covering more than 130 countries and regions worldwide. It has multiple account sets, multiple currencies, and cross regional business characteristics, which is in line with the cross-border research scenario of the dual business model in this article. Secondly, the transformation practice has research value. The company has gradually promoted automated financial tools such as RPA since 2023, and the third-party vendor has publicly disclosed the phased construction of data platforms and intelligent financial applications; The publicly available materials for related practices primarily consist of case studies from the vendor, as the company's annual report lacks comprehensive official disclosures of details [4]. Thirdly, it has data availability. The company publicly discloses its annual financial reports and digital transformation announcements, combined with official RPA landing quantitative data, which can support in-depth empirical analysis.

3.1. Early stage of transformation: pain points and transformation drivers of traditional financial governance (before 2023)

Before 2023, Chuanhua Zhilian had long adopted the traditional manual financial control mode. With the expansion of chemical manufacturing and highway logistics industries and the promotion of global layout, the original financial system gradually exposed multiple structural shortcomings and could not adapt to diversified and cross-border business needs, which became the core driving force for the enterprise to launch the digital transformation of intelligent finance. Firstly, the accounting system for multiple entities and multiple sets of accounts was decentralized. Multiple highway ports and overseas chemical production bases across the country independently established accounts for accounting, and multi-currency accounting was managed separately. The consolidation of group level reports relied entirely on manual layer by layer aggregation, resulting in a lengthy overall accounting process chain, poor timeliness, and prominent risks of manual errors. Secondly, the dual business and financial calibers were separated, with the chemical sector focusing on the collection of production costs and accounting at the production end, while the logistics sector focused on revenue and service settlement in logistics parks. The accounting standards and statistical dimensions of the two types of business formats were not unified, and the financial data were independent of each other, forming data silos that were difficult to support the group's overall refined control. Thirdly, there was a lack of cross-border financial risk control measures. Foreign currency translation, cross-border tax reporting, and overseas accounts receivable write-off all relied on manual processing, lacking monitoring and early warning mechanism. This made it difficult to hedge potential risks such as exchange rate fluctuations, overdue overseas accounts, and cross-border financial and tax irregularities in advance. Fourthly, the granularity of business performance was insufficient. Traditional finance could only achieve the disclosure of reports for large business segments, making it difficult to break down the input-output of product lines, projects, and regional units. The management's refined resource allocation lacked a fine-grained quantitative basis.

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3.2. Transformation: core implementation measures for layered intelligent financial system (2023-2024)

From 2023 to 2024, Chuanhua Zhilian has promoted the intelligent financial transformation work in three stages, matching corresponding digital tools in each stage to solve the original financial operation problems of the enterprise in a targeted manner. At the beginning of 2023, the company initiated the construction of a comprehensive data hub, connecting three independent business systems including chemical ERP, logistics scheduling, and group finance, and integrating complete domestic and foreign business data. It unified the revenue recognition, expense collection, and foreign currency translation accounting standards of the two major sectors of chemical and logistics and built a centralized data storage platform to solve the practical problem of multiple independent accounting entities and disconnected data between sectors from the root. From mid-2023 to the end of the year, the company deployed RPA automation modules according to different business scenarios. The chemical sector was equipped with functions such as raw material monitoring, bill verification, and production cost statistics. The logistics sector developed programs for document matching, cross system reconciliation, batch tax reporting, and automatic report generation. Besides，special tools for foreign currency flow capture, overseas invoice recognition, and overseas payment terms monitoring were added to cross-border business. Repetitive tasks were all automatically completed by the system. In 2024, the company deployed vertical financial AI and iterated the entire system, clearly distinguishing the usage boundaries of different digital tools. Specifically, the intelligent system for park operation mainly serves business scheduling, and its business output data can provide basic input for financial accounting and cost estimation, but it does not directly perform financial accounting processing. In addition, based on the mature RPA process, a professional financial AI module has been built, covering exchange rate calculation, cross-border financial and tax verification, multi business revenue splitting, and overseas risk analysis. The company has also conducted digital practical training for all employees, encouraging each business line to optimize lightweight digital programs.

3.3. Post transformation phase: comprehensive implementation and quantitative effectiveness analysis of digital transformation (2025)

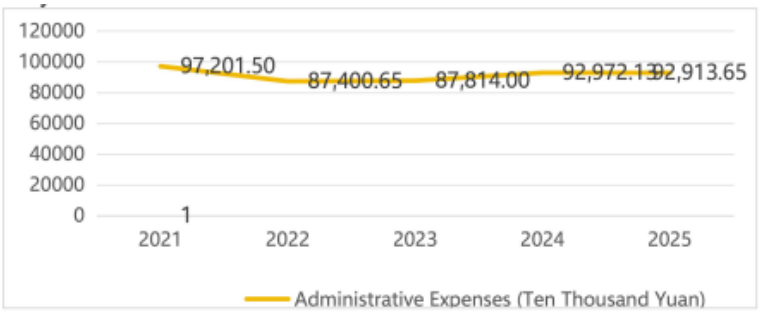

Figure 1. Line chart of changes in administrative expenses of Chuanhua Zhilian from 2021 to 2025 (picture credit: original)

After two years of phased and hierarchical digital transformation, the intelligent financial system of Chuanhua Zhilian has achieved full coverage and normalized operation by 2025. To visually highlight the empowering effect of the hierarchical intelligent financial system, this article selects continuous financial data from 2021 to 2025, forming a vertical comparison of "pre transformation

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(2021-2022), mid transformation (2023-2024), and full-domain implementation of transformation (2025)". The transformation value is quantified from three dimensions: cost control, risk prevention, and profit quality.

From the perspective of operational cost control effectiveness, combining the data in Figure 1 can intuitively reflect the short-term cost reduction effect brought by RPA. In 2021, the entire process of enterprise financial work relied on manual completion of offline accounting, cross regional reconciliation, and multi-level report aggregation, with a huge input of manpower and a total administrative expenses of 972.015 million yuan; In 2022, the enterprise launched a batch of RPA automation processes, with standardized and repetitive tasks such as document review, batch tax reporting, and group consolidation reports being handled by the system. This directly streamlined a large number of redundant financial personnel, resulting in a significant reduction in administrative expenses to 874.0065 million yuan. From 2023 to 2024, the company made capital investments in data hub deployment and financial AI module procurement. Meanwhile, expenditures on digital talent training and system technical support rose, which pushed up administrative expenses; In 2025, the entire intelligent financial system entered a stable operation stage, with a slowdown in new construction investment. The long-term savings in labor costs from RPA continued to offset digital supporting expenses, resulting in a slight decrease in administrative expenses. Overall, relying solely on RPA tools can only replace basic processes and achieve short-term expenses reduction at the human level. It does not have the functions of risk prediction and decision-making.

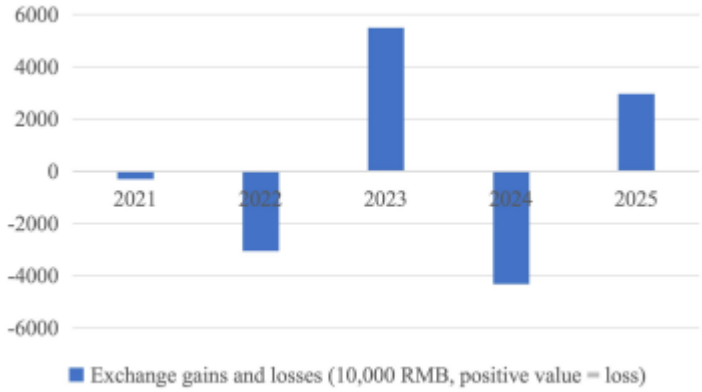

Figure 2. Bar chart comparing exchange gains and losses of Chuanhua Zhilian from 2021 to 2025 (picture credit: original)

From the perspective of the effectiveness of cross-border risk control, combined with the comparison of the exchange gain and losses column in Figure 2, it can clearly reflect the mid-term risk protection transmission mechanism formed by the synergy of RPA and financial AI. In 2023, the company did not utilize digital linkage risk control tools, with foreign currency transactions statistics, exchange rate calculations, and overseas account write offs all relying on manual operations. It was unable to capture exchange rate changes in real time and hedge foreign currency exposure in advance. As a result, a large exchange loss of 54.9814 million yuan was incurred that year. In 2024, the RPA foreign currency data capture function and financial AI exchange rate analysis model were synchronously implemented. RPA automatically collected all currency transaction flows, while AI synchronously calculated the fluctuation range and output hedging recommendations. Under the synergistic effect of the two, effective hedging of exchange risks was achieved, resulting in an exchange gain of 43.2392 million yuan in the current period. In 2025, the overseas business volume continued to expand, but with the dynamic monitoring system built on

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two types of tools, the current exchange loss was only 29.7337 million yuan, significantly narrowing compared to the peak in 2023.From this, it can be seen that RPA alone can only complete data collection, but with the intelligent analysis capabilities of financial AI, it can build a full chain risk warning system, mitigate cross-border business risks, thereby forming a guarantee empowerment for digital transformation.

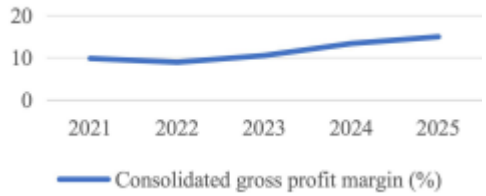

Figure 3. Line chart of consolidated gross profit margin of Chuanhua Zhilian from 2021 to 2025 (picture credit: original)

From the perspective of optimizing business formats and improving profitability, the consolidated gross profit margin used in this article is the comprehensive profit indicator of the consolidated financial statements of Chuanhua Zhilian. The accounting scope covers both the core businesses of chemical manufacturing and highway logistics, offsetting internal transaction data within the group, which can objectively reflect the overall profitability of the dual business formats. The change in this indicator intuitively reflects the long-term high-order value transmission path dominated by vertical financial AI. In 2021-2022, the company expanded its dual business sectors in a crude manner, and traditional manual finance was unable to separate the true profitability levels of each business format (Figure 3). The proportion of low-margin logistics business remained high, and the consolidated gross profit margin was only maintained at a low level of 9% -10%.In 2023, a layered intelligent financial system was implemented, relying on vertical financial AI to break down performance by industry and product line, and output accurate business data to support strategic adjustments; The management relies on AI analysis conclusions to shrink the inefficient logistics sector and expand the production capacity of high value-added chemical new materials. The consolidated gross profit margin continued to steadily increase from 2023 to 2025.This was because vertical financial AI could output performance analysis results for segmented product lines, providing decision-making basis for management's business adjustments. The improvement of gross profit margin was the result of product structure upgrading, overseas market expansion, and optimization of management decisions.

4. Conclusions

The intelligent finance transformation of Chuanhua Zhilian can be divided into three stages. At the beginning of 2023, it established a unified accounting standard for the global data platform to solve multiple account sets and data fragmentation. In mid-2023, various RPA programs were launched in batches, replacing most standardized manual financial work with automated processes. In 2024, a vertical financial AI system was implemented, defining the scope of use for different digital tools and building a complete three-layer intelligent financial operation framework.

The hierarchical digital system improves business operations from three dimensions. First, RPA streamlines basic financial manpower and reduces administrative expenses. Secondly, RPA and financial AI work together to hedge against cross-border business losses caused by exchange rate fluctuations. Finally, vertical financial AI splits the revenue of each business segment, supports

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management to adjust business structure, increases the group's consolidated gross profit margin, forming a layered value release path. However, differences in business accounting, changes in overseas policies, and incomplete advanced AI functions will limit the release of digital value.

A dual format multinational group can build an intelligent financial system in layers, distinguish the functional boundaries between general business intelligence and professional financial AI, and iterate the system to adapt to domestic and foreign policy environments. While small and medium-sized enterprises do not need to copy the entire architecture and should prioritize implementing automation tools for core pain point scenarios.

This article uses a single case for longitudinal analysis, so the generality of the research conclusions is limited. In addition, all data comes from public annual reports and corporate promotional cases, lacking internal ledger support, so there are shortcomings in the depth of analysis. In the future, multiple case comparisons can be expanded for groups of different scales, to further test the transmission mechanism of the hierarchical intelligent financial system.

References

[1] Qi, Y., & Xiao, X. (2020). The transformation of enterprise management in the digital economy era. *Managing the World, 36*(6), 135-152+250. https://doi.org/10.19744/j.cnki.11-1235/f.2020.0091

[2] Liu, J., Zhou, K., Zhang, Y., & Tang, F. (2023). The effect of financial digital transformation on financial performance: The intermediary effect of information symmetry and operating costs. *Sustainability, 15*(6), 5059. https://doi.org/10.3390/su15065059

[3] Eisenhardt, K. M. (1989). Building theories from case-study research. *Academy of Management Review, 14*(4), 532-550. https://doi.org/10.5465/amr.1989.4308385

[4] Yingdao RPA. (2024). Digital transformation practice case of Transfar Group RPA. https://www.yingdao.com/case/detail/Production/chjt/

[5] Yang, Y., & Liu, Q. (2024). The accounting revolution in the era of artificial intelligence: Evolutionary logic and analytical framework. *Accounting Research*(3), 3-20. https://kns.cnki.net/kcms2/article/abstract?v=sb6TFb_dKpooaqmj6awcPnbJac_CCOXC0I8UUP9R_6l95jtIwrRrQV0SQt1t3wo5tNRmTtEIyDKhOsx-wdfEJbYOQPbduCXT8BKTXnXVcwWC9_t6qumHEhbGupddy87dDo1r46k_7Y64IF__Jh5pmudW9glcCfp22CUxrwY_y2via12FKugFeOjkwuUoc9fI0S8zSQHdobY&uniplatform=NZKPT&captchaId=fe0e62d0-c58b-4d7d-b6ba-f9c6eedec479

[6] Liu, M., Huang, H., Tong, C., & Liu, K. (2020). Research on the basic framework and construction ideas of intelligent finance. *Accounting Research*(3), 179-192. https://kns.cnki.net/kcms2/article/abstract?v=AnfjKog0mmwlJbcbYCQnuMpLdUilrzrplFGb8ff9Db-T0QWEv2QPj7PoP8z9-uTbhfhE5v9pBESQ-9JIGr2-5ZqjwrbYrXVxRO1VDFCMUcHTErS0mX-uQkYtB1-dgkWCkSpISb4ZaiMnU7CpjdfdUjWyi1mNrc8Dpmrl-FykxF6k-9SHeOzA==&uniplatform=NZKPT&language=CHS

[7] Zhang, Q. (2022). Data center: Make financial data useful. *Finance and Accounting*(9), 15-19. https://kns.cnki.net/kcms2/article/abstract?v=sb6TFb_dKprZnrTiLhKU_iI9oOUPMzoSYbYw6Ho09vJj3A_-GrnLxr96dFgbXhBeyTcULbLy8Q4MIdNtp4u_kT0Q_gn_oihH_dGehqcQ-cMkfT18EIgYsISr52NyZqbXd1n20AAFc60N4q-vhCWnCK9bHFqyY_E7r9Qz-fmX7efpooNs8zuicZz4gmmAO9Yp_SvIa0sl4fg&uniplatform=NZKPT&captchaId=fa247c2c-1012-4176-9c51-ddb8ce2c1d03

[8] Jin, Y., Li, C., & Zhuang, L. (2024). Construction and application practice of financial digital employee system. *Finance and Accounting*(2), 55-59. https://kns.cnki.net/kcms2/article/abstract?v=sb6TFb_dKprWXPsJzV73qIOJWhNPVczPe-vRfX9sezHnyYdwdqpnPb_yV5CfLoNn6VDWImm7p36wbY7S_JO_PoMWCy7-9Aue7G7EIKSvgUns2HAtoVL1SLNOLGPshveQzf9ptuxxnYLTP5_r43Ud7AzM1-0XwzjOJTl_a23S-8-UL5ebHqjLk03uHBy6N4Ne2kaZ3nis2tE&uniplatform=NZKPT&captchaId=e9c23043-04c4-416c-8af4-d6be4ce67cd9

[9] Qin, R. (2024). Research on constructing intelligent financial system using generative artificial intelligence. *Friends of Accounting*(24), 26-30. https://kns.cnki.net/kcms2/article/abstract?v=sb6TFb_dKpqB6crquW2V1GtvAxkh9sUHXCN_cBPbGci3UN38D3YiaZCU0qwEmYfIeWzoQvSvVkplv_dGTuqZL72v1V5Kx7KxeRj_QK1sNh3rA7BCFrsIMhrz97DyzRVxe9biYlLE2bRWn1SLzmNyr7bKvBoe4vzElb4qbrN

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i5XC2Ytmat7gZRrLP8wEJkICmqtwoGxtWNuk&uniplatform=NZKPT&captchaId=4b0588dc-afb3-41a1-b165-017a1e19d6d5

[10] Chen, H., & Guo, Y. (2024). New financial management organizational system in the digital age. *Finance and Accounting Monthly, 45*(16), 17-20. https://doi.org/10.19641/j.cnki.42-1290/f.2024.16.003