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Research on Financial Sharing Construction of J Enterprise Group

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Abstract: In recent years, with the epidemic raging, more and more enterprises are trying to help enterprises reduce costs and increase efficiency through the use of technology to achieve the purpose of helping enterprises to rescue. Especially under the background of China's economic development changing from "high growth" to "high quality", how to make full use of "Internet +", "Internet of things +", "big data" and other digital technologies to shape the digital construction of enterprise group finance has become a major topic for managers. As a sword of financial reform driven by digital technology, financial sharing service is widely concerned by managers and financial personnel. Based on the construction practice of the financial sharing center of Guangxi Communications Investment Group, this paper deeply dissects the internal structure, construction path and transformation effect of the construction of the financial sharing center, and looks forward to the future development direction of the financial sharing center of the enterprise group, with a view to providing reference for similar group companies to build financial sharing centers.

Keywords: digitization; financial sharing; group management

1. Introduction

With the development of economy, from "high growth" to "high quality". As the leader of regional and industrial development, large enterprise groups have a huge asset scale and business volume, and gradually become the market economy subject of cross industry and cross regional diversified development. In this process, the shortcomings of the traditional high and long organizational structure model in group enterprise management have become increasingly prominent. Many branches and subsidiaries bring many sets of financial institutions, resulting in a large number of mid-level personnel. With the expansion of business, the number of multi-level subsidiaries has increased, the management cost has gradually increased, the financial process is lengthy, and layer upon layer transmission leads to distorted information, which is not conducive to the decision-making management of the enterprise group headquarters. How to solve this series of problems has gradually become a topic for managers.

During the exploration of generations of managers and financial personnel, we found that as a relatively flat financial management model, the financial sharing center can effectively solve the problems highlighted by group enterprises. By separating the same, complex, standardized and procedural businesses in the group from each branch and subsidiary, they are managed in the financial shared service center. This new financial model was first proposed by Ford and first built by ZTE among Chinese enterprises in 2005. Since then, it has been sought after by China Telecom, Huawei, Baosteel and other large enterprises [1].

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2. Review of the construction of financial sharing service center

Robert once described shared services as a new management idea for the group company to gain a leading edge from the low level structure and decentralized management model in relevant research [2]. Kris et al. proposed that shared services enable enterprise groups to not only achieve remarkable results in reducing operating costs and improving operating efficiency, but also achieve business process and standardization, help the company gain a leading position in the industry, and continue to create value for the group company [3]: Daniel and Melchior (2009) clarified that shared services are a means to help enterprise groups simplify management processes and help strengthen the modern management of the group; Based on the existing research conclusions, Ulrich summarized the shared services refining as combining repetitive and large business activities into a new organizational department, so as to achieve an extremely standardized unified processing process [4]. It is not difficult to find that the connotation of shared services is a constantly deepening process, that is, from the initial management concept to the adjustment of some functions, to the organizational reconstruction. Shared service is to centralize the repetitive and large amount of work in the enterprise group, establish unified service standards and processes, and achieve cost savings and scale benefits across business units. The research of Schulman et al. shows that shared services can be seen as the goal of reducing operating costs and improving financial function services through the integration and concentration of cross business unit resources within the group company [5]. Denburg hand (2010) believed that the core idea of financial sharing service is to hire fewer financial personnel, meet the expanding scale and business volume needs of the enterprise group, gradually reduce operating costs, maximize the scale benefit of the enterprise, and thus promote the strategic development of enterprise clusters; The International Association for the Management of Financial Shared Services (2010) pointed out that financial shared services are a management model that relies on information technology, processes financial business, and provides specialized services for internal and external customers of enterprises based on marketization. Compared with the definition proposed by Schulman et al., the International Association for Financial Shared Service Management emphasizes the importance of improving service quality and information technology for internal and external customers of enterprises. It can be seen that different scholars have different views on the construction of the financial sharing center, but their views are different on the whole [6]. To sum up, the connotation of financial shared services has been derived and developed on the basis of the connotation of shared services, and the sharing concept has been applied to the financial field to serve the financial management of enterprise groups.

3. Challenges Faced by J Enterprise Group in Implementing Digital Finance

3.1. J Introduction to Enterprise Group

J Enterprise Group Co. Ltd. was established in July 2008. According to the deployment of the Party Committee and the government of Guangxi Zhuang Autonomous Region, J Enterprise Group Co. Ltd. and Guangxi Railway Investment Group Co. Ltd. implemented strategic restructuring in September 2018 to establish a new J Enterprise Group Co. Ltd., which is directly under the People's Government of Guangxi Zhuang Autonomous Region, an important investment and financing entity and state-owned asset management entity in our region, and shoulders the task of promoting the construction of highways and railways in Guangxi. The three orientations of the Party Committee and the government of the autonomous region for the new investment are "the main force of Guangxi's transportation construction, an important force of Guangxi's industrial development, and a model of Guangxi's integration of industry and finance".

On August 30, 2018, the party committee and government of the autonomous region held a conference on the construction of "digital Guangxi" in Nanning, pointing out that the whole region should be mobilized to implement the "big data" strategy, build "digital Guangxi", build a new digital highland and an important portal of the digital Silk Road for ASEAN's opening and cooperation, accelerate the cultivation of new momentum of the digital economy, and provide strong support for high-quality development, It has brought significant historical opportunities for the informatization development of J Enterprise Group.

The "13th Five Year" Development Plan of Transportation Informatization and the "13th Five Year" Development Plan of Highway and Waterway Transportation Informatization in Guangxi Zhuang Autonomous Region of the Ministry of Transport have been issued successively, which put forward ideas and pointed out the direction for accelerating the construction of transportation informatization in Guangxi.

In recent years, the Group has more than 800 transportation informatization talents, including 220 in software and hardware research and development, 280 in Internet operation, 100 in intelligent equipment manufacturing, and more than 200 in system operation and maintenance, distributed in computing centers, technology companies, Zhitong companies, Jietong companies, machinery research institutes, and operating companies.

3.2. J Enterprise Group's Implementation of Digital Finance

3.2.1. Enterprise group information system is not perfect

Because there are still obstacles in the business connection between systems, enterprise groups cannot fully realize information sharing, which leads to the problem that different businesses do not achieve effective linkage, thus increasing enterprise risks. For example, the performance of contracts such as A/R and A/P in the contract system cannot be obtained from the financial system, which may cause economic losses and also increase the risk of legal disputes. The Group involves many business operations, complicated data related parties, and unclear data ownership, which also increase the risk of business connection between systems and data development and utilization. Taking J Enterprise Group as an example, it has 45 wholly-owned subsidiaries, 18 holding subsidiaries and 581 controlling enterprises (6 of which are listed in Table 1), mainly engaged in the operation and construction of major transportation infrastructure such as highways; Collection, maintenance and maintenance of traffic facilities; Investment, construction and management in logistics, real estate, transportation, finance, resource development, municipal facilities, energy, construction and other industries, as well as international economic and technological cooperation and other businesses have been committed to establishing and optimizing the Group's information system in recent years, but there are still problems with defective and imperfect information system settings.

Serial No	subsidiary	Operating business
1	Guangxi Sanqi Investment Co. Ltd	Investment and management in transportation, construction, municipal engineering, transportation, landscaping and commerce
		Purchase and sales agency of metal materials, building materials, decorative materials, machinery and equipment
		Real estate development and operation, greening project and traffic safety project construction
2	Guangxi Communic-ations Industry Co. Ltd	Wholesale of finished oil (limited to dangerous chemicals), operation of dangerous chemicals, chemical products (excluding dangerous chemicals), and sales of lubricating oil
		Wholesale operation of coal
		Transportation science and technology development, centralized fast charging station, electric vehicle charging infrastructure operation, and solar power generation technology services
		Lease of communication pipeline, optical cable and mechanical equipment
3	Guangxi Wuzhou Transporta-tion Co., Ltd	Investment and operation in transportation infrastructure such as roads, bridges, stations,
		ports and wharves
		Investment in logistics parks, trade, finance and mining
		Purchase and sales of construction equipment, construction machinery and equipment,
		hardware and electrical equipment, and general merchandise
4	Guangxi Real Estate Group Co., Ltd	Cooperate with the land reserve institutions of the autonomous region in land collection and storage, land development and consolidation, land financing, land management, participation in some major infrastructure construction and social project construction in the autonomous region, and other matters authorized by the people's government of the autonomous region
5	J Enterprise Group Trading Co., Ltd	Mainly carry out bulk material supply and bulk commodity trade for expressway, railway
		Carry out logistics supply chain service business of bulk commodities such as steel and
		asphalt around core production enterprises and important market customers
6	Liuzhou Express- way Operation Co.Ltd	Traffic facilities installation, management, expressway toll collection, maintenance, rescue and consulting
		services; Removal of obstacles outside the expressway Sales of agricultural and livestock products (excluding prepackaged food)
		Catering enterprise management
		Rental of machinery, equipment and houses

Table 1. 6 Subsidiaries of J Enterprise Group.

3.2.2. Failure to link data with supply chain management

At this stage, after the establishment of shared services, enterprise groups have not connected the data generated with supply chain management. In fact, this is also an "information island", which fails to achieve "horizontal integration and vertical connectivity" [7]. Sharing is not only a sharing platform, but also a sharing of data. The traditional supply chain is mostly managed independently by each subsidiary. There is a lack of conversion from "chain" to "network" among the subsidiaries. After the establishment of financial sharing, it provides an opportunity for the Group to achieve this transformation. However, in fact, the enterprise group has not really connected sharing with the supply chain, which also makes it more and more difficult for the group to make global optimization decisions, especially with the increasing number of group businesses and subsidiaries.

3.2.3. The ability to integrate and extract information needs to be strengthened

The ultimate purpose of financial sharing services is to help the enterprise group achieve cost reduction and efficiency increase through systematic, procedural and standardized operations, and to link data with decision-making. The big data formed by sharing services can support the decision-making of the management and achieve the strategic objectives of the group. However, at this stage, China's financial sharing center has not really realized the transformation from data to decision-making [8]. At present, most financial sharing service centers in China still stay at the level of centralized accounting, and the root cause of this problem is the lack of information integration and information extraction ability of enterprise groups.

4. J Financial sharing construction of enterprise group

4.1. J Implementation path of enterprise group

Since 2021, J Enterprise Group has applied the middle office strategic thinking to the construction of the financial sharing center by means of "top-level design, overall deployment, step-by-step implementation and gradual improvement" and adhering to the concept of "high starting point construction and high-quality operation", It is committed to building the financial sharing center into the "control center, business center, data center, talent center and service center" of the group company.

4.1.1. J Organizational Structure of Enterprise Group Financial Sharing

Compared with the traditional long financial organizational structure, the financial organizational structure of the financial sharing service center is a flat structure, which is a secondary organization directly managed by the Group Finance Department. This organizational structure with few management levels and wide control range enables the group headquarters to make decisions on the corresponding financial information quickly, reduces the drawbacks caused by layer by layer reporting, and realizes the rapid transmission and communication of information.

The financial sharing service center of J enterprise group adopts an M-type organizational structure, that is, this structure is to integrate the business of each branch and subsidiary, and pass the corresponding business through the consulting service department, business audit department, general ledger statement department, tax management department, operation and maintenance department, fund management departmentThe General Affairs Department and other seven departments handled the problem (Figure 1). This organizational structure is also more conducive to setting posts and staffing according to business efficiency, and is easy to assess. Besides, each post conducts business processing according to standardized processes.

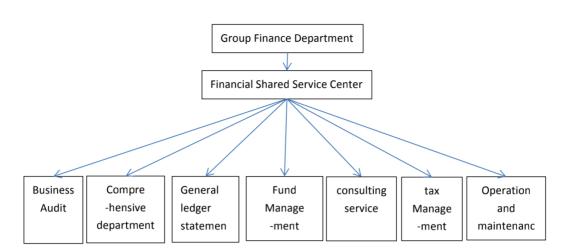


Figure 1. Organization Chart.

4.1.2. J Enterprise Group Financial Sharing Process Construction

The financial shared service center is not only the centralized accounting, but also the business process reengineering. According to the business characteristics of J Enterprise Group, its financial sharing service center adopts a platform architecture of "technology business data". It retains and continues to build the front-end system in the business module. The back-end ensures that the back-end system platform is consistent with the group headquarters, such as a unified accounting system, a unified capital system, a unified cost control systemUnified asset management system and other modules. The optimization of these business processes has achieved the goal of unifying accounting policies, accounting subjects, accounting processes, information systems and standards within the Group, and further improved the Group's efforts in reducing bill transfer, standardizing reimbursement processes, and reducing capital control risks.

4.1.3. J Enterprise Group Financial Sharing Information System

The financial sharing service relies on an efficient information system [9]. Since 2021, J Enterprise Group has started to establish a unified information system, which includes five systems, including image, reimbursement, accounting, archives, and fund management (Figure 2). By sharing the financial data and business data of each subsidiary on the platform, the information can be used efficiently.

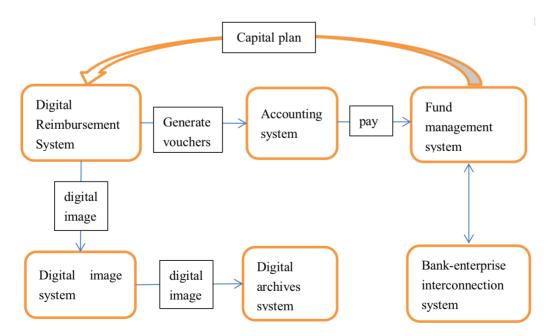


Figure 2. Financial Shared Service Information System Architecture.

First of all, the image system is responsible for the circulation of physical bills and the extraction of original vouchers, including four aspects of collection, transmission, business processing and storage. Secondly, the reimbursement system is the core system integrating document filling, approval, approval and voucher generation. It includes the complete system of business occurrence, information collection, application approval, information transmission, accounting processing, information import and information archiving (Figure 3). Furthermore, the accounting system is divided into four aspects: general ledger, A/R, A/P, and asset; The general ledger integrates the whole process of voucher entry, review, and reversal to financial statements; Accounts receivable integrates the whole process of credit management, invoice processing, A/R records, revenue confirmation, collection management, and loan management; Accounts payable integrates invoice management and payment management; Asset management integrates the whole series of projects under construction, increase, transfer, change, depreciation and retirement. In addition, the archive system mainly implements electronic management of vouchers, statements, archives and warehouses, and uses electronic information for reference management.

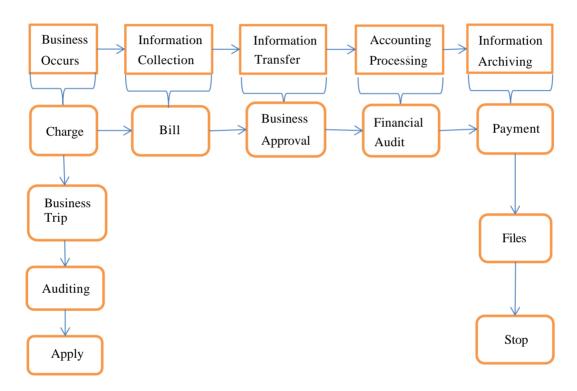


Figure 3. Reimbursement Business System.

4.2. Effect of digital financial sharing construction of J enterprise group

4.2.1. Reduce management cost and create enterprise value

Through the optimization and unification of processes and standards, the reasonable structure of organizations and posts, the construction of information platform, the standardization of post manuals and other management manuals, as well as fair and open employee performance competitions, the shared service center of J Enterprise Group has effectively mobilized the enthusiasm of employees, realized cost reduction and efficiency increase, and won efficiency and cost advantages for the Group [10]. At the same time, the shared service center of J enterprise group implements the unified entry mode for those businesses with high frequency and large total amount, which greatly avoids the accounting failure caused by accounting, and thus improves the accuracy of accounting data for the business performance feedback of the enterprise group.

4.2.2. Financial transformation, standardized accounting level

By building a financial sharing service center, J Enterprise Group has forced relevant employees within the Group to carry out transformation, so as to improve the overall level of practitioners, further improve the accounting level of the enterprise, and lay a more solid foundation for the business decision-making of the enterprise group. Not only that, the accounting related content generated in the whole supply chain link is gathered in the financial shared service center, and the operation is carried out according to the standardized process and standardized operation, thus realizing the accounting information quality requirements of accuracy, timeliness and integrity. In addition, the internal staff of the financial sharing center can give an early warning of possible accounting errors in each link of the supply chain, and communicate with relevant personnel in a timely manner, thus realizing the financial supervision of the enterprise group headquarters on each subordinate organization or each supply chain link.

4.2.3. Unify caliber and improve efficiency

After J Enterprise Group established the financial sharing service center in 2021, the number of employees engaged in financial accounting within the whole group has decreased from 1700 to 600, and the number of relevant staff has decreased to about 65%, but the sharp decrease in the number of personnel has not affected the efficiency of the financial operation of the group in any way. In fact, after the implementation of financial sharing services, the efficiency of individual financial personnel has increased significantly. For example, for invoicing posts, the per capita invoicing rate has increased by nearly 43% compared with that before the implementation of shared services, and the closing date has decreased from 15 days to 7 days. This allows the Group to save a large number of professional accountants with financial work experience and familiar with the Group's environment, who can engage in financial management work such as budget, internal control, capital and business support.

From the perspective of the overall business performance of the enterprise group, as the group continues to promote the construction of digital finance, in the first half of 2022, J Enterprise Group also handed over a satisfactory answer, in which the development benefits of the business sector achieved a new breakthrough, achieving a year-on-year gross profit growth of 171%; The business structure of the logistics sector continued to optimize, and the operating income of the logistics park increased by 16.87% year on year; New achievements have been made in improving the quality and efficiency of the manganese industry development sector, and the output of self operated manganese ore increased by 9.87% year on year; In the financial sector, the operating efficiency of the combination of industry and finance rose steadily, and the total profit increased by 16.32% year on year; The science and technology information sector continued to promote transformation and upgrading, and the digital construction of science and technology companies achieved remarkable results. In the first half of the year, the revenue and profit increased by 123% and 150% respectively year on year. This series of data shows that the financial sharing services of J Enterprise Group have played a positive role in promoting the group's operation and management.

4.3. J Development direction of financial sharing of enterprise group

4.3.1. Service oriented, establish data governance system

J Enterprise Group, as a regional industry leader, wants to build a complete set of enterprise data centers, set up a series of basic support platforms such as enterprise level cloud computing platforms, big data analysis platforms, group backbone communication networks, and security management, control, and operation and maintenance platforms, coordinate the use of enterprise IT resources, and reduce the cost of information construction and operation and maintenance, Improve the efficiency of enterprise operation and management, and provide good support for business and technological innovation. Taking service-oriented application architecture (SOA) as the overall goal, while maintaining compatibility with a variety of mainstream technologies, business function reuse and business process optimization can be achieved through service sorting, opening and calling. Establish a data governance system, build an enterprise level master data model, manage data sources and data caliber, control data quality, and enable enterprise operation management data to be generated once and called everywhere.

4.3.2. Strengthen the fund operation management of the shared service center

In the future, J Enterprise Group will build a "fund cloud" platform based on the data middle office model, use new management methods, combine new technologies with fund operation management, and continuously enhance the fund management strength of the sharing service center and the "fund cloud" platform. At the same time, we will develop a payment based breakthrough and deploy the group's integrated account and payment

clearing and settlement system; This includes collection and payment, account management, financial services, clearing and settlement, risk control and other functions. It will further achieve the personalized goals of security, compliance and internal business integration. So as to improve the financial management and overall operation efficiency as a whole, and realize the information system of unified payment, unified control and unified account-ing management in the whole scenario and process. In this way, the financial sharing of J Enterprise Group can achieve the goal of standardizing the fund business process, embedding standardized operations into the fund system, maximizing unmanned operation, and comprehensively improving the fund operation capability and efficiency of the financial sharing service center platform [11].

4.3.3. Optimize the financial sharing service mode of financial business middle office

With the continuous development of financial sharing services of J Enterprise Group, the experience and knowledge related to financial sharing will also continue to lay a solid foundation for the Group to shift from financial sharing services to business middle office. The Group will continue to further develop and optimize the financial sharing service platform based model in the future. Through the feedback of real-time information, we can integrate the high-quality resources of the enterprise to maximize the use of resources and generate income. At the same time, the Group will further shape an efficient and centralized cloud platform for fund management and financing management, better serve its subsidiaries in all regions and sectors, and provide strong support for the Group's strategic development.

5. Enlightenment from J Enterprise Group's Implementation of Financial Sharing

The financial sharing of J Enterprise Group is not only a centralized organizational structure, nor a simple information platform, nor is it a common pipeline based accounting. The sharing center is a platform that can meet the requirements of rapid information conversion; It is a platform to strengthen group control; It is a platform focusing on risk control; It is a comprehensive service platform for efficient utilization and optimal allocation of resources [12].

5.1. Focus on core competence and boost digital transformation

For J Enterprise Group, the implementation of financial sharing services is not only a system and platform, but also a few core capabilities that the Group wants to cultivate. First, end-to-end process management capability; This ability is the carrier of all work promotion, and the key to avoid duplication of approval, complexity of audit, different caliber, and access to high-quality data, because it breaks the traditional barrier that financial sharing only aims at internal processes, and avoids the problem that business and finance are not on the same topic. Second, the ability to summarize and refine rules; The summary and refinement of rules here mainly refers to the establishment of an approval rule base in the shared service center. The rule base is formulated in advance according to various financial systems, which can be quickly extracted from the rule base and used in the process of approval, so as to improve the approval efficiency and accuracy. Third, the ability of digital expression; This is based on a certain amount of data, and helps the group to operate, or even make strategic decisions, through the refined classification and analysis of data. This data expression ability can effectively avoid the drawbacks brought by the traditional report based analysis.

5.2. Embrace change and build a platform for continuous digital transformation

In today's environment of rapid technological progress and continuous innovation and change, both business and demand are changing. As a platform serving business and enterprise strategy, the financial sharing service center needs to keep pace with the times. What Computer Telephony Integration has built is a shared service center that constantly embraces changes and continues to promote digital construction. During the continuous development of the shared service platform, J Enterprise Group will build a high-level management platform with the characteristics of application scenarios, capacity services, data integration, technology components, resource sharing, etc.

5.2.1. Build and improve enterprise information system

The enterprise group should fully integrate the business scope and build a business management system. Based on the financial sharing center, build a digital middle platform architecture. The digital middle platform is a digital innovation platform built on the technical framework of big data cloud computing AI, which supports the standardization and rapid customization of enterprise digital business applications, and solves the problems of enterprise business resilience and responsiveness in the face of industrial interconnection and ecological development [13]. Taking J Enterprise Group as an example, in view of its multiple subsidiaries, wide business scope and incomplete coverage of digital transformation, businesses can be classified first. First, they are core businesses and general businesses respectively. The core businesses such as expressway and other major transportation infrastructure construction and business priority construction management system for the same type of business of each subsidiary, describe the business with the same "process" only according to the method of business process management, change the tedious business process into a simple process, and focus on tackling key problems one by one.

5.2.2. Establish a middle office supply chain management platform

Enterprise groups tend to develop in a diversified way, and their business scope often covers all walks of life. At this time, they need supply chain support to maximize the effectiveness of enterprise group resources. This requires middle office thinking to help managers govern enterprise groups. Among them, there is no lack of scholars' research. Zhong Hua (2020) believes that the core point of digital transformation of enterprises is how to optimize business processes through transformation, solve the pain points and difficulties in business, create profits, and realize business value. He also puts forward ten elements of platform thinking in digital transformation and new business construction principles based on the mid platform architecture [14]; Chen Xinyu, Luo Jiaving, Jiang Wei, etc. (2020) pointed out that the middle office is the key support system for the digital transformation of enterprises, and demonstrated how the middle office promotes the digital transformation and achieves the purpose of enterprise economic growth through specific cases [15]; Zhang Qinglong (2020) believes that the data center is the connection point between various intelligent systems, which can promote the construction of intelligent finance and is the basis for enterprises to achieve digital transformation [16]. Because of this, the supply chain will be transformed into a supply network through the establishment of a mid platform supply chain management platform to realize the interconnection between data. In this process, make full use of big data, artificial intelligence and other digital technologies to help enterprises achieve full chain management, so as to achieve the purpose of accurate demand prediction, accurate procurement and intelligent decision-making, so as to reduce procurement costs and achieve the goal of cost reduction and efficiency increase. Moreover, the supply chain management based on the middle office enables the supply chain to have the ability of real-time, visual, perceptible and adjustable, and is more conducive to the whole basin management of enterprise group managers.

5.2.3. Building intelligent decision support

Decision making application is the embodiment of the ultimate value of financial sharing and digital transformation of enterprise groups [17]. In the future, enterprise groups should establish data-driven business decision analysis, let the data "speak", such as establishing ratio analysis models, trend prediction models, etc., convert the data of the sharing platform into visual pages, and directly present the scientific conclusions to managers and decision-makers to support decision-making, so as to help decision-makers reduce the involvement of personal emotions or subjective factors, Achieve fair, objective and reasonable scientific decision-making. Real financial visualization and decision-making standardization.

5.3. Personnel transformation, win in advance

When establishing the shared service center, J Enterprise Group is based on the transformation of financial personnel. For group employees who have the conditions and willingness to transform, they can enter the shared service center through competitive selection; The group employees mentioned here are not only the headquar-

ters, but also the financial staff of more than 300 subsidiaries under the group. The internal financial personnel are forced to transform through competitive selection. Turn traditional basic financial personnel to professional finance and business finance; Turn traditional accounting to management accounting, that is, turn the actual work focus of financial personnel to budget, mergers and acquisitions, help market or production business departments to support decision-making.

6. Conclusion and prospect

China has entered a new era, and the transformation and upgrading of enterprise financial management has become a general trend. The goal of the transformation is to form a complete strategic pattern of financial management [18]. Years of practical experience of domestic and foreign enterprises has proved that building financial sharing service centers, building new functions of management accounting, and using new technologies such as big data and artificial intelligence to accelerate the creation of higher enterprise value have become a clear, reliable and effective model in the process of financial transformation and upgrading of enterprise groups [19]. At the same time, the ultimate orientation of the development of financial sharing services is the terminal processing of data. In the future, enterprise groups need to shift their attention from the processing of financial data to the full process control of big data, and think about how to use new technologies to innovate the financial sharing mechanism, optimize the construction of information systems, so that China's financial sharing services can reach a new height.

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Conflicts of Interest

The authors declare no conflict of interest.

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