Research on Innovation of Enterprise Management Accounting Informatization Platform based on Intelligent Finance

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Abstract. artificial intelligence, big data and other emerging digital technologies have spawned a series of stringent enterprise management standards. Intelligence is applied in the financial field, and enterprise financial management intelligence is an irresistible trend. The connotation of intelligent finance is defined comprehensively and profoundly based on the background of intelligent finance era in the paper. The mode and path of enterprise financial function transformation in the era of intelligent finance are designed from the perspective of enterprise financial function transformation through combining the level and current situation of financial sharing and business-finance-tax integration in Chinese enterprise on the basis. The traditional financial processing process is reconstructed, the financial organization is flattened, and the industry and finance are truly integrated. A BI-based management accounting informatization platform for analysis and decision-making is constructed. The plight of accounting "information island" is reversed, thereby providing enterprises with multi-level management analysis and operating decision support in many aspects, assisting managers to understand enterprise operation, and meeting the requirements of enterprises for obtaining data conveniently, timely, regularly and accurately.

Keywords: intelligent finance; management accounting informatization; business-finance-tax integration.

1. Introduction

The financial pattern has been completely subverted by intelligent finance in all aspects for the whole process. Enterprises regard digital transformation as the core of enterprise management strategy under current new economic situation starting with digital transformation economy. Financial management is the lifeline of enterprise management. All enterprise management levels and competitiveness are reflected based on finance. Therefore, financial digital transformation is the key link for the success of enterprise digital transformation, and digital transformation of enterprise management will be reflected most intuitively from the digitization of finance. It is urgent for enterprises to drive digital transformation through intelligent finance.

Promotion of digital integration of management accounting information system is regarded as the core of enterprise digital transformation. Finance and trading are integrated in the paper by constructing the BI-based governed intelligent management accounting informatization platform. Internet opening and connection functions are utilized to integrate with the data of partners, clients and suppliers in the trading. Post-processing of management accounting information based on business system is changed into real-time generation of data from trading terminals.

2. Definition of Relevant Concepts

Intelligent finance is mainly manifested as the intelligent management system based on data discovery, intelligent decision-making and intelligent actions. It is a comprehensive intelligence covering the whole financial process, which provides professional services for enterprises to integrate internal and external resources and improve overall value chains. A whole set of solutions to the problems of management accounting are formed. Intelligent finance can assist decision-makers in intelligent judgment, policy generation and policy selection.

Management accounting informatization is regarded as actual application of big data, artificial intelligence and other digital technologies in management accounting field. Enterprise business, finance and taxation information are integrated into an intelligent platform. They are integrated into a big data warehouse. The collected data are processed, data is analyzed, which are then displayed in

forms such as reports and charts, thereby providing effective data information support for business management and decision support. It is an important part of enterprise digital transformation.

3. Development Status of Management Accounting Informatization

Current accounting is inseparable from the support of the information system. Accounting data is increasingly integrated with business management, and the support to management decision is increasingly strengthened. The progress of information technology, such as mobile application, big data, cloud computing, graph processing technique, etc., are combined with the management mode, thereby greatly promoting the progress of accounting. Management accounting informatization has become the enterprise strategic development direction. However, outstanding achievements of current management accounting informatization is still concentrated in few advanced enterprise scopes. The financial data of most enterprises are just numbers. The enterprises fail in really integrating business, finance and tax deeply. Business and finance are disconnected. Accounting information island phenomenon is serious. The whole value chain cannot be managed, and values cannot be created for enterprises effectively.

4. Necessity of Management Accounting Informatization

Management levels of enterprises can effectively manage pre-forecast and post-control only through timely searching and mining high-value information from massive and complex data in the era of big data. It is urgent for enterprises to drive digital transformation through intelligent finance guidance. Promotion of management accounting informatization is regarded as the core for driving the digital transformation.

Business, finance and tax are deeply integrated through management accounting informatization, thereby creating an intelligent, automated and coordinated business - finance - tax integration information platform, and breaking the boundaries of the enterprise management in time and space. The finance function is integrated into the business front end, thereby truly achieving extension from back-end finance to front-end business. Enterprise business flow and financial flow are integrated, thereby organically integrating business process, accounting process and management process. It covers the whole staff and process internally as well as the whole value chain externally. Suppliers, business travelers, clients, etc. are connected on the one hand, external systems such as banks, tax authorities, etc. are also connected on the other hand, thereby realizing transaction transparency, process automation and data authenticity.

Enterprises should further standardize business processes, integrate financial resources, strengthen the strategy support, lower cost, and increase efficiency through management accounting informatization. Traditional financial process is reshaped and reconstructed. Internet thinking is utilized for enterprises to integrate with external suppliers and tax agencies. The post reimbursement is changed into pre-transaction and data control. The manual accounting is changed into online automatic real-time processing. Meanwhile, tax data and tradings are connected based on electronic invoice information, thereby achieving automated accounting. The traditional financial processing process is reconstructed accordingly. It is returned to the essence of enterprise operation with transaction management as the core and value creation as the orientation. The system becomes more efficient and automatic. The business-finance-tax integration intelligent sharing platform leads to reconstruction of financial process on the one hand, the enterprise business operation process is further optimized on the other hand, thereby promoting enterprise transformation.

5. Construction of Enterprise Governed Management Accounting Informatization Platform based on Intelligent Finance

The platform is composed of a business - finance - tax deeply-integrated intelligent sharing system and a BI-based governed analysis and decision system.

5.1 (A) Business-finance-tax Deeply-integrated Intelligent Sharing System

The business-finance-tax deeply integrated intelligent sharing system belongs to a new concept and model of modern enterprise financial management embracing "Internet+" and big data technology. Enterprises can realize real-time linkage between finance and business through Internet connection and digital transformation. Three major systems are integrated in the platform: procurement sharing, financial sharing and tax sharing. Th traditional financial sharing is regarded as the main body, which is integrated with procurement sharing forwards and tax sharing backwards. Intelligent technology engine penetrates through the whole process as technical support.

The business-finance-tax deeply-integrated intelligent sharing platform is mainly composed of four modules:

5.1.1 Module I: Finance Sharing Service Center

'Finance sharing service center' essentially aims at creating a standardized financial accounting factory. The finance sharing service center does not refer to simple concentrated office of accounting personnel, but centralization and unification of accounting standards, process and operation. Enterprises are returned to enterprise operation essence based on trade management in the finance sharing service center, thereby reconstructing traditional financial processing process, realizing enterprise digital operation, perfectly combining finance and business, and deeply integrating financial accounting and management accounting.

Business personnel make all their efforts on the application and receipt of transactions in the intelligent finance sharing center, thereby eliminating the tedious and non-value-added reimbursement and reporting process. Financial personnel have realized automatic accounting and tax, which can free them from tedious and repetitive work. They can focus more on valuable work such as business analysis, risk monitoring and identification. The traditional financial processing process is reconstructed through connection and digital transformation by the intelligent finance sharing platform. The enterprise operation essence based on trade management is returned, and the system is more efficient and automated.

5.1.2 Module II: Procurement Sharing Service Center

Enterprises should build a comprehensive one-stop procurement management system during rapid development of digital and Internet technologies. The process becomes more smooth. Enterprises can be more agile in response to market changes.

Enterprises can build an online 'consumption mall' in the procurement sharing service center through 'Internet + cloud'. Existing travel services , office supplies, official vehicles ,mass procurement and internal resource procurement of enterprises are 'internet-based' with the help of a mature e-commerce platform. They are closely integrated with the finance sharing service platform, thereby realizing direct settlement of enterprise consumption business and procurement business to suppliers as well as seamless connection with suppliers and clients, simplifying the traditional financial processing process. Staff daily consumption and bulk raw material procurement can automatically completely online in the whole process of order, payment and reimbursement check. Business flow, financial flow and the management flow are organically integrated. Financial data and business data are fused, thereby eliminating information isolated island, and ensuring the transparency of transactions and the authenticity of data. Meanwhile, the tax data and transactions are connected to realize the automatic accounting accounting based on the electronic invoice information.

Enterprise malls can be connected to the external standard e-commerce platform for enterprise procurement. It also can be accessed to material, service and other private suppliers who are determined by enterprises through bidding, thereby facilitating employees in price comparison. Suppliers publish commodities and services on the mall according to the agreed material price. Employees compare the prices of commodities online, who should fill in the application form, and complete a series of links such as order determination after the approval and confirmation by leaders. In addition, orders are controlled by enterprise budget control and procurement standards. Additional process examination and approval are required if the amount of orders exceeds the company's budget or standards.

Enterprise consumption malls adopt systematic automatic settlement mode. Suppliers and enterprises settle accounts uniformly after the transaction. Lists are automatically generated from the booked orders in the mall system during settlement, and the order status is checked automatically. Suppliers check lists and issue invoices in the system. The platform automatically obtains full invoice information through data docking with the tax platform. Orders, contracts and invoice data are recorded in the system in the form of full digitization under such a new business-finance-tax integration system. The accounting process can be completed automatically by the system through digitization of the whole process, thereby reducing a lot of manual work.

Enterprises have the ultimate goal of energizing enterprise management through digitalization of procurement management. An intelligent procurement sharing service center is established with innovative technologies, thereby realizing highly automated process, category management and sourcing optimization, and perfect connection with the entire supply chain, thereby reducing cost and increasing efficiency.

5.1.3 Module III: Tax Sharing Service Center

The sharing service model has been greatly developed with the continuous development of IT and Internet technology. The sharing economy and governance concepts are integrated in the tax sharing service center, thereby creating invoice and tax integration solution and platforms for enterprises. The tax sharing service center is a unified whole, wherein centralized management of enterprise tax business is regarded as the core. Internet and other means of informatization are utilized. Tax authorities, enterprises and molecular companies are organically combined through information sharing, IT sharing, service sharing and knowledge sharing, thereby realizing transition from offline to online and from decentralization to centralization, eliminating the intermediate links, improving enterprise management efficiency, and reducing management cost.

Tax data and transactions are connected with the help of Jinshui phase III platform and electronic invoice technology in the tax sharing service center. Tax processing mode of large group enterprises among different regions and different organizations can be changed. The management of value-added tax input and output invoice, full tax payment and automatic declaration, big data tax risk and planning can be comprehensively supported, thereby realizing the integrated reporting and processing of tax business within the group as well as the integrated control of tax planning and tax risk. Tax data information can be centralized.

5.1.4 Module IV: Intelligent Technology Engine

Machine learning, natural speech processing, rule engine and other artificial intelligence technologies are adopted to realize automatic accounting process and greatly improve the efficiency of accounting processing in terms of intelligent technology engine.

Data of procurement, transaction link, tax control platform and enterprise financial system are connected more smoothly by the business-finance-tax integration. The existing simple and repetitive labor of manual review of contracts, orders, invoices, etc. Disappears. The management system targeted at risk control is changed. The problems of complex process and low efficiency are solved, thereby adapting to the enterprise operation requirements of the Internet era, namely rapid decision-making and rapid response.

5.2 (B)BI-based Governed Analysis and Decision-making System

A large amount of data can be generated after collection and modeling calculation of management accounting data. Effective presentation of the data to managers as well as analysis and utilization of the data is regarded as an important task of the management accounting information system. The essence of management accounting refers to data collection and analysis established based on fine and quantitative management. The value of management accounting is determined by the ability to collect, sort, process and analyze data.

The important influence of digitization on financial work is just the influence on data demand and application. Policymakers really need non-financial data and unstructured data that have been ignored

rather than traditional financial data and structured data. BI technology should be relied for collecting massive data, especially unstructured data, and applying it effectively.

BI-based governed analysis and decision - making system relies on BI technology to realize ‘intelligent' management accounting information system. Financial data, non-financial data, structured data and unstructured data from different operation systems of the enterprises are integrated into an enterprise-level data warehouse. Data are analyzed and processed through utilizing various management accounting tools on the basis. 'Useful information' is formed, thereby integrating business and finance deeply and effectively. Enterprise operation is monitored in advance and in the process. Management decision-making can be assisted, thereby providing high quality data support for the top managers to make decisions timely and accurately. Management accounting is fully utilized to create value for enterprises.

First of all, data of different operation systems of the enterprises are integrated into an enterprise-level data warehouse by the BI-based governed analysis and decision-making system, thereby forming a 'global view' of enterprise data. The searched data are process and analyzed by establishing a model in the intelligent management accounting informatization platform. Statement, chart and other forms are utilized to show the data. Data information of actual company business operation is embodied rapidly, accurately, comprehensively and flexibly according to different management requirements of managers at all levels on business operations, thereby providing effective data information support for business management and decision support. Managers can discover and solve problems in operation. Meanwhile, enterprise operation can be monitored in advance and in the process, thereby assisting managers to make decisions. In addition, managers can also view relevant information anytime and anywhere through mobile terminals such as mobile phones, Ipads, etc. who can understand enterprise operations through real-time data, thereby effectively meeting the needs of enterprise management level for convenient, timely, standardized and accurate data acquisition. The logical frame of the BI-based governed analysis and decision - making system is shown as follows:

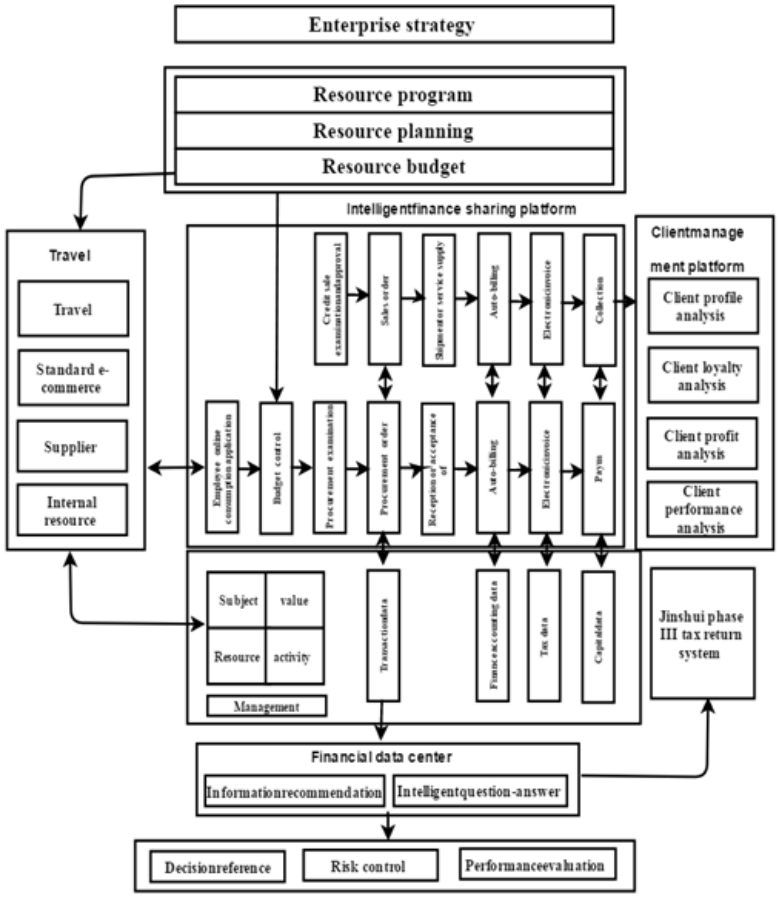

Figure 1. The logical frame of the BI-based governed analysis and decision - making system

It is necessary to introduce new thinking in the construction of enterprise management accounting informatization. Problems in the following aspects should be treated mainly. Firstly, the difficulty of management accounting data collection is solved by establishing the business-finance-tax integration intelligent finance sharing system under the guidance of management accounting at the data acquisition level. Secondly, the data value of management accounting can be fully explored through data visualization, intelligent data analysis, data mining and machine learning technologies at the level of management accounting data utilization.

The domestic management accounting theory and practice of informatization are in the ascendant. The current application mode is restricted by historical and technological factors, which is not ideal generally. Meanwhile, managers need a more sophisticated, real-time and intelligent management accounting system to cope with various rapid changes and uncertainties in the business process due to changes in the enterprise operating environment.

The paper is the research result of the scientific research project of humanities and social sciences in Qingdao University of Technology (Linyi) 'Research on Management Accounting Application Innovation Based on Supply-side Reform' (project No. [2017] RW001).

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