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Research on Intelligent Finance Construction of Manufacturing Enterprises under Digital Transformation

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Abstract: At present, China's economic development has entered a new normal. In order to adapt to the rapid development of the times and improve the competitiveness of China's manufacturing industry, Chinese manufacturing enterprises have begun digital transformation and upgrading. The development and application of intelligent technology have had a profound impact on the manufacturing industry, and intelligent manufacturing has entered a new stage of development. At present, many industries are at a critical juncture in digital transformation, with an increasing reliance on intelligent technology, which highlights the importance of establishing intelligent finance. If manufacturing enterprises want to truly complete digital transformation, they must make the construction of smart finance a new driving force. Based on the current background of digital transformation, financial management in the manufacturing industry needs to be innovated and optimized, and an intelligent financial model should be established. By actively applying technologies such as big data and cloud computing to the enterprise, the integration of business and finance can be enhanced, and the financial and commercial data of the enterprise can be deeply excavated to help the enterprise make business and management decisions and improve its risk control capabilities. Based on the background of intelligent finance construction, this article provides a specific discussion on the relevant issues of intelligent finance construction in manufacturing industry. Starting from the problems faced by intelligent finance construction in manufacturing enterprises, it briefly explains the background of digital transformation and the concept of intelligent finance. Secondly, it analyzes the important role of intelligent finance construction in manufacturing enterprises, and finally proposes countermeasures to promote the construction of intelligent finance in manufacturing enterprises.

Keywords: Intelligent Financial Construction; Manufacturing Industry; Digital Transformation.

1. Introduction

In recent years, in the era of the new economy, manufacturing has become the main supporting force of the world economy. A new technological revolution and industrial transformation are quietly emerging, with the deepening development of world multipolarity, economic globalization, and social informatization. On this basis, this paper explores how regulatory manufacturing enterprises in China can seize opportunities to achieve transformation and upgrading in the new situation, and proposes corresponding countermeasures. Especially when the COVID-19 continued to rage and the downward pressure on the economy doubled, digital transformation has become an inevitable choice to promote high-quality development of the manufacturing industry. In the context of digital transformation, the construction of intelligent finance is an important guarantee for enterprises to achieve digital transformation, and an important way for manufacturing enterprises to improve their internal management level and enhance market competitiveness. Therefore, this article aims to study the driving effect of intelligent finance construction on the digital transformation of manufacturing enterprises, and propose corresponding countermeasures for the problems existing in the current intelligent finance construction, in order to provide reference for manufacturing enterprises to achieve digital transformation.

2. Background of Digital Transformation in the Manufacturing Industry

The deep integration of new generation information technology and manufacturing industry, as well as the deep integration of digital technology and the real economy, has accelerated the penetration of new generation information technology into the manufacturing industry, greatly improving the production efficiency, product quality, and service level of the manufacturing industry, providing new impetus for the high-quality development of China's economy. In the context of digital transformation, more and more manufacturing enterprises are beginning to attach importance to the construction of intelligent finance.

In the context of the deep integration of new generation information technologies such as the Internet, cloud computing, and big data with the manufacturing industry, enterprises have achieved effective application of enterprise intelligence in various aspects, from research and development design to production and manufacturing, to business management, and finally to after-sales service, thereby effectively promoting innovative development of enterprises. In addition, with the widespread application of information technologies such as the industrial internet in the manufacturing industry, enterprises can achieve real-time monitoring and management from procurement, production, sales and other links through the network, thereby achieving digitization and intelligence. This transformation can help

enterprises improve production efficiency, reduce costs, enhance market competitiveness, and create higher value. In the digital transformation of manufacturing industry, the construction of intelligent finance is a crucial link. Therefore, digital transformation makes enterprise business processes more efficient and convenient, and can help enterprises accurately and timely grasp market dynamics and customer demand changes, thereby achieving customer-centric digital transformation.

Based on the above analysis, manufacturing enterprises are facing enormous opportunities and challenges in digital transformation. The typical product of the integration of digitalization and manufacturing is intelligent manufacturing, which is also a core goal of digital transformation in the manufacturing industry[1].Only by actively carrying out the construction of intelligent finance can we fully leverage the driving role of intelligent finance in digital transformation and assist manufacturing enterprises in achieving digital transformation.

3. Overview of Intelligent Finance Construction

3.1. Concept of Intelligent Finance

Intelligent finance refers to "intelligence+finance", which is a functional definition that essentially refers to intelligent finance. Liu Dongming stated that "intelligence+" is a major driving force for promoting the transformation and upgrading of various industries towards intelligence and intelligence. In essence, "intelligence+" is the integration of innovative achievements of artificial intelligence in various aspects of the economy and society, promoting innovation in technology and business models, improving efficiency, and effectively controlling costs, bringing new vitality to the real economy.

Intelligent finance is a development method of financial accounting. It is a financial management process based on financial informatization and digitization, utilizing modern technology and artificial intelligence technologies such as big data, artificial intelligence, and cloud computing to automate and intelligentize enterprises. The biggest advantage of intelligent finance is that it can accurately collect and quickly organize massive financial data, accurately reflect the execution status of enterprise financial work, and automatically operate through pre-set programs, which is faster and more precise than manual management. In the new development environment, intelligent technology has become an important component of economic development, permeating every corner of the market. Intelligent financial towers can not only improve the efficiency of company financial management, but also reduce financial risks, providing strong support for promoting the digital transformation of industries.

3.2. Core Content of Intelligent Finance

Intelligent finance includes three core contents: firstly, a financial sharing platform that integrates business and finance has been built to provide support for financial sharing platforms such as big data and cloud computing. The financial sharing platform can efficiently process financial business processes, and compared with traditional financial management methods, it can improve enterprise control capabilities and work efficiency, and reduce operating costs. A financial sharing platform established on the basis of business and finance integration can connect various business links related to finance, and can automatically support the business activities of enterprises with data, as well as complete digital processing automatically; Secondly, establish a management accounting platform centered on business intelligence. With the help of business intelligence, it is possible to carry out business data analysis work, including risk analysis, cost analysis, and performance evaluation, and other business data analysis work, realizing the digital means of transforming management accounting into business analysis direction, providing reference for decision-making of enterprise management departments. Through intelligent risk control, intuitive reasoning can be intelligently simulated and applied to business and financial risk control, achieving the goal of automated control. In addition, business intelligence can also provide parameters for different production and operation, provide accurate prediction plans for managers, and effectively predict risks; On this basis, this article proposes the construction of a functionalized "business finance integration" financial platform, laying the foundation for the development of intelligent finance. The integrated intelligent finance of business and finance can promote the sustainable development of business activities and improve the efficiency of financial management, which is also an important direction for the development of intelligent finance in the future. However, from the current stage, the integrated intelligent finance of business and finance is still in the development stage and has been attempted in some special scenarios, such as providing intelligent prediction solutions, intelligent warning, etc. Preliminary exploration has been conducted in specific scenarios such as intelligent financial robots, but it will take time to achieve large-scale applications.

3.3. Characteristics of Intelligent Finance

3.3.1. Intelligent Finance is Data-driven

Intelligent finance is the process of collecting a large amount of data, analyzing and predicting financial data through artificial intelligence algorithms and data mining techniques. For example, predicting future financial conditions, analyzing profit and cost structures, and conducting risk assessments to help enterprises achieve data-driven financial management.

3.3.2. Automated Processes

Intelligent finance utilizes automation technology to automate tasks such as bookkeeping, reconciliation, and report generation, achieving standardized and automated financial management processes, thereby improving financial efficiency and reducing labor costs.

3.3.3. Personalization Service

The third is personalized service. Intelligent finance can provide targeted and personalized financial services to enterprises according to their different needs. By preparing financial budgets and plans, conducting financial simulations and predictions, further optimizing financial plans, and helping enterprises achieve financial goals.

3.3.4. Real Time Information

Intelligent finance can timely collect and display financial information, monitor financial data, and provide effective risk analysis and control suggestions once abnormal situations are found, thereby helping enterprises make financial decisions and reducing financial risks.

3.3.5. Visual Presentation

Intelligent finance can use data visualization technology to

visually and clearly display financial data, issue intelligent financial analysis reports, and help enterprises better understand their financial situation.

Intelligent finance will bring a significant revolution to the field of financial management. It can enable the implementation of functions such as financial decision-making, financial operations, financial risk control, financial budgeting and planning, help enterprises improve the efficiency and quality of financial management, reduce costs, and enhance their core competitiveness, thus standing firm in the wave of digital transformation.

4. The Impact of Intelligent Finance on the Digital Transformation and Upgrading of the Manufacturing Industry

Digital transformation is based on informatization, utilizing new generation information technology to redesign, optimize, and integrate various activities of enterprises, in order to achieve digital transformation and upgrading in production, operation, management, and other aspects. Digital transformation includes: based on the Internet and artificial intelligence technology, changing the original business processes and organizational structure of enterprises, and improving the efficiency of enterprise business operations; Integrate enterprise resources with the help of next-generation information technology, and use intelligent manufacturing technology to promote product upgrading and management model innovation; Utilize new generation information technologies such as cloud computing and big data to improve enterprise management processes, achieve resource sharing, and enhance production and operational efficiency. The digital transformation of manufacturing industry is a way for manufacturing enterprises to achieve digital transformation by introducing new technologies, equipment, and other means. Digital transformation is a new way of production and operation, which can promote product innovation, optimize production processes, and improve production efficiency for manufacturing enterprises. An intelligent financial system can reduce the workload of financial personnel in enterprises, drive the upgrading of the financial system, provide good guarantees for the economic development of enterprises, and achieve true source opening and cost saving[2].However, there are many problems in the process of digital transformation in the manufacturing industry: traditional accounting models cannot meet the needs of digital transformation; The data quality needs to be further improved; Intelligent manufacturing technology is not yet mature; Lack of professional talents. Therefore, in order to promote the digital transformation and upgrading of the manufacturing industry, manufacturing enterprises should actively carry out the construction of intelligent finance.

5. Strategies for the Construction of Intelligent Finance in the Manufacturing Industry under the Background of Digital Transformation

The first is to strengthen the concept of intelligent finance and increase publicity efforts for the construction of intelligent finance. In the process of implementing intelligent finance construction, enterprises should increase their publicity efforts for intelligent finance construction, improve the understanding of staff, and enable them to actively participate in intelligent finance construction.

The second is to improve intelligent software and hardware facilities, providing technical support for enterprises to implement intelligence. Intelligent devices are the fundamental conditions for implementing intelligence. In the process of implementing intelligence, enterprises should improve hardware facilities according to their own development needs, providing technical support for the implementation of intelligence.

The third is to accelerate the cultivation of composite talents and provide talent support for enterprises to implement intelligent financial construction.

The fourth is to establish a sound data management system to ensure data security.

The fifth is to promote the integration of business and finance, and promote the deep integration of business and finance. Manufacturing enterprises should actively promote the integration of industry and finance in the process of promoting intelligence, and promote business development through the integration of industry and finance.

In summary, manufacturing enterprises should fully recognize the importance and necessity of intelligent construction, increase publicity efforts for intelligent financial construction, accelerate talent cultivation, improve data management systems, and improve data management systems. In the construction of intelligent finance, it is necessary to choose a suitable talent team construction plan based on one's own actual situation, and promote the construction of intelligent finance with high quality[3].Promote the smooth implementation of intelligent financial construction in manufacturing enterprises.

6. Conclusion

In the era of digital economy, manufacturing enterprises should fully realize the importance of intelligent financial construction in the process of digital transformation. Starting from the perspectives of financial digitization, business intelligence, process standardization, and talent specialization, they should accelerate the establishment of an intelligent financial system and promote the development of intelligent financial construction. To accelerate the transformation and upgrading of intelligent finance from "manual" to "intelligent", the first step is to strengthen the training of financial personnel and improve their quality; Secondly, we need to leverage digital technology to innovate financial management models; Finally, we need to strengthen risk management in the construction of intelligent finance to ensure the safe operation of the system. By building an intelligent financial system, manufacturing enterprises can not only improve work efficiency and reduce operating costs, but also enhance their core competitiveness. At the same time, by cultivating and motivating financial personnel, their own value creation ability can be improved, and the digital transformation process of enterprises can be promoted.

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