Design and Research on Digital Business Platform of Enterprise Project Management System Based on Information Technology

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Abstract. Although the traditional digital business platform of enterprise project management system has a complete set of design and research scheme, it cannot meet the new requirements of the new era for enterprise level project management system digital business platform. Therefore, in order to improve the design and research level of enterprise project management system digital business platform, this paper puts forward the method of integrating information technology and enterprise level project management system digital business platform design and research. Based on the analysis of the design and research status of enterprise project management system digital business platform, combined with the current new requirements for enterprise level project management system digital business platform, a set of design and research scheme that is most suitable for enterprise level project management system digital business platform is formulated. Through the analysis and research, it is found that the method proposed in this paper has important practical significance for the design and research of enterprise project management system digital business platform.

Keywords: Science and Technology, Information Technology, Enterprise Project Management, Digital Business

1. Introduction

China is in a period of rapid economic development and transformation, and the progress of information technology[1-3] is also in the promotion and application. What kind of requirements are put forward for workers’ skills, what kind of changes will happen to the demand of high skilled workers
and low skilled workers, and how the income distribution gap will be changed, these are the problems that need to be paid attention to urgently. In the labor market, on the one hand, there is a large number of low skilled rural surplus labors, on the other hand, there are a large number of university graduates difficult to find employment. How should labor supply meet the needs of information technology reform? At the same time, in the process of economic transformation, the organizational structure of enterprises[4-5] is also undergoing profound changes. We need to explore the relationship between information technology and workers' skills.

Although the traditional project oriented project management mode[6-8] provides a complete and mature project life cycle management tool for enterprise project research and development; although the early research project can manage the whole process of project construction, there are three problems in the specific project oriented project management mode of project management: first, project research and development can only meet certain specific needs, It cannot strictly guarantee that the research and development of the project can meet the strategic development plan of the enterprise; second, the research and development resources of the project are considered as exclusive resources, with poor information flow, and cannot share resources, information exchange and knowledge dissemination with other projects; third, the research and development resources of the project cannot meet the strategic development plan of the enterprise, Ignoring the horizontal connection between projects, the construction needs of projects and the application of preliminary research projects cannot provide effective support for the development strategy of enterprises.

This paper mainly studies the design and research method of digital business[9-10] of enterprise project management system based on information technology. With the rapid development of the times, all walks of life in various fields need to integrate some new science and technology to help them carry out innovation and reform, so as to adapt to the development needs of the new era. The 21st century is the era of information technology. Information technology has been widely used in this era. This paper puts forward the method of integrating information technology with the design and research of enterprise level project management system digital business platform, analyzes its development status deeply, and formulates a set of design and research scheme that is most suitable for enterprise level project management system digital business platform. Through the analysis and research, it is found that the method proposed in this paper has important practical significance for the design and research of enterprise project management system digital business platform.

2. Design and Research Method of Digital Business Platform for Enterprise Project Management System Based on Information Technology

2.1. Information Technology

With the rapid development of information technology, people began to think about how to adjust workers' skills to meet the needs of information technology development and promote economic growth. Some changes in the labor market have also prompted people to reflect on the role of information technology. In the United States, information technology has brought about an increase in the demand for highly skilled labor, while the demand for low skilled labor is also rising, and the demand for medium skilled labor is declining. The distribution of labor skill composition changes from the growth rate with the improvement of skill level to the U-shaped distribution of low skill and high skill growth rate, that is, the bipolar distribution of labor skill.
2.2. Enterprise Project Management System

With the in-depth development of project management theory, multi project management theory has gradually become the research hotspot and future development direction of modern project management theory. The theory of multi project management is oriented to the construction project which can realize the overall planning of the enterprise. Through the analysis of the organic connection projects, it can realize the goal of sharing project resources and knowledge, avoid repeated construction, and make the engineering construction closely related to the enterprise development strategy.

3. Experimental Correlation Analysis

3.1. Experimental Background

Although there are many directions for the use of research and development costs, due to the wide application of information technology in all walks of life, the research and development of information technology should be an important content of today's enterprises, so this index can also reflect the status of enterprise information technology application to a certain extent. We find that technical variables significantly increase the proportion of workers with high education, significantly reduce the proportion of workers with low education, while the impact on high school education is relatively small and positive.

3.2. Experimental Design

In order to overcome the impact of enterprise heterogeneity, we use a limited number of cross-year data from 2017 to 2019 for analysis. As shown in Table 1, the explained variables are the proportion of workers with different educational background, and the explanatory variables are the R &amp; D expenses representing the technical level of the enterprise and the main business income representing the scale of the enterprise.

| Table 1. Panel data analysis (2017-2019) |
|----------------------------------------|
|                                       |
| Proportion of university degree or above | Proportion of senior high school education | Proportion of education below senior high school |
| Logarithm of R &amp; D expenses | 1.675 | 0.162 | -1.786 |
| Logarithm of main business income | -0.692 | 1.466 | -1.423 |
| Fixed or random effects | Fixed effect | Fixed effect | Fixed effect |
| Other control variables | Province, industry and ownership | Province, industry and ownership | Province, industry and ownership |
4. Discussion

4.1. Analysis on the Design and Research Status of Digital Business Platform of Enterprise Project Management System Based on Information Technology

This paper introduces the historical origin of China and Taiwan and the modern pioneer of China Taiwan system. From the technical system level, Zhongtai is an enterprise level shared service platform. From the perspective of organization and management, Zhongtai is the center of competence and the platform of sharing capability. The platform that provides sharing capability in the form of service is Zhongtai. For Internet enterprises, business platform and digital platform are essential. They complement each other and jointly support the front-end business and strategic innovation of enterprises. Compared with traditional enterprises, the business platform is enough to support the front-end business. The project platform derived from this cannot only play the role of service sharing, but also bring opportunities for business development and open up a new way for strategic innovation of project-based enterprises.

This paper takes a project-based enterprise focusing on information system integration construction as the research object. Its information system integration belongs to infrastructure construction, and its construction content is very extensive. The most common construction contents include security system, network system, broadcasting system, digital conference system, etc. Each system can be subdivided into several small systems, such as security system, including video monitoring system, access control system, intrusion alarm system, etc. In addition to hardware facilities, software development is also a part of informatization. Some industries can use general manufacturer software, while some industries need to customize special software. The core values of such a system integrator is to use professional technical knowledge, tap the needs of customers, deeply customizes information solutions for customers, integrate the original independent systems together, and combines the resources of manufacturers to create an organic, efficient and convenient information system for customers. The results are shown in Figure 1:

![Figure 1. Business income of the company from 2016 to 2020](image-url)
As shown in Figure 1, the company's total revenue in 2016 was 25 million yuan. From 2017 to 2020, the business income increased rapidly. The turnover in 2019 reached 156 million yuan, and the turnover in 2020 was expected to reach 296 million yuan. From the growth trend of turnover in recent years, the information technology enterprises in the new era are in a good development trend, which shows that the industry has a good development prospect in the future and is a hot development field in the new era.

Through the establishment of the project center, the company carries out business activities around the project center. In the period of rapid development of start-up enterprises, the company has solved many problems of its own strength and project quantity mismatch. Support front-end business and drive the expansion of business scale. This is essentially a strategic innovation at the corporate level. The data before and after the strategic transformation of the company are compared to analyze the impact of innovation and development on the industry. The results of data comparison are shown in Figure 2:

![Figure 2. Comparison of two groups of data before and after strategic transformation](image)

As shown in Figure 2, from the project payment rate and project completion acceptance rate after the company's strategic transformation in 2017, 2018 and 2019, it can be clearly seen that the project payment rate and project completion acceptance pass rate after strategic innovation are higher than those without strategic innovation, and the effect is better. The project payment rate and project completion acceptance rate in 2019 are higher than those in 2018 and 2018. And the project completion acceptance pass rate increased by 46% and 29%, which basically proved the effect of strategic transformation on the company's project payment rate and project completion acceptance pass rate. The mode of the project platform from fuzzy to gradually clear, step by step for the company to bring a turnaround.

### 4.2. Suggestions on the Development of the Design and Research of Digital Business Platform of Enterprise Project Management System Based on Information Technology

Through the enterprise level project management platform and modern information technology, we can easily realize the full participation of employees in the quality related departments, establish a good enterprise level project management system, the whole enterprise quality culture atmosphere, and promote the effective implementation of the project from top to bottom.
How to make the quality information system adapt to the enterprise environment is one of the key problems in the implementation of quality information system. The quality information system must adapt to the quality system. However, the quality system of enterprises is different. If we adopt the implementation mode of enterprise case fully customized development, it will not only have a long development cycle and high cost, but also cannot guarantee the development quality. For the future of enterprise software upgrade, version update and information services buried hidden dangers. In the modern competitive environment, the dynamic characteristics of enterprises are increasingly prominent. Once the business process of the enterprise changes, the customized development system is difficult to adapt to the new management needs, and can only be redeveloped, resulting in a huge waste of resources.

In the early research, organizational structure was regarded as the core issue of organizational system. Subsequently, many scholars added key processes to the research of organizational system, which broadened the research connotation of organizational system. This study believes that the organizational system is an organic system formed by interrelated, matching and coordinated organizational structure, functional division, management and control mode, operation process and other elements established by enterprise level project management. It is the general name of operation management system based on the core theories of value chain management, process reengineering and social system. Enterprise level project management organization system includes not only the "skeleton" of organizational structure and responsibility division, but also the "blood" of business process and management process. More importantly, there are "muscle parts" such as management and control mode, key capabilities and operation mechanism, which further deepen the research on enterprise level project management organization system.

As strategic and systematic business architecture, the core value of marketing service center is to transform it mode of marketing business capability into asset model of business capability, so as to improve business agility and response speed to market. In the marketing service business, the business capability platform provided can be reused gradually by more business applications, so as to gradually accumulate the assets of enterprise business capability, and output the core business ability and rapid innovation ability for the foreground application oriented to enterprise project management customer service through the way of midrange enabling. It includes not only the information system support of China Taiwan, but also the management system and standards matching with China Taiwan. Specifically, the marketing service platform consists of business midrange analysis methods, business service capability centers and their corresponding business data domains, business midrange technical support and corresponding management mechanisms and standards.

"Big middle platform" strategy is the inevitable result of the development of enterprise informatization (especially group enterprises) to a certain stage. It is also the stage goal of the transformation of enterprise information management from rough generalization to intensive. In the strategic transformation of enterprise informatization, it is necessary to optimize and restructure the strategic framework of large and medium-sized enterprises, and then the non-core business / standardized business can be separated, and the professional work can be handed over to professional people, and asset operation is ignored. Dazhongtai strategy is a process of Phoenix Nirvana. Due to the influence of internal and external factors of the enterprise, the implementation of the strategy is not achieved overnight. It may need to accumulate and last for many years. In the middle process, there
will also be various management and technical problems. But in the long run, it will be an important guarantee for the standardization and sustainable development of enterprise informatization, and the strategic vision of enterprise overall planning and step-by-step implementation.

5. Conclusion

This paper mainly introduces the design and research method of digital business platform of enterprise project management system based on information technology. In today's high-speed development era, in order to enhance its core competitiveness in the new era, various industries have adopted various methods and means to help it carry out innovation and development, so as to adapt to the development needs of the new era. The 21st century is the era of rapid development of information technology. Information technology has been widely used in various fields of people's daily life. Therefore, this paper puts forward the method of integrating information technology with the design and research of enterprise level project management system digital business platform, and carries out accurate research on the design of enterprise level project management system digital business platform In order to develop a set of the most suitable for enterprise project management system digital business platform design and research. Through the analysis and research, it is found that the method proposed in this paper has important practical significance for the design and research of enterprise project management system digital business platform.

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