



## Based on The Value Chain Analysis of China's Private Vocational Universities, The Construction, and Implementation of The Business-Finance Integration Information Platform Framework

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**Abstract:** China's higher education has entered a stage of popularization, with competition tending towards incentives. Utilizing information technology to strengthen the integration of higher education business and finance can play a timely and effective role in supporting business, which is receiving attention from universities. Private vocational universities, due to resource limitations in various aspects, may utilize information technology to improve efficiency; however, their approach is not systematic. Therefore, this study proposes that universities should construct an information platform framework that integrates business and finance under the guidance of value chain analysis, concentrate limited funds and resources on key value drivers, and provide application suggestions for this framework.

**Keywords:** Business-Finance Integration; Higher education; Value chain; Business process reengineering; Internal control; Financial management

### 1. Introduction

Business-finance integration, also known as integration of business and finance, is a three-dimensional integration of business, finance, and information technology [1]. In the context of modern enterprise management requiring financial functions to be prioritized, enterprises use information technology to timely share real-time information generated by business with finance through institutional control and process reengineering, to improve information utilization efficiency, empower financial forecasting, decision-making, and control work, and achieve value creation. In the past decade, the call for the integration of business and finance has swept across China, and management accounting has received increasing attention from various types of organizations. Many public universities have also made vigorous attempts to integrate business and finance under the supervision of government funding efficiency and public expectations for the quality of education, to use every resource to create more value. At the same time, with the slow growth of the country's population, the level of competition and incentives for higher education have been increasing year by year, and private vocational universities are also in this competition. However, according to a study by Mikersi on the teaching budget investment of private undergraduate universities above the designated size in China in 2021, the average daily operating expenditure per student is 3,571 yuan, and only one private university has an average expenditure of 12,500 yuan per student [2], which be compared to over 40% of public universities with an average financial allocation of over 12,000 RMB per student [3]. There is a significant difference in funding. For this reason, the mandatory implementation of internal control in private vocational universities is relatively weak, resulting in internal control becoming a conscious behavior in private universities and lacking government supervision. Moreover, universities have achieved varying degrees of informatization construction, but the phenomenon of information silos is very serious. Each department on campus is accustomed to only focusing on the smooth progress of their own business, and data cannot be circulated in various systems, resulting in incomplete reflection of the development status of teachers, students, and the school. The finance department is also unable to obtain backend information promptly, and risk management and decision-making cannot be achieved in advance. At the same time, whether it is leaders, employees, or teachers in universities,

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their digital thinking, process thinking, and system thinking are all lacking. In addition, the lack of participation in strategic planning has led to insufficient attention paid to the construction of an information platform that integrates business and finance. Therefore, this study starts with value chain analysis, analyzes the current operating mode of private vocational universities, and uses information technology to strengthen the integration of business and finance, constructing an integrated information platform architecture for business and finance with the goal of value realization.

## **2. Literature Review**

### **2.1 Current research status at home and abroad**

#### **2.1.1 Current Status of Foreign Research**

The integration of business and finance is a concept proposed under the requirements of digital transformation of enterprises, which enterprises have extensively practiced. Business Process Reengineering (BPR) is a key path to achieving business finance integration. BPR is defined as a “fundamental revision and radial redesign” of business processes aimed at improving quality and efficiency [4]. MF Olalla (2000) believes that information technology (IT) can help BPR achieve the goals of reducing costs, saving funds, and improving organizational efficiency, mainly reflected in the use of shared databases, imaging technology, electronic data exchange, and fund transfers to reduce organizational coordination time and capital costs [5]. Marijn Janssen and Anton Joha agree on the role of IT and BPR and believe that the key management issues for Emerging shared service organizations and service-oriented enterprises are effective strategic execution, redesign and restructuring of activities and roles, standardized processes, applications, and underlying IT architecture, and full stakeholder engagement [6]. Financial management, as a key management field for enterprises, has expanded its scope of management to the front end of business during the digital transformation process. Its functions have shifted from data analysis and reporting in the back end to prediction, decision-making, and strategic formulation in the front end. The practical requirements for integrating business and finance are receiving increasing attention, and this phenomenon is also occurring in China.

#### **2.1.2 Current Status in China**

Wu Yuan et al. (2019) surveyed financial personnel of small and medium-sized enterprises in the Pearl River Delta region of Guangdong and found that over 80% of enterprises pursue continuous integration of business and finance and attach importance to the opinions put forward by the finance department in business process design, major investments, strategic planning, and performance setting [7]. Scholars in the education sector who have long been concerned about enterprise management have introduced the integration of business and finance into university governance. In today's increasingly competitive higher education landscape, the issue of business and finance integration in Chinese universities remains a hot research topic, with main research directions including process management, framework construction, information construction, internal control embedding, and budget management, which guide the integration of business and finance in universities.

In terms of process management, Lin Shengnan and Sun Lingfeng (2021) focused on the most complex fixed asset management in universities, optimizing the fixed asset management process from the entire process of subscription, acceptance, existence, and disposal [1]. Zhang Haiyan (2019) conducted a case analysis of a certain university from three modules: budget management, financial reimbursement, and student fees, proposing to explore the integration path of business and finance in the university's financial management process from the application level, system support level, and business level [8].

In terms of the framework construction or information construction of the integration of business and finance in universities, Liu Ruijun et al. (2022) believe that the financial information platform of universities needs to follow the financial system, internal control system, and process rules of administrative institutions, and use information technologies such as RPA and manual functions to create an intelligent platform, achieving the integration and sharing of data such as business flow, fund flow, and information flow [9]. Jiang Shuhong and Jiang Yimin (2020) demonstrated the construction process of a smart campus cloud service platform through the implementation of a real payment cloud platform as a case study [10]. Liu Yanni (2020) constructed an integrated framework of business and finance from three main lines: universities' business, financial, and capital chains [11]. Fan Lingling and Guo Xiuguo (2020) listed five major problems in universities, including traditional management ideas hindering development, serious information silos, inconsistent data collection standards, lack of composite skills among financial personnel, and failure to integrate internal control systems with the construction of information platforms. They proposed targeted suggestions [12].



In terms of embedding internal control into the integration of business and finance information construction, Liang Yong, and Gan Shengdao (2018) emphasize that finance needs to implement internal control measures in line with key business nodes. For example, business planning must consider financial needs, business execution must be equipped with financial guarantees, business processes must comply with financial standards, and business evaluations must reflect financial benefits [13]. Chen Xiaomei and Kang Jianjun (2021) suggested that universities should focus on key areas, using discipline construction, teaching, and research equipment, and student fees as examples to demonstrate process design with internal control characteristics [14].

In terms of guiding the integration of business and finance through budget management, Yu Yiqi (2019) believes that budget preparation is the starting point of business and finance integration, budget execution is the specific process of business and finance integration, budget evaluation is the performance reflection of business and finance integration and emphasizes the supporting role of information technology construction [15]. Liang Yong et al. (2022) found a lack of coherence and correspondence in budget management during the integration of business and finance, including budget preparation, execution, and evaluation. The main reason was the incomplete construction of the data platform for the integration of business and finance, and the failure of budget management to match strategic goals [16].

## 2.2 Synthesis of Literature Review

Although many scholars have conducted multi-directional and beneficial research on the integration of business and finance in Chinese universities, there is a relative lack of research on the integration of business and finance in private vocational universities, a new type of education in China. Many scholars believe that the integration of industry and finance should be aimed at value creation; however, they have not conducted specific value chain analyses, which leads to an inability to guide universities in investing limited resources into key value-driving factors. Most scholars construct a business finance integration information platform, which generally includes management modules such as budget, human resources, assets, procurement, and scientific research. However, teaching management, as an important aspect of business that affects the quality of university education, is not reflected in the business finance integration information platform. Therefore, in this study, starting from value chain analysis, we will propose an information platform architecture for Chinese private vocational universities based on the concept of business finance integration, including teaching management modules.

## 3. Research Objective

Taking the operational model of China's private vocational universities as a starting point, this study will analyze the value chain of this type of university. Based on the value chain analysis results, the value drivers for such universities to achieve their functional or social value will be known. Under the guidance of this value chain, this study will employ the construction method of the basic structure of the financial sharing platform to expand and develop an information integration platform framework, with the business and finance of vocational universities serving as the primary focus. This framework should reflect the characteristics of the information platform and integrate industry and finance. The concept should be consistent throughout and comply with the internal control and financial requirements of private vocational universities.

## 4. Theoretical Basis and Methods

### 4.1 Theoretical basis

### 4.2 Value Chain Theory

According to the value chain model developed by Porter (1985) [17] and the concept proposed by Shank and Govindarajan (1992) value chain analysis should consider the relationship between suppliers, customers, and themselves [18], private vocational universities need to consider the five basic value drivers and related support systems of enrollment, operation, output, marketing, and service based on the steps of higher education input-output when analyzing the value chain, Concentrate funds on building a business finance integration information platform based on these value drivers. At the same time, based on the rest of the higher education value chain proposed by Pathak and Pathak (2010) [19], combined with China's national conditions, referring to the higher education value chain proposed by Hutaibat (2011) [20] and the internal value chain of university organizations proposed by Ma Fasheng (2012) [21], the value-driving factors of the main stakeholders of private

vocational universities are increased. When building a business finance integration information platform, the consensus and starting point of platform module design should be based on the value chain, and value creation should be promoted through information technology means.

#### **4.2.1 Business Process Reengineering Theory**

Before building an information platform that integrates business and finance, many systems in private vocational universities were independent, including teaching management systems and course management systems. The workload statistics of teachers needed to wait for a long time to be obtained, and the teaching effectiveness of teachers was only provided with feedback at the end of the semester, resulting in serious isolation and a lag in information. According to the business process reengineering theory proposed by Hammer (1990) and Hammer and Champy (1993) [22], as well as the PDCA cycle proposed by Deming (1953) [23], information platform processes should follow an end-to-end, closed loop, and disruptive redesign aimed at creating value (reducing costs, improving efficiency, enhancing flexibility, and enhancing flexibility) [24].

#### **4.3 Construction method of business-finance integration information platform**

Currently, the business-finance integration information platforms adopted by Chinese enterprises or organizations are developed based on the theory and practice of financial sharing. According to Jia Xiaoqing et al. (2020)'s explanation of the decades-long development process of financial sharing services, it is summarized that financial sharing has gone through three important stages in China: 1) information concentration resource collaboration; 2) Procurement transactions tax management; 3) Data sharing full business coverage [25]. The information platforms used in the three major stages all reflect similar architectures, with the bottom layer being the platform layer, which mainly applies big data, cloud computing, AI, and OCR technology to support the basic functions of the platform; The middle layer is the data layer, mainly used as a data pool for the application layer, supporting users in the application layer to use relevant data through various engines (such as document engines, budget engines, data engines, etc.) and databases; The upper layer is the application layer, consisting of various systems and shared service platforms for business and finance. Among them, the shared service platform is a crucial embodiment of business and finance integration, serving as a powerful means to quickly transmit business information to finance, thereby generating cost reduction and efficiency improvements. Therefore, the business-finance integration information platform of Chinese private vocational universities constructed in this study is also based on this construction method.

### **5. Proposed for the construction and implementation of the business-finance integration information platform framework for China's private vocational universities.**

#### **5.1 Value Chain Analysis**

The operation model of China's private vocational universities is similar, operating around five major businesses: enrollment, teaching, scientific research, social services, and students' employment services. Therefore, its value chain can be summarized as recruitment, operations, output, marketing, and after-sales service, with the specific contents as follows:

After the recruited students, teachers, and researchers enter private vocational universities, they will enter a cycle of value creation. Mainly reflected in operations, output, and marketing, which affects the quantity and quality of recruiting students and teachers, as well as the management of stakeholder relationships.

Operation is the most important factor driving value and reflects the three major functions of universities, including talent cultivation, scientific research, and social services. The factors of talent cultivation should consider expanding the number of talent deliveries from upstream suppliers (middle schools, society, enterprises), improving the teaching quality of universities themselves, and meeting the talent needs of downstream employers. Academic research factors should consider the guidance and motivation of school-level topics, vertical topics of government agencies, and horizontal topics of cooperative enterprises for teacher academic research. Social service factors should consider the contribution of teachers and students to the community and the quantification of the benefits of providing scientific research results for cooperative enterprises.

These three factors should be further subdivided into several value-driving factors. For example, talent cultivation should be subdivided into teaching services and auxiliary teaching services. Teaching services can be divided into curriculum teaching research, teacher training, and development; Teaching auxiliary services should be divided into laboratory equipment services, academic staff support, and library resource services.



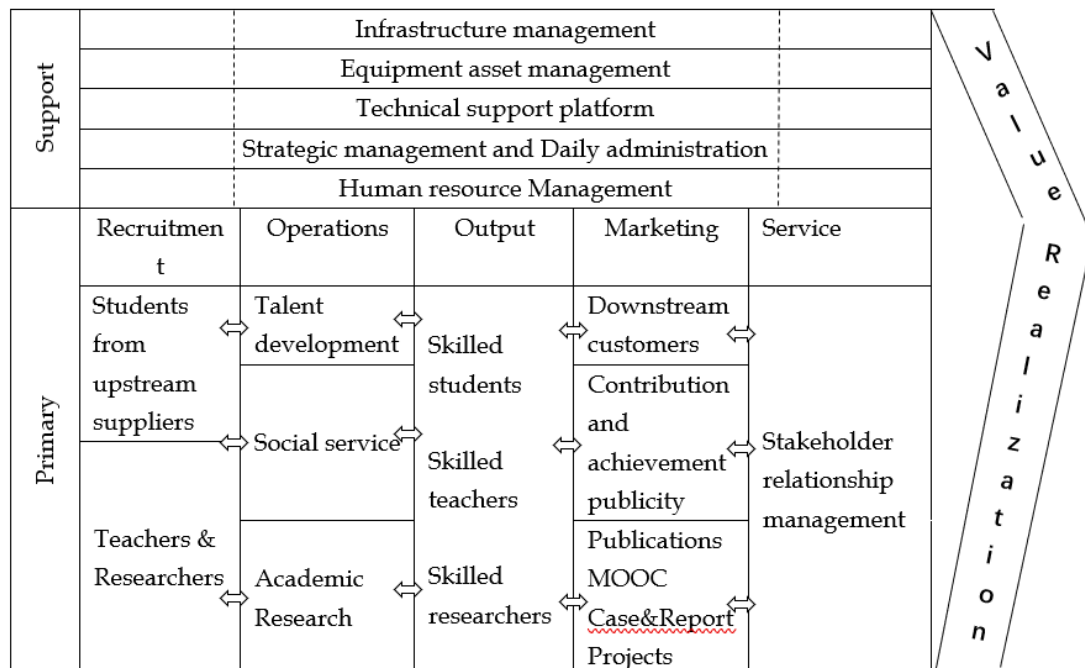


Academic research should be subdivided into vertical and horizontal topics. Vertical topics include education reform research and scientific research at all levels, while horizontal topics refer to the difficulties that enterprises seek solutions from universities. Social services should be subdivided into community services and off-campus stakeholder services, including the contributions of teachers and students to the on-campus and off-campus communities, as well as the commercialization of training, consulting, and research results provided to cooperative enterprises, institutions, and individuals.

The value-driving factor of marketing needs to continue its three major functions of talent cultivation, social services, and scientific research so that the value they create can be perceived by society (including employers, parents, and the public). For example, in talent cultivation, teaching services should focus on highlighting a key characteristic of vocational education: the integration of industry and education. Vocational universities should thoroughly assess the talent needs of employers, develop tailored talent training plans, and effectively implement them. Teachers, researchers, and students who are committed to improving their skills should all participate in the integration of industry and education. The skilled talents cultivated in the process of industry-education integration, namely output, are the results of industry-education integration and school-enterprise cooperation. More specifically, the result of talent cultivation is to produce skilled students, teachers, and researchers, who should strengthen their skills in social services and scientific research during their university years. Marketing is responsible for promoting their contributions and achievements in talent cultivation, scientific research, and social services, attracting more and better downstream customers (employers, government agencies) to participate in the value co-creation of talent cultivation in schools. Through marketing, vocational universities allow society to perceive their unique value, attract upstream suppliers (secondary schools, society, and enterprises) to send human resources to universities for further study, and attract more high-level talents to join the ranks of teachers and researchers, thus forming a virtuous cycle.

Finally, services should reflect stakeholder relationship management, including alumni relationships, employee relationships, and customer relationships.

And these basic value factors should have a strong support system. Among them, information technology, with its advantages of cost reduction and efficiency increase, can effectively promote the value realization of vocational universities under the correct strategic concept and scientific framework design.



**Figure 1.** Value Chain of Private Vocational University in China (derived from Pathak and Pathak, 2010; Hutaibat, 2011; Ma Fasheng, 2012, and with appropriate modifications)

## **5.2 Framework construction**

When constructing an information-sharing platform for the integration of business and finance, it is necessary to analyze the value chain mentioned above and consider how to create value, share business information with the finance department, and achieve integration benefits. Therefore, obtaining and transforming the granularity of business information into financial information is important, and the principles of business decentralization, process-oriented refinement, and closed-loop operation should be grasped.

On this information-sharing platform, take a teacher's daily work as an example to illustrate how to decentralize, process, refine, and operate in a closed-loop manner. Suppose a teacher's work plan includes attending classes in the morning, conducting research activities in the afternoon, and providing one hour of community service. This teacher can log in to the information-sharing platform in the morning, select the talent cultivation module, and then enter the teaching sub-module. They should conduct intelligent attendance first and use various information technology methods to teach within the teaching sub-module. The platform can record the teacher's online duration, click function, interaction frequency, and real-time evaluation of students and supervisors throughout the entire process. This data can be intelligently disseminated to relevant departments in the form of standardized reports, allowing individuals to understand the teaching situation. Simultaneously, the platform records the workload. On that day, the academic affairs office will review and approve the workload, then submit it to the finance department for confirmation of the salary. The teacher can continue to log in to the information platform in the afternoon. He can select the research module to enter the sub-module of the project, first perform intelligent filling, upload the project completion report and other materials, and submit them to the research department which is responsible for approval. If the completion materials are approved, the teacher will receive a notification of feedback from the platform. The teacher can perform intelligent reimbursement by uploading relevant invoices generated during the scientific research process to the platform. As the scientific research department has approved the closing information, only the intelligent audit function or manual review is required to confirm the reimbursement amount. The amount can be paid through the bank's enterprise direct connection system outside the value chain. The community service provided by the teacher on that day will be training social workers and receiving a service certificate from the community management department. The teacher can use this certificate and relevant training site photos as evidence materials, in which the keywords in the standardized service certificate will be identified through OCR technology. And the teacher can use an intelligent reporting function to push it to the dean of the teacher's college. After the dean reviews and approves it, the workload will be confirmed, and it will be reported to the Academic Affairs Office and Finance Office as the basis for calculating rewards.

In this business-finance integration information platform, the roles and permissions of personnel will be defined, and the work of the teacher can be recorded on the platform. After a period of information collection, the management department and the teacher can obtain the teacher's work performance by querying standardized reports, and can also access the overall performance of the teacher's team through data analysis for performance comparison and feedback. Meanwhile, academic reports from teachers who have achieved certain performances can be intelligently pushed to the marketing department, which will then contact the teacher's team or college to organize promotional activities. The entire process, including all fund payments within the scope of comprehensive budget management, will be monitored by budget control during the approval process, ensuring that internal control is implemented by relevant responsible persons.

The entire processes of business operation on the information platform are based on the value-driving factors of the university as a module, flying from business initiation and process recording to result from evaluation or approval, forming a closed loop. Through process reengineering and information technology support, there is no need for centralized processing through multiple layers of organization, reducing centralized operations. Guided by the principles of business process and information refinement, information platforms can effectively eliminate administrative intermediaries, information redundancy, and delays, reduce human intervention, leverage the advantages of multi-party collaboration, and improve the accuracy of information exchange [5]. Support systems within the value chain can quickly collect relevant business information from shared service platforms and use process control and budget management to timely and comprehensively grasp the daily operation of the organization. This plays a very important role in strengthening internal control and risk management.



Application Layer	PORTAL SITE	Login	Unified Authentication	Message Center	Mobile Portal	PC Portal
	On value chain Support systems	Selection of basic modules within the value chain (recruitment, talent cultivation, scientific research, social services, marketing, services)				Off-value chain connection system
	Budget management	FINANCIAL SERVICES	Query service	Data analysis services	Standardized reporting services	Host-to-Host
	Equipment management	Shared Service Platform				Travel platform
	Asset Management	Intelligent attendance	Intelligent reporting	Intelligent reimbursement	Intelligent procurement	Procurement platform
	Scientific research management	Application and Approval	Intelligent push	Risk warning	Fund management	Tax return
	HR Management	Budget control	Intelligent auditing	Electronic Archives	Multidimensional evaluation	Life service system
Data layer	Data Exchange Center (Business and Financial Data Assets)					
Platform Layer	Big data	Cloud Computing	blockchain	knowledge graph	image management	speech recognition

**Figure 2.** Business and Financial Integration Information Platform Architecture Based on Value Chain Analysis (derived from Liu Ruijun and Luo Hui, 2022 and with appropriate modifications).

### 5.3 Suggestions for Framework Application

#### 5.3.1 Reasonably optimize and adjust the organizational structure.

Reasonably optimizing and adjusting organizational structure is the primary task of integrating business and finance management in organizations. Implementing effective responsibility-based business process management through a flat structure is conducive to improving the efficiency of information flow between organizations. Universities should strictly follow the corporate governance structure, with the board of directors as the highest authority, and improve and adjust the departmental structure by changing the existing organizational departments, including personnel and administrative departments, finance departments, business development departments, safety departments, and technology departments. At the same time, universities should adjust their internal business structure based on the accounting framework for integrated management of business and finance and introduce corresponding management mechanisms to strictly supervise relevant departments, which is conducive to the effective implementation of the accounting framework for integrated management of business and finance.

#### 5.3.2 Improve internal financial management system.

Universities should supplement the existing financial management system and further improve the financial management system based on the new changes in finance generated by the business-finance integration information platform. At the same time, universities should further optimize the specific operational processes and links of their internal business. According to the specific financial tasks, timely and regularly updated relevant financial management tools to promote the informatization, and modernization of internal financial management. Based on improving the financial management process of the enterprise, maximizes the accuracy of financial data.

#### 5.3.3 Strengthen communication and contact between finance and business departments.

In the process of implementing the business-finance integration information platform framework, universities should continue to strengthen communication and connection between finance and business departments. Analyze the current financial and business processes and rationalize the relevant issues in the two departments. On this basis, based on these issues, departments should create a good communication mechanism between departments through consultation, create a good internal working atmosphere, and lay a solid foundation for the relevant work. At the same time, universities should also regularly carry out corresponding training activities based on the business and finance departments, creating conditions for communication between the

two departments, and further deepening communication and connection between the finance and business departments.

#### **5.3.4 Strengthen asset management and supervision.**

Universities should develop a scientific financial planning plan based on the actual situation and existing functional departments. Moreover, to ensure the effective implementation of relevant plans, corresponding reward and punishment mechanisms should be established to constrain the daily behavior of relevant personnel, strictly follow the corresponding plans for fund expenditures, and strengthen the regulatory role of management departments. Under the framework of the business finance integration information platform, universities should adjust their existing financial management mechanisms appropriately, disclose financial information when necessary, and achieve transparent management of financial information.

### **6. Summary**

In the process of reviewing research literature, this study found that most scholars recognize the integration of industry and finance as a service for value creation but failed to elucidate the relationship and guiding role of value chain analysis in building a business-finance integration information platform. Therefore, this study addresses this research loophole and based on previous research, reconstructs the value chain according to the operational characteristics of private vocational universities in China. Based on this, an information platform framework that integrates business and financial information sharing is constructed, and suggestions for the implementation of the framework are proposed to provide a reference for improving the competitiveness of private vocational universities in China.

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#### **Data availability**

The datasets generated during and/or analyzed during the current study are available from the corresponding author on reasonable request.

#### **Ethics approval and consent**

Not applicable. This study uses publicly available, de-identified secondary data and does not involve human participants or personal information.

#### **Competing interests**

The authors declare no competing interests.

### **7. References**

- [1] Lin Shengnan, Sun Lingfeng. Exploring the optimization of fixed asset management processes in universities under the background of business finance integration [J]. Financial and Accounting Communications, 2021, (22): 122–125.
- [2] Mikersi Study. Latest statistics! Top 100 investment in teaching funds for private universities! Multiple institutions are on par with "Double First Class" [EB/OL]. Baidu, June 19, 2023.  
<https://baijiahao.baidu.com/s?id=1769130617474063089&wfr=spider&for=pc>
- [3] Think Tank for Vocational Education Development. Spending money on vocational colleges: Which of the 31 provinces has the most "trench"? [EB/OL]. Zhihu, August 11, 2023.  
[https://www.sohu.com/a/710899392\\_451178](https://www.sohu.com/a/710899392_451178)
- [4] Hammer M., Champy J. Redesign of the Business [J]. Barcelona, Spain: Parramon, 1994.
- [5] Fossas Olalla M. Information technology in business process reengineering [J]. International Advances in Economic Research, 2000, 6(3): 581–589.
- [6] Janssen M., Joha A. Emerging shared service universities and the service-oriented enterprise: Critical management issues [J]. Strategic Outsourcing: An International Journal, 2008, 1(1): 35–49.
- [7] Wu Yuan, Yu Peifang, Zhuang Wanting, et al. Analysis of the current situation of business finance integration in enterprises from the perspective of financial personnel — Based on questionnaire survey analysis method [J]. Business Accounting, 2019, (16): 104–107.
- [8] Zhang Haiyan. Research on the optimization of financial management processes in universities based on the integration of business and finance [D]. Hebei University of Geosciences, 2019.





- [9] Liu Ruijun, Luo Hui. Exploration of financial informatization construction in universities in the era of big data [J]. *Business Accounting*, 2022, (6): 67–70.
- [10] Jiang Shuhong, Jiang Yimin. Construction of a comprehensive cloud payment service platform for universities under the background of smart campuses [J]. *Friends of Accountants*, 2020, (11): 120–127.
- [11] Liu Yanni. The construction of a framework system for the integration of business and finance in universities [J]. *Research on Education Finance and Accounting*, 2020, 31(4): 69–74.
- [12] Fan Lingling, Guo Xiuguo. Research on the problems and ideas of financial informatization construction in universities from the perspective of business finance integration [J]. *Market Weekly*, 2020, 33(11): 102–104.
- [13] Liang Yong, Gan Shengdao. Reflection on the integration of business and finance in universities under the background of internal control construction [J]. *Financial and Accounting Monthly*, 2018, (13): 51–55.
- [14] Chen Xiaomei, Kang Jianjun. Research on the integration of business and finance into the internal control system of universities [J]. *Business Accounting*, 2021, (16): 57–60.
- [15] Yu Yiqi. Research on the integration of business and finance in universities with comprehensive budget management as the entry point [J]. *Research on Education Finance and Accounting*, 2019, 30(3): 36–38.
- [16] Liang Yong, Gan Shengdao, Huang Ya. Reflection on financial budget management in universities based on the integration of business and finance [J]. *Financial and Accounting Communication*, 2022, (2): 160–165.
- [17] Porter M. E. *Competitive Strategy: Creating and Sustaining Superior Performance* [Z]. New York: Free Press, 1985.
- [18] Shank J. K., Govindarajan V. Strategic cost management: The value chain perspective [J]. *Journal of Management Accounting Research*, 1992, 4.
- [19] Pathak V., Pathak K. Reconfiguring the higher education value chain [J]. *Management in Education*, 2010, 24(4): 166–171.
- [20] Hutaibat K. A. Value chain for strategic management accounting in higher education [J]. *International Journal of Business and Management*, 2011, 6(11): 206.
- [21] Horse Occurrence. Research on the construction and application of a performance evaluation index system for strategic cost management in Chinese universities [J]. *Education and Economy*, 2012, (2): 57–61.
- [22] Hammer M., Champy J. *Reengineering the Corporation: A Manifesto for Business Revolution* [J]. New York: HarperBusiness, 1993.
- [23] Deming W. E. Statistical techniques in industry [J]. *Advanced Management*, 1953, 18(11): 8–12.
- [24] Hammer M. *Handbook on Business Process Management 1: Introduction, Methods, and Information Systems* [M]. Springer, 2014: 3–16.
- [25] Jia Xiaoqiang, Hao Yuxiao, Lu Chuang. *Intelligent Upgrade of Financial Sharing — Deep Integration of Industry, Finance, and Taxation* [M]. Beijing: People's Posts and Telecommunications Press, 2020: 5–10.