Research on the Construction of Competency System of Intelligent Financial Personnel Under Digital Economy

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Abstract. This paper aims at building an intelligent financial personnel training system that matches the requirements of digital economy and enterprise transformation and upgrading, and uses Delphi method and hierarchical method to build an enterprise intelligent financial personnel competency model, which includes three dimensions and nine elements. The results show that the application ability of automatic tools, intelligent data and intelligent system is an important factor for intelligent financial personnel to be competent for intelligent financial work.

Keywords: Smart Finance · digital economy · Competency model

1 Introduction

At present, in the new stage of China's economic digital, intelligent finance came into being and became the key competitiveness of enterprises. Accounting information plays an important role in serving macro-economic management, supervision, accounting industry management and internal governance of enterprises. Combining digital technology to modernize financial management is a necessary work for enterprises to adapt to internal and external conditions. Manpower is the most important key factor in financial work, and intelligent financial work puts forward higher requirements for financial personnel under the digital economy. A large number of small and medium-sized enterprises' financial management work still stays in the stage of accounting computerization, and the lack of intelligent financial talents in the education stage leads to the shortage of intelligent financial talents and enterprise intelligent finance. Therefore, how to cultivate professional compound talents who can meet the needs of social enterprises and industries, have professional financial accounting knowledge, data mining and decision-making ability is an urgent problem to be considered at present.

2 Current Situation of Intelligent Financial Talents Demand Under Digital Economy

At present, there have been a large number of researches on how to do a good job in intelligent transformation of enterprise organizations under the digital economy. Some scholars believe that "Internet plus financial management" is the top-level design basis of

financial management in the intelligent era [1]. Under the influence of digital economy, the circulation of financial data and the creation of financial value will depend on the information digitalization mechanism [2]. There are also scholars from the theoretical aspects of different economic stages of different financial management innovation, and think that in the era of sharing economy, financial management will be user-oriented, and the application of the Internet is essential [3–5]. Most scholars recognize the great impact of digital economy on financial innovation, and think that financial cloud electronic data mining has a profound impact on accounting practitioners [6]. In the research on the application of digital economy in financial management, financial personnel, as an important humanistic element, have attracted more attention. Some scholars have come to the conclusion that intelligent financial personnel need equal emphasis on "technology + finance" and intelligent financial personnel are scarce competitive resources for large enterprises based on the research on the needs of digital economy [7–9]. Financial personnel under intelligence also need relevant knowledge of statistics and computers, and even some knowledge of management and economics [10]. For example, using big data technology to find laws from massive data, mining value, and then improving the efficiency of capital use, creating maximum value for enterprises on the premise of reasonably controlling financial risks, that is, playing a role in management decision-making innovation through mining data [11].

To sum up, this paper holds that the competency of intelligent financial personnel needs to be good at applying automation tools, intelligent systems and other technologies on the basis of basic financial ability to improve management ability such as financial accounting decision-making. In order to clarify the quality of intelligent financial personnel, the following will build a competency model of intelligent financial personnel to test the importance of each factor through empirical analysis.

3   Construction of Three Models and Empirical Test

In order to construct the competency model of enterprise intelligent financial talents, this paper adopts Delphi method and hierarchical method to confirm the weight of the components of the model through expert scoring. Firstly, combined with the research of Zhou Shouliang, Tang Dapeng (2020), Sharla Cheung and other scholars (2023) and the talent planning of accounting industry (2021–2025), the hierarchical model of intelligent finance system structure is constructed by hierarchical method, which is represented by target layer, standard layer and index layer The target layer A1 is the competency index layer B is the financial ability including the application of accounting standards (B1), the application of auditing standards (B2) and the application of financial management (B3); The index layer C is the technical application ability, including automatic tool application ability (C1), intelligent data application ability (C2) and intelligent system application ability (C3); Indicator level D is personal traits including teamwork (D1), active learning (D2), critical innovation ability (D3).The explanation of the hierarchical model is shown in Table 1 below:

In order to quantify the hierarchical model, it is necessary to compare each index element in pairs to build a judgment matrix. It consults experts on the importance ranking of factor indexes by Delphi method. Firstly, the corresponding expert questionnaire is

Table 1. Competency hierarchy model of intelligent financial personnel

Competency of intelligent financial personnel (A)	First-class index	Secondary index
	Financial capacity (B)	Application ability of financial management (B1)
		Ability to apply auditing standards (B2)
		Ability to apply accounting standards (B3)
	Technical application ability (C)	Automatic tool application ability (C1)
		Intelligent data application ability (C2)
		Application ability of intelligent system (C3)
	Personal traits (D)	Critical innovation ability (D1)
		Active learning ability (D2)
		Teamwork ability (D3)

designed, and the enterprises in the university area where the author is located are taken as the survey scope. The survey objects mainly cover financial direction, experts and scholars, enterprise intelligent business leaders and accounting leaders. 20 valid questionnaires were collected to evaluate the competency of intelligent financial talents according to the indicators. Finally, the judgment matrix of indexes at all levels is formed (Table 2, Table 3, Table 4, Table 5).

In the calculation of the model, the consistency of each element vector and feature with the test judgment matrix is obtained, and the consistency test results of each level judgment matrix are qualified as shown in Table 6.

Table 2. Judgment matrix of competency index of intelligent financial personnel

Indicators	Financial capacity	Technology application	Personal traits	Weight
Financial capacity	1	1/3	4	0.2676
Technology application	3	1	5	0.5177
Personal traits	1/4	1/5	1	0.2147

Table 3. Judgment matrix of financial ability index

B	Financial management	Auditing standards	Accounting standards	Weight
Financial management	1	5	1/2	0.0563
Auditing standards	1/5	1	1/5	0.0696
Accounting standards	2	5	1	0.1418

Table 4. Judgment matrix of technical application index

C	Automatic tool	Intelligent data	Intelligent system	Weight
Automatic tool	1	1/6	1/3	0.0945
Intelligent data	6	1	4	0.1265
Intelligent system	3	1/4	1	0.2967

Table 5. Judgment Matrix of Personality Trait Index

D	Critical innovation	Active learning	Teamwork	Weight
Critical innovation	1	1/3	3	0.0939
Active learning	3	1	5	0.04
Teamwork	1/3	1/5	1	0.0809

Table 6. Consistency test of indicators at different levels

hierarchy	λmax	CR (Consistency)	Judgment criterion	Test result
A-B	3.0536	0.0825	0.1	consistent
Bi	3.0940	0.0516	0.1	
C-Ci	3.0858	0.0516	0.1	
D-Di	3.0246	0.037	0.1	

Finally, the weight of each level index and the comprehensive weight of specific factor index can be obtained by hierarchical calculation. For the convenience of observing the importance of each factor, the ranking results are shown in Table 7.

The survey results show that experts' opinions on the competency elements of intelligent financial talents in the application of intelligent data applications and automatic tools

Table 7. Ranking of comprehensive weights of competency elements of intelligent financial personnel

First-class index	Weight	Secondary index	Weight	Comprehensive weight	sort
B	0.2676	B1	0.0563	0.0151	8
		B2	0.0696	0.0186	6
		B3	0.1418	0.0379	4
C	0.5177	C1	0.0945	0.0489	3
		C2	0.1265	0.0655	2
		C3	0.2967	0.1536	1
D	0.2147	D1	0.0939	0.0202	5
		D2	0.04	0.0086	9
		D3	0.0809	0.0174	7

in intelligent systems are relatively concentrated, that is, technical application ability is the most needed ability of intelligent financial talents, and the proportion of technical application ability is 0.5177, while the application ranking of intelligent systems in technical application ability. Secondly, the proportion of financial ability is 0.2676. In financial ability, the application of accounting standards is the most concerned, followed by auditing standards. At last, there is a low concentration of experts' opinions about the personal traits' weighting of 0.2147 and the financial ability, and the experts think that the critical innovation ability is the most important personal traits of the intelligent financial personnel, the active learning ability.

4 Conclusion

Through the research, it is concluded that the current intelligent financial personnel are the most important in technology application ability, including the application ability of intelligent system, intelligent data and automatic tools. Enterprises should focus on their intelligent technology application ability when recruiting intelligent financial personnel. There are two specific suggestions:

4.1 Colleges and Universities

As the main force of training financial personnel, colleges and universities should make full use of the key contents of courses, especially the courses on intelligent systems, intelligent data automatic tools, to ensure that what students learn is in line with the actual needs of enterprises Strengthening the connection between universities and enterprises through the establishment of practical training bases, such as practice cooperation.

4.2 Enterprises

The enterprise is the one who knows its own business needs best. Through internal training, employees can get started with specific work quickly Specifically, we can start with holding lecture halls, courses and training camps, etc., so that the existing intelligent accountants who have been trained and mature in the enterprise can be lecturers and inherit the knowledge within the enterprise.

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