Research on Competency Evaluation of Accounting Applied Talents

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Abstract—In order to evaluate the competency of accounting applied talents, this paper constructs a competency evaluation model for accounting applied talents based on factor analysis. Firstly, the evaluation index system of accounting applied talents competency is constructed from the four dimensions of learning ability, professional judgment ability, comprehensive management ability and self-discipline ability. Secondly, the data is collected through questionnaires, and the data is descriptively analyzed, validity analyzed and reliability analyzed to determine the validity of the survey data. Finally, based on the results of statistical analysis, the competency evaluation model of accounting applied talents based on factor analysis method is constructed for the different needs of junior, intermediate and senior accounting talents. The research results show that the ability of Chinese accountants is at a good level, but the scores of legal and regulatory professional knowledge ability, operational ability and comprehensive business ability are relatively low. The competency evaluation model of accounting applied talents based on factor analysis method is applicable to the evaluation of competency of different levels of Chinese accounting talents, and it may provide direction for improving the competency of Chinese accounting applied talents.

Keywords—accounting applied talents; competency; evaluation

I. INTRODUCTION

With the continuous development of society and economy, the functions of accountants are also constantly changing. Competency has gradually become a comprehensive indicator to measure whether accountants are competent for actual jobs.[1] Therefore, it is of great significance to scientifically measure the competency of the application-oriented in accounting for enterprises to recruit talents, colleges to cultivate talents, and accountants to improve their comprehensive quality. Requirements on the competence vary due to the different nature of their work. Basic position requires higher learning ability of financial accounting and regulations.

Professional judgment ability in financing, restructuring and other important business is indispensable for intermediate managers, such as the chief financial officer and even the CFO [2]. The comprehensive capability is the most important index to measure the senior managers. This thesis intended to analyze the emphasis of different positions on the ability of accountants, construct the competency model of accounting applicated talents, evaluate the competency scientifically, and provide a reference for accounting professionals to improve their competitiveness.

II. COMPETENCY EVALUATION INDEX SYSTEM OF ACCOUNTING APPLIED TALENTS

By reading literature and conducting research on finance personnel and executives, some indicators affecting the competency were preliminarily confirmed, and then build an evaluation index system for the competency of accounting applicated talents, as shown in TABLE I.

TABLE I.   COMPETENCY EVALUATION INDEX SYSTEM OF ACCOUNTING APPLIED TALENTS

Primary evaluation index	Secondary evaluation index	Three-level evaluation index
Study (S)	Operational capability (S_1)	Financial software (S_{11})
	Professional (S_2)	Financial accounting (S_{21})
		Management accounting (S_{22})
		Audit (S_{23})
	Laws and regulations (S_3)	Accounting principle (S_{31})
		Tax law (S_{32})
		Economic law (S_{33})
Judgment (J)	Basic Judgment (J_1)	Authenticity (J_{11})
	Professional judgment (J_2)	Business transaction (J_{21})
Management (M)	Interpersonal skill (M_1)	Communication and coordination (M_{11})
		Organization and management (M_{12})
	Comprehensive capability (M_2)	Strategy (M_{21})
		Forward-looking perspective (M_{22})
		Outsight (M_{23})
Self-Discipline (D)	Professional ethics (D_1)	Cherish and devote to work (D_{11})
		Honesty and trustworthiness (D_{12})
	The values (D_2)	Law-abiding (D_{21})
		Objective and fair (D_{22})

As can be seen from TABLE I, the competency evaluation index system of application-oriented accounting talents included four first-level evaluation indexes--learning, professional judgment, comprehensive management and self-discipline ability. Learning ability mainly included the basic financial accounting knowledge, the basic operational capabilities of financial software, the adaptability to constantly updated accounting standards and understanding of various laws and regulations [3]. Professional judgment ability mainly referred to the sensitivity to the authenticity of all kinds of business information and economic operations. The comprehensive management capabilities mainly included interpersonal skills based on communication and organizational management, and the comprehensive business ability of strategic thinking and forward-looking observation [4]. Self-discipline ability included basic professional ethics of honesty and trustworthiness, obedience to the law and the values of objective and fair.

III.   CONSTRUCTION OF ACCOUNTING APPLIED TALENTS COMPETENCY MODEL

A. Data Sources

The basic data information was collected by questionnaire. SPSS software was used to sort out and analyze the data collected in the questionnaire [5-6]. And then constructed the competency model for application-oriented in the primary, intermediate and advanced accounting talents.

1) Design the questionnaire

There were three parts in the questionnaire:

a) Basic information of respondents. This part covered four questions, including the working place, the working years, the position department, the position nature and industry, etc., this part was the basis of the whole questionnaire.

b) The four major competencies of accounting talents. This part mainly analyzed the importance of learning, professional judgment, comprehensive management and self-discipline ability.

c) Specific evaluation indexes of accounting competence. This part was divided into four sections. Each section analyzed the importance of the secondary and tertiary indicators under the four dimensions of learning, professional judgment, comprehensive management and self-discipline ability.

The second and third parts of the questionnaire were the key to the entire study [7]. At the same time, respondents can supplement and improve the incomplete and imperfect parts of the questionnaire.

2) Determine the respondent

To ensure the validity, the main research object of this survey was the alumni of northeast petroleum university who are engaged in accounting work [8-9]. In addition, relying on the existing social network of school teachers, questionnaires were distributed to middle and senior managers of some enterprises.

3) Collect the data

According to the content of the questionnaire, the respondents were divided into three groups based on their work positions: primary, intermediate and advanced. The research objects were located in Beijing, Shanghai, Guangdong, Zhejiang, Shandong, Sichuan, Chongqing, Hunan, Xinjiang, Liaoning and Heilongjiang province, which can effectively avoid the impact of regional differences on the questionnaire results. The industries included petrochemical, real estate, manufacturing, service, transportation, catering and clothing, etc., covering most industries, which can eliminate the influence of different industry backgrounds [10].

B. Statistics and analysis of results

572 questionnaires were collected in this survey, and 41 unqualified questionnaires were removed. A total of 531 valid questionnaires were obtained. Among them, 258 were junior positions, 180 were intermediate positions and 93 were senior positions. The results of the questionnaire were analyzed by SPSS 19.0 as follows:

1) Descriptive statistical analysis

TABLE II. WORKING YEARS STATISTICS

Working hours	Frequency	Rate
Less than 3 years	193	36.35%
4-7 years	163	30.70%
8-10 years	116	21.85%
More than 10 years	59	11.1%
Total	531	100%

TABLE III. POSITIONS STATISTICS

Working hours	Frequency	Rate
Accountant and cashier	207	38.98%
Finance director	104	19.59%
Finance manager	122	22.98%
Chief Financial Officer	61	11.49%
General manager	37	6.96%
Total	531	100%

It can be concluded from TABLE II and TABLE III that the majority of the respondents who were engaged in primary jobs was the largest, and the higher the position was, the smaller the number of respondents would be. And the proportion was similar to the working years, which was in line with the normal law. The results ensured the credibility of the results of the questionnaire initially.

2) Reliability analysis

TABLE IV. RELIABILITY ANALYSIS

Category	Cronbach α	Number
Study	0.731	7
Judgment	0.692	2
Management	0.679	5
Self-Discipline	0.704	4
Overall questionnaire	0.653	18

As can be seen from TABLE IV, the Cronbach values of the four dimensions and the overall questionnaire were all greater than 0.6, indicating that the questionnaire data was credible and can be analyzed in the next step.

3) Validity analysis

As can be seen from TABLE V, the load on all four factors was greater than 0.65, indicating that the structural validity of the questionnaire was good and can meet the empirical research standard.

TABLE V. VALIDITY ANALYSIS

	Component			
	S_1	J_2	M_3	D_4
S_{11}	0.904			
S_{21}	0.846			
S_{22}	0.815			
S_{23}	0.768			
S_{31}	0.722			
S_{32}	0.709			
S_{33}	0.673			
J_{11}		0.831		
J_{21}		0.784		
M_{11}			0.942	
M_{12}			0.900	
M_{21}			0.860	
M_{22}			0.793	
M_{23}			0.737	
D_{11}				0.891
D_{12}				0.838
D_{21}				0.785
D_{22}				0.726

C. Construction of accounting applicated talents competency model based on factor analysis

Suitability tests were performed on factor analysis. The test results are shown in TABLE VI. After Kaiser normalized orthogonal rotation, the explained total variance and component score matrix are shown in TABLE VII.

TABLE VI. KMO AND BARTLET'S TEST

KMO Measure of Competency		0.630
Bartlett's Test of Competency	Approx. Chi-Square	17782.860
	Df	136
	Sig.	0.000

TABLE VII. TOTAL VARIANCE EXPLAINED

Component	Initial Eigenvalue			Rotation Sums of Squared loadings		
	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %
1	4.230	29.382	29.382	3.083	28.374	28.374
2	3.483	23.407	52.789	2.693	23.869	52.243
3	2.363	16.902	69.691	2.349	16.839	69.082
4	1.472	12.204	81.895	2.238	12.813	81.895
5	0.873	5.431	87.326			
6	0.241	3.098	90.424			
7	0.634	2.431	92.855			
8	0.615	2.010	94.865			
9	0.446	1.396	94.486			
10	0.342	1.214	95.882			
11	0.301	0.872	97.096			
12	0.147	0.815	97.968			
13	0.129	0.557	98.783			
14	0.064	0.289	99.340			
15	0.048	0.203	99.629			
16	0.025	0.096	99.832			
17	0.011	0.062	99.990			
18	0.002	0.010	100.000			

It can be seen from TABLE VI that the KMO was 0.630, and the approximate chi-square of the Bartlett sphericity test was 17782.860, corresponding to a p-value of 0.000, which passed the significance test and was shown to be suitable for factor analysis. In the factor analysis of application-oriented

accounting talents competency, the four factors with eigenvalues greater than 1 were extracted and their accumulative variance contribution was 81.895%. From TABLE V, the common-factor variance of all the indicators was almost greater than 0.7, indicating that the common factor well reflected the original indicators information. The common factor reflects the information of the original indicator very well. Taking the proportion of the variance contribution of 4 common factors as the weight, the comprehensive score function of the application-oriented accounting talents competency after weighted aggregation is:

$$P = (28.374S + 23.869J + 16.839M + 12.813D)/81.895 \quad (1)$$

For the secondary and tertiary evaluation indexes, the weight in the competency evaluation model was determined by the scores in the questionnaire statistical results.

IV. EVALUATION OF ACCOUNTING APPLIED TALENTS COMPETENCY

After the establishment of the above model, the competency of the investigated object as the research sample was calculated, as shown in TABLE VIII. It is set that the evaluation score of this samples is above 9 points as excellent, 8-9 as good, 7-8 as medium, 6-7 as qualified and below 6 as unqualified. It can be seen from TABLE VIII that the ability varies among different positions. For junior accountants, the abilities were all excellent or good except comprehensive business capabilities. Intermediate and senior accountants were in good or above in each ability, and for senior accountant, the values, comprehensive business and judgment ability have reached excellent. In terms of competency, the comprehensive competency of senior accounting talents was the highest, with a score of 9.03, reaching the excellent level. The competency of junior and intermediate accounting talents was at a good level, with a score of 8.71 and 8.89 respectively. The overall competency score of accounting talents surveyed was 8.84 points, which was at a good level.

It can be concluded from TABLE VIII that the higher the job position is, the stronger the competence of accountant is, indicating that accountant needs to continuously improve their competence to adapt to the responsibilities of senior jobs. The result also showed that the competence of accountants was continuously improved with work experience. On the whole, the competency of all abilities was all above good level, but the scores of the professional knowledge of laws and regulations, operational ability and comprehensive business ability are relatively low, which was the weakness of all accountants at present.

TABLE VIII. COMPETENCY EVALUATION RESULT

	Primary	**Intermediate**	**Senior**	**Overall**
Operational capability	8.94	8.47	8.23	8.61
Professional	8.21	8.74	8.97	8.58
Laws and regulations	8.04	8.39	8.96	8.36
Basic Judgment	8.92	9.15	9.07	9.05
Professional judgment	8.53	8.79	9.14	8.75

Cont. to TABLE VIII				
Interpersonal skill	8.93	8.83	9.01	8.90
Comprehensive capability	7.83	8.45	9.03	8.32
Professional ethics	9.13	8.98	8.74	8.99
The values	9.31	9.28	9.35	9.30
Competency	8.71	8.89	9.03	8.81

V. CONCLUSION

(1) The competency of accounting applied talents is a comprehensive ability system including learning, professional judgment, comprehensive management, and self-discipline ability. However, the accountants on different positions require different emphasis on their ability to work.

(2) The competency evaluation model for accounting applied talents constructed in this paper quantifies the four abilities. It can evaluate their competency more intuitively and provide more convenient evaluation methods for enterprises to recruit talents. It can point out a clearer training plan for talents in colleges and provide a clearer direction for individuals to improve their self-abilities.

(3) Based on the results of the evaluation results, the following measures were proposed to improve the competency of accounting applied talents: 1) Strengthen the study of professional knowledge and relevant laws; 2) Strengthen the cultivation of professional ability; 3) Adhere to the edification of professional ethics; 4) Formulate incentive system.

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