Research on the Countermeasures for the Development of Service Trade Talents along the "the Belt and Road" in the Digital Era

Wenxia Sun[a] , Ying Chen[b]*

[a]724917856@qq.com , [b]Chenjobying@163.com

Shanghai Urban Construction Vocational College college of business administration, Shanghai, China

Abstract. Service trade is an important part of the joint construction of the "the Belt and Road", as well as an important system of international trade competitiveness and national soft power. With the development of the digital economy, China's service trade with countries along the "the Belt and Road" continues to grow, facing many opportunities and challenges for development. To promote the high-quality development of service trade between China and the "the Belt and Road", talent development is the primary task. This research uses expert interviews and questionnaire surveys for research, and uses SPSS. 20 to statistically analyze 1800 data obtained from the survey. It establishes a competency index system for service trade talent positions, which includes 3 primary indicators and 15 secondary indicators.

Keywords: digital economy , "the Belt and Road" , service trade talent , competency

1 Introduction

Data shows that the trade share between China and the countries and regions along the "the Belt and Road" will grow from 25% in 2013 to 33% in 2022, with an average annual growth rate of 8%[1]. In terms of service trade, the share of China and countries and regions along the "the Belt and Road" has also increased to 15% of China's total service trade[2].

However, with the rapid development of digital trade in countries along the "the Belt and Road", the shortage of relevant talents has become prominent. Specifically, the countries along the route have not yet formed a complete and efficient digital trade talent training program, and there is a lack of professional talents with specific digital strategic management, data analysis and mining, cross-border digital marketing and other abilities required for digital trade work[3]. The supply of composite talents is seriously insufficient. At present, most of the talents engaged in digital trade in China have graduated from majors such as international economics and trade, business English, and e-commerce, and their knowledge structure is relatively single, making it difficult to meet the actual development needs. In addition, the development of the economy and the advancement of information technology require digital trade talents to keep up with the times, master higher levels of digital technology and innovation capabilities. However, most countries along the route still have a large supply of low-end talents, limited supply of innovative mid to high end talents and leading talents, and the progress of talent cultivation has always lagged behind the rapid development of digital

IEDM 2024, February 23-25, Kuala Lumpur, Malaysia

DOI 10.4108/eai.23-2-2024.2345940

trade[4]. It is predicted that by 2025, China's talent gaps in artificial intelligence, big data, and cloud computing will reach 5 million, 2.3 million, and 1.5 million respectively[5]. In the new era, in terms of digital trade exchanges between China and countries along the "the Belt and Road", due to the differences in the development level of digital trade among countries along the Belt and Road, China needs to adopt different cooperation methods to expand the trade markets of countries along the Belt and Road, resulting in a sharp increase in demand for professionals who master the economic, cultural, legal and other information of countries along the Road, and further exacerbating the contradiction between supply and demand of digital trade talents[6].

Therefore, in the digital era, the talent gap in service trade that meets the development needs of the era will seriously restrict the development of service trade between China and countries along the "the Belt and Road". Therefore, on the basis of previous studies, it is of great practical significance to study the development of service trade talents along the "the Belt and Road" in the digital era.

2 Construction of talent competency indicators for service trade along the "the Belt and Road" in the digital era

2.1 Literature Review

The "the Belt and Road" initiative has provided new impetus for the development of service trade[7]. With the gradual implementation of the "the Belt and Road" initiative, China's service trade with countries along the Belt and Road will continue to increase, followed by an increase in demand for service trade talents. Meanwhile, as a branch of international trade, service trade places more emphasis on trade service awareness, cross-border e-commerce capabilities, cross-cultural communication skills, technological innovation capabilities, and market development capabilities in terms of talent requirements compared to goods trade and technology trade.

In practice, in the development of service trade between China and the countries along the "the Belt and Road", digital trade rules, digital trade barriers, digital divide, digital governance, digital talent and other issues restrict digital trade and seriously hinder the development of digital trade of the countries along the "the Belt and Road".

The researchers first conducted interviews with professors in the field of human resource management in universities and senior human resource management personnel in service trade enterprises to obtain the competency factors for service trade talent positions in the digital era. The steps for expert interviews are as follows:

First of all, clearly inform the purpose of the expert interview: that is, this interview is hoped to obtain the talent competency factors of service trade along the "the Belt and Road" in the digital era through their own practice or experience of key events from the experts.

Secondly, select interviewees: this research selected five undergraduate service trade professors, five human resource managers of service trade enterprises, and five middle and senior managers of service trade enterprises along the "the Belt and Road" as the experts.

Once again, prepare interview questions: based on the purpose of the interview and the characteristics of the interviewee, the research prepared a series of targeted questions. These questions can guide interviewees to share their experiences and insights, while also delving deeper into their thoughts and perspectives.

Afterwards, there will be a formal interview: the interview will be conducted in a bright, spacious, and quiet environment. During the interview process, the interviewers maintain respect and politeness, and guide the interviewees to share their experiences and insights. And according to the actual progress, the interviewers flexibly adjust the questions to ensure the smooth progress of the interview.

Finally, organize and analyze the interview content: the research classified and coded the interview content, and performed mathematical statistics on the encoded content. According to the statistical results, a two-level indicator system of "the Belt and Road" service trade talent competency in the digital era was formed.

Table 1 . Service Trade Standardization Talent Evaluation Index System

Primary indicators	Secondary indicators	annotate
Basic abilities	Physical health	Healthy body, without any illness
	political literacy	Political stance is correct, and political values are positive and upward
	psychological quality	Psychological health, no psychological problems
	Love and dedication to work	Passionate about the job position, with good professional ethics
Developmental ability	Standard consciousness	The level of understanding and application ability of domestic/international service trade standards, rules, and policies
	Industry knowledge	Professional knowledge and experience in specific service trade industries (such as finance, healthcare, education, etc.)
	International Vision	Relevant personnel have an international perspective and perspective on promoting development
	legal consciousness	Knowledge and application capabilities in areas such as trade regulations, intellectual property law, and contract law
Competitive capability	Ethnic emotional ability	Sensitivity and emotion towards the development and beliefs of different countries/ethnic groups
	Cross cultural communication skills	Using different languages and communicating with people from different countries
	teamwork	Team members divide and collaborate to advance work progress
	Innovative development capability	Using new methods/perspectives to solve problems/promoting the development of things
	Continuous learning ability	Continuously learning and improving oneself according to the needs of things and work
	crisis management capability	Ability to predict, solve, and resolve crisis events
	Digital application capability	Proficiency and application ability in digital tools, platforms, and technologies

Table 1 shows that the competency indicators of the "the Belt and Road" service trade talents in the digital era include three first level indicators and 15 second level indicators.

2.2 Questionnaire preparation and validation

In order to better verify the competency index system of service trade talents this research conducted a questionnaire survey on service trade talents along the "the Belt and Road" on the basis of the establishment of the above indicators, and used SPSS.20 for statistical analysis of the data obtained to verify the scientificity and feasibility of the index system established by the research.

Firstly,initial questionnaire preparation. Using literature analysis method to sort out research literature on the competence of service trade personnel at home and abroad, and extract the competence factors of service trade personnel in the digital era; Using one-on-one interviews with 5 professors majoring in human resource management in universities, we comprehensively understood the job competency factors of service trade talents and extracted possible items and factors for the initial questionnaire. Then we interviewed 8 middle and senior managers of service trade enterprises, compared the interview results at two levels, retained the items with high overlap, classified and analyzed the remaining items, formed the "the Belt and Road" service trade personnel evaluation and development indicator system in the digital era, and then prepared and formed a formal questionnaire. The questionnaire was in the form of a 6-point scale, from "very inconsistent" to "very consistent", and scored 1 to 6 points respectively.

Secondly, initial and Correction. 20 samples were randomly distributed through 5 service trade enterprises along the "the Belt and Road" to conduct a preliminary test of the questionnaire. The main purpose is to screen the items and conduct a preliminary investigation of the questionnaire structure for further revision.

In order to establish more accurate competency indicators for service trade professionals, this research divided respondents into those with average performance and those with excellent performance (distinguishing between the general group and the excellent group based on the year-end performance evaluation results of enterprises in the past three years, with the year-end performance evaluation results being basically qualified, the qualified group are the general group, and the performance evaluation results being good and the excellent group are the excellent group). A total of 120 service trade talents from the "the Belt and Road" service trade enterprises were investigated in this survey, 60 of whom had average performance and 60 had excellent performance.

3 Inspection of competency indicators of service trade talents along the "the Belt and Road" in the digital era

3.1 Descriptive statistical analysis of data

This topic conducted a questionnaire survey on the evaluation indicators of standardized talents in service trade along the "the Belt and Road" in the digital era, and investigated 160 service trade talents from 30 service trade enterprises along the "the Belt and Road". There are three primary indicators, 15 secondary indicators, and a total of 1800 data points involved.

According to SPSS. 20 analysis, the results showed that KMO=0.944, Cronbache·s Alpha=0.974, these two data means the reliability and validity of the survey data were relatively high, indicating that further factor analysis can be conducted.

Table 2 Descriptive Analysis of Survey Data

	Mean		Std. Deviation	Variance	Skewness		Kurtosis	
	Statistic	Std. Error	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Physical health	4.3938	.09429	1.19273	1.423	-.263	.192	-1.189	.381
political literacy	4.0688	.07685	.97207	.945	-.389	.192	-.994	.381
psychological quality	4.0875	.08568	1.08383	1.175	-.176	.192	-1.128	.381
Love and dedication to work	4.4500	.08902	1.12602	1.268	-.449	.192	-.881	.381
Standard consciousness	4.3938	.09429	1.19273	1.423	-.263	.192	-1.189	.381
Industry knowledge	4.3938	.09429	1.19273	1.423	-.263	.192	-1.189	.381
legal consciousness	4.3938	.09429	1.19273	1.423	-.263	.192	-1.189	.381
International Vision	3.9625	.08121	1.02722	1.055	-.030	.192	-1.029	.381
Ethnic emotional ability	4.3938	.09429	1.19273	1.423	-.263	.192	-1.189	.381
Cross-cultural communication skills	4.0750	.08576	1.08477	1.177	-.420	.192	-.893	.381
teamwork	4.1125	.08504	1.07567	1.157	-.135	.192	-.931	.381
Continuous-learning ability	4.3688	.09326	1.17961	1.391	-.379	.192	-.994	.381
Crisis-management capability	4.2937	.09111	1.15250	1.328	-.271	.192	-.973	.381
Innovative development capability	4.2250	.08996	1.13797	1.295	-.194	.192	-1.003	.381
Digital-application capability	4.3938	.09429	1.19273	1.423	-.263	.192	-1.189	.381

Table 2 shows that the average values of the 15 indicators involved in the survey range from 3.9625 to 4.4500, with a standard deviation between 0.97207 and 1.19273. The difference between the data is significant and statistically significant. Meanwhile, Table 4 shows that the Skewness values of the survey data range from -0.030 to -0.420, with a negative skewed distribution. The kurtosis values of the survey data range from -0.881 to -1.189, and the data partitioning curve is relatively flat. The absolute peak values of the data for the other 15 indicators are all less than 10, and the absolute Skewness value is less than 3. So, the data from this survey basically follows a normal distribution.

This indicates the data obtained from this survey has a low degree of dispersion between them, and the overall data stability and reliability are good. This lays a solid foundation for subsequent data analysis and provides feasibility.

3.2 Independent sample t-test for research data

In order to better distinguish the performance and difference between the general group and the excellent group of service trade talents in terms of job competency indicators, the "the Belt and Road" service trade standard talent evaluation indicator system in the digital era is established. This topic conducts independent sample T test on the two groups of data on the basis of grouping the survey data.

Table 3 . Data Description and Statistics for the General and Excellent Performance Groups

	Group	N	Mean	Std. Deviation	Std. Error Mean
Industry knowledge	1	60	3.4667	1.14191	.14742
	2	60	4.9667	.91996	.11877
Standard consciousness	1	60	3.2500	.89490	.11553
	2	60	4.5000	.56748	.07326
Love-dedication to work	1	60	3.2500	1.00212	.12937
	2	60	4.5333	.81233	.10487
psychological quality	1	60	3.9333	1.35129	.17445
	2	60	4.8000	.89821	.11596
political literacy	1	60	3.4667	1.14191	.14742
	2	60	4.9667	.91996	.11877
Physical health	1	60	3.4667	1.14191	.14742
	2	60	4.9667	.91996	.11877
legal consciousness	1	60	3.4667	1.14191	.14742
	2	60	4.9667	.91996	.11877
International Vision	1	60	3.2000	.83969	.10840
	2	60	4.2667	.73338	.09468
Ethnic emotional ability	1	60	3.4667	1.14191	.14742
	2	60	4.9667	.91996	.11877
Cross-cultural communication skills	1	60	3.1667	.78474	.10131
	2	60	4.5167	1.01667	.13125
teamwork	1	60	3.2000	.89821	.11596
	2	60	4.7667	.74485	.09616
Continuous-learning ability	1	60	3.1667	.80605	.10406
	2	60	5.1667	.71702	.09257
Crisis-management capability	1	60	3.4167	1.21141	.15639
	2	60	5.0000	.71307	.09206
Innovative-development capability	1	60	3.4667	1.14191	.14742
	2	60	4.9667	.91996	.11877
Digital-application capability	1	60	3.2167	.95831	.12372
	2	60	4.9833	.79173	.10221

Table 3 statistical data shows that in terms of mean and standard deviation, the excellent group data is significantly higher than the general group data, and in terms of standard error value, the general group is higher than the excellent group. This indicates that the service trade talent evaluation index established in this study is scientific and feasible.

Table 4 T-test data for excellent and general sample groups

Levene's Test for Equality of Variances		t-test for Equality of Means						
F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
							Lower	Upper
2.584	.111	-7.924	118	.000	-1.50000	.18931	-1.87488	-1.12512
		-7.924	112.887	.000	-1.50000	.18931	-1.87506	-1.12494
2.386	.125	-9.137	118	.000	-1.25000	.13680	-1.52090	-.97910
		-9.137	99.845	.000	-1.25000	.13680	-1.52142	-.97858
.004	.950	-7.706	118	.000	-1.28333	.16654	-1.61313	-.95354
		-7.706	113.155	.000	-1.28333	.16654	-1.61327	-.95339

28.081	.000	-4.137	118	.000	-.86667	.20947	-1.28148	-.45185
		-4.137	102.621	.000	-.86667	.20947	-1.28213	-.45121
2.584	.111	-7.924	118	.000	-1.50000	.18931	-1.87488	-1.12512
		-7.924	112.887	.000	-1.50000	.18931	-1.87506	-1.12494
2.584	.111	-7.924	118	.000	-1.50000	.18931	-1.87488	-1.12512
		-7.924	112.887	.000	-1.50000	.18931	-1.87506	-1.12494
2.584	.111	-7.924	118	.000	-1.50000	.18931	-1.87488	-1.12512
		-7.924	112.887	.000	-1.50000	.18931	-1.87506	-1.12494
.001	.981	-7.411	118	.000	-1.06667	.14393	-1.35169	-.78165
		-7.411	115.902	.000	-1.06667	.14393	-1.35174	-.78159
2.584	.111	-7.924	118	.000	-1.50000	.18931	-1.87488	-1.12512
		-7.924	112.887	.000	-1.50000	.18931	-1.87506	-1.12494
4.165	.044	-8.142	118	.000	-1.35000	.16580	-1.67833	-1.02167
		-8.142	110.886	.000	-1.35000	.16580	-1.67855	-1.02145
.042	.838	-10.400	118	.000	-1.56667	.15064	-1.86498	-1.26835
		-10.400	114.093	.000	-1.56667	.15064	-1.86508	-1.26825
.092	.762	-14.360	118	.000	-2.00000	.13927	-2.27580	-1.72420
		-14.360	116.420	.000	-2.00000	.13927	-2.27584	-1.72416
15.593	.000	-8.725	118	.000	-1.58333	.18147	-1.94270	-1.22396
		-8.725	95.503	.000	-1.58333	.18147	-1.94358	-1.22308
2.584	.111	-7.924	118	.000	-1.50000	.18931	-1.87488	-1.12512
		-7.924	112.887	.000	-1.50000	.18931	-1.87506	-1.12494
.583	.447	-11.009	118	.000	-1.76667	.16048	-2.08446	-1.44888
		-11.009	113.944	.000	-1.76667	.16048	-2.08457	-1.44876

Table 4 shows that the Levene's Test for Equality of Variations has an F-value ranging from 0.001 to 28.081, with a significant difference in data values and a relatively high degree of inter group variation. This supports the grouping criteria and hypothesis for the excellent and general groups in this study. The Levene's Test for Equality of Variations sig ranges from 0.000 to 0.981, indicating the singularity of the data variance and the consistency of the dispersion characteristics between the general and excellent groups. Sig (2-tailed)=0.000<0.05, indicating that the difference in data between the general group and the excellent group is due to the true differences in the data itself, rather than randomness, which once again proves the scientific and feasible grouping of this study.

The lower and upper limits of the 95% confidence interval of the Difference are both negative, indicating that the difference between the two groups (excellent group and general group) is statistically significant and negative, means that the average value of the general group is lower than the average value of the excellent group.

4 Countermeasures for the development of service trade talents along the "the Belt and Road" in the digital era

In order to better promote the development of service trade talents, this research proposes the following countermeasures to promote the development of service trade talents along the "the Belt and Road" in the digital era in accordance with the competency indicators of service trade talents.

4.1Strengthen standardized education and training.

The government or relevant training institutions can establish specialized standardization courses to train talents in the field of service trade in their understanding and application abilities of standardization. At the same time, regular standardization training courses can be held to improve the standardization level of existing practitioners. Enterprises can regularly send service personnel to participate in training and assess those who participate in the training. Those who pass the assessment can receive corresponding rewards or job promotions, in order to motivate the progress and development of service trade talents.

4.2Strengthen national exchanges and cooperation

Service trade enterprises can actively participate in the activities of the International Organization for Standardization, understand the latest developments and trends in international standardization, strengthen exchanges and cooperation with other countries and regions, jointly promote the establishment of service trade standardization, and promote service trade enterprises and international development to maintain the same pace. In the construction of service trade standardization talents, service trade enterprises actively learn from international service trade standardization talent training strategies and methods.

4.3Establish school enterprise cooperation and strengthen the construction of standardized talents in service trade

The service trade enterprises along the "the Belt and Road" can cooperate with schools at different educational levels to establish a school enterprise cooperation system.

Firstly,Schools and enterprises jointly participate in the student training program, combining the professional learning of college students with the actual development needs of service enterprises, and optimizing the talent training program for college students.

Secondly,the schools can arrange students to visit relevant enterprises for learning during their school years. Schools and enterprises can arrange for students to visit and learn about the corporate culture, development systems, work content, and requirements of service enterprises based on their learning progress. It can cultivate students' awareness and understanding of the enterprise, as well as their emotions and love for the enterprise, laying the foundation for establishing an excellent talent pool for the enterprise.

Thirdly,the school hires corporate lecturers to teach professional content at the school. In response to the learning requirements of students in professional content, it is possible to hire full-time personnel with rich practical experience from enterprises to teach students practical content at school, in order to improve the effectiveness and interest of student learning.

Lastly, the schools can arrange students to intern at designated positions in enterprises. The school can arrange for students to intern at corresponding enterprises in the first half of their senior year, allowing them to comprehensively and systematically learn the standardized content of service trade, and incorporate it into the student training plan, giving students corresponding credits.

5 Conclusions

This research uses the literature research method, SPSS. 20 and other methods to analyze 1800 data, and establishes a quantitative competency index system for service trade talents along the "the Belt and Road" in the digital era. The index system includes three major first level indicators and 15 second level indicators, which is highly scientific and practical. The implementation and application of this indicator can promote the development of China's service trade talents along the "the Belt and Road" in the new era.

Acknowledgment. This research is supported by" Research on the development of standardized talent assessment of service trade along the ‘the Belt and Road’ in the digital era" (NO:FMBZH-2307).

References

[1]Shi Weina, Liu Fan. Promoting the high-quality development of the "the Belt and Road" service trade [J]. Macroeconomic Research. 2022 (11): 12-15.

[2]Li Qiuyi, Xu Yan, Zhang Xiaohua. Digital Service Trade Barriers Faced by China: Typical Examples, Causes, and Response Strategies [J]. Price Monthly.2023(2): 89-93.

[3]TadesseB,WhiteR.Does Cultural Distance Hinder Trade in Goods?A Comparative Study of Niche OECD Member Nations[J].Open Economics Review,2010,21(2):237-261.

[4]KimuraF,LeeHH.The Gravity Equation in International Trade in Service [J].Review of World Economics,2006,142(1):92-121.

[5]Wang Yizhi. Opportunities and Challenges of the "the Belt and Road" [M]. Beijing: People's Publishing House, 2021: 4.

[6]Zhang Gengqing Research on the "the Belt and Road" service trade innovation talent training system - based on the "five links" perspective. [J]. Journal of Xiamen City Vocational College. 2022 (7): 18-22.

[7]Zeng Xuemei Analysis of cross-border digital talent training mode under the "the Belt and Road" initiative [J]. Talent training. 2023 (10) 89-91.