



Research on the Cultivation Path of Craftsmanship Spirit among Laborers Based on IPA Analysis Method

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Abstract. The craftsmanship spirit is a crucial quality for laborers, playing a vital role in boosting productivity and fostering high-quality economic development. This study assesses the importance and satisfaction levels regarding work quality and career pursuits among frontline workers of the "Chuanzi Hao" labor service brand through a questionnaire survey. Using IPA analysis, we delve into the current state of cultivating craftsmanship spirit. Findings reveal that workers prioritize work quality due to its direct correlation with compensation and industry standards. Additionally, their endurance and diligence ensure high-quality work. However, workers perceive career pursuits as less crucial, resulting in lower self-evaluation satisfaction due to insufficient recognition, hindering the development of craftsmanship spirit. Suggestions are proposed to enhance the brand impact of labor service brands, refine laborers' concepts, promote skill improvement, guide work value transformation, and enhance overall craftsmanship spirit cultivation effectiveness.

Keywords: Craftsmanship spirit; IPA analysis method; labor service brand; cultivation path

1 INTRODUCTION

On November 24, 2020, during the National Commendation Conference for Role Models in Labor and Advanced Workers, Xi Jinping emphasized that the core of craftsmanship spirit lies in "perseverance, dedication to excellence, meticulousness, and pursuit of perfection." However, traditional craftsmanship spirit faces challenges amidst the process of modernization, with industrialization and market competition gradually causing its decline. Therefore, the urgent issue of how to cultivate a craftsmanship spirit that meets the requirements of the times while preserving traditional characteristics has emerged.

With the globalization and transition of the market economy, characteristic labor service brands have become a significant force in promoting the internationalization of Chinese traditional crafts and culture. This paper focuses on the first batch of "Chuanzi Hao" characteristic labor service brands to explore their experiences and challenges in cultivating craftsmanship spirit. Through analyzing their practices, it delves into meth-

ods of strengthening and inheriting craftsmanship spirit amidst the pressures of modernization. This not only assists characteristic labor service brands in addressing contemporary challenges but also provides valuable insights for the sustainable development of Chinese traditional crafts.

2 LITERATURE REVIEW

Currently, research on labor service brands primarily focuses on conceptual definition, value assessment, significance of roles, and constraining factors. In terms of conceptual definition, Wang Yimin et al. [1] pointed out that a labor service brand refers to a brand that gains high visibility and good reputation in the labor service field of another region due to specific occupations, superb skills, and positive work attitudes possessed by labor service providers in a certain region, thereby bringing significant economic benefits. Additionally, Tian Botao et al. [2] found that labor service brands play a crucial role in employment absorption, skills improvement, and income increase based on the development process of labor service brand construction in Xiangyang, Hubei Province. Xu Ming [3] identified key factors constraining local labor service brand construction in Jilin Province, including low quality of human resources, inadequate occupational skill content, insufficient utilization of industrial resources, intense competition in the employment environment, imperfect industry association supervision, and inadequate output security system. Zhang Junming [4] proposed a comprehensive evaluation model for assessing the value of labor service brands, exemplified by "Qianjiang Tailor," considering regional and industry values.

Regarding craftsmanship spirit, many scholars have analyzed its connotations under new circumstances [5]. Craftsmanship spirit is seen as a crucial carrier for inheriting China's outstanding cultural genes, promoting self-reliance in science and technology, and cultivating high-quality industrial workers in the new era. Scholars have extensively discussed the practical implications of craftsmanship spirit. An et al. [6] found that craftsmanship spirit can foster employees' dual innovation behaviors. Bai et al. [7] highlighted its significant positive impact on enhancing organizational innovation atmosphere and employees' psychological contracts in advanced manufacturing enterprises. Li et al. [8] discovered that craftsmanship spirit can enhance employees' job satisfaction. Ma [9] identified a close correlation between the lack of core competitiveness in China's manufacturing industry and the prolonged neglect of craftsmanship spirit, emphasizing the importance of its cultivation. Qing [10] et al. analyzed the constraining factors of craftsmanship spirit cultivation and proposed specific cultivation paths, utilizing Chinese vocational college students as research subjects. Overall, current research on craftsmanship spirit primarily focuses on theoretical analyses, emphasizing the impact and constraints of objective factors on its cultivation. Generally, related research is still in its early stages, with limited focus on laborers themselves, primarily centered on laborers' self-perception.

3 RESEARCH DESIGN

3.1 Design of Craftsmanship Evaluation Index System

Based on literature review and interviews with subjects, this paper constructs a craftsmanship evaluation index system, as detailed in Table 1.

Table 1. Evaluation Index System of Craftsmanship Spirit.

Primary Index	Secondary Index
A. Personal Growth	A1. Continuously explore potential at work. A2. Continuously improve job performance. A3. Continuously enhance work skills. A4. Continuously enhance professional expertise.
B. Responsibility	B1. Take responsibility for completed work B2. View work as a responsibility and commitment. B3. Approach work with rigor. B4. Quality completion of work is one's duty.
C. Pursuit of Excellence	C1. Strive for perfection in work details. C2. Continuously brainstorm better ways to complete work. C3. Make efforts to avoid defects or shortcomings in work. C4. Set higher work standards than organization requirements.
D. Esteem Reputation	D1. Feel ashamed if work is poorly done. D2. Work quality affects personal reputation. D3. Let others know when a task is completed by oneself. D4. Work quality reflects character.
E. Firm Dedication	E1. Not anxious for immediate results in the short term. E2. Devote life to producing quality work. E3. Adhere to personal standards, uninfluenced by external factors. E4. View work as a career, not just a means of earning money.

3.2 Data Source and Questionnaire Testing

In 2021, Sichuan Provincial Department of Human Resources and Social Security identified "Sichuan Brand" characteristic labor service brands across agriculture, services, and construction industries. Samples were selected from different sectors in the province's five major economic zones. 1002 questionnaires were distributed online and offline to practitioners, resulting in 832 valid responses, an 83% response rate.

The reliability and validity of the questionnaire were examined. Cronbach's Alpha coefficients for questionnaire importance and satisfaction were 0.987 and 0.99, respectively. The Kaiser-Meyer-Olkin (KMO) value was 0.981, indicating strong reliability and validity.

4 RESEARCH RESULTS

4.1 Analysis of Sample Demographics

As shown in Table 2, Among the participants, females account for about 62.1%, reflecting the prevalence of female employees across multiple service industry brands surveyed. Individuals aged between 33 and 52 constitute over 60% of the labor force, indicating a predominantly middle-aged sample. Regarding educational attainment, approximately 58.6% of respondents have a high school education or lower, suggesting a lower level of education among the labor force. Concerning annual income, about 64.9% of respondents earn an annual income of 50,000 yuan or less, indicating generally low income levels among labor service personnel. Analysis of professional skills data reveals a relatively high proportion of individuals lacking relevant professional qualifications and experience.

Table 2. Basic Information of Labor Force (N=832).

Variable Name	Category	Frequency
Gender	Female	517
	Male	315
Age	53-62	140
	43-52	234
	33-42	272
	23-32	170
	13-22	16
	0	29
	6	190
Years of Education	9	155
	12	114
	15	212
	16	127
	19	5
Obtained Relevant Industry Certification?	NO	537
	Yes	295
Past Year's Annual Income	¥30,000 and below	347
	¥30,000 - ¥50,000	193
	¥50,000 - ¥80,000	153
	¥80,000 - ¥120,000	94
	¥120,000 and above	45
Participated in Skills Competition?	NO	687
	Yes	145

4.2 Exploratory Factor Analysis

Exploratory factor analysis was performed on the 20 indicators to explore the dimensions of craftsmanship spirit. After three rounds of exploratory factor analysis, factor loadings of the 20 indicators ranged from 0.757 to 0.931 after rotation. Two common factors were extracted after maximizing variance rotation, with a cumulative explanatory rate of 86.798%. Based on the characteristics of the observed indicators in each dimension, they were named "Work Quality" and "Work Pursuit". As show in table 3.

Table 3. Results of Factor Analysis on Craftsmanship Spirit Dimensions.

Factor	Indicator	Rotated Factor Loadings	Eigenvalue	Variance Contribution (%)	Cumulative Variance Contribution (%)
Work Quality	A1	0.865	16.25	81.25%	81.25%
	A2	0.895			
	A3	0.902			
	A4	0.907			
	B1	0.919			
	B2	0.93			
	B3	0.924			
	B4	0.916			
	C1	0.898			
	C2	0.931			
	C3	0.904			
	C4	0.901			
Work Pursuit	D1	0.816	1.11	5.55%	86.80%
	D2	0.832			
	D3	0.757			
	D4	0.843			
	E1	0.804			
	E2	0.793			
	E3	0.829			
	E4	0.794			

4.3 Self-evaluation and Importance Analysis of the Labor Force

An analysis of 832 labor practitioners' self-evaluation, detailed in Table 4. Except for factors D1, D2, D3, and E1, which showed poor paired-sample t-test results, the rest were statistically significant. Notably, specific indicators, such as B1, B2, B3, C2, scored a maximum mean value of 4.1. These aspects should be emphasized in cultivating craftsmanship spirit. Additionally, 65% of respondents rated 13 indicators above 4.0, indicating high expectations for these aspects' cultivation.

The evaluation of craftsmanship spirit indicators involves subjective importance and satisfaction assessments of current behavior. When $I-P \geq 0$, it suggests a need for

strengthened cultivation; when $I-P < 0$, satisfaction is indicated. From Table 4, it's evident that the labor force's mean difference in I-P for all evaluation factors is above 0, signifying room for improvement in work quality and pursuit.

Table 4. Analysis Results of Importance, Satisfaction, and IPA Index at the Indicator Level.

Type	Indicator Level	Importance		Satisfaction		I-P	T-test Results
		Mean	SD	Mean	SD		
Work Quality	A1	3.95	0.91	3.61	0.94	0.34	Significant
	A2	4.04	0.82	3.65	0.94	0.39	Significant
	A3	4.06	0.82	3.69	0.92	0.37	Significant
	A4	4.09	0.84	3.68	0.94	0.41	Significant
	B1	4.10	0.84	3.69	0.97	0.41	Significant
	B2	4.10	0.79	3.65	0.94	0.45	Significant
	B3	4.10	0.81	3.71	0.94	0.39	Significant
	B4	4.07	0.83	3.68	0.92	0.39	Significant
	C1	4.06	0.83	3.71	0.94	0.35	Significant
	C2	4.10	0.81	3.63	0.92	0.47	Significant
	C3	4.04	0.81	3.65	0.95	0.39	Significant
	C4	4.08	0.77	3.63	0.95	0.45	Significant
Work Pursuit	D1	3.93	1.02	3.64	0.99	0.29	Insignificant
	D2	3.92	1.01	3.61	1.01	0.31	Insignificant
	D3	3.79	1.12	3.56	1.02	0.23	Insignificant
	D4	3.93	1.02	3.63	1.01	0.30	Significant
	E1	3.96	0.98	3.59	1.02	0.37	Insignificant
	E2	3.93	1.00	3.55	1.01	0.38	Significant
	E3	4.01	0.93	3.62	1.03	0.39	Significant
	E4	4.01	0.97	3.65	1.11	0.36	Significant

4.4 IPA Quadrant Analysis

Using importance and self-evaluation satisfaction as axes, draw a two-dimensional IPA quadrant diagram, as depicted in Figure 1, with the mean importance of 4.58 and mean satisfaction of 3.64 as the quadrant boundary. Label the importance and satisfaction means of the 20 observation indicators (1-4 corresponding to A1-A4, 5-8: B1-B4, 9-12: C1-C4, 13-16: D1-D4, 17-20: E1-E4).

Quadrant I indicates high importance and satisfaction. Indicators include A2, A3, A4, B1, B2, B3, B4, C2, C4. Future efforts should delve deeper into these indicators to enhance work quality, efficiency, and individual growth. Quadrant II represents low importance but high satisfaction, requiring minimal intervention. E4 is the sole indicator, reflecting intrinsic motivation among middle-aged workers considering their work as a lifelong career. Quadrant III shows low importance and satisfaction levels, suggesting minor improvement areas, especially in career pursuits. Indicators include A1,

D1, D2, D3, D4, E1, E2, E3. Addressing this should be a secondary focus in the craftsmanship spirit cultivation. Quadrant IV indicates low importance and satisfaction. Indicators include C1 and C3, demanding focused improvement efforts.

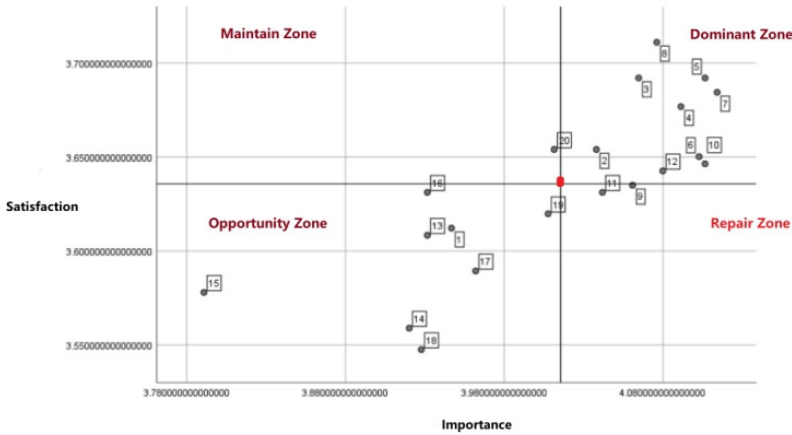


Fig. 1. IPA Quadrant Diagram of Importance-Satisfaction in Cultivation of Craftsmanship Spirit

5 CONCLUSION

Labors emphasizes work quality and expresses satisfaction due to:(1) Dependence on work for livelihood, linking compensation directly to quality, motivating effective performance.(2) The sample, mainly from service and construction sectors, faces heightened quality demands. The service industry requires meticulousness for customer satisfaction, while construction necessitates meeting standards. Thus, there's elevated expectation and satisfaction.(3) Demonstrated resilience and diligence ensure high-quality work and satisfaction. In work pursuits, labors perceive less importance and lower satisfaction due to the belief that labor isn't linked to personal reputation. The quality of work doesn't reflect an individual's character or aspirations, limiting craftsmanship development. Thus, future efforts should focus on improving the work ethics and values of labors.

To boost the cultivation of craftsmanship among workers, consider the following:(1)Utilize labor service branding to improve workforce skills. Labor service brands, focusing on people, offer better job opportunities and higher pay. However, this requires higher skill proficiency. Therefore, labor service branding can drive autonomous skill enhancement.(2) Promote the shift in labors' perception and work values. The current social consensus on craftsmanship spirit is inadequate among the public, resulting in low status for craftsmen and insufficient cultural support. there's a need to enhance awareness of craftsmanship's societal importance, foster a supportive social atmosphere, and integrate craftsmanship values into daily work practices. (3) Enhancing craftsmanship spirit involves tapping into industrial, cultural, and resource assets.

These pillars aid in forming labor groups with practical skills and ample experience, guided by cultural values. Additionally, leveraging the internet's spillover effects addresses knowledge diffusion issues, facilitating the exchange of development experiences across regions and boosting local labor force effectiveness.

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