Analysis of SEM Model for Student Employment Choice in the Era of Big Data

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Abstract:

At present, Zhoushan's natural population growth rate is the lowest in Zhejiang, and the ageing in the province is the most serious. From a macro point of view, Zhoushan has to occupy the advantage in the problem of "graduates stay in Zhoushan" to relieve the pressure and sense of urgency brought by the considerable decline in the natural growth rate and to pave the way for the future from the development vision of the strategy of strengthening the country with talent. This study first the qualitative research, the method of research, using the literature analysis, based on the previous analysis of employment impact factors, through classification, screening and sorting, the following final summary and summary of the following more typical and universal factors: urban factors; Natural factors; employment economy; emotional factors; family economy. Then, this study adopts a quantitative analysis method based on the above five research objectives and factors. This study designs a high correlation with each factor forms a questionnaire through cluster analysis to check the correlation of factors and problems and optimizes and modifies the factor classification and problem set to find out the correlation between five factors and the influence of five factors for Zhoushan students. After that, this study draws the corresponding conclusion, puts forward perfect measures and a more feasible scheme, and establishes the corresponding structure equation model.

Keywords: *college students' employment place choice, structure equation model, factor analysis*

1 INTRODUCTION

At present, with the ageing of the population, the demand for young people in cities is soaring. This supply shortage has triggered a "battle for talent resources" among cities [11]. Then as a labor force with great potential, the regional choice of college students will also be related to the development of a regional economy. With the arrival of intelligent information and network era, information talents have also become the focus of many cities. The material and spiritual guarantee of infrastructure construction, the urbanization level and modernization level of the region and the city itself will also affect the essential factors for graduates to choose employment places to a certain extent. Therefore, this study hopes to explore what factors will affect employment choice under the background of "talent competition".

2 LITERATURE REVIEW

Through the literature analysis method, this study first finds the most critical factors affecting the choice of employment. According to the previous literature, the factors affecting the choice of college students' employment areas are as follows:

2.1 Family emotion

The choice of employment of college students is closely related to their future life. Therefore, family emotion is vital for more college students to return home to work when they choose employment.

Chen Yingming, a professor at Central South University, believes that parents' traditional ideas significantly impact the employment choice of college graduates [3]. Peter Berck and Sofia Tano believe that young adults have the highest migration rates, especially

students and that their location selection affects the regional distribution of human capital, growth, and local public sector budgets [10]. In short, college students belong to the potential labor force, and their choice of employment place is directly related to the future economic development vitality of the city.

2.2 Family economy

The family economic situation significantly influences college students' study experience, ideas, future career planning, etc.

For example, Jennifer Metheny and Ellen Hawley McWhirter argue that the socioeconomic status of families is closely related to the career development outcomes of college students [6]. Xin Bi and Zeng Jiangguo believe that the family's social and economic status can explore employment channels and ways for graduates and provide valuable employment information and a certain degree of economic assistance [2]. These views can lead to the conclusion that the family economy is both the starting point and the final destination of college students' employment. Depending on the family capital, decide where to work and start a business to give back to the family.

2.3 Employment economy

The employment economy includes:

- The city's price level.

- The city's competitive pressure.

- The salary level that the city can provide.

- The attractiveness of the employment policy provided by the local government.

In East Africa, for example, Peter Ainomugisha's research results show that east African governments need to design policies to implement pro-poverty, inclusive growth projects and projects to achieve economic expansion and create more jobs [1]. Michel Okiemy and Sylvaniste Etsiba believe that the informal sector offers more jobs than the formal sector. These results allow us to develop some economic policy implications regarding access to job opportunities and job search channels for Congolese youth [9]. The key to economic development is the appropriate use of the potential labor force. The government can introduce various policies to improve people's employment levels to promote economic development.

2.4 Urban factors

According to the previous literature, the economic level, development prospects, employment opportunities and future life expectations in urban planning greatly influence the choice of employment areas of college students.

2.4.1 Economic level

Gao Huijuan believes that the social and economic situation is an essential factor affecting the employment of college graduates [4]. Li Dazhi and Jiang Xinsheng believe that the level of economic development restricts the total amount and development form of employment [7]. A city's economic level significantly impacts the employment choice of college students, which will affect the future economic income level and quality of life.

2.4.2 Development prospects

According to Liu Xiaohan, Yu Yitong and Guo Ziying, 77.5% of college students in Guangdong Peizheng College will consider the regional development prospects of employment areas. In comparison, 55% of college students in Guangdong Peizheng College think the development prospects are fundamental [8]. The city in the first and second-tier has a special economic status, which effectively promotes and supports the standardization of all walks of life and even nationalization, and has unlimited development prospects, so these regions are beautiful to college students.

2.4.3 Employment opportunities

Liu Xiaohan, Yu Yitong and Guo Ziying pointed out that in the face of the still grim employment situation, the number of employment opportunities is one of the essential factors affecting the choice of employment [8]. In big cities with developed economies and high quality of life, various industries have superior development prospects and broad employment channels, meeting college students' general employment intention.

2.4.4 Expectations for the future of life

He Zhongyu and Zhai Guofang suggested that college students think the more prominent the scale and the more economically developed cities, the more social elites and various opportunities exist, and the more likely they are to realize the ideal life personal values [5]. In terms of the expectations of living standards, most students have high requirements for material living standards.

2.5 The Natural Environment

The natural environment is also included in the selection factors of college students' employment places. Zhang anti-private, Zhou Xiaomeng, believes that the natural environment can affect the flow of workers with undergraduate and graduate degrees between provinces, indicating that college graduates focus on the question of

"whether the target workplace is livable" when finding jobs [12]. Therefore, local governments in various cities should start with building a livable environment, pay attention to the protection of the ecological environment, introduce talents and labor force, and then serve the local economic development.

To sum up, family emotion, family economy, employment economy, natural environment and urban level are closely related to the choice of college students' employment place. So taking Zhoushan as a sample, to study the influencing factors of college students' employment, place selection needs to consider: how can Zhoushan serve as an island city to attract college students to stay in Zhoushan? These problems have a certain degree of practical significance and a strong research value.

3 RESEARCH TARGET QUESTIONS AND ASSUMPTIONS AND RESEARCH METHODS

3.1 Research Questions and research hypotheses

In the context of the population war, cities and regions pay more attention to talent retention. However, Zhoushan does not have much advantage in attracting talents and shows a brain drain trend. Therefore, this study will take Zhoushan City as an example to analyze and explore the factors that college students in Zhoushan will consider when choosing a job. The research team will conduct quantitative and qualitative analysis based on the literature, investigation, and interview methods to find out the influencing factors and the relationship and role between the factors. This way, the team will study relevant factors and the impact of Zhoushan graduates.

The specific assumptions given in this study are as follows:

1. Suppose that urban factors, natural factors, employment economy, emotional factors and family economy respectively affect the willingness of Zhoushan graduates.

2. Suppose a specific correlation exists between urban factors, natural factors, employment economy, emotional factors and family economy.

3.2 Study Method and Scale Selection

Specific according to the previous review, the research scale using Chun-xiao Zhao's "personal will factors" and "green employment will factors" scale and the scale and other scales for fusion [13].

3.3 Statistical Description

3.3.1 Data collection

This study takes college students in Zhoushan City as the research object. Considering the limitations of subjective and objective conditions and the impact of the epidemic situation, the paper and electronic versions were used to conduct a random sampling survey and questionnaire distribution in Zhoushan. The author's team distributed 251 questionnaires, and 223 questionnaires were recovered, with a recovery rate of 88.84%. According to the time the respondents took to fill in the questionnaire, 203 valid questionnaires, after excluding the invalid questionnaires that took less than 120 seconds to answer, had an effective rate of about 81%.

3.3.2 Descriptive statistics

The table of the data collected by the team is as following table1

Table 1. Descriptive statistics of valid samples

Basic personal information	category	frequency	percentage(%)	Cumulative percentage (%)
Gender	male	69	33.99	33.99
	female	134	66.01	100.00
Registered residence	Zhoushan nationality	9	4.43	4.43
	Non Zhoushan nationality	194	95.57	100.00
Grade	Freshman	73	35.96	35.96
	Sophomore	28	13.79	49.75
	Junior	72	35.47	85.22
	Senior	15	7.39	92.61
	First year of master's degree	8	3.94	96.55
	Second year of master's degree	2	0.99	97.54
	Third year of master's degree	1	0.49	98.03
	other	4	1.97	100.00

4 ACTUAL STUDY RESULTS —— STRUCTURAL EQUATION MODEL STUDY CONCLUSION

The factors involved in this study are described by combining subjective judgment and objective data. After sampling, those showing that the standardized regression coefficient was less than 0.6 according to the pretest data were removed, and the subquestions with a high correlation coefficient were retained. Please study the sample individuals to answer the impact of these factors on their employment choice, from 1= strongly disagree to 5= strongly agree.

According to the summary table data of the model regression coefficients, among the effects of the five factors on the boat selection of college students, the P-value of the natural environment and emotional factors is 0.002 and 0.000, respectively. Furthermore, this can show that when choosing an employment city, the two most priority factors to consider and choose are natural environmental factors and family emotional factors. The results are shown in table 2 and table 3.

Table 2. Summary table lattice of the model regression coefficients

Summary table of model regression coefficients					
X→Y	Non-standardized regression coefficients	SE	z (CR)	p	Normalized regression coefficients
Urban factors→College students stay in Zhoushan	-0.196	0.193	-1.015	0.310	-0.136
Natural environment→College students stay in Zhoushan	0.291	0.095	3.059	0.002	0.216
Employment economy→College students stay in Zhoushan	0.019	0.386	0.050	0.960	0.010
Family economics→College students stay in Zhoushan	0.006	0.110	0.054	0.957	0.004
Emotional factors→College students stay in Zhoushan	1.293	0.235	5.508	0.000	0.821

Note: → indicates a regression influence relationship or a measurement relationship

Table 3. Model fitting metrics

Model fitting metrics										
Commonly used metrics	χ^2	df	p	Chi-square degrees of freedom ratio χ^2/df	GFI	RMSEA	RMR	CFI	NFI	NNFI
value	353.644	174	0.000	2.032	0.857	0.071	0.044	0.922	0.859	0.906

We can see that the correlation between the five factors is positively correlated without any reverse changes. The relevant specific data are shown as figure 1 and figure2 below. Below, my team will discuss and analyze the relevant factors.
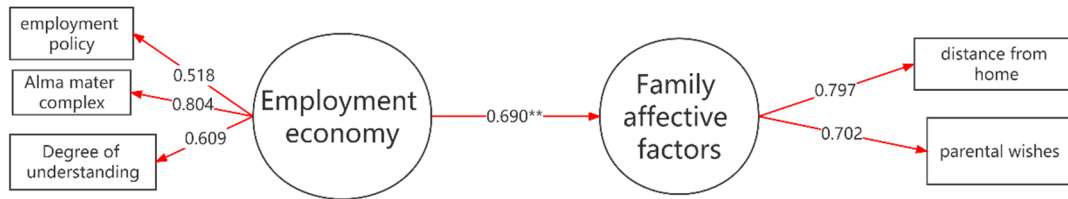
Figure 1. Model diagram of employment economic and emotional factors
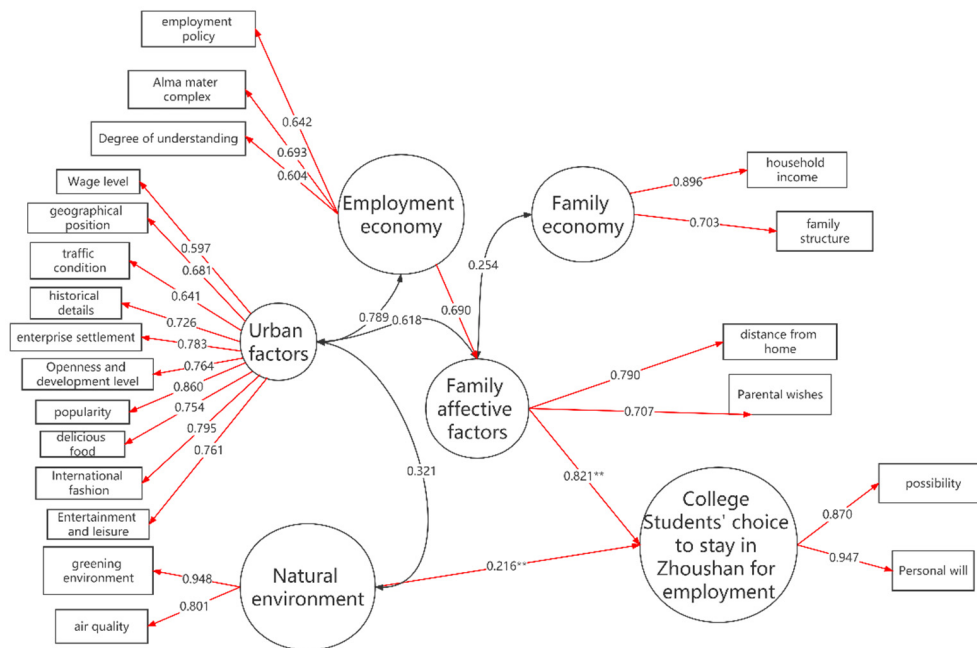
Figure 2. Overall structural equation model diagram

Regarding standard indicators, the degree of freedom ratio, RMSEA, RMR, CFI and NNFI all meet the judgment criteria. Among them, the degree of freedom is 2.032, and the RMSEA is 0.071. The model fit is good, while the GFI and NFI indexes are close to the criteria. It can be seen that the model fit degree of model 1 is good, which can serve to verify the research hypothesis and is very suitable for exploring the problem of this factor analysis.

According to the analysis of the previous model, the research team split the two factors with the highest correlation from the original model; that is, the employment economy has a significant positive impact on the emotional factors. However, the direct effect of the government's employment policy on students is not significant.

5 CONCLUSION

According to the equation model research, questionnaire survey, analysis and empirical research, this research gives the Zhoushan municipal government three ways to strengthen its attraction and retain graduate talents effectively and effectively: natural environment, employment economy and emotional factors.

5.1 An excellent natural environment in Zhoushan will play a positive role in college students who choose to stay in boats for employment

The natural environment is also the foundation of everyone's life, and it is one of the indicators of urban attraction to a certain extent. Zhoushan's air quality and natural environment has significant advantages, but also accompanied by the threat of natural disasters such as summer typhoon, Zhoushan government can be committed to continuing to adhere to the strategy of "the garden city at sea" attach importance to the construction of ecological civilization.

5.2 Whether parents support college students to stay in boats is the most crucial factor for Zhoushan college students in choosing employment places

In this survey, 68.97% of the parents do not want their children to graduate, which is also the research team's purpose, significance and value. The main reason for the low talent attraction of Zhoushan city is that the parents do not want their children to leave after graduation. The reason for this result is that, from the perspective of whether their parents have good relatives and friends living in Zhoushan and have family and social contact, 89.66% of the sample individuals have no relatives and friends settling in residence working in Zhoushan.

5.3 Employment policy publicity should be implemented for parents' parents

This study shows that the employment policy proposed by the Zhoushan government will not significantly impact college students, but these policies will affect parents' judgment of their children's employment place.

In conclusion, this study found that about 70% of students' parents do not want their children to stay in Zhoushan in the future, and this data is consistent with students' willingness to stay in Zhoushan. The most direct way to change this situation is to publicize Zhoushan's employment policy to their families through students. Bringing the manual home to their parents will affect their future employment choices, and a series of policies of the Zhoushan municipal government to attract talents will be promoted and implemented.

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