Using AI to Analyze Relationship between Employment Discrimination and Interview Decision

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Abstract. Employment equality means not only the rational allocation of talents, but also the stability and progress of society. In the process of job-searching, graduates will inevitably be restricted by non objective factors and miss the position they like. Therefore, this paper makes an in-depth study on the relationship between employment discrimination and interview decision. First of all, this paper introduces the background of employment discrimination, and then through literature analysis, selects three factors that exist in the real employment discrimination of college students in the process of job-searching as the research content, which are gender, education level and appearance, and defines the concept of employment discrimination. Next, it makes a comparative study at home and abroad, and analyzes the causes of employment discrimination. Then, the theoretical model suitable for this study is constructed and it uses questionnaire survey to collect first-hand data from college students and enterprise recruiters to explore how employment discrimination factors affect interview decision. Finally, through questionnaire data analysis, three influencing factors, including gender, education level and appearance, are found to have a positive correlation between employment discrimination and interview decision.

1. Introduction

In the past, knowledge, skills, work experience and education level were the key factors for college students to obtain offers. However, it was found that in recent years, a large number of applicants were required to attach photos with their resumes; important tasks for graduates to do before graduation, including makeup skills, and even to improve their external image through cosmetic surgery.

Nowadays, the new graduates are increasing year by year. The employers are in the "buyer" market. Although they break through the discrimination of appearance and gender, the discrimination of academic qualifications is still a difficult problem for college students to change. After all, it is still difficult for enterprises to change the stigmatized label of the working ability of ordinary colleges and universities.

This paper compares the influence deviation of employment discrimination on interview decision-making between college students and employers, so as to help college students understand which factors have a greater impact on interview decision-making, so as to better improve their competitiveness in the interview process. For the recruiters, this study can understand the existing behaviors of employment discrimination in the current enterprise recruitment, which will be more comprehensive and fair in the future selection of talents. Moreover, in the interview process, we can judge the talents' abilities more objectively.
2. Literature review and research hypothesis
There are scenario simulation analysis (Zhang Yan-Mei, 2017) [7] and virtual matching resume (Ge Yu-Hao, et al., 2018) [1] in domestic research and design of employment gender discrimination. In the recruitment process, the interviewers will be influenced by social and cultural traditions, and the decision-making management posts are more male and the internal service posts are more female (Luo Juan, 2018) [5]. Therefore, if the interviewer is influenced by social and cultural traditions, the interview decision-making will also be affected by gender differences. The social demand for women is higher than that for men, and the inequality of employment between men and women has long been an indisputable fact. Although there are clear provisions against discrimination in employment, women are often hindered in the way of job-hunting due to gender reasons.

A high degree does not mean a strong ability to work. A person's ability only depends on his or her education background and cannot be fully reflected. However, due to the oversupply of talents in the employment market, academic qualifications have become the primary screening condition for many enterprise HR in the selection of talents. Xiong Yi-Qing and Lee He-Wei (2010) [6] found, graduates from key colleges in China are more likely to be employed and less likely to suffer from education level discrimination; while graduates from general colleges are more likely to suffer from education level discrimination than those from key colleges and universities.

The first impression effect (also known as the first impression effect) can influence the interviewer's interview decision. Although most of the time appearance has nothing to do with one's ability to work, good appearance plays an important role in social communication. In interpersonal communication, beautiful people are more likely to make friends (Lee Jun-Su, 2008) [2]. According to the survey, 97.2% of the recruiters admit that the "first impression" of the candidates may or will definitely affect their recruitment decision-making (Lu Mei-Yu, 2018) [4]. To a certain extent, it is understandable that the interviewer is more favorable to the good-looking candidate. In general, job seekers with high appearance attractiveness are more likely to be employed than those with low appearance attractiveness (Lee Ying-Wu et al., 2014) [3].

3. Research method
The subjects of this study are college students of different grades in different colleges in Guangzhou, including South China Agricultural University, Guangdong Normal University of technology, Nanfang College of Sun Yat-Sen University, Xinhua College of Sun Yat-Sen University and Guangdong Vocational and Technical College of Science and Technology. In addition, there are interviewers with different recruitment experience in the industry.

4. Research results and findings
Using online and offline questionnaire survey method, 176 student version questionnaires were collected. After checking the collected questionnaires, 19 invalid questionnaires were eliminated (all of them were selected the same option), 157 valid questionnaires were obtained. The effective rate of the questionnaire was 89.2%. In the enterprise version, 61 questionnaires were collected, 7 invalid questionnaires were eliminated, and 54 effective questionnaires were obtained, with an effective rate of 88.5%.

In the questionnaire data analysis for college students, the survey objects are college students of different levels. There are 157 questionnaires, including 55 boys and 102 girls, 22 freshmen, 7 sophomores, 46 juniors, 80 seniors and 2 others. In addition, 49.68% of the samples think that appearance is the most important factor, followed by college level, and finally gender. The inspiration is that college students perceive that appearance will be the factors of interview success, and they think that there is no difference between men and women in gender or education level, and they should be treated equally (see Table 1).
Table 1. College student and enterprise pay attention to the factors of employment discrimination.

| Item          | College Student | Enterprise |
|---------------|-----------------|------------|
| Gender        | 22.93%          | 18.52%     |
| Education Level | 27.39%        | 75.93%     |
| Appearance    | 49.68%          | 5.56%      |

Otherwise, the mean value of appearance factor, gender factor and education level factor are also taken as independent variables, while the mean value of interview decision is taken as dependent variable for stepwise regression analysis. After automatic recognition of the model, the mean value of appearance factor, gender factor and education level factor in the model is 0.693, which means that R-square value is 0.693. The mean value of appearance factor, gender factor and education level factor can explain 69.3% of the change of the mean value of interview decision. Moreover, the model passes F test \(F = 114.983, P = 0.000 < 0.05\), which is enough to show that the model is effective. As for the multiple collinearity test of the model, it is found that all VIF values in the model are less than 5, which means there is no collinearity problem. In addition, D-W value is near the number 2, which indicates that there is no self-relevance in the model, there is no correlation between sample data, and the model is better. Finally, the specific analysis shows that the regression coefficient value of the mean value of appearance factor is 0.287 \(t = 5.206, P = 0.000 < 0.01\), which means that the mean value of appearance factor will have a significant positive impact on the mean value of interview decision. Similarly, the regression coefficient value of the mean value of gender factor is 0.318 \(t = 5.356, P = 0.000 < 0.01\), and the regression coefficient value of the mean value of education level factor is 0.318 \(t = 5.704, P = 0.000 < 0.01\), which means that the average of gender factor and education level factor will have a significant positive impact on the average of interview decision.

According to the survey data of enterprises, there are 25 males and 29 females, 14 in state-owned enterprises, 25 in private enterprises, 3 in foreign enterprises and 12 in other types. There are 13 experienced recruiters, 16 in general and 25 less experienced. 75.93% of the sample of enterprise recruiters think that education level is the most influential factor, followed by gender, and finally appearance (see Table 1).

In addition, the mean value of appearance factor is also used, the mean value of gender factor and the mean value of education level factor are independent variables, while the mean value of interview decision is taken as dependent variable for stepwise regression analysis. Then, there is one remaining mean value of gender factor in the model, with R-square value of 0.261, indicating that the mean value of gender factor can explain the reason of 26.1% change of the mean value of interview decision. Moreover, the model passes F test \(F = 18.355, P = 0.000 < 0.05\), which shows that the model is effective. Otherwise, the multiple collinearity of the model is tested and found that all VIF values in the model are less than 5, which means there is no collinearity problem. At the same time, D-W value is near the number 2, which means that the model has no self-relevance, there is no correlation between the sample data, and the model is good. Finally, the specific analysis shows that the regression coefficient of the mean value of gender factor is 0.511 \(t = 4.284, P = 0.000 < 0.01\), which means that the mean value of gender factor will have a significant positive impact on the mean value of interview decision.

5. Conclusions and suggestions

So far, scholars at home and abroad generally believe that the discrimination in the labor market not only causes the unbalanced allocation of labor resources, leading to the damage of social welfare, but also directly affects the realization of the protection of the legitimate rights and interests of the labor force.

In view of this, this paper studies the relationship between employment discrimination and interview decision. Further investigation and analysis, through the investigation of enterprise interviewers, confirm that employment discrimination does exist with the development of the labor market.
Therefore, the purpose of this paper is to help college students face employment discrimination objectively on the way of job-searching through the data comparison and analysis of college students and enterprises, keep an optimistic attitude and actively obtain employment, at the same time, feed back the unreasonable conditions in the process of talent selection to enterprises, in order to effectively reduce the cost of talent selection and cause unnecessary waste of resources.

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