



Determine The Correlation between Majors and Wages of College Students

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Abstract. Currently in China, more and more college students are not anticipated to choose jobs related to their majors as their future careers after graduation, while they choose jobs with good salaries and welfare. Nowadays, most people's jobs don't match their majors well. This research evaluates the relationship between the matching of the majors and the wages of employees: the potential causation relationships between the factors, the predominant factor that will have greater influence, and the result in a high average salary of high and low matching employees in various occupations. The research uses literature review with supported statistical data on salaries at different levels of matching from data bases and other peer-reviewed papers. The final results of the study miraculously indicate that the average salary of low matching people is often higher than that of high matching employees of different occupations, as some jobs do not strictly require professionalism. Particularly in these occupations, low matching employees have stronger internal drive, which enables them to improve rapidly. In addition, the continuous pursuit of high salary and welfare allows these people to constantly find jobs that better meet their goals, causing their salary to increase as they change their jobs.

Keywords: Wage, Welfare, Matching degree, College students.

1 Introduction:

Looking for a job is the most important thing for a person after graduation, and finding a suitable and satisfactory job is even more important for certain people. There are many criteria for choosing a job: People might choose a favorite job to realize their dream, they might find a job that matches with their university major, or they might long for a job with a good salary and societal welfares. Everyone has different standards while these standards return completely different outcomes. According to one of the two data sets, 65% of college students' employment is primarily based on welfare and salary, whereas another data set shows that only 36.1% of fresh college students' job-hunting is related to their majors [1] [2]. It is concerning on why so many college stu-

dents choose jobs not fitting their suitable majors, but for wages and benefits is a problem worth thinking about, and this leads to the detailed analysis on the relationship between wages and professional matching.

The purpose of investigating this problem on the matching degree between occupation and university major is very significant, as it necessarily the wages for employees and the productivity of employees for employers.

In this research, the method of literature review is used, with analysis on the supporting data. This research presents a clearer understanding and analysis on the employment situation of various industries. The results will help college students to choose better jobs, obtain higher and more satisfactory salaries, while maximize their output efficiencies.

2 The Influence of Professional Matching Degree on Wages:

When it comes to the relationship between wages and matching, people inevitably start to consider from the impact of matching on wages: Different matching degrees can cause the difference in wages, whereas the influences of matching degree are multi-dimensional. First, the most obvious factor to think of is the different majors in university: if the job matches with the major, an employee will have higher proficiency in their own work, and this higher proficiency will allow the employee to excel from other people, which eventually result in a higher total output. No one can deny that one of the biggest factors affecting wages is the work efficiency of the different employees and their work output. For the people whose fields of work are similar to their chosen majors in universities, which is regarded as employees who have a higher matching degree, naturally have high proficiency, considerable work efficiency, and significant output. Within the same industry, these people are more likely to get higher salaries.

Another influencing factor is that some occupations naturally regards a greater importance to the professional matching degree of their employees. These kinds of jobs have certain restrictions or higher expectations on the ability of employees, especially inside the field of the work. If people want to become an employee in these fields or jobs, they must master some specific skills, which can only be learnt inside a few specific majors during college. These occupations have high requirements for the matching of employees, and as a result the wages of such jobs are often very high. This privilege of having a highly paid job is only employees with high professional matching. For example, in certain computer programming industries, only people with high proficiency in electrical engineering and majored in computer science or related areas in universities can engage in this industry. Furthermore, in the field of education, there are many occupations similar to professors, professors who teach other college students in the university. These jobs require different knowledge for different subjects, but they are in common that these professors must have high expertise in their field, especially on the professional knowledge that they teach or research on, which also necessitates a very high matching degree. Moreover, these special jobs have much higher wages and preeminent social statuses. No one can deny that these are great jobs if people can be

entirely engaged since university. In a report under the official account DTcaijing, they refer the data of the National Bureau of statistics and analyze the income of different jobs in China from a macro perspective [3]. The article points out that the annual average income of “information transmission, software and information technology services” is the highest, which can reach approximately 201,000 CNY, equivalent to 16,800 CNY per month before tax. In recent years, whenever high wages are mentioned, information, finance, and technology can never be avoided. In fact, the annual income of the treatment of “health and social work” is also adequately high, whereas the treatment of non-private and private units is the second in rank, even above the three classic high wage industries. However, these jobs are the minorities after all, and most people live an ordinary life with ordinary wages in the more common work fields.

3 The Impact of Salary on Specialty Matching:

However, wages also have certain influences on the matching degree. First of all, as mentioned above, the primary references standards for most college students to choose jobs after graduation are welfare and salary rather than the matching of their major. In other words, some college students will pursue high paying jobs rather than the jobs matching their majors. Therefore, the higher the salary a company posts, the more people will be attracted, with fewer of these people that are highly matched with their majors, because most people aim at salary rather than suitability. The result, surprisingly, indicates that the salary of the job has a negative correlation with the professional matching degree of employees, which means that people with higher salary have less matching degree of major when pursuing jobs. This is because of their difference in the purposes of working. Eventually, from the perspective of wage affecting matching degree, the results give a contrary answer: low matching degree will lead to higher wages.

In addition, as some jobs require special skills and high professional matching, but the others do not require a as high level of proficiency, some employees only need some training before entering. A good match is completely unnecessary for these jobs. If the salary of these jobs is also good, they will attract more people, whose majors do not match and who simply yearn for wages. And they only need a few days of training to be capable of this job.

Finally, another important reason is that those who pursue high salaries and benefits have an internal motivation. In other words, their goal has always been to get a higher salary, which is their internal motivation. They will constantly strive to increase their strength, so that they can improve their ability and productivity faster in a short amount of time compared to the other colleagues, and then get a raise. Although the raise cannot instantly fill up the salary gap with the highly matched employees, it can continually narrow the difference between the income of the two types of employees. E. C. Pointed out in the journal of Becchetti, L., Castriota, S., and Tortia, E. C., intrinsically motivated individuals may be more productive, and as a result, their wages may be higher, rather than lower, than those of their non-intrinsically motivated colleagues [4].

4 Comparison and Results of the Two Kinds of Influences:

According to various other data, low matching often leads to higher wages. First of all, there is no doubt that the impact of wages on matching is more significant than that of matching on wages. To furtherly explain, it is because the enthusiasm of college students for high salary is greater than the impact of professional matching for employees on salary. There is another factor that can further narrow the income gap between skilled employees and novice employees, that is, those employees with low matching degree have a strong internal motivation, so that their productivity and output ability continue to rise, resulting in their rising income. Besides, in the process of people's continuous pursuit of higher wages, their professional matching will continue to decline. Although in the same job, people with high matching degree can get higher salary due to their excellent proficiency, work efficiency and output, those who choose mismatched jobs are able to pursue an even higher salary, although they have lower efficiency and output due to low matching degree, resulting in lower salary than others in the same industry. But their wages will still be higher than what they get when they look for a suitable and matching job. For example, John M. Abowd, Francis Kramarz, Sébastien Pérez-Duarte, & Ian M. Schmutte. have analyzed many models about the relationship between wages and productivity, wages, and various additional factors, and they pointed out sharply that the problem is that none of these papers considers the problem of sorting across versus within industrial sectors [5].

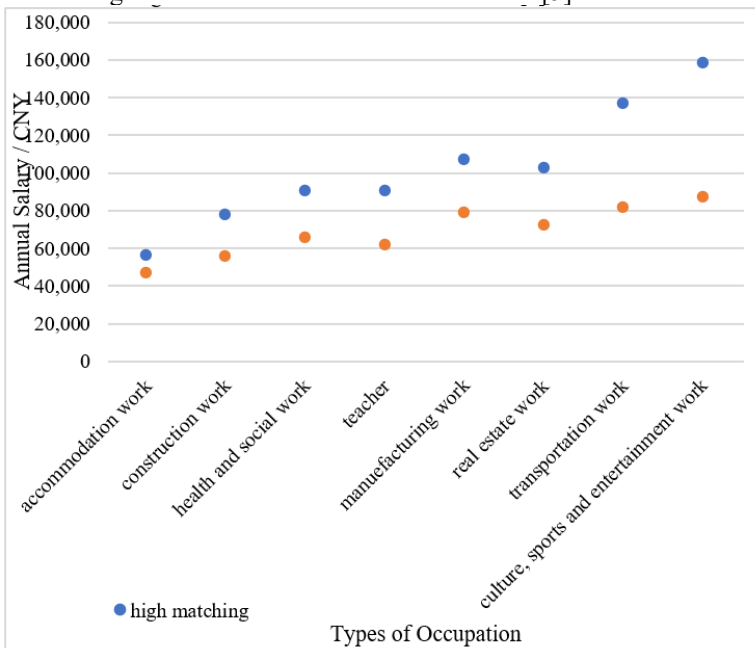


Fig. 1. Wages at Different Degree of Matching in Different Occupations in China

Therefore, as shown in the Figure 1, the income of low matching people will exceed that of high matching people. These data in the table are based on the statistics of commissioner Yang Fan, about China's national average wage in 2021 [6]. In different industries, the low matching salary chosen for this research is based on the salary of the office and related personnel, while the high matching salary is based on the salary of professional and technical personnel. In each job, the salary of high matching is obviously better than the salaries of the low matching, no matter for accommodation work or culture, sports, and entertainment work. However, because those groups of people are only concerned with wages and benefits, but not matching, they rarely choose low-paying jobs as their occupations.

Overall, the number of people who choose low wage jobs is less than that who choose high wage jobs. For example, in the table, the number of people who choose culture, sports and entertainment work may be more than the number of people who choose transportation work, and the number of people who choose accommodation work may be less than other jobs. The discrepancy in the salaries in different fields of occupation is large enough so that the average wage for low matching people is still higher than the wage for high matching in the other fields. In this case, the average income of this group of low matching employees may be higher than that of high matching employees, while some people would choose to endure a lower wage than colleagues in the same field, but a significantly higher wage than the field that they themselves are proficient with.

In view of this phenomenon, problems will inevitably arise. For example, the proficiency of workers is generally declining, although they are getting more paid. To resolve this, the government can increase more detailed pre-employment training to improve the overall ability of employees to increase the total production. In addition, for some companies, it would also be a good idea to change the current salary statistics method, such as breaking the fixed monthly or annual salary of employees, and setting a new salary according to the monthly or annual productivity and output results of different employees. In this way, it can increase the productivity of both high matching employees and low matching employees. Moreover, this will help the company to preserve more proficient employee who are able to produce more and better works for profit. In the case of Safelite Auto Glass installers, switching from hourly wage pay to a piece rate structure had an almost immediate and massive impact, increasing productivity by 44%. The study showed both that changing a compensation scheme could have large effects and that economic theory does well in predicting these outcomes [7]. It is also important to adapt newer and better method of organizing the companies.

5 Conclusion

In a word, there are reasons why most college students choose to work and pay attention to wages and benefits rather than matching. Indeed, for some reasons, the impact of salary on matching degree is greater than that of matching on salary, so the low matching degree will be partly higher than the average salary of high matching workers. This

phenomenon has caused a series of problems, and is likely to cause more problems in the future.

Luckily, there are many solutions to this situation. The most efficient and useful resolution is that the government can prepare specific pre-employment training for the different positions. After training, the proficiency of people with or without professional matching can be greatly improved, and the production capacity and output can be improved, too. The small cost of the training will be able to bring back significant returns. Additionally, an alternative method is to change the standard and way of salary payment and adopt different schemes according to the different situations. For example, the shift from calculating salary according to working hours or fixed monthly salary to determining salary according to production output will allow the company to find out the most proficient worker. More importantly, this will also increase the internal drive of employees and improve production capacity overall.

However, there are still some research gaps and defects in this paper. For example, it is difficult to define the word “matching degree” clearly and quantitatively. The understanding in the text refers to whether the direction and content of finding a job are the same as the contents of the major studied in the University. However, it is difficult to completely distinguish between high matching degree and low matching degree. Moreover, there are potentially some minor connections between some seemingly unrelated careers that could have been ignored by the degree of matching. Furthermore, there are many other interference factors. The correlation relationship is not necessarily causation, as of the confounding factors. It is always unknown whether there are some conditions or favorability of job that could inherently limit the upper and lower boundaries of a certain occupation. In addition, the gathering of the data is also very challenging, because there are few statistics on “high and low matching” salaries, so the research might not be necessarily conclusive.

Although there are certain minor issues, this research still provides a reasonable conclusion of the negative linear correlation between the wages and majors of college students. Focusing on future research, more detailed and multi-perspective data could be gathered through more databases and actual surveys. Moreover, this can be applied for more countries, especially under different economic and political backgrounds. With more research, it is anticipated to find a better way to represent matching, such as quantifying this variable to create a better relationship. This will further assist the understanding of this relationship. These improvements and amendments will guarantee a more conclusive and accurate result regarding this social concern on major and career.

6 Reference

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