

Analysis and Empirical Study of Factors Influencing Undergraduates' Income Level

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Received: December 13, 2010 Accepted: February 14, 2011 doi:10.5539/ass.v7n7p84

Abstract

As the structure of the social economy changes, the employment situation has become more serious, the supply of good quality workers has increased rapidly, the problem of undergraduates' employment has become increasingly obvious and income level has become a core factor in the measurement of the quality of employment. That we do research into, among other factors, undergraduates' income level after graduation provides more realistic basis. In this text, we use Logistic model to take advantage of estimation techniques to analyze the income level and other factors of undergraduates who have graduated within the last ten years. It indicates that the nature of the job, gender, the frequency of changing jobs and English ability have notable effect on the income level of undergraduates. According to the results of analysis, we put forward relevant recommendations and suggestions from the angle of government, the society employer community, higher education and undergraduates.

Keywords: Undergraduates, Income level, Logistic model

Introduction

As the structure of the social economy changes, our country is facing an increasingly serious employment situation. On one hand, supply exceeds demand in the labor market and an overall imbalanced un-employment situation exists. On the other hand, as adjustment of industrial structure, economic structure and the great imbalance in quality structure in supply and demand of labor, structural unemployment has arisen continuously. Since the higher institutions in our country expanded in 1999, most universities have also continuously expanded the total student enrollment and the supply of high-quality workers has increased year by year. Under the background of multiple factors, consequently, the problem of undergraduate employment has become a hot topic in China.

Wang Zongrong insists that it's the imbalance of supply and demand in labor market which leads to the reality of the difficult employment for college graduates, by analyzing the reasons for the problem at present (Wang Zongrong, 2008). Sun Chongyu insists that one of reasons for the problem is that some graduates, with the effect of traditional concept, think too highly of themselves and expect too high in the process of employment. While analyzing the situation in the career expectation of the graduates (Sun Congyu, 2007). Zhu Jian and Yu Jie find that the expectation is high and practical (Zhu Jian & Yu Jie, 2005). Xu Li insists that graduates have high

expectation for the potential opportunities of the career and the positions at present can't meet their needs for the future, which indicates that most people will choose profession again (Xu Li, & Guo Yanjun, 2010).

In most years, there has been much research into the problem of undergraduate employment, but most researches have been aimed at the quantity of employment. Research aimed at the quality of employment is still rare. Income level has become a core factor in the measurement of the quality of employment. Consequently, that we do research into, among other factors, undergraduates' income level after graduation provides some realistic guide.

1. Choice of variables, settlement of statistics and model assumptions

1.1 Choice of variables and model assumptions

1.1.1 Choice of the basis variables

According to the survey and the questionnaire, the annual salary is used to be the measure indicator of the income level of the graduates. Economic development impacts on the income gap through a variety of specific factors. The factors have an effect not only on the growth of economic output, but also the changes of the residents' income, for example, the demographic characteristics of the residents have such properties (Wu Junding, & Yang Wei, & Zhou Yunbo, 2007). The gender difference keeps being an important task in the labor economics. Yang Juhua finds that the income of female is just about 70-80% of males', by the data of "Survey on Health and Nutrition in China" through multi-level model (YangJuhua, 2008). Stability is one of the major factors influencing the income level, and the flowing stability mainly refers to the out-for-woke age limit, the annual out-for-work time and the frequency of job changing (Zhang Yongli, & Yang Zhiquan, 2009). Work experience and foreign language skills are the two factors of the income level, and the foreign language proficiency has greatly improved individual competition ability (<http://www.xinhuanet.com>). According to the needs of research, we selected indicators-gender, age, nature of specialties, categories of schools, English ability, taking part-time jobs or not, frequency of job changing, frequency of on-the-job training and so on as explanatory variable.

1.1.2 Model assumptions

We assume explanatory variables as the explanatory variables of personal basic characteristics, the explanatory variables of educational characteristics, the explanatory variables of quality characteristics and the explanatory variables of work characteristics. Furthermore, we put forward the following hypotheses:

- ① Variables of personal basic characteristics, including age and gender. Supposing they are in direct relationship with income level, gender discrimination in the job market is a common problem facing women across the world. Despite differences in development level and cultural differences among countries, discrimination against the female is an objective fact. The female is at a disadvantage in career prospects (Xiang Dan, 2007). Therefore, it's commonly assumed that the male's income is higher than the female's.
- ② Variables of educational characteristics, including the categories of schools and nature of specialties. In theory, 211project undergraduates have more employment opportunities than undergraduates in other universities and they are more capable, so their income is higher (SuGuihong, Linhong & Liu Ping, 2009; Barbieri RL, Anastos L & Michels KB, 2005). Barbieri finds by observing 15 specialties: annual income is in direct relationship with the proportion of medical college graduates. With more than average income based on process and hospital specialized is most likely in the forefront of the American medical graduates (Barbieri RL, Anastos L & Michels KB, 2005). Therefore, it's assumed that category of the school and the nature of specialties are in direct relationship with income level.
- ③ Quality characteristics variables, including English ability, taking a part-time job or not. We assume that English ability and taking a part-time job or not are in direct, relationship with income level. Nowadays, employment institutions lay great emphasis on English ability, practicable ability and work experience.
- ④ Work characteristics variables, including the frequency of changing job and in-service training as well as the nature of occupations. It's assumed that the frequency of changing jobs and income level have a direct or an inverse relationship and the frequency of in-service training have direct relationship with income level. Normally, the income level of people who receive in-service training is higher than that of people who don't. The income levels of leaders are far higher than that of their staff. Finally, the writer confirms four categories and nine variables. The definition about variables and an anticipated direction that explanatory variables have on explained variables can be seen in table one.(Note 1)

1.2 Model

Based on the above description and analysis, we assume the income level of undergraduates and each influencing factors takes the following function form: $Y=F(X_p, X_e, X_q, X_w)+u$, This research makes use of index Logistic model.

1.3 The source of statistics

These research statistics are obtained from the questionnaires of more than 20 provinces, municipalities, over 300 higher institutions throughout the country in 2010.800 questionnaires were distributed in total and 750 questionnaires were returned. The efficiency of questionnaires was 81.061. After processing the statistics, the average value distribution of variables can be seen from table one.

2. Empirical analysis

2.1 The results of model estimation

This text takes advantage of SPSS17.0 statistical analysis software to carry out the Logistics process. Judging from the operational results of the models, the whole estimation process worked out well. The estimation results can be seen in table 2. (Note 2)

2.2 The analysis of the results of model estimation

2.2.1 The nature of the job and the income of undergraduates have a strong direct relationship. Moreover, below the 1% level is very significant

It can be seen from table 2 that the average contribution rate that the nature of the position has to undergraduate income level is 0.877, when the numerical value increases by one unit. This is in accordance with Su Guihong and Lin Hong's research. That is to say, higher position, greater ability and greater contribution mean higher income level. It is consistent with the reality.

2.2.2 Gender has a great effect on the income of undergraduates

The average contribution rate that gender has to undergraduate income level reaches as high as 0.612, when the numerical value increases by one unit. According to the results of data statistics, men get the highest income while women occupy 80% of the total employment in low-income group. Gender discrimination is widespread in the labor market. This is now beyond dispute. Just as the 2009 China Education Development Report says: As the educational level of Chinese women rises, the income gap between men and women caused by Gender discrimination is narrowing. However, it can't be denied that the phenomenon of mild gender discrimination in the female undergraduate employment prospects are not good.

2.2.3 Taking a part-time job or not, English ability and undergraduate's income have a strong direct relationship and significance level is above 5% and 1%

The average contribution that both of them have to undergraduate income level is 0.598, 0.528 respectively, when the numerical value increases by one unit. Nowadays, employing bodies put great emphasis on personal practicable ability, work experience and English ability. Foreign-funded companies especially attach great importance to English ability. More part-time job experience, greater practicable ability, richer work experience, greater adaptability and greater contribution together correlate with higher income.

2.2.4 Frequency of changing jobs and the income level of undergraduates have a strong direct relationship

This study finds a very interesting phenomenon: frequency of changing jobs and the income level of undergraduates have a strong direct relationship and significance level is below 1%. The average contribution rate that the frequency of changing jobs has to undergraduate income level reaches as high as 0.251, when the numerical value increases by one unit. Changing jobs contributes to the risking of income levels. Especially for undergraduates who graduated after 2003, changing jobs can help them their income level (Weng Jie, Zhou Bihuo, & Han Yixiang, 2008)

2.2.5 The categories of schools, the nature of specialities as well as the frequency of in-service training have a great effect on the income level of undergraduates

There is a positive correction between the three above and the income level of graduates, especially the categories of schools and the nature of specialities, which have a prominent effect on the income level of graduates and have an average contribution rate of 0.456 and 0.266. According to the results of data statistics, graduates from the normal bachelor's degree of architecture and e-commerce have the highest income level, which is up to ¥800, 000 a year. However, graduates from the faculty specialities of language majors and business and management major have the lowest income level, which is ¥10, 000-30.000 a year. Meanwhile,

according to the simple weighed average of the data, graduates from the key bachelor's degree program and the ahead-of-schedule key bachelor's degree program have the highest annual income level, which is ¥76,300, while graduates from faculty specialities have the lowest annual income level, which is ¥38,300.

2.2.6 The age has no significant effect on undergraduate income level

Age variables were not tested. Perhaps, it's because current society is becoming more and more material-minded. The safe job is becoming increasingly rare. Social competition is more and more fierce. What undergraduates depend on is personal ability. Many positions have no age limit. (Su Guihong, Lin, Hong & Liu Ping, 2009)

3. Conclusion

The above empirical analysis indicates that the nature of positions, gender, English ability and taking a part-time job or not have a significant influence on undergraduate income level. Meanwhile, we found an interesting phenomenon. That is to say, frequency of changing jobs and income level has a direct relationship while the age has nothing to do with income level. The rest of the variables have different effects on undergraduate income level.

4. Recommendations and suggestions

4.1 Government should strengthen labor legislation and draw up practical laws to ensure equal opportunities of employment

Eliminating or reducing gender discrimination is one of the contents of achieving the social fairness and justice gradually, stimulating the whole creativity of the whole society and promoting social harmony. Under the influence of women's physiological characteristics and traditional concept of division of labor, gender discrimination exists in the labor market almost universally. Hence, the state should strengthen labor legislation and reinforce the operation of law on the basis of clearly prohibiting gender discrimination. The state should take the lead first, make full use of the mass media to propagate the concept of employment between men and women, bring the government's function into fuller play and reduce the cost of employing female undergraduate. On one hand, welfare system should be set up soon so that the cost of bearing children can be minimized. On the other hand, the state should help companies reduce the cost of employing female workers through tax revenue (Li Jing, 2008).

4.2 The society employer community should establish a correct attitude of talents consumption, eliminate gender discrimination and perfect employment system

Nowadays, some employer communities pursue blue blood blindly and make harsh employing conditions casually. Especially for the female applicants, who are suffered the restrictive conditions such as height, appearance, temperament and so on.

4.3 Higher education should be oriented with the market and shift the modes of personnel training

At present, there are two main forms of unemployment--overall unemployment and structural unemployment. The latter is caused by the industrial and economic restructuring and the serious imbalance of the quality structure of labor supply and demand. One of the concrete manifestation is that professional set-up in colleges can't meet the needs of society. It is not only responsible for the students but also the needs of the development for schools to be oriented with the market and shift the modes of personnel training and to set up reasonable professional structure based on the needs of market.

4.4 Change the concept of employment and improve undergraduates own quality

4.4.1 Change the concept of employment and improve their own quality.

As the labor system changes, higher institutions continuously expand their total student enrollment, enterprises' concept of employing workers changes and the concept of "Expansion of employment opportunities" and "Taking the first job before making a career-directed occupation" dominant employment ideological influence, employment stability of undergraduates continues to decline. Therefore, undergraduates should pursue the concept of a single-minded goal and a stable job, and improve their own quality.

4.4.2 Improve English ability and strengthen their own advantages

4.4.3 Value the cultivation of the leader's ability

Obtaining the chief position ensure a high salary. Undergraduates not only have qualification and technique but also pay attention to fostering a good personality, communication ability, the ability to make decision and so forth.

4.4.4 Be pro-active in pursuit of in-service training and continuously upgrade their knowledge

In-service training promotes employees' adaptability towards the position and greatly helps to increase pay. As the knowledge base in industries grows continuously, you have to remain current in order to obtain in-service training opportunities.

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Notes

Note 1. This is the result of the survey

Note 2. This is the result of the survey

Table 1. The anticipated direction and average value distribution of each influencing factor on the explanatory variables

variable name	variable definition	anticipated direction	average value
explanatory variables	be explained variables	1-5=0, >5=1	0.27
Variables of personal basic characteristics (xp)			
gender	female=0, male=1	+	0.65
age	16-19=1, 20-24=2, 25-29=3, 30-34=4 35-39=5, 40-44=6, 45-49=7, >=50=8	+	2.8
Variables of educational characteristics, (xe)			
categories of schools	Non- Project 211 universities =0, Project 211 universities=1	+	0.39
nature of specialities	three-year program majors =1, majors in a privately-funded university =2 majors in the public university=3, majors in the keys university =4	+	2.69
Quality characteristics variable (xq)			
English ability	level three=1, level four=2, level six and test of English majors four=3, test of English majors six=4	+	2.04
taking a part-time job or not	No=0, Yes=1	+	0.72
Work characteristics variables (xw)			
frequency of changing job	no=0, once=1, twice=2, three times=3, four times=4, over five times=5	+	1.01
frequency of in-service training	No=0, once=1, twice=2, three times=3, over four times=4	+	1.94
nature of occupations	Level employees=1, Local leaders =2, Middle managers=3, unit principal leaders =4	+	1.66

Table 2. The estimation results of graduates income level

Explanatory variable	y	B	Wald	Sig.	Exp(B)
Constant		-6.701	96.186	0.000*	0.001
Variables of personal basic characteristics (xp)					
gender		0.612	6.690	0.010*	0.65
age		0.214	1.553	0.213	1.239
Variables of educational characteristics (xe)					
categories of schools		0.456	3.820	0.051***	1.578
nature of specialities		0.266	4.697	0.030**	1.305
Quality characteristics variable (xq)					
English ability		0.528	10.582	0.001*	1.695
taking a part-time job or not		0.598	5.429	0.020**	1.818
Work characteristics variables (xw)					
frequency of changing job		0.251	9.045	0.003*	1.286
frequency of in-service training		0.155	3.882	0.049**	1.167
nature of occupations		0.877	44.066	0.000*	2.405
forecast accuracy %		78.8			
Log-likelihood values		542.236			
Chi-square test value x2		161.619			
Nagelkerke' R2		0.342			

Note: *, ** and *** mean significance at 1%, 5% and 10% levels resp.

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