
Study on the Influence of Non-cognitive Competence on Job Satisfaction of Post-90s Employees in China

Jia Yao

School of Economics and Management, Zhejiang Sci-Tech University, Hangzhou, China

Email address:

yjpansy@126.com

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Abstract: The post-90s have become the main force of the employees. Their job satisfaction is not only related to their own career development, but also to the future development of enterprises. The objective of this paper is to analyze how non cognitive competence affects job satisfaction of young employees. Based on the Big Five Model, with statistical analysis method, econometric regression analysis method, this study used the China family panel survey data (CFPS) to investigate the impact of post-90s non-cognitive competence on job satisfaction. The results show that non-cognitive competence has a steady and significant impact on post-90s job satisfaction. Neuroticism has a significant negative effect on post-90s employees' job satisfaction. Agreeableness, responsibility and extraversion have a significant positive effect on post-90s job satisfaction. The gender-based analysis shows that neuroticism has the greatest impact on female employees' job satisfaction, and agreeableness has the greatest impact on male employees, which is related to the psychological characteristics of men and women and the main content of work. This study reveals the important value of non-cognitive competence in improving post-90s employee job satisfaction. In the future, schools and organizations should pay attention not only to the cultivation of students' and employees' cognitive competence such as mathematics, language and professional technology, but also more attention to the cultivation of their non-cognitive competence such as emotions and personalities.

Keywords: Post-90s Employees, Job Satisfaction, Non-cognitive Competence, Big Five Model, Panel Data

1. Introduction

A stable and reliable workforce is the cornerstone for the sustainable development of enterprises. Post-90s employees are the core power of enterprises in the future as a large number of them are entering the labor market. A number of surveys revealed that middle and senior managers and HR both love and hate post-90s employees because on one hand, post-90s employees have better professional knowledge and broader world visions, they are new blood in enterprises, but on other hand, they have high turnover rate, which brings new challenges to the development of organizations.

Compared with post-70s and post-80s, post-90s have shorter serving time in one company and higher turnover rate, and a certain proportion of them even resign in the probation period. It has been found by the *China Salary Report 2012* that the turnover rate of post-90s employees reached more than 30%. The survey of ZHILIAN ZhaoPin showed that up to 11.6% of post-90s employees said they had switched jobs

more than five times, and the main reason was that they weren't satisfied with their job. Jack Ma (former chairman of Alibaba) once said that employees resign because of nothing but low salary and the feeling of being wronged. The feeling of being wronged is more about a response of individual non-cognitive competence or psychological characteristics and plays an increasingly important role in job satisfaction and turnover rate of employees, which attracts the attention from the academic and practical circles. According to Maslow's hierarchy of needs, after the low-level needs such as basic survival and safety needs are met due to wage growth, individuals begin to seek the satisfaction of higher-level needs, such as social needs, self-esteem and self-fulfillment needs. For Post-90s employees, they tend to demand the satisfaction of higher-level needs and are more active in their occupations. Therefore, it is crucial for human resources management in modern enterprises to manage post-90s employees scientifically and effectively in order to improve their job satisfaction, so as to retain staff and maintain stability of

workforce.

Compared with the research on the influence of cognitive competence (including reading ability, computing ability, technical skills, etc.) on employee's job satisfaction, the existing studies on the influence of non-cognitive competence on employee's labor market performance yielded much less due to the limitations of data and methods. With the development of personality psychology, psychological economics, experimental economics and other interdisciplines, as well as the progress of research methods and technical means, studying the influence of non-cognitive competence on employee's job satisfaction becomes possible. Post-90s have more diversified values and more psychological activities compared with post-70s and post-80s. And a large number of modern enterprise managers believe that the stable and reliable personality traits of employees are more important than their production skills, and that non-cognitive competence have a more significant influence on the performance of employees. Foreign studies have shown that there is a significant negative correlation between job satisfaction and turnover intention, and thus job satisfaction of employees can be used to predict resignation [1, 2]. Therefore, to promote job satisfaction of post-90s employees has become a key part of enterprise management. In this paper, the influence of non-cognitive competence on job satisfaction of post-90s employees and its mechanism were empirically explored and analyzed based on large sample survey data under the framework of human capital theory, which has important academic and practical significance.

The second part of this paper relates to the literature review of research on post-90s employee characteristics and non-cognitive competence; the third part introduces the data and variables used and model selected; the fourth is empirical analysis, including the statistical analysis of main variables, and the regression analysis, with endogenetic problems treatment; the final part is conclusion.

2. Literature Review

Job satisfaction refers to a person's overall view on his/her work and an attitude or feeling formed under the influence of personal internal factors and external environmental factors [3]. Job satisfaction comprises overall job satisfaction and satisfaction in various dimensions, such as satisfaction with salary and superiors in the company. In this paper, the influence of non-cognitive competence on the overall job satisfaction of post-90s employees was analyzed.

J. Organiz. Behav claimed that employees of different ages have different values towards work [4], as a result of which it is necessary to scientifically improve job satisfaction of post-90s employees with the knowledge of their age characteristics in order to reduce their resignation rate. The characteristics of post-90s fall roughly into two categories: positive and negative based on the existing research.

On the one hand, post-90s have a high knowledge level and strong learning ability since most of them have received higher education, so they have high cognitive competence. As

post-90s grew up in an age of mass information and thus contact with information technology, such as computers and the Internet, at a very young age, they have an open and active mind and are innovative [5], efficient at learning new things and expressing their opinions, and capable of solving problems with innovative thoughts and broader vision. What's more, post-90s have a strong ability to adapt to the changing environment and are willing to take challenges. As post-90s grew up with the rapid change of Chinese economy, society and culture, they have good adaptability when facing the changes in the external environment and far greater ability to accept new things than ever before, and they also prefer challenging work. In addition, post-90s have strong independence ability and pay much attention to high-level spiritual needs [6]. For post-90s who were raised in a family with good economic condition and live in a society with well-developed economy, material incentives become less effective and cannot make them more satisfied. They are more interested in social contact, respect and other spiritual needs. In their work, they hope to be recognized, understood and respected by their superiors and colleagues, emphasize the independence of work and flexibility of working hours, and favor democratic equality in communication and a relaxed and inclusive corporate culture. They work not only to get professional remuneration, but also to achieve life values and ideals.

On the other hand, post-90s are characterized by strong self-consciousness and weak collective consciousness because most of them are the only child and thus self-centered. They always put self needs first in all things, which lead to their low loyalty to enterprises, lack of responsibility and collective consciousness, poor ability to integrate into a team and poor interpersonal relationship. As they tend to ignore other people's feelings and care more for their personal interests and goal achievement at work, and they do not depend on any enterprise, they will leave the company when it cannot enable them to achieve their values. Besides, growing up in a favorable family environment and loved and forgiven by family members, post-90s experienced fewer setbacks, so they have weak stress tolerance capability and poor psychological endurance, and are easy to be overwhelmed in their work. Therefore, faced with setbacks at work, they tend to feel anxious, nervous, impatient, depressed and lonely, which result in low work efficiency and dissatisfaction with work.

In the previous studies, many researchers assumed that it was context factors like work characteristics and environment that determined individual job satisfaction. Under such context view, all people are satisfied with the work as they have the same needs for the same work characteristics and conditions. Therefore, people begin to suspect the view that job satisfaction is only determined by context factors [7]. Researchers believe that the influence of personal factors on job satisfaction deserves attention. The influence of personal factors on job satisfaction stems from the trait of individual stability, which makes individuals pay different degrees of attention to positive and negative events, and thus leads to

differences in individual satisfaction. Stable personality trait is deemed the personal factor that affects people's job satisfaction independent of work characteristics or environment, and psychologists often refer to the stable trait as personality trait [8], while economists often name it as individual's non-cognitive competence.

Compared with economics and management, psychology has studied non-cognitive competence earlier, and usually describes it with the concepts of personality trait or non-intellectual factors, etc. Non-intellectual factors include subjects' interest, persistence in overcoming difficulties, desire to succeed, etc. [9]. Personality trait is a relatively long-lasting pattern that covers thoughts, feelings and behaviors, reflecting the fixed tendency of individuals to respond in a specific way under a particular situation [10]. Economics tends to use non-cognitive competence to represent personal trait variables in existing studies. Economists [11], emphasized the economic values of non-cognitive competence factors such as energy, perseverance, morale, honest and cooperative spirit, can improve labor productivity greatly. Heckman et al. put forward a new human capital theory frame work with "competence", not "education", as the core, classified competence into cognitive competence and non-cognitive competence, and emphasized the significance of non-cognitive competence independent of cognitive competence [12]. Competence was incorporated into Mincer's income determination equation by researchers to further analyze its impact on individual development and the heterogeneity of human capital, and it became the core variable of income determination and labor market performance. The research progress of non-cognitive competence opens the black box between human capital, individual income and labor market performance, giving a deeper analysis of the influence, transmission and function mechanism of individual competence.

The stable and reliable personality of individuals is sometimes more valued by employers than production skills in modern enterprises. Higher education does not mean higher ability, and there are differences in the soft power (mainly referring to non-cognitive competence) of people having the same educational level in employment, which was confirmed by the famous GED project research conducted by Heckman [13]. This research found that compared with cognitive competence such as reading and counting, non-cognitive competence may be more important and will affect the job satisfaction of employees as the investigation of non-cognitive competence can help to judge whether the employees are optimistic and hopeful, and have self-efficacy and endurance, which will affect their feeling towards work.

Psychologists have made great contributions to the measurement of non-cognitive abilities by developing a variety of measurement tools, including Rotter's Internal and External Control Point Scale (1966), Rosenberg's Self-esteem Scale (1965), Big Five Personality Scale, etc., which have been widely recognized by academia and applied in research and practical human resources management.

3. Data, Variables and Model

The data used in this study originate from China Family Panel Study (CFPS) in 2016, which was designed and implemented by the China Social Science Research Center of Peking University. The panel data in 2010, 2012, 2014 and 2016 are available currently with a good track of families and individuals, which cover households and all family members in 25 provinces and autonomous regions in China except Hong Kong, Macao, Taiwan, Xinjiang Uygur Autonomous Region, Tibet Autonomous Region, Qinghai Province, Inner Mongolia Autonomous Region, Ningxia Hui Autonomous Region and Hainan Province, and contain rich micro-variables of family and individual in economy, education, health, demography, sociology, etc., capable of meeting the variable requirements of non-cognitive competence and employee's job satisfaction, and thus supporting the empirical research in this paper.

As this research is aimed to analyze the job satisfaction of post-90s employees, the samples birthed from 1990 to 1999 were selected from the original data of CFPS 2016 which have a total of 33296 individuals (over 15 years old), among which 1930 valid samples of post-90s employees were retained finally with the samples that are still in school at the time of investigation and that lacked of variables needed for this study were removed and the type of "non-farm employees" (i.e. not peasants, self-employed persons, individual businessmen, agricultural workers, non-farm part timers, etc.) were kept.

In this paper, employee's non-cognitive competence was measured based on the widely used Big Five Model [14, 15] which holds that five factors that constitute personality are neuroticism, extraversion, openness, agreeableness and conscientiousness. Neuroticism refers to the nervousness, anxiety, disappointment and uneasiness personality of a person, and is the main source of negative emotions. The higher the neuroticism index, the lower the stress tolerance of the subjects, and individuals more likely feel stressed, frustrated, depressed and hostility, and have a sense of hostility. In the end, they are easy to be haunted by emotions caused by bad events, which undoubtedly leads to lower job satisfaction. Extroversion refers to the personality dimension that describes a person as extroverted, energetic, vigorous, helpful, sociable, talkative and confident. Extroverted individuals tend to have positive emotions towards job. Openness refers to creativity and curiosity. The higher the openness index, the stronger the curiosity, and individuals are more likely to seek and accept new experience and innovative ideas or concepts. DeNeve and Cooper believe that openness is a "double-edged sword", which makes the relationship between it and the job satisfaction vague since it enables individuals to have more positive and negative emotions at the same time [16]. Agreeableness refers to individual friendliness, gentleness, enthusiasm, cooperation and trust. Individuals with high agreeableness have stronger motivation to acquire close interpersonal relationships and thus more satisfaction. Conscientiousness describes individuals' confidence, focus, efficiency and orderliness, which was believed to be related to job satisfaction by Judge and Heller [17], because

highly responsible individuals are more likely to get satisfactory job returns due to their high involvement in work.

The empirical analysis in this paper will be based on the data in the form of self-report according to the items related to non-cognitive competence provided by the questionnaire. The influence of neuroticism, agreeableness, conscientiousness and extraversion in Big Five Model on job satisfaction of post-90s employees was explored. Variables were selected as follows: agreeableness was measured by items "QN10024 Trust in strangers" and "PN414 I feel lonely" in the questionnaire; conscientiousness was measured by the item "PN407 I feel it is extremely difficult to do anything"; extraversion was measured by the item "QN12014 How confident I am in my future"; neuroticism was measured by items "PN406 I feel depressed" and "PN418 I feel sad". There are one or two questions in the measurement of the above dimensions of personality, and the non-cognitive competence of each dimension represented by the answers of each question was assigned 1-4 points respectively in this paper (the higher the score, the better the non-cognitive competence of the dimension). Means were taken for the cases of two questions in the same dimension to obtain its measurement indicator. Although effective proxy variables about openness cannot be obtained by this paper at present due to the limitation of data conditions, important non-cognitive competence of post-90s employees and its influence on their job satisfaction were largely covered.

The variable "job satisfaction" was measured by the item "Overall job satisfaction" in the questionnaire, which ranged from very unsatisfied (1 point) to very satisfied (5 points). In order to make the estimation more accurate, other factors that may affect job satisfaction were controlled, including age, the square of age, the level of education completed (6 levels: 1 for below primary school, 2 for primary school, 3 for junior middle school, 4 for senior high school/special secondary school/professional high school/technical school, 5 for junior college, 6 for undergraduate and above), gender (male =1), Communist Party member (yes =1), household registration (non-farm=1), marital status (married=1, other=0), geographical location (eastern, central and western), nature of the unit (three types: government department/government-sponsored institution/people's organization, state-owned enterprise, private enterprise), physical condition (5 grades: from 1 unhealthy to 5 very healthy) and level of income in the local area (1-5 points, higher score for higher income), which will have influence on job satisfaction.

The OLS (binary regression model) used in this paper is set as

$$Y_i = \alpha + \beta * \text{noncognitive}_i + \sum_{n=1}^N \gamma_n x_{in} + \varepsilon_i$$

among which Y_i is the degree of job satisfaction of employees; α is the constant term; noncognitive_i is the non-cognitive competence measurement index of neuroticism, agreeableness, conscientiousness and extraversion, and β is its coefficient; $\sum_{n=1}^N x_{in}$ is the other control variables that may affect the post-90s employee's job satisfaction; γ_n is the

corresponding variable coefficient; ε_i is the error term.

Some scholars pointed out that there are two kinds of endogenous problems when traditional OLS model was adopted to analyze non-cognitive competence and individual job satisfaction. One is caused by the omission of unobservable variables, like the loss of control of cognitive competence, which may be related to non-cognitive competence, as claimed by some scholars [18], in the process of exploring the influence of non-cognitive competence. It will lead to erroneous estimated results. However, there were still some errors although most researchers of previous studies replaced the cognitive competence of individuals with years of education. And some foreign scholars began to use IQ scores or test scores of language and mathematics courses in primary school to control cognitive competence variables with the improvement of data quality, so as to reduce endogenous problems. In this paper, the QZ207 intelligence level variable (1-7 points, higher score represents better cognitive competence) in CFPS 2016 data was added in the equation as the proxy variable of the cognitive competence in order to ensure the estimated results correct. The other type of endogenous problem is caused by reverse causality. Non-cognitive competence such as psychological activities and personality characteristics of post-90s employees may be affected by their income and job satisfaction in the labor market. Therefore, there will be reverse causality between independent variables and outcome variables in the same period, leading to deviation in estimating the parameters of non-cognitive competence. To solve the problem of reverse causality to a certain extent and thus to make the estimated results in this paper more accurate and reliable, in view of the existing research abroad, the panel data was constructed based on CFPS long-term tracking survey data, among which the non-cognitive competence variables of the tracking sample in 2012 were matched with other dimensions in 2016, so as to make non-cognitive competence variables obviously precede individual job satisfaction and other variables.

4. Empirical Analysis

4.1. Descriptive Statistical Analysis

Table 1 shows the statistical results of the major variables observed in this paper and the test of gender differences among groups (t-test was used to test the statistical differences between male and female samples on the observed variables. With male samples as the reference, the high score of female samples is marked by +, and vice versa -; * indicates the significant difference among groups). It can be seen from the table that there is no significant difference in age (they are all post-90s), household registration, geographical distribution and level of income in local area (both female and male post-90s employees earn middle income) between male and female samples in terms of basic individual characteristics. Unexpectedly, the post-90s female employees surveyed are better than male employees in educational level, marital status and political situation. The post-90s employees have generally

completed the 9-year compulsory education, so their education level is basically high school / special secondary school and above. However, the results show that the education level of women is significantly higher than that of men, which is inconsistent with the existing knowledge. The reason may be that the post-90s men are still receiving higher education and do not enter the labor market, and the age at which men begin to receive education is generally larger. There is no significant difference in the intelligence between male and female samples, indicating that the cognitive competence of the post-90s employees surveyed is basically the same. The proportion of married women in the post-90s generation is significantly larger than that of married men, which is because the legal marriage age of women is lower than that of men. The proportion of female Party members is significantly larger than that of male Party members, which is consistent with the statistical results of the type of work units. Female employees attach more importance to the stability of

work and the fixed working hours while male employees lay stress on income. Therefore, in the unit type variables, there are more women working in government departments, government-affiliated institutions and state-owned enterprises than men, which means there are more female Party members than male Party members since these units require relatively high political status.

As for the result variables and explanatory variables concerned in this paper, the statistical results show that post-90s female employees are much more satisfied with their job compared with post-90s male employees. There is no significant difference between male and female employees in agreeableness and conscientiousness, but male employees perform significantly better than female employees in neuroticism (emotional stability) and extraversion. How these non-cognitive competence traits will affect their job satisfaction will be analyzed by regression analysis.

Table 1. Statistical results of variables.

variables	Overall sample		Male sample		Female sample		Gender difference(t-test)
	mean/ratio	Std.	mean/ratio	Std.	mean/ratio	Std.	Female-male
Result variables							
Job satisfaction (1-5points)	3.402	0.749	3.362	0.741	3.451	0.758	+***
Independent variables (non-cognitive competence)							
Neuroticism (1-4pts)	3.240	0.632	3.305	0.626	3.162	0.631	-***
Agreeableness (1-4pts)	2.590	0.596	2.608	0.588	2.568	0.604	-
Conscientiousness (1-4pts)	3.468	0.686	3.462	0.706	3.475	0.660	+
Extraversion (1-4pts)	3.203	0.835	3.257	0.828	3.137	1.07	-***
Control variables							
Gender (male %)	54.870	0.498	/	/	/	/	
Household registration (non-farm %)	62.021	0.485	61.379	/	62.801	/	+
Age	23.512	2.501	23.517	2.504	23.505	2.500	-
Level of education (1-6)	3.703	1.248	3.602	1.231	3.829	1.257	+***
Marital status (married %)	31.244	0.464	27.762	/	35.476	/	+***
Communist Party (yes %)	7.617	0.265	6.704	/	8.726	/	+*
Health (1-6pts)	3.645	0.987	3.750	0.996	3.517	0.961	-***
Level of income (1-5)	2.582	0.882	2.585	0.888	2.579	0.875	-
Nature of the unit							
Government department (%)	11.192	0.315	9.065	/	13.777	/	+***
State-owned enterprise (%)	12.279	0.328	13.409	/	10.907	/	+*
Private enterprise (%)	76.529	0.424	77.526	/	75.316	/	-
Geographical distribution							
Eastern (%)	49.067	0.5000	49.386	/	48.679	/	-
Central (%)	27.150	0.445	26.156	/	28.358	/	+
Western (%)	23.782	0.426	24.457	/	22.962	/	-
Cognitive competence							
IQ test (1-7pts)	6.255	0.935	6.246	0.957	6.265	0.907	+
sample size	1930		1059		871		

*p<0.1, **p<0.05, ***p<0.01

4.2. OLS Regression Analysis

After controlling other variables in OLS regression model, the influence of different non-cognitive competence dimensions on job satisfaction of post-90s employees is shown in Table 2. Model (1) to model (4) were established by adding four non-cognitive competence dimension variables into the regression equation respectively, while model (5) was established by adding the four variables into the equation together. Regression results show that neuroticism, as the main source of negative emotions, either by itself or together with other three

dimensions, has a significant negative impact on job satisfaction of post-90s employees, as job satisfaction of post-90s employees decreases by 11.7% if emotional instability (neuroticism) increases by 1%. Single dimension regression results show that agreeableness, conscientiousness and extraversion all have a significant positive effect on job satisfaction of post-90s employees at 1% level. More extroverted individuals will get better job experience and thus higher job satisfaction. Highly agreeable individuals have stronger motivation to acquire intimate interpersonal relationships, so they reflect high job satisfaction. Conscientiousness describes individual confidence,

focus, efficiency and organization, which has a significant positive effect on job satisfaction of post-90s employees, but its effect reduced and the effect of other three dimensions remain significant at the level of 1% when the four dimensions function together.

Previous statistical descriptive analysis reveals that

post-90s male and female employees are different in individual characteristics, non-cognitive competence in various dimensions and job satisfaction, so further regression analysis of post-90s male and female employees is of great significance to explore the effect of non-cognitive competence on individual work ability and gender impact differences.

Table 2. OLS regression model.

	(1)	(2)	(3)	(4)	(5)
Neuroticism	-0.170***(0.028)				-0.117***(0.031)
Agreeableness		0.135***(0.029)			0.081***(0.029)
Conscientiousness			0.111***(0.026)		0.035(0.028)
Extraversion				0.156***(0.021)	0.141***(0.021)
Sample size	1930	1930	1930	1930	1930
R-squared	0.097	0.088	0.087	0.105	0.1260

*p<0.1, **p<0.05, ***p<0.01

4.3. Gender Difference Analysis

The influence of each dimension on male and female employees was shown in Models (1) - (4), and the joint effect of four dimensions of non-cognitive competence on post-90s employees was shown in Model (5). The regression results of different genders are shown in Table 3, from which it can be seen that personality traits of different dimensions affect post-90s male and female employees to a different degree. Firstly, according to the aggression results of each of four dimensions of Big Five Personality, neuroticism, agreeableness, conscientiousness and extraversion have a significant impact at the level of 1% on job satisfaction of both post-90s male and female employees, which is consistent with the results of the overall sample analysis. Among them, neuroticism, as the main source of negative emotions, has a significant negative impact on the job satisfaction of both post-90s male and female employees. It has a greater impact on female employees than male employees, as with neuroticism increasing by 1%, job dissatisfaction of female employees increases by 19.4%while that of male employees by 15.2%. Agreeableness, conscientiousness and extraversion have the same significant positive impact on job satisfaction of post-90s male and female employees. Based on the regression results of four single dimensions, non-cognitive competence has different effects on post-90s male and female employees. Firstly, in Model (5), the influence of agreeableness and conscientiousness on job

satisfaction of post-90s female employees decreases significantly and was not significant, while the effect of neuroticism and extraversion on job satisfaction of post-90s female employees remains significant at the level of 1%, and is significantly greater than that on job satisfaction of post-90s male employees. The possible reason is that emotional stability (neuroticism) and extraversion, rather than agreeableness or conscientiousness, are the most important factors affecting the job satisfaction of post-90s female employees. On the one hand, compared with men, women are more sensitive, more emotional and more likely to be nervous, anxious or dissatisfied when facing difficulties, which makes female employees feel dissatisfied with their work. On the other hand, if women are outgoing, active and confident, they are more satisfied with their work. Secondly, extraversion also affects the job satisfaction of post-90s male employees. In this way, extraverted, sociable and highly confident post-90s employees with good personality are more satisfied with their work. Neuroticism and agreeableness also have a significant positive impact on job satisfaction of post-90s male employees. Compared with female employees, agreeableness is one of the important factors affecting job satisfaction of post-90s male employees. Perhaps it is because good cooperation ability and trust in others have a greater impact on job satisfaction of male employees who act more as organizers or leaders in the organization compared with women.

Table 3. OLS regression model (difference in gender).

	(1)		(2)		(3)		(4)		(5)	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Neuroticism	-0.152*** (0.037)	-0.194*** (0.043)							-0.093** (0.042)	-0.149*** (0.048)
Agreeableness			0.134*** (0.039)	0.138*** (0.044)					0.087** (0.040)	0.073 (0.046)
Conscientious-ness					0.115*** (0.033)	0.105*** (0.041)			0.050 (0.037)	0.014 (0.044)
Extraversion							0.150*** (0.028)	0.159*** (0.032)	0.136*** (0.028)	0.142*** (0.032)
Sample size	1059	871	1059	871	1059	871	1059	871	1059	871
R-squared	0.111	0.087	0.106	0.073	0.107	0.070	0.122	0.091	0.141	0.114

*p<0.1, **p<0.05, ***p<0.01

4.4. Dealing with Endogenous Problems

When the traditional OLS model was used to analyze non-cognitive competence and individual job satisfaction, reverse causality may cause endogenous problem, which is that the level of non-cognitive competence of individuals may change due to the influence of job satisfaction as the two inter-relate. Therefore, non-cognitive competence related variables in CFPS2012 were matched with job satisfaction variables and other control variables in CFPS2016 based on CFPS panel data in this paper, so that non-cognitive competence related variables were obtained before job satisfaction variables, income variables, etc., in the adjusted regression model, thus mitigating the effect of reverse causality and making the estimated result more accurate. The results of the adjusted regression model are shown in Table 4, in which Models (1) - (3) are the regression results of adding four dimension variables respectively, showing that the effects of neuroticism, agreeableness, conscientiousness and extraversion on job satisfaction are -3.27%, 3.2%, 3.5% and 5.0%, respectively, which is consistent with the results of traditional OLS. However, according to the adjusted model, the effects of neuroticism and conscientiousness on job satisfaction were not significant while the effects of agreeableness and extraversion were statistically significant at the level of 1% and of 10%, respectively, which means easygoing, pleasant, outgoing and cooperative post-90s employees with strong ability in stabilizing emotions are more satisfied with their work. It has also been found in Model (5)

that the effects of neuroticism, conscientiousness and extraversion on job satisfaction significantly decreased, except for agreeableness whose effect remained significant at the level of 1%. Combined with the above analysis, we found that agreeableness has always important positive impact on job satisfaction of both post-90s male and female employees. The influence of other dimensions decreased or even became insignificant according to the results of adjusted model, which, on the one hand, may be explained by the strong causal relationship between individual neuroticism and job satisfaction, as well as conscientiousness and job satisfaction. In other words, the more satisfied one person is with his/her job, the stronger the sense of responsibility the person will have for the job, and the more emotionally stable the person will become at work. Therefore, the coefficient of the influence of non-human ability was larger when OLS data analysis was adopted; when the pre-data of non-cognitive competence earlier than the job satisfaction survey in the panel data were adopted, the causal effect of explanatory variables and outcome variables was mitigated, resulting in the decrease of influence coefficient. On the other hand, the non-cognitive competence of different dimensions may have some common connections or influences among them, which led to the regression results. However, the results obtained by controlling endogeneity still prove that some dimensions of individual non-cognitive competence have an important impact on job satisfaction of post-90s employees.

Table 4. Adjusted regression model.

	(1)	(2)	(3)	(4)	(5)
Neuroticism	-0.327(0.039)				-0.022(0.043)
Agreeableness		0.032***(0.011)			0.030***(0.011)
Conscientiousness			0.035(0.039)		0.006(0.044)
Extraversion				0.050*0.029)	0.039(0.029)
Sample size	941	941	941	941	941
R-squared	0.098	0.106	0.098	0.097	0.108

*p<0.1, **p<0.05, ***p<0.01

5. Conclusion

To improve the job satisfaction of post-90s employees is one of the approaches to achieving the stable and sustainable development of the staff since the post-90s generation has become the new and main force of today's enterprises. Compared with the post-70s and post-80s, the post-90s have more diversified values and working incentives. They have good cognitive competence as they generally completed nine-year compulsory education. And since their average income is at or above the middle level of social income, besides basic survival and security needs in terms of income, they have higher demand for what their work can bring them like respect from others, social contact and even self-actualization needs, so analyzing the factors influencing job satisfaction of post-90s employees is important for the development of both employees and enterprises. Previous

studies have paid more attention to the influence of general work situation factors, such as work atmosphere and salary, than to the influence of employees' own traits on their job satisfaction. The marginal contribution of this paper is to analyze the effect of non-cognitive competence on job satisfaction of post-90s employees and the gender difference mechanism of non-cognitive competence affecting job satisfaction based on the Big Five Model by using the national large sample survey data CFPS2016. The panel data were also constructed to match the non-cognitive competence related variables in CFPS2012 with individual job satisfaction variables and other control variables in CFPS2016, so that non-cognitive competence related variables are obtained before job satisfaction, income and other variables in the adjusted regression model, thus mitigating the effect of the reverse causality.

OLS regression results indicate that neuroticism, as the main

source of negative emotions, has a significant negative impact on job satisfaction of post-90s employees (significant at the level of 1%), and agreeableness, conscientiousness and extraversion have a significant negative impact on job satisfaction of post-90s employees at the level of 1% when neuroticism, agreeableness, conscientiousness and extraversion were added into the regression equation alone. More extroverted individuals get better job experience and thus high job satisfaction, and highly agreeable individuals have stronger motivation to acquire intimate interpersonal relationships, so they are more satisfied with their work. However, when the four dimensions were added into the equation together, the effect of conscientiousness decreased and became insignificant, while the effects of neuroticism, agreeableness and extraversion remained significant at the level of 1%, which was basically consistent with the effect of single dimension.

A comparative analysis of gender differences among post-90s employees was conducted in this paper to further analyze the effect of different dimensions of non-cognitive competence on post-90s employees, and the results show that neuroticism has the greatest impact on female employees as with neuroticism increasing by 1%, job dissatisfaction of female employees increases by 19.4% and male employees by 15.2% when considering the effect of single dimension. Agreeableness, conscientiousness and extraversion have the same significant positive impact on job satisfaction of post-90s male and female employees. When considering the joint effect of the four dimensions, the influence of agreeableness and conscientiousness on job satisfaction of post-90s female employees decreased significantly and became insignificant. The influence of neuroticism and extraversion on job satisfaction of post-90s female employees is the most significant at the level of 1%, and is greater than that on male employees. Agreeableness is the most important factor affecting the job satisfaction of post-90s male employees, which is because good cooperative ability and trust in others have a greater impact on job satisfaction of male employees as they are more likely to act as organizers or leaders in the organization compared with women. In addition, extraversion also has an important effect on the job satisfaction of post-90s male employees.

The regression results of the panel data constructed to mitigate the effect of endogeneity show that agreeableness and extraversion have a strong positive impact on job satisfaction of post-90s employees. Therefore, sociable and confident post-90s male or female employees with good personality and capable of working in cooperation with others are more satisfied with their work.

Good psychological characteristics and high non-cognitive competence will promote the career development and performance of individuals and good and orderly development of enterprises. The non-cognitive competence, such as emotions and personalities, is of great importance to improve job satisfaction of employees, whose cultivation should be paid more attention to like cognitive competence such as mathematics, language and professional skills when schools are training students and enterprises are managing employees

in the future.

Schools should lay stress on the training of comprehensive high-quality talents, strengthen students' psychological quality and enhance their career planning and development, thus enabling students to achieve the synchronous development of "wisdom" and "ambition". Students should be encouraged to participate in extra-curricular activities and community activities, through which they contact with the society and cooperate with others, and thus their non-cognitive competence like extraversion, agreeableness, conscientiousness and emotional stability will be improved.

Management mode and working atmosphere of enterprises will affect the development of non-cognitive competence of employees, and different incentives should be adopted to cultivate personality traits of the post-90s employees. For example, enterprises can strengthen the self-efficacy of post-90s employees, weaken their negative emotions at work and enhance their self-confidence, so as to make them be willing to accept challenges. Enterprises should also adopt a more democratic management model to endow post-90s employees with more work autonomy and establish good communication channels between upper and lower levels, thus making them feel they are trusted and respected by others in the organization. Appropriate psychological and emotional training programs should be set additionally in the process of staff training to create a good development space for and give promotion opportunities to post-90s employees. What's more, creating a fair environment and developing a perfect culture based on the enterprise spirit and core values will make post-90s employees have great sympathy for the corporate culture since it is in line with their characteristics, and thus be more satisfied with their work.

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