

# The Study on the Effect of University Faculties' Job Stress on Organizational Commitment

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**Abstract**—In recent years, the role of university faculty is more and more important, and multiple job responsibilities made faculty's job more demanding and stressful. Under high performance pressure, faculty turnover rate is always high, and it has detrimental effects on the development of university. However, research on the effect of university faculty's job stress on organization commitment is rarely, this study takes job burnout and job engagement, in to the research framework, constructs job stress-organizational commitment conceptual model, and takes university faculties from Ningbo as an example to examine this model. The results show that: (1) job stress has significant negative effect on organizational commitment; (2) job stress has significant negative effect on job engagement; (3) job engagement has significant positive effect on organizational commitment, and job burnout has significant negative effect on organizational commitment.

**Keywords**—Job Stress; Job Engagement; Job Burnout; Organizational Commitment

## I. INTRODUCTION

University faculties are the knowledge providers and knowledge innovators of higher education, they play more and more important role in the national society, but they bear more work responsibilities in the same time, teaching, service, and counseling, research are all university faculties' Job duties. Teaching is the core responsibility of university faculties', teaching content and quality has far-reaching influence on students. Teaching lesson preparation is time-consuming and laborious, teaching achievement generated by the inherent compensation factor is the main source of teacher satisfaction (Blackburn & Lawrence, 1995; Blau, 1994) [1-2]. Although the teaching performance has limited impact on the rank promotion and work development of university faculties, but teaching is still one of the core multiple responsibilities. Service duties are also tasks that university teachers cannot avoid (Blau, 1994; Sullivan, 1996) [2-3]. Most of the university faculties have a professional background, and are expected to provide services through professional knowledge (Porter, 2007) [4]. Buckholdt & Miller (2009) [5] argues that university faculties are also guides, advisors and mentors for students. The research output of the university is related to the academic competitiveness of the state, which makes the research work of university faculties have been given great expectations

(Miller, Buckholdt, & Shaw, 2009) [6]. Teaching is the most basic duty of university faculties, and scientific research is also university faculties should be responsible (Blau, 1994; Sullivan, 1996) [2-3]. It is not easy to maintain the balance between teaching and research, and if there is a need for quality output in teaching and research, teachers are required to have a deep commitment to the university (Cirone, 2003) [7]. Under the research and other duties of work, the simply and quiet academic environment for university faculties has changed. In addition, the university assessment is also connected to the diversity duties of university faculties, which makes the performance pressure of faculties is high.

In the high performance pressure environment of university, the flow of talent in colleges and universities gradually become a common phenomenon, it not only seriously affected the normal teaching and research work order, but also had a greater impact on the stability of the teacher team, and it is unfavorable for the construction of college teachers.

There are many changes in the domestic higher education environment in recent years. Teachers face many new challenges. The situation is difficult to be the same as that of foreign countries. Teachers are actively pursuing the academic performance of SCI and SSCI, students are in the "heavy research and light teaching" environment, the right to be educated has been ignored. Although there are some researches on the relationship among job stress, job satisfaction and job burnout (Huang & Hsiao, 2007; Mathieu & Zajac, 1990; Williams & Hazer, 1986; Wang Han, 2007; Liu Dege, 2011; Chen Weiqi, 1998) [8-10], under different economic, cultural, social conditions, these issues are also worthy of more in-depth analysis and research in china.

## II. LITERATURE REVIEW

### A. University Faculties ' Job Stress and Organizational Commitment

In the global competition environment, job insecurity and unsatisfactory salaries are forcing employees to cope with more work stress (Leineweber et al., 2010). In the theory of job stress, the "Effort-Reward Imbalance" model is best able to streamline concepts and interpret the job stress of most occupational groups (Siegrist et al., 2009). The theory of

"Effort-Reward Imbalance " was proposed by the German sociologist Johannes Siegrist in the 1990s, which argues that people, like other animals, are seeking to increase their reward and reduce their penalties. When feedback and punishment are changed, behavior will change. Therefore, the effort-reward imbalance theory suggests that after the staffs enter the organization, they will have a psychological contract to the organization, and have money, respect, promotion, work support and other feedback expectations to the organization, they will assess the feedback expectation and job payout in the same time. If the effort and reward cannot be balanced, the original social reciprocity criteria will have a threat and imbalance, triggering a strong negative emotional response (Siegrist, 2012), employee psychological contract was destroyed. In the labor market, employees can choose to balance themselves with self-regulation through rational career mobility, and if the jobs are becoming increasingly scarce, the imbalance will continue and negative pressures will continue (Siegrist et Al., 2004). In the "Effort-Reward Imbalance "theoretical structure, the pressure is divided into effort part and reward part. The effort part is divided into extrinsic effort and intrinsic effort. Siegrist (2012) [11] proposes that the extrinsic effort, intrinsic effort and reward are three basic dimensions of effort-reward imbalance theory. The theory suggests that a high degree of extrinsic effort and low reward, resulting in effort and reward imbalance, it will be harmful to the health of employees. However, if the staff has high intrinsic effort, the excessive work is exists, the intrinsic effort too much and effort-reward imbalance phenomenon coexist, the interaction effect will increase the health hazards of job stress.

"Organizational Commitment" is a form of mental state between employees and organizations, it implies an employee's decision on whether to remain in the organization. In the field of behavioral science, employees do not let themselves remain in imbalance for a long time, make adjustments in personal cognition or behavior, or make their own payments or try to reinforce their feedback (Vegchel et al., 2005) [12]. However, not all scholars believe that job stress has a direct impact on organizational commitment, such as Chen & Kao (2011) [13] propose that teachers' work pressure has no direct impact on organizational commitment. Therefore, there is no definite conclusion on whether there is a direct impact between university faculties' job stress and organizational commitment. The following hypothesis is proposed in this study:

H1: The job stress of university faculties has a significant negative impact on organizational commitment.

#### *B. University faculties' job stress, job engagement and organizational commitment*

Job engagement represents the employee's psychological identity of the work, is a personal belief in the work (Brooke, Russell & Price, 1988) [14], is also a personal self-impression, and the importance of the work of the cognitive presentation, (Lodahl & Kejner, 1965) [15]. Brooke et al. (1988) [14] argue that job engagement is the degree to which employees are absorbed in or preoccupied with their work. As more studies focus on positive

psychology, the concept of job engagement has been focused by more and more researchers. In general, the research that takes job engagement as the consequence variable of job stress is still scarce. Parasuraman (1984) [16] proposes that the lower degree of the job stress, the higher degree of job engagement, that is, job stress has negative effect on job engagement. Bakker (2012) [17] found that when an individual felt energy recovery on a working day, the amount of work that day could be regarded as the stress of the individual, and it was positively related to the degree of job engagement.

H2. The job stress of university faculties has a significant negative impact on job engagement.

Organizational commitment usually refers to the individual's identity and values of the organization, willing to work for the organization and hope to stay in the organization. Kahn (1990) [18] argues that while organizational commitment helps to understand how individuals perceive themselves, their work, and the relationship between the two, this understanding is so broad that it is far away from people's daily performance in specific work situations and the experience; the job engagement focuses on how the individual's psychological experience of work and work situations affects their self-presentation in the execution of the task. In general, individuals with high engagement tend to have higher organizational commitments, and vice versa; but sometimes people can have higher job engagement and lower organizational commitments, or have lower job engagement and higher organizational commitment .Demerouti (2001) [19] shows that there is a significant positive relationship between job engagement and organizational commitment.

H3. The job engagement of university faculties has a significant negative impact on organizational commitment.

#### *C. University faculties' job stress, job burnout and organizational commitment*

Job Burnout refers to a kind of emotional failure, disintegration of personality and a decrease in individual accomplishment in the work field, is a special, long-term and multi-lateral essential job stress response, and contains negative attitudes that usually occur in individuals with higher motivations (Dunham, 1992) [20]. Individuals at work cannot bear the burden of emotional exhaustion work is too monotonous, from which no sense of accomplishment, or lack of autonomy in the work, will make individuals unable to work in the self, and the formation of frustration, the final emotional retreat and physiological abnormalities and other phenomena and individuals face different contradictory role expectations, cannot be adjusted, to cope with, will also make emotional resources exhausted (Cordes & Dougherty, 1997) [21].

H4. The job stress of university faculties has a significant positive effect on job burnout.

Previous studies involve a number of consequence variables of job burnout, including resignation, reduced job satisfaction and organizational commitment (Meyer, Allen, 1991) [22]. The interaction theory argues that people have a

certain need and desire to find a working environment that can meet these needs. Steers (1977) [23] pointed out that if an organization can satisfy the employees' needs, then the link between employees and employers will increase. Steers (1977) [23] based on the organizational commitment theory, and propose that three types of factors can influence organizational commitment, and organizational commitment in turn produces results and aspirations to maintain and improve attendance and job performance. Although the study is limited, previous studies have pointed out the link between organizational commitment and job burnout. Lee & Asforth (1996) [24] studied the relationship between job burnout and organizational commitment, they point out that emotional exhaustion may reduce career commitments. Wright & Bonett (1997) [25] pointed out that low performance will lead to job burnout. King & Sethi (1997) [26] also argues

that in the information technology industry, the organization is committed to cushioning the relationship between job stress and job burnout. Sethi et al. (1987)[27] extended the study to the relationship between job-related variables and job burnout, and they attempted to further examine the effects of job burnout on the two dimensions of organizational commitment (emotional commitment and sustained commitment), it was found that only sustained commitment has significantly positively relationship with job burnout.

The job burnout of university faculties has a significant positive effect on organizational commitment.

#### D. Research model

The above assumptions and theories are summarized, and the theoretical model of this study is shown in Fig1.

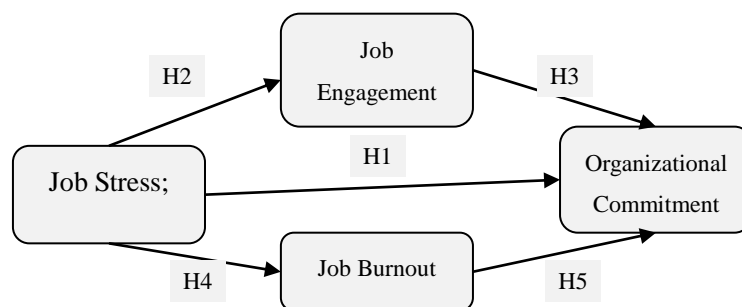


Fig. 1. The path of university faculties' job stress affecting the organizational commitment: the theoretical model

### III. RESEARCH DESIGN

#### A. Research objects and samples

In order to ensure the smooth progress of the visit, the questionnaire was sent to the teachers in advance, and 360 questionnaires were distributed. After deleting some of the

invalid questionnaires, the paper collected the data from the university teachers in Ningbo City, Zhejiang Province. And finally received 323 valid questionnaires, the valid rate is 89.72%. The statistical analysis of the survey sample is shown in the following table 1.

TABLE I SAMPLE DESCRIPTION OF STATISTICAL ANALYSIS

Respondents gender	Frequency	Percentage	Whether has an administrative part-time job	Frequency	Percentage
Male	162	50.2	Yes	71	22.0
Female	161	49.8	No	252	78.0
Age	Frequency	Percentage	Teach age	Frequency	Percentage
<28	32	9.9	<2	43	13.3
29-33	54	16.7	3-6	43	13.3
34-38	125	38.7	6-10	82	25.4
39-43	67	20.7	11-15	111	34.4
44-48	29	9	16-20	27	8.4
>49	16	5	>21	17	5.3
Total	323	100.0	Positional titles;	Frequency	Percentage
Education	Frequency	Percentage	Primary title	83	25.7

TABLE 1, cont.					
Ph.D.	86	26.6	Middle title	182	56.3
Master degree	174	53.9	Vice-senior Title	52	16.1
Bachelor degree	63	19.5	Senior Title	6	1.9
Total	323	100.0	Total	323	100.0

### B. Measurement

The research variables in this paper include job stress, job engagement, job burnout and organizational commitment, using the Likert 5-point scale for measurement. In order to ensure that the measurement tool meets the reliability and validity criteria, the measurement of each variable will be based on the scale in the relevant literature, combined with the specific circumstances of China to adjust and modify the use.

- Job stress, this study adopts the ERI scale (Siegrist et al., 2009) [28], which is the measure of working pressure, including two dimensions of effort and reward imbalance.
- Job engagement, this study define it as the degree of how university teachers pay attention to the work, the degree of psychological identity, and degree of

concentrate on the work, the use Kanungo's (1982) [29] job engagement scale as measurement tools.

- Occupational burnout, this study defines job burnout as a condition of emotional exhaustion, disintegration of personality and reduction of individual accomplishment in the field of work for people, using Maslach & Jackson's (1981) [30] Maslach Burnout Inventory, including three different dimensions, that is emotional exhaustion, depersonalization and diminished personal accomplishment
- Organizational commitment, this study use Porter, Steers & Mowday's (1974) [31] organizational commitment scale, including the value commitment, retention commitment.

TABLE II RELIABILITY ANALYSIS OF THE SCALE

Construct	Dimension	No. of item	Cronbach's $\alpha$ of items	Cronbach's $\alpha$ of Construct
Job Stress	Extrinsic effort	3	0.806	0.84
	Intrinsic effort	6	0.779	
	Feedback	7	0.645	
Job Burnout	Emotional	9	0.897	0.789
	Depersonalization	5	0.758	
	Diminished personal accomplishment	8	0.818	
Job Engagement	Job Engagement	9	0.788	0.788
Organizational Commitment	Value commitment	9	0.868	0.883
	Retention promise	5	0.849	

### C. Reliability and Validity Analysis

Reliability analysis(as shown in Table 2): the Cronbach's  $\alpha$  coefficients of each scale are all higher than 0.6, and mostly above 0.7, according to Nunnally [32] on the

Cronbach's  $\alpha$  coefficient of the critical point of view, the scales have a good reliability

Convergence validity: In this study, AMOS software was used to analyze the main research constructs of this paper, and the standardized factor load of each item was obtained.

Some scholars have pointed out that when the standard factor load of each item is greater than 0.5 and the AVE value of each latent variable is greater than 0.5 and the CR value is greater than 0.7, then the measure of the potential variable

has good convergence validity]. The results show that the scale used in this study has good convergence validity (as shown in Table 3 below)

TABLE III SCALE OF THE CONVERGENCE VALIDITY TEST

Variable	Dimension	Item	Standardized factor load	AVE and CR	Variable	Dimension	Item	Standardized factor load	AVE and CR
Job Stress	Effort	A1	0.765	AVE=0.589 CR=0.926;	Job Engagement		B1	0.598	AVE=0.57 CR=0.94
		A2	0.803				B2	0.62	
		A3	0.676				B3	0.592	
		A4	0.693				B4	0.783	
		A5	0.574				B5	0.763	
		A6	0.64				B6	0.793	
		A7	0.83				B7	0.863	
		A8	0.62				B8	0.774	
	Reward	A9	0.742		B9	0.552			
		A10	0.704		Emotional exhaustion	D1	0.68	AVE=0.65 CR=0.95	
		A11	0.677			D2	0.68		
		A12	0.779			D3	0.81		
		A13	0.691			D4	0.69		
		A14	0.738			D5	0.87		
		A15	0.773			D6	0.86		
Organizational Commitment	Value commitment	C1	0.769	Job Burnout		Depersonalization	D7		0.71
		C2	0.719		D8		0.62		
		C3	0.721		D9		0.74		
		C4	0.693		D10		0.79		
		C5	0.638		D11		0.83		
		C6	0.753		D12		0.78		
		C7	0.828		D13		0.78		
		C8	0.798		Personal accomplishment		D14		0.51
	C9	0.782	D15			0.51			
	Retention promise	C10	0.623			D16	0.74		
		C11	0.823			D17	0.83		
		C12	0.769			D18	0.74		
		C13	0.788			D19	0.72		
		C14	0.766		D20	0.70			

#### IV. RESULTS

For the theoretical model proposed in this paper, the structural equation model is a suitable test tool. The structural equation model can be used to test the interrelationship between potential theoretical variables. The advantage is that it allows the existence of measurement errors and can handle multiple dependent variables at the

same time, while estimating the relationship between factor structure and factor, and providing diagnostic information for the model (Joreskog and Sorbom, 1979) [33]. For this reason, the structural equation model is a more effective test method for the hypothesis presented in this paper.

##### A. Evaluation of Goodness of Model

In the evaluation of whether the measurement model and the data is fitted, the main observation parameters of the

standard error, T value, standardized residuals, correction index and a series of your preferred degree of statistics. In this paper, we choose the chi-square free ratio (GFI), the approximate error root mean square (RMSEA), the provincial fidelity goodness index (PGFI), and the province

(PNFI), normalized fitting index (NFI), and comparison fitting index (CFI). They include three categories of indices, such as absolute fitting index, relative fitting index and simple fitting index.

TABLE IV STRUCTURAL EQUATION MODEL RESULTS

Index	Absolute goodness-of-fit			Simple goodness-of-fit		Add value goodness-of-fit	
	$\chi^2/df$	GFI	RMSEA	PNFI	PGFI	NFI	CFI
Evaluation standard	< 3	>0.9	<0.08	>0.5	>0.5	>0.9	>0.9
Results	2.396	0.917	0.083	0.612	0.684	0.906	0.911

It can be seen from the analysis results in Table 4 that the fitting index values are within the acceptable range, except that the RMSEA value (0.083) is in the acceptable range, indicating that the fitting degree of the measurement model is basically satisfactory.

### B. Results of hypothesis testing

Figure 2 below is the result of the work pressure, job input, job burnout and organizational commitment relationship obtained by the above method.

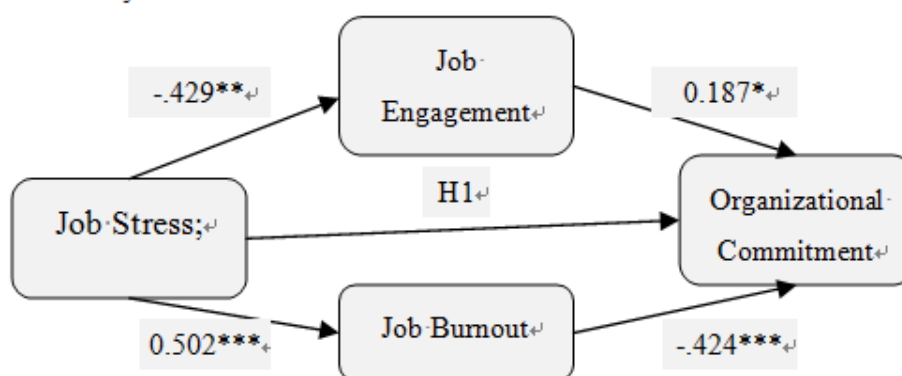


Fig. 2. University teacher work stress affects the path of its organizational commitment: structural model results

Note: \*, \*\*, \*\*\*, respectively, in the 0.1, 0.05, 0.01 level on the two-tailed test significantly.

It can be seen from the above figure that H1-H5 is tested by significance, but it is also important to note that H3 only

has a significance test with a significance level of 0.1 and does not have a significance test with a significance level of 0.05

TABLE V THE DIRECT EFFECT AND INDIRECT EFFECTS OF UNIVERSITY FACULTIES' JOB STRESS ON ORGANIZATIONAL COMMITMENT

Dependent variable	Independent variable	Direct effect	Indirect effect	Total effect
Job Engagement	Job Stress	-.429		-.429
Job Burnout	Job Stress	0.502		0.502
Organizational Commitment	Job Stress	-.193	-.133	-.326
	Job Engagement	-.424		-.424
	Job Burnout	0.187		0.187

Combining Figures 2 and table 5, we obtained the following findings.

- The job stress of university faculties has a significant negative impact on organizational commitment (-.326), that is, H1 is supported. First, the job stress of university faculties has a significant direct impact



on their organizational commitment (-.193). Second, the job stress of university faculties s through the job engagement and job burnout indirectly affect (-.133) its organizational commitment.

- The job stress of university faculties has a significant negative impact on job engagement (-.429), which has a significant positive effect on job burnout (0.502), that is, both H2 and H4 are supported.
- The job engagement of university faculties has a significant positive impact on organizational commitment (0.187), while job burnout has a significant negative impact on organizational commitment (-.424), that is, H3 and H5 are supported.

## V. CONCLUSION AND IMPLICATION

The main contributions of this research are as follows: for the first time, we put the variables such as job stress, job engagement, job burnout and organizational commitment into the theoretical research framework, and construct the job stress as the independent variable, the job engagement and the job burnout as the middle variables, and organizational commitment as the dependent variable. The empirical research examines the relationship among job stress, job engagement, job burnout and organizational commitment. The research framework and the empirical test not only make up the lack of research on the mechanism of the internal mechanism of the relationship between the job stress and the organizational commitment in the existing research, but also further clarify the path of the job stress on the organizational commitment. Specifically, the conclusions of this paper can be divided into the following aspects.

- Greater job stress in colleges and universities will reduce the organizational commitment of university teachers, never lead to the occurrence of high turnover rate.
- The greater job stress in colleges and universities will lead to a decrease in the engagement of university teachers.
- The job engagement of university teachers has positive effect on organizational commitment.

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