



The Impact of Job Engagement on Tacit Knowledge Transfer

XU Li^{[a],*}

^[a] University of Science and Technology of China.
*Corresponding author.

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Abstract

In Knowledge-based economy, the importance of tacit knowledge is realized. In the process of tacit knowledge transfer, the learning intention of knowledge and the capacity of knowledge suppliers and knowledge recipients play an important role, which leads to the necessity to consider the role of humanity. In our study, we take job engagement into consideration, since this variable is closely linked to emotion of humanity, we hope to know whether job engagement affect tacit knowledge transfer.

This article starts with summarizing previous literatures, and the concepts of tacit knowledge, job burnout and engagement are introduced. Furthermore, some latest research achievements are involved. Then we propose our research model and hypotheses based on previous studies. Afterwards, the research methodology is described and the result is given. The result of our study demonstrates the relationship between job engagement and tacit knowledge transfer, which has not been tested by other researchers. We suggest that managers who want to promote the effect of tacit knowledge transfer should increase the degree of job engagement.

Key words: Tacit knowledge; Job engagement; Effect of tacit knowledge transfer

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INTRODUCTION

In human history, there are four different economic formations existing, which are primitive economy,

agricultural economy, industry-based economy and knowledge-based economy. With the development of information and technology, we are lucky to live in the knowledge-based economy era.

The term of knowledge-based economy results from a full recognition of the role of knowledge and technology in economic development just as the name suggests, the knowledge-based economies are characterized by the use of knowledge, which benefit from the development of information technology. In the report of OECD named "1996 Science, Technology and Industry Outlook", knowledge-based economies are the economies which are defined as "which are directly based on the production, distribution and use of knowledge and information." And it is generally reflected on extensive investment of science and technology, high-tech industry, high-tech labor and other related production growth.

Comparing to other economic forms, knowledge-based economies represents two different features. Firstly, As an advanced economic form, knowledge-based economy is characterized by its fast spread and extensive application. But in the long history of agricultural economy in china, land was considered as the most important resource for the development of society. And in the period of industry economic, the energy was taken as the most important resource that can promote the development of production. For these reasons, previous production function treat labor and capital as the endogenous variables, but knowledge and technology are just treated as external influences on production. However, knowledge-based economy occupies the leading position in 21th century, and we have recognized that knowledge has become the driver of productivity and economy development. Furthermore, the emergence of New Growth Theory make people profoundly aware of the role and special status of the knowledge in stages of economy growth.

How to cognize knowledge? The report of OECD have proposed that knowledge can be divided into four types:

the first one is “know-what”, which refers to knowledge about “facts”; the second one is “know-why”, which refers to scientific knowledge of principles and laws of nature; the third one is “know-how”, which refers to skills or the capability to do something; The last one is “know-who”, which refers to the information about who knows what and who knows how to do what. According to Lundvall *et al.* (1994), the knowledge “know-what” and “know-why” are mostly referred to codified knowledge which is easy to be understood, and the knowledge “know-how” and “know-who” are mostly tacit knowledge which are difficult to be codified and measured. However, the tacit knowledge appears to be more important in knowledge economy period, because the transfer and absorption of tacit knowledge plays a key role in developing the competition vantage of company (Lubit R, 2001). So we suggest that managers should pay more attention to the tacit knowledge.

The other feature of knowledge-based economy is the increasing demand for highly-skilled workers. We know that innovation is driven by the interaction of producers and users in the exchange of both codified and tacit knowledge. However, as knowledge is owned by human beings, and if we want to promote knowledge transfer, we need to pay attention to the effect of human beings. According to the some publication, fifty percent of doctors and thirty percent of masters in the world are in US, which is the largest economic country. What's more, millions of research fellows also here. Every year, U.S. government spends lots of money on education and they adopts open immigration policy to attract talent from other countries. In recent years, Chinese government has also increased the education budgets, especially in the last five years, 7790 billion CNY has been put into education, and the average annual growth rate is 21.58%, in 2012, the amount of money accounted for 4% of GDP.

Under this background, we find that the governments have paid enough effort on human resource. But problems still exist in keeping the talent in enterprises, especially in high-tech companies. Recently, more and more enterprises are suffering from high turnover rates. The loss of human resource means a loss of knowledge resource, which will limit the innovation and development of companies. Previous studies lead us to know that, job engagement which is related to the psychology has strong effect on the turnover rates (Schaufeli, 2004). More than that, engagement also has relationship with employees' performance (Babakus *et al.*, 2009; John, 2003; Bakker, 2011). In our research, we consider the role of human beings, and explore the effect of engagement in the process of the transfer of tacit knowledge. We would like to see that our research can be helpful for managers, when managers encounter difficulties in the process of tacit knowledge transfer.

1. PREVIOUS RESEARCH

1.1 Job Engagement

In recent years, scholars in the field of work and organizational psychology have become increasingly interested in employee's optimal functioning and positive experience at work (Luthans, 2002), so more and more scholars are interested in the study of job engagement. Kahn (1990) firstly proposed the definition of job engagement, that is a positive, fulfilling, work-related state of mind that is characterized by vigour, dedication, and absorption. Recently, most studies adopt the definition of schaufeli (2004): Engagement is defined as a positive, fulfilling, work-related state of mind that is characterized by vigour, dedication, and absorption.

In previous research, researchers usually focused on job burnout rather than engagement. Burnout is a syndrome of emotional exhaustion, depersonalization, and a reduced sense of personal accomplishment occurring among individuals who work with people in some capacity (Iwanicki, 1981). Job burnout is possible to happen in any fields, especially the fields of workers in client-centered which are most susceptible. Previous research indicated that job burnout and engagement were two ends of continuum. Based on this idea, a job-person fit model was proposed to analyze the antecedent variables of job burnout and engagement. In the job-person fit model, work load, control, reward, community, fairness, and values are considered as the six factors which affect the burnout and engagement. It means that job burnout would be generated by employee, when they are in the following situations: work overload, lack of control, low return, lack of work team, unfairness, and culture conflict. Otherwise, employees will be under the state of job engagement (Maslach & Leiter, 1997).

Schaufeli *et al.* (2002a) questioned the job-person fit model, they held the view that job burnout and job engagement are independent from each other, and they are not absolutely opposite. Therefore, they developed Utrecht Work Engagement Scale, by which one can evaluate the investment of work through measuring the three dimensions: activity, domination and focus. As their study proved, the opinion of Schaufeli is more reliable (Schaufeli, 2002b).

Different from burnout, engagement is a positive mood which can motivate employees to work harder. It is said that engaged employees usually have stronger abilities to accept new information, are more willing to try new things, and tend to proactively change the work environment to keep engagement (Bakker, 2011). comparing with job burnout, different levels of job engagement have significant difference in employees' work performance, for example, an employee, who has a higher level of engagement, would like to do more extra-role behavior and have a lower rate of dissemination and

turnover intention, as well as higher job satisfaction, job involvement and organizational commitment.

1.2 Tacit Knowledge

Knowledge can be divided into two different kinds, one is codified knowledge, and the other is tacit knowledge. Wittgenstein (1953) said that “Something that we know when no one asks us, but no longer know when we are supposed to give an account of it, is something that we need to remind ourselves of”, and Polanyi (1958) named this thing “tacit knowledge”. The amount of tacit knowledge is huge just like his memorable phrase tells us “we can know more than we can tell” (Polanyi, 1966), tacit knowledge is considered as key strategic resource for enterprises. We believe that effective transfer of tacit knowledge can help the enterprise to promote innovation and technology development.

Recently, the research of transform and conversion of tacit knowledge is popular. Nonaka *et al.* (1995) proposed a famous model to explain the transform and conversion of tacit knowledge, this model is named SECI. In the model of SECI, the process of knowledge transfer can be classified into four categories, which are, (1) socialization, which indicates the transformation from tacit knowledge to tacit knowledge; (2) externalization, which indicates the conversion from tacit knowledge to explicit one; (3) Combination, which indicates the conversion from explicit to explicit; (4) Internalization, which indicates the conversion from explicit to tacit. Following this model, scholars engaged in exploring ways to promote tacit knowledge transfer.

1.3 Hypothesis Development

With the development of social productive forces and social mode of production, the world has entered into the knowledge-based economy age. Knowledge-based economy is characterized by the knowledge which is now treated as the most important element and resources for production. As shown in the review, the value of tacit knowledge lies in its role in ensuring effective communication between organizational members, and creating an environment for knowledge transfer. (You *et al.*, 2010). It means that if we want the knowledge to create value, we should focus on the transfer of tacit knowledge. Hamel (1991) put forward that three factors would affect tacit knowledge transfer, which are the learning intention of knowledge, the capacity of suppliers and recipients, it makes us realize that “human beings” whose knowledge embed in is significant, and the psychological variable-engagement of human beings is a hot research recently, so we consider to explore the relationship between job engagement and the effect of tacit knowledge transfer. The aim of our investigation is to find some ways to promote the tacit knowledge transfer.

Hypothesis: job engagement is positively related to the effect of knowledge transfer

2. METHOD

2.1 Procedure and Sample

We collected data we needed by questionnaires. Some questionnaires were administered via e-mail as a Microsoft Word attachment, which took about 10 minutes to complete, and the other were distributed to the participants by paper. Because the items are simple, we did not give any training to the participants. Instead, we attached samples in the questionnaires to illustrate them.

The subjects in our study come from five companies in China. Two Jiangsu Companies, three Anhui Companies, respectively. Among 300 questionnaires distributed, 168 were returned, with a response rate of 56%. And 22 responses were discarded because they were incomplete.

After effective data analysis, we have got some useful information. For more detail, there are 62% of participants are men, which is not significant difference in gender. The ages of them are between 25 to 35, and most of them work at high-tech companies.

2.2 Measures

The surveys were designed to capture the two concepts being investigated in this research: job engagement and the effect of tacit knowledge transfer. All of the items employed a seven-point Likert scale format (1=strongly, 7=strongly agree) unless otherwise indicated.

2.2.1 Job Engagement

The measure of job engagement experienced two different periods. In the first period, scholars used scale MBI to measure job engagement which was developed to measure job burnout because the concept that engagement is an erosion of burnout with job. The job burnout scale-MBI was developed by Maslach (1981), which contains 25 items in total. In the second period, scholars like Schaufeli *et al.* (2002) didn't agree with the theory proposed by Maslach, they thought engagement and burnout are independent of each other, another scale should be developed to measure engagement.

A 17-item scale named UWES (Utrecht Work Engagement Scale) which was developed by Schaufeli (2002) was used to measure job engagement, and it is very popular in the field of engagement. It is said that there are more than 13 versions of scale to measure engagement all over the world, we adopt the Chinese version to do our survey. This scale measures three dimensions of engagement. The first dimension was measured via 6-item scale, such as “I feel full of energy in the work”, “when I work I forget everything around”, all these items are used for measuring vigor. The second dimension was measured via 5-item scale, such as “I'm very proud for my job”, “work is challenging for me”, all these items are used for measuring dedication. The last dimension was measured via 6-item scale, such as “I can persevere even my work get into trouble”, all these items are used for measuring absorption. These scales showed good reliability

in this study with coefficient alphas for vigor, dedication, absorption being .863, .779 and .860, respectively.

2.2.2 The Effect of Tacit Knowledge Transfer

A 7-item measure was used to assess the three dimensions of the effect of tacit knowledge transfer. This scale is widely accepted by most scholars in china. All the dimensions are based on “satisfaction of knowledge receiver”, “fluency of knowledge transfer”, “innovation of knowledge” and so on (Szulanski, 1996; Nonaka, 1994; Nelson, 1982). In order to express the meaning better, we named these dimensions as “satisfaction”, “performance”, “innovation”. A 2-item scale is used for measuring the first dimension, such as “I was very satisfied with the content of tacit knowledge transfer.”, “I was very satisfied with the result of tacit knowledge transfer.” A 3-item scale is used for measuring the second dimension, such as “The efficiency of our department was improved by absorbing the tacit knowledge.”, “The performance of our department was improved by absorbing the tacit knowledge.” The last dimension is measured by a 2-item scale, such as “The innovative ability of our department was improved by absorbing the tacit knowledge”, “The ability of acquire new knowledge was improved by

absorbing the tacit knowledge”. The coefficient alpha of these scales for this sample was .890, .817, .774.

3. RESULTS

3.1 Dimensionality of the Effect of Tacit Knowledge Transfer

We acknowledge that it is not a mature scale to measure the effect of tacit knowledge transfer. But the main purpose of this study is to investigate the applicability of the three dimensional model of effect of tacit knowledge transfer. To examine the dimensionality of the effect of tacit knowledge transfer, we conducted a principal components analysis to test the validity. The result is consistent with our expectation.

3.2 Correlation

SPSS18.0 was employed to determine the mean values associated with the 6 dimensions as well as the Pearson correlation to ascertain about the relationship between the two variables. The means, standard deviations, and intercorrelation matrix for this study’s variables are shown in Table 1. From Table 1, it can be seen that there is a relatively significant correlation among most dimensions.

Table 2
Descriptive Statistics and Pearson Correlation Matrix

	Mean	SD	1	2	3	4	5	6
vigor	4.781	1.004	1					
dedication	3.931	1.470	.492**	1				
absorption	4.7793	1.080	.734**	.576**	1			
satisfaction	4.1379	1.323	-.086	-.088	.025	1		
performance	4.8138	1.199	.370**	.207*	.333**	-.222**	1	
innovation	4.5586	1.073	.286**	.234**	.377**	-.078	.689**	1

* p<.05; ** p<.01

3.3 The Results of AMOS Analysis

An additional analysis was performed using AMOS 18.0 to determine the relationship between engagement and effect of tacit knowledge transfer. The model describing the direct relationship between job engagement and the effect of tacit knowledge transfer yielded a good fit to data, CMIN=11.530, DF=8, CMIN/DF=1.441 (which should be between 1 to 3); GFI=0.973 (>0.9); IFI=0.965 (>0.9); CFI=0.962 (>0.9); RMSEA=0.055 (<0.08). The index indicates that the model fits the data very well. The path coefficients of the model are shown in Figure 1.

From the viewpoint of the path coefficients of the model, job engagement has a significantly positively impact on the effect of knowledge transfer ($\beta=0.49$, $p<.05$), which implies that if people enjoy a high degree of job engagement, the tacit knowledge transfer between them will be more effective. This result support our hypothesis.

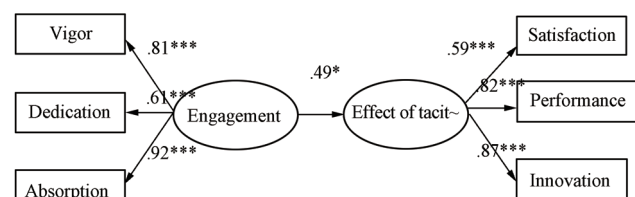


Figure 1
The Path Coefficients of the Model

4. DISCUSSION

4.1 Results Implications

The result supports our hypothesis, which means that job engagement is positively related to the effect of tacit knowledge transfer. According to this conclusion we think

if we want to improve the effect of tacit knowledge transfer, we should pay more attention to the feeling of human beings because positive emotion can play an effective role on tacit knowledge transfer. So some measures which can be used to promote the engagement could be taken into account to help the tacit knowledge transfer.

4.2 Limitations and Future Research Directions

The results of this study must be viewed in light of its limitations. First, the present study is limited by the nature of the sample and data collected. The number of respondents was actually rather small (168), although this sample size is within an acceptable range for the number of independent variables included in the models, the study did not possess optimal statistical power.

Second, the study is limited by the fact that most of the respondents aged from 25 to 35, and all of the respondents come from Jiangsu and Anhui province. Although the respondents come from high-tech companies, and the knowledge of these respondents are more tacit, we still need to consider expanding the scope of the samples, and by doing so, our result can be more validated

Subsequent research could investigate the relationship among job engagement, job burnout and the effect of tacit knowledge transfer. In the field of psychology, job engagement and job burnout are two sides of a coin, we often study them together. In our research, we proved that job engagement is positively related to the effect of knowledge transfer, but there is still confusion about whether job burnout is related to the effect of knowledge transfer. More than that, job engagement and burnout are affected by common factors, if we proved that burnout is negatively related to the effect of tacit knowledge transfer, the intervention means of burnout can also be used to promote the tacit knowledge transfer, and it also can be used to promote the degree of job engagement.

CONCLUSION AND SUGGESTIONS

As we know, few studies have been done to examine the relationship between engagement and tacit knowledge transfer. As the first study to do this, we hope that our study can shed some light on their relationship and inspire further studies. According to previous research and our study, tacit knowledge is difficult to share and transfer, but we found that engagement can improve the effect of tacit knowledge transfer so that the managers should pay more attention to employees' psychological state rather than advanced tools of knowledge transfer. The results inspire us to take measures to improve Job engagement to help the tacit knowledge transfer.

Individually, we think psychological counseling, cognitive therapy and vocational training can be useful. The psychological counseling and cognitive therapy mainly targets the employees whose job engagement are insufficient. With the help of these measures, employees

can eliminate their negative psychological and emotional states. And it also helps to change employees' attitude towards work, thus to improve their job engagement. The vocational training can be applied to employees' entire career. What's more, it helps employees get more knowledge and skills, and solving could result in improve problems solving skill.

For enterprises, job resources such as social support, performance feedback, and autonomy could promote a motivational process leading to job engagement (Salanova *et al.*, 2005). Managers could try something based on job resources to give employees more support. For example, Jana *et al.* (2009) thought that a short respite can increase the job engagement, so we suggest that the enterprise should not deprive employees' annual leave. Ten Brummelhuis *et al.* (2012) thought that the new ways of working can foster work engagement. They define the new ways of work as a work design in which employees can control the timing and place of their work, while being supported by electronic communication. The new ways of work give employees more autonomy such as flexible timing, various options for place and diverse new media technologies, and research indicated that the new technologies itself can also help tacit knowledge transfer (CHEN *et al.*, 2005).

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