

# A Review of the Relationship on Zhong-yong Thinking and Innovation Intention

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## Abstract

This review attempts to combine the existing researches of Zhong-yong Thinking and innovation intention from three aspects: the connotation, the dimensions and measurements, and the related researches. And then discusses the relationship between them. The result shows that Zhong-yong Thinking has a profound influence on Chinese employees' innovation intention. But the direction and degree of possible impact has not yet been clear.

**Keywords:** Zhong-yong Thinking; innovation intention; relationship

## 1. Introduction

Zhong-yong is an important part of Chinese traditional culture. Confucius considered "Zhong-yong" as the state of "going too far is as bad as not going far enough, be just perfect" or the value orientation to this state. It is to grasp the principle of moderation correctly according to the situation(Shao Aiguo, 2003) and refers to an action orientation or a modal in the person contact(Zhang Desheng, et al, 2001).

Therefore, this thinking mode can affect people's attitude and behavior, innovation intention is no exception. On the one hand, innovation intention is one of the reasons for innovation(Bandura, A., 1977). On the other hand, it is even more directly tied to thinking mode. So studying the relationship of Zhong-yong Thinking and innovation intention is more significant. However, the researches on this aspect are still comparatively few. For this reason, this review tries to tease the concept, the

constructs and measurements, the related study variables, and the relationship of them, so as to enhance the understanding in this field, and provide some theoretical support to solve the innovation behavior problem in Chinese enterprises.

## 2. Concept of Zhong-yong Thinking and Innovation Intention

### 2.1. Connotation of Zhong-yong Thinking

Zhong-yong Thinking is a set of "practical mode of thinking" of "metacognition" (Yang Zhongfang, Zhao Zhiyu, 1997), which constructed as a Zhong-yong Practice Thinking System. It's a cognitive construal, which reflects the process of weighing and self-handling(Yang Zhongfang, 2010). It's also a process control thinking, involving information collecting, environment judging and action selecting(Zhao Zhiyu, 2000) from multi angles(Wu Jiahui, Lin Yizheng, 2005).

As a special mental model in the Chinese culture, Zhong-yong Thinking is a perceived framework about persons, concepts, and things in the process of practice. It hopes to reach the goal of harmony through the cognitive of "Zhong"(Yang Zhongfang, 2010), and this kind of harmony not only refers to the personal inner, but also includes other people and the environment(Ye Xiaolu, et al, 2012).

### 2.2. Connotation of Innovation Intention

The Theory of Planned Behavior recognizes that the process of attitude causing behavior is contacted by "motivation", which is the "behavioral intention"(Ajzen, I., 1991). In the process of individual innovation, innovation intention is a powerful predictor of innovation

behavior(Choi, J. N., 2004), which can reflect the person's innovation enthusiasm and self-control ability(Berends, H., et al, 2006).

Chinese scholars think that the individual innovation behavior may be affected by the inner and external supports(Chen Jing, Zhang Lili, 2013). Only when the external incentives internalize into the innovation intention can promote innovation(Wei Rong, 2010). This innovation intention is exactly the employee's subjective belief, attitude and probability toward innovation(Hu Wanli, 2013).

### **3. Dimensions and Measurements of Zhong-yong Thinking and Innovation Intention**

#### **3.1. Dimensions and Measurements of Zhong-yong Thinking**

As a kind of thinking modes, it's difficult to sort out the dimensions by any single measure. At present, the measurements of Zhong-yong Thinking are mainly considered by the practicality, thinking process and behavioral expression. Zhong-yong Practical Thinking Scale(Yang Zhongfang, Zhao Zhiyu, 1997) focuses on the practicality. Zhong-yong Actional Thinking Scale(Zhao Zhiyu, 2000) and The Tendency of The Golden Mean on Behaviors(Shao Aiguo, 2003) both focus on action. Zhong-yong Integrative Thinking Scale(Wu Jiahui, Lin Yizheng, 2005) focuses on Zhong-yong tendency in opinion integration. The Actional Features of Zhong-yong Scale(Wang Feixue, Li Huaxiang, 2005) studies the characteristics of Zhong-yong behaviors in the conflict situations.

#### **3.2. Dimensions and Measurements of Innovation Intention**

The innovation intention mainly includes three dimensions: attitude toward innovation behavior, subjective norms and perceived behavioral control (Ajzen, I., 1991). The early measurements are quite simple on the dimensions and items. With the development of research, some scholars such as Su Jingqin, et al(2011) and Zhang Chao(2012) develop the relevant scales at home. Among them, the Knowledge Employee's Innovative Intention Scale which developed by Hu Wanli(2013) is a relative typical scale. It contains four dimensions: innovation

attitude, subjective norms, self perceived and environmental perceived.

### **4. Related Study Variables of Zhong-yong Thinking and Innovation Intention**

#### **4.1. Related Study Variables of Zhong-yong Thinking**

The antecedent variables of Zhong-yong Thinking mainly contains individual characteristics(Ye Xiaolu, et al, 2012), psychological traits(Xiao Anzhi, 2011) and environment factors(Dai Jianlin, Feng Yan, 2008).

The outcome variables of Zhong-yong Thinking involve both the group and individual levels. From the group view, Zhong-yong Thinking can affect the relationship during the interpersonal communication process(Li Yufei, 2011), the organization harmony and organization effectiveness(He Xuan, 2009; Chen Jianxun, et al, 2010; Shao Aiguo, 2003). From the individual perspective, Zhong-yong Thinking will influence people's mental health levels(Xi Mingjing, 2008), adaptation states(Tan Dongxue, Huang Miner, 2012), voice behaviors(He Xuan, 2009; Duan Jinyun, et al, 2011), innovation behaviors(Hu Wanli, 2013; Liu Hui, 2013) and performances(Hu Xiping, et al, 2012).

Besides, Zhong-yong Thinking is a moderator, which can act on the competitive and cooperative attitude (Wang Feixue, Wu Qiuping, et al, 2006), emotional management(Guo Kan, et al, 2012), psychological adjustment(Deng Chuanzhong, 2008) and so on.

#### **4.2. Related Study Variables of Innovation Intention**

This paper divides the antecedent variables of innovation intention into organizational and individual layers. In the organizational factors, there are organization climate and culture(Scott, S. G., Bruce, R. A., 1994), leader's initiative and LMX(Kozlowski, S. W. J., Doherty, M. L., 1989), the supervisor's expectation (Zhou, J., George, J. M., 2001) and colleagues' evaluation(Bao Gongmin, et al, 2012). In the individual factors, the personality characteristic, thinking mode and interest orientation will affect employee's attitude to innovation(Hu Wanli, 2013; Zhao Bin, et al, 2013). And the employee's consciousness to work environment and work autonomy will also decide whether they can stimulate creativity (Amabile, T. M., et al, 1996).

The outcome variables of innovation intention are simply contain innovation behavior and innovation performance. The innovation intention is actually a psychological support during innovation activities, it is good for promoting innovation behavior and innovation performance(Wan Qing, et al, 2012).

## **5. Relationship between Zhong-yong Thinking and Innovation Intention**

The existing researches on innovation intention are mostly based on the western culture, the traditional culture under the eastern cultural background need to be considered in Chinese enterprises, especially the difference of thinking modes(Duan Jinyun, et al, 2011). Among the thinking modes, Zhong-yong Thinking is particularly important to Chinese people. For the moment, the researches on innovation are rarely from the angle of Zhong-yong Thinking(Li Yufei, 2011), the conclusions of a few studies tend to differ, and the direct study on the relationship of Zhong-yong Thinking and innovation intention is more rare.

Cross-cultural studies on innovation have shown that, the Zhong-yong Thinking of executive team has significant positive effect on strategic ambidexterity of exploitative innovation and exploratory innovation under Chinese specific management context(Wang Yimin, Miao Xiaomei, 2012). These leaders will balance the contradiction between kinds of activities so as to meet the requirements of dual development of enterprises(Chen Jianxun, et al, 2010). But on the other hand, studies have also shown that, the subjects under western cultural background play better than those under eastern collectivist culture in creativity. Among those Chinese people, the degree of Zhong-yong Thinking in highly creative group is also significantly lower than the general population group. The Zhong-yong Thinking may inhibit the fostering and developing of individual creativity because of emphasizing on the overall harmony too much (Liu Hui, 2013).

Although the above views aren't consistent, the studies on innovation intention have shown that the organization members have higher innovation intention under Zhong-yong cultural background(Hu Wanli, 2013). Among the individual factors of employee's innovation

intention, the personality characteristic, sense of duty and interest orientation will affect employee's attitude to innovation(Zhao Bin, et al, 2013). Zhong-yong Thinking will affect employee's attitude and willingness to innovation (Shalley, C. E., et al, 2009) through the shaping of personality(Shao Aiguo, 2003; Ye Xiaolu, et al, 2012), the choosing of organizational environment perception (Amabile, T. M., et al, 1996), and the flexible of work autonomy(Yang Zhongfang, 2010). Especially the employee's consciousness to work environment, it will decide whether they can stimulate creativity(Ekvall, G., 1997), and then influence the innovation intention. Besides, employee's work autonomy can promote their intrinsic motivation (Anderson, N. R., West, M. A., 1996), enhance their interest at work, and foster innovation(Shalley, C. E., et al, 2009). So the multi thinking and integration of Zhong-yong Thinking will encourage employees to hold a more open attitude to face the new ideas and new things, and be more willing to accept or engage in innovation activities from the subjective(Han Fei, Xu Zheng, 2012).

To sum up, as a unique thinking process in Chinese traditional culture, Zhong-yong Thinking focuses on the self-handling process before the behavior. So it pays attention to not only the behavior, but also the changes before and after the behavior(Chen Wenping, et al, 2013). Thus, we can come to the conclusion that Zhong-yong Thinking will affect the employees' innovation intention and innovation behavior in the Chinese enterprises. As to the direction and degree of the impact, it needs to be explored in depth.

## **6. Conclusion**

Although Zhong-yong Thinking is an old topic, but its connotation is broad and profound. So there exists a lot of interpretations, including positive and negative. The broad of the connotation and the relative concealment property of the thinking mode also lead to the difficulties of measurement. The lack of scale has limited the research. In the future research, we should develop the Zhong-yong Thinking scales with higher reliability and relativity, so as to promote the development of native culture research.

At the same time, what we can clearly is that

Zhong-yong Thinking will affect the individual's innovation intention and behavior. But we can't make sure the direction and extent of this impact. However, Zhong-yong Thinking is widespread in Chinese employees, we must make clear their relationships. So it's much more necessary to explore the connotations and measurements of Zhong-yong Thinking and innovation intention, and the influence of Zhong-yong Thinking on individual's innovation intention.

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