

**How Does Organizational Centralization Influence Employees' Creative Work
Involvement in China's Insurance Industry? From a Psychological Safety Perspective.**

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How Does Organizational Centralization Influence Employees' Creative Work Involvement in China's Insurance Industry? From a Psychological Safety Perspective.

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Abstract

Insurance companies in China, characterized by high organizational centralization, face fierce competition to grab the market share. Hence, many of them have made innovation a corporate strategy, and simultaneously their employees are expected to get more involved in the creative process or work. However, does the organizational centralization of Chinese insurance firms impact employee involvement in creative work? If so, how? To answer these questions, one attempted to examine the association between organizational centralization and creative work involvement from a view of psychological safety. To achieve this goal, one conducted a field study and then adopted a mediation analysis with the AMOS software using the data from 711 employees working for insurance companies in China.

Results suggest that organizational centralization was positively associated with psychological safety and creative work involvement, which is different from the negative associations between organizational centralization and creative work involvement suggested by previous studies. Consistent with previous studies, psychological safety was found to be positively associated with employee creative work involvement. More importantly, psychological safety fully mediates the relationship between organizational centralization and creative work involvement. Such findings demonstrated organizational centralization impacts creative work involvement through psychological safety. These findings enriched the theory of hierarchy, organizational structure and organizational innovation. Moreover, it offered an example of explaining the interplay between organizational factors, psychological conditions and organizational innovation for the research community. From the pragmatism view, it tells organizational management the importance of psychological safety in motivating employees to be more involved in creative work. Moreover, organizational management should find a balance point for the degree of organizational centralization because it influences employees' psychological safety. Cautions should be paid to interpreting and generalising the results due

to some limitations, and the author advocated replicating studies.

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Foreword

Employee involvement in creative work is one prerequisite for the innovative outcome. Hence making employees actively involved in their creative work has become a crucial task for the management of organizations. But how does organizational centralization influence employee involvement in creative work? To answer this question, the author conducted a field study to examine the relationship between organizational centralization and creative work involvement from a psychological view. Mediation analysis in AMOS 28 was adopted with the data collected from insurance companies in China. Although there are some limitations, this study attempted to contribute to the research community and the practical world in numerous ways.

To complete this study, many people have made significant contributions which author can't wait to say a sincere "Thank you". I want to express my infinite gratitude to my thesis supervisor, Huseyin Arasli. He gave me great and wise guidance for my thesis. I can't finish my thesis on time without his instructions and guidance. A "thank you" on this page is too small to express my gratitude. The only thing I can do is carry the skills and knowledge he imparted to me into my future research and make my slightest contribution to the research community.

Another person that I want to say "thank you" is Torvald Øgaard. Although Torvald was not my thesis supervisor, he gave me invaluable assistance. I was his student in the MHR-101 Research Methods for Business and Leadership. This course gave me basic knowledge and skills for doing social science research. Without the knowledge I learned in his class, it would have been impossible to do my Master's thesis. Moreover, the insights and inspirations I got from him shed light on my research career in the future and even my life.

Last, I want to thank my school, the University of Stavanger (UiS). The two-year Master's study at this school is too short for me compared to the great experience I gained

there. The excellent teachers and resources the university offered me are my life's precious assets. UiS provided me with education and critical thinking, which might be helpful and bring positive change to my life. The education received there offered me new opportunities and possibilities for my life. "Critical thinking" makes me see this world more critically and encourages me to be "myself". In the future, wherever I am living or working, I will make what I have learned at UiS a compass of my life, show the charm of UiS to the people I meet and be proud to tell others that I graduated from the University of Stavanger.

Introduction

According to the Insurance Association of China (2023), the number of insurance companies has expanded from a few to approximately 235, and China's commercial insurance market has become the world's second-largest since the government resumed the domestic insurance business in 1979. Insurance companies face fierce competition. So, to grab market share, insurance companies have kept emphasizing service innovation and even made it the basic principle for survival (Sun, 2003). *Idea generation*, "the production of novel and useful ideas (Amabile, 1996, p. 1)", is the starting point and one of the significant tasks of innovation (Amabile, 1996; Kanter, 2009). From the insurance company's stand, only when employees actively involve themselves to the most considerable extent to generate novel and valuable ideas will they likely gain creative achievements or outcomes. Hence, considering creative achievement requires employees' intense involvement, this study mainly investigates under what conditions employees would like to be involved in producing creative ideas. This process refers to *creative work involvement*, operationalized as "the extent to which an employee engages his or her time and effort resources in creative processes associated with work" (Carmeli & Schaubroeck, 2007, p. 36). In this study, employees' creative work involvement manifests an employee's subjective assessment of the degree to which they are engaged in creative tasks.

Since creative work involvement is crucial for organizations, identifying conditions that influence employees' involvement in creative work has become an ever-interesting topic for researchers. One of the conditions at the organizational level that has attracted the attention of researchers is the organizational centralization. *Organizational centralization*, featured by China's insurance firms, refers to the locus of decision-making authority lying in the higher levels of a hierarchical relationship (Tsai, 2002). It describes a hierarchy of authority; only people at the higher-level hierarchy have decision-making power (Dewar et al., 1980; Hage

& Aiken, 1967). Some researchers have explicitly and implicitly pointed out the adverse effects of organizational centralization on employees' creative work involvement (e.g., Germain, 1996; Ibarra, 1993; Oedzes et al., 2019; Shalley & Gilson, 2004). For example, Germain (1996) argued that organizational centralization hinders creative work involvement by creating a non-participatory work environment. Oedzes et al. (2019) found an informal hierarchy of organizational centralization stifles creativity, and a leader's empowerment can dampen the adverse effects. However, other researchers claimed that organizational centralization might improve employees' creative work involvement due to its high effectiveness in coordination and cooperation. These contradictions implied that the mechanism of the relationship between organizational centralization and creative work involvement is still not clear-cut. In other words, how exactly the organizational centralization influences creative work involvement? Alderfer (1983) and Hackman et al. (1980) suggested organizational factors influence employees' psychological experience or conditions; psychological experience at work drives employees' attitudes and behaviours. Furthermore, the theory of hierarchy suggests hierarchy might influence people's mindset; at the same time, their mindset decides people's actions or behaviour in the hierarchical environment (Diefenbach, 2013). This evidence implies that organizational centralization, as one organizational factor, might influence employees' psychological conditions; their psychological conditions might impact their involvement in creative work. Hence, based on the theory of hierarchy, this study investigated the relationship between organizational centralization and creative work involvement from a psychological point of view.

Psychological safety, the individual's perceptions of the consequence of taking interpersonal risks in the work environment (Amy, 2004), is one of the most potent psychological conditions that influence the degree of work engagement or disengagement (Kahn, 1990) and has been repeatedly confirmed to promote innovative behaviour (e.g., Amy, 2004; Huang &

Jiang, 2012; Kahn, 1990; Kark & Carmeli, 2009; May et al., 2004). Based on these previous findings, one postulated a hypothesized relationship between organizational centralization (independent variable), psychological safety (mediator), and creative work involvement (dependent variable). In addition, since the phenomenon addressed in the current study is from a high power-distance country, China (Andreasson & Lundqvist, 2018), people readily accept the authority and inequality of power (Hofstede, 1984, 2001). Simultaneously, hierarchy, the characteristics of organizational centralization, has been repeatedly validated to be able to satisfy people's psychological needs for predictability and security by offering a stable hierarchical order (e.g., Anderson & Brown, 2010; Halevy et al., 2012; Halevy et al., 2011; Hays & Bendersky, 2015; Magee & Galinsky, 2008). One further assumed that organizational centralization positively influences employees' perception of psychological safety and thus positively impacts their creative work involvement. In developing the hypothesized relationship, the theory of hierarchy was used.

To empirically examine the relationship between these variables, this study chose China's insurance industry, which is featured a hierarchical structure, as the study objective. With data collected there, mediation analysis with AMOS in SPSS was applied. This study contributes to the research community and reality from a few aspects. First, although researchers have conducted numerous studies on this topic or related topics, this study examined the psychological conditions that influence employees' involvement in creative work in a non-western environment. It extended our understanding of this area and verified previous findings in a different cultural context. More importantly, the possible impacts of cultural value were taken into account. It makes it possible to compare the effects of organizational centralization on innovation in different cultures. Second, it advances the understanding of the theory of organizational innovation by studying the interplay between one situational factor (organizational centralization), one specific social context

(psychological safety) and creative work involvement. Third, many researchers have theoretically claimed organizational centralization negatively or positively influences employees' involvement in creative work, but few empirical studies have confirmed their assertions and clearly explained the mechanism. This study was the first attempt to use the theory of hierarchy to explain the mechanism and was supported by empirical data. However, this research also has some limitations, which need to be cautious when interpreting or generalizing the results.

Literature Review

Employee Creative Work Involvement

Amabile (1996) defined *creativity* as “the production of novel and useful ideas in any domain” (p. 1). It is a necessary and starting point for innovation (Amabile, 1996; Kanter, 2009; Scott & Bruce, 1994). Based on this definition, organizational researchers have further studied the factors that impact *employee creativity* in different types of organizations (e.g., Cao & Zhang, 2020; Carmeli & Schaubroeck, 2007; Guo et al., 2018; Kark & Carmeli, 2009). This study is mainly focused on *employee creativity* in insurance firms. Employees’ creative ideas range from ideas for new products, processes, services, procedures, policies or other work-related domains within the organizations (Amabile, 1988; Kark & Carmeli, 2009; Myers, 1996; Woodman et al., 1993). These ideas can be minor adaptations, breakthroughs or even the development of brand-new products or processes, but they have to be different from the existing ones (Mumford & Gustafson, 1988). Further, to be considered creative, the ideas are not only different for difference’s sake but also have to be potentially helpful to the organization (Amabile, 1996; Kark & Carmeli, 2009).

Since creativity emphasizes “new” and “useful”, undoubtedly there will be challenges or competition with an alternative course of action, poses threats to some people’s vested interests and needs source (including efforts, time), the occurrence of opportunity, or even constant trial and error (Kanter, 2009). Hence, one of the critical questions in the research on organizational creativity is related to stimulating employees to become and remain creatively engaged at work (e.g., Amabile, 1997; Amabile et al., 1994), even if they face these challenges. This process has been conceptualized as *employees’ creative work involvement*, which refers to “the extent to which an employee engages his or her time and effort resources in the process of generating creative ideas associated with work” (Carmeli & Schaubroeck, 2007, p. 36). As such, it manifests “an employee’s subjective assessment of the degree to

which she or he is engaged in creative tasks” (p. 787). It is worth mentioning that although an employee engages in the creative processes, it is still possible that they will not achieve any outcome of creativity (or not produce any creative ideas). The reason is that involvement is not one decisive factor in predicting creative performance or outcome (Kark & Carmeli, 2009). As Kanter (2009) suggested, the source or occurrence of new opportunities is unpredictable, so the innovation process, the ultimate result (including the creative performance), and even costs are usually uncertain. Notably, an individual’s work involvement is directly and highly driven by the individual’s intrinsic motivation influenced by individual’s *psychological conditions* or psychological experience at work (Hackman, 1986; Hackman et al., 1980). The latter is primarily influenced by an individual’s perceptions of organizational factors (Alderfer, 1983; Kahn, 1990; May et al., 2004). Therefore, *psychological safety*, has been confirmed as the most important psychological condition that impacts employees’ engagement or involvement at creative work (e.g., Amy, 2004; Cao & Zhang, 2020; Carmeli et al., 2009; Edmondson, 1999; Edmondson & Lei, 2014; Edmondson & Mogelof, 2006; Shanker et al., 2017), will be introduced next.

Psychological Safety

Psychological safety is an intrapsychic state related to interpersonal experience at their work (Amy, 2004). It mainly describes a “sense of being able to show and employ self without fear of negative consequences to self-image, status, or career (Kahn, 1990, p. 705)”. It is “the belief that the work environment is safe for interpersonal risk-taking” (Edmondson, 2018, p. 8). The nature of psychological safety is that people tend to consciously and subconsciously calculate interpersonal risks when they make decisions (Edmondson, 2018; Frazier et al., 2017; Kahn, 1990). It is the nature of humans to weigh the risk of being mocked, hated, belittled or other bad feelings (Edmondson, 2018). Such findings imply that when individuals feel the interpersonal risk is high, they are less likely to act and vice versa

(Edmondson, 2018). Researchers have found psychological safety at the workplace facilitates the willing contribution of ideas and actions, information and knowledge sharing, speaking up with suggestions, taking initiatives to develop new products and services, learning behaviour and work engagement (Bradley et al., 2012; Edmondson, 1999; Edmondson & Mogelof, 2006; Edmondson & Smith, 2006; Gibson & Gibbs, 2006; Huang & Jiang, 2012; Kahn, 1990; Madjar & Ortiz-Walters, 2009; Singh et al., 2013).

Previous studies have found people usually feel safe in situations where they feel trustworthy, secure, predictable, and transparent regarding the consequences of behaviours (Kahn, 1990; May et al., 2004). Kahn explained that when people could understand the boundaries between what was allowed, disallowed and the potential consequences of their behaviours, they felt safe. Such a structured and well-ordered work environment is derived from the organisation's control mechanisms, and one of the primary mechanisms is organizational centralization. Therefore, the next section will introduce the centralization in the organization.

Organizational Centralization

Organizational centralization is one dimension of organizational structure which is widely perceived as the controlling tool or mechanism of the organization (Auh & Menguc, 2007; Chen & Huang, 2007; Germain, 1996; Nahm et al., 2003; Sciulli, 1998). The degree of centralization reflects the organisation's power distribution and is signified by *the hierarchy of authority* and the degree of *participation in decision-making* (Andrews et al., 2009; Dewar et al., 1980; Hage & Aiken, 1967). The hierarchy of authority describes “to what extent the power of decision-making is exercised at the upper level of the organizational hierarchy” (Andrews et al., 2009, p. 58). When organizational members can make their own decisions, and there is little reliance upon their superordinate, then there is a relatively low hierarchy of authority in the organization and vice versa. The degree of participation in decision-making

represents the degree of involvement in determining the allocation of resources and the organization's policies (Andrews et al., 2009; Dewar et al., 1980; Hage & Aiken, 1967). Here decisions are basic kinds of decisions made by most organizations, such as the adoption of new services or a new policy. Based on the explanation above, a more centralized organization means a higher degree of hierarchical authority and lower levels of participation in organizational decisions. In contrast, a more decentralized organization is characterized by a lower hierarchical authority and highly participative decision-making. In the current study, one views decentralization and centralization are the two ends of a continuum demonstrating developmental trends rather than a dichotomy. Given that hierarchy is one of the main characteristics of organizational centralization (e.g., Andrews et al., 2009; Hage & Aiken, 1967), the effects of organizational centralization on employees' psychological safety are contingent upon the effects of hierarchy. Therefore, to investigate the effect of organizational centralization on psychological safety, it is necessary to delve into the theory of hierarchy.

A Functionalistic View of Hierarchy

As mentioned above, organizational centralization is characterized by hierarchy (Hage & Aiken, 1967; Ouchi, 1978), so this section mainly focuses on the theory of hierarchy. Hierarchy primarily means "the creation and maintenance of unequal social relationships between people at dyadic, group, organizational, and societal levels" (Diefenbach, 2013, p. 4). In essence, hierarchy systematically enables and guarantees unequal distribution of resources, influence and power, so hierarchy is antidemocratic, unfair, and unjust. Hierarchy can be seen from the structured organizational charts and informal hierarchical relationships between superiors and subordinates (Diefenbach, 2013).

The theory of hierarchy claims that the emergence and continuation of hierarchy mainly depend on people's *mindset*, which comprises people's interests, identities, emotions, and moral characters (Diefenbach, 2013). More specifically, the realization and persistence of

hierarchy are contingent upon how people perceive and interpret, how they act and interact in the hierarchical relationship and the interest or advantages they would attain in supporting and maintaining the hierarchy. On the contrary, hierarchy also shapes people's mindsets and behaviours.

Hierarchy has advantages to support its persistence or continuation. It establishes the order in which roles and tasks are clarified and facilitates coordination (Anderson & Brown, 2010; Halevy et al., 2012; Halevy et al., 2011; Magee & Galinsky, 2008). By providing explicit rules and regulations, hierarchy provides predictability, certainty and security for people; reduces and regulates the power that higher-rank people have and thus protects subordinates from higher-rank people's arbitrariness and randomness behaviour. In addition, the hierarchy motivates individuals by offering incentives for those trying to climb up to higher positions (Halevy et al., 2011; Hays & Bendersky, 2015). Evidence has shown people in higher positions usually enjoy more tangible and intangible benefits (Anderson & Brown, 2010; Fişek & Hysom, 2008; Nembhard & Edmondson, 2006), to some extent, which tempts some people to move up to the ladder and thus satisfy human's psychological needs for power and achievements (Schwartz et al., 2012). Therefore, consciously and unconsciously, superiors and subordinates together keep the hierarchy function and continue.

It is worth mentioning that hierarchical order can be changed due to external changes, fairness and the legitimacy of hierarchical differences and competitions (Diefenbach, 2013; Magee & Galinsky, 2008). For example, Mahoney (1979) suggested that lower-level employees are more likely to quit if they think the wage gap between ranks in the organizational hierarchy is too high. Based on the theory of hierarchy, one postulated the relationship between organizational centralization, psychological safety and creative work involvement in the next section.

Hypothesis Development

Organizational Centralization and Psychological Safety (H₁)

Organizational centralization reflects the power distribution of the organization (Hage & Aiken, 1967). The degree of organizational centralization is signified by the hierarchy of authority and participation in decision-making (Andrews et al., 2009). It implies that a higher degree of centralization means a higher degree of hierarchy. Hence, this study will investigate the relationship between organizational centralization and psychological safety based on the hierarchy theory.

According to the theory of hierarchy, the emergence and continuation of hierarchy mainly depend on people's mindsets; conversely, the hierarchical environment also shapes people's mindsets (Diefenbach, 2013). Based on this logic, how people interpret or perceive organizational centralization is mainly up to their mindset. China has a high power-distance index (Andreasson & Lundqvist, 2018), so the less powerful members in China expect and accept that power is distributed unequally (Hofstede, 1984). In other words, with a high power-distance orientation, employees would be more likely to interpret the hierarchy or organizational centralization positively or neutrally rather than rejecting it. One function of hierarchy (e.g., Anderson & Brown, 2010; Halevy et al., 2011) is hierarchical differentiation that creates a structured, well-ordered work environment (e.g., Anderson & Brown, 2010) by providing explicit rules and formalized procedures (Crozier, 1964). To form psychological safety, uncertainty and chaos are hindrances. As Kahn (1990) and Edmondson (2018) suggested, it is human nature to weigh the risks when making decisions. When the consequences of taking action are uncertain and unpredictable, or even if the situation is chaotic, people might not feel psychologically safe. While in the centralized work environment, people in higher positions offer directions to people at lower ranks about how they work and what would happen if they behave or don't behave as expected (Diefenbach, 2013). Such clarity or

order fulfils humans' psychological needs for certainty, predictability, and safety (Halevy et al., 2011; Kruglanski & Webster, 1996; Whitson & Galinsky, 2008). In other words, employees tend to feel psychologically safe in such a predictable and rule-clarified environment. Such a claim is consistent with Kahn (1990) that people feel psychologically safe in a trustworthy and secure situation where the consequence of behaviour is predictable and transparent. Furthermore, centralization has a clear chain of command and spheres of authority (e.g., Halevy et al., 2011; Mahoney, 1979) which allow employees to have uniform expectations about the behaviours of people at the different ranks and roles (e.g., Halevy et al., 2011; Magee & Galinsky, 2008). In such situations, employees understand the boundaries surrounding acceptable behaviours. It is reasonable to believe employees would get less concerned over the consequence of interpersonal risks when they interact with each other, especially with people at higher positions.

Taken together, all evidence mentioned above, directly and indirectly, shows that, in a high power-distance context, centralization positively impacts employees' perception of psychological safety. So, the first hypothesis is postulated as follows:

Hypothesis 1: In a high power-distance culture, organizational centralization is positively related to employees' perception of psychological safety.

Psychological Safety and Employee Creative Work Involvement (H₂)

Employees' creativity refers to the production of new and valuable ideas for meeting their daily work demands (Carmeli & Schaubroeck, 2007; Woodman et al., 1993), so engaging in creative work inherently involves interpersonal risks (Myers, 1996; Tesluk et al., 1997). In detail, to produce new ideas, individuals must be willing to challenge the status quo, depart from the established routine or system, and recognize new opportunities (Kanter, 2009). Myers (1996) also suggested the cause of creativity is the "twisting" of reality where

fundamental beliefs are challenged, and alternatives are suggested. So, for many people, creative work is not easy, considering it is against the psychological needs of humans: certainty and security (Schwartz, 2010; Schwartz & Boehnke, 2004; Schwartz et al., 2012). Amy (2004) asserted individuals might engage in a tacit calculus when making decisions (p. 241). When people decide whether to act on behaviour, it is their nature to consider how others will respond, or more precisely, they will assess the interpersonal risks.

Similarly, when employees engage in creative tasks, they might weigh the risks: if I try this new solution, will I be embarrassed or criticized by others? Undoubtedly, a higher degree of psychological safety would be more likely to make them proceed with their creative work. Conversely, there is a large possibility that they might invest less time or energy into searching for new solutions or even give up the new ideas at the starting point for reducing uncertainties or self-defence (e.g., Edmondson, 2018; Schein, 1995).

Besides, psychological safety can also promote help-seeking, feedback-seeking, and other learning behaviours (Edmondson, 1999) needed in creative work. Because learning behaviours usually involve risks of appearing incompetent (Lee, 1997; Schein, 1995), psychological safety can alleviate excessive concern about others' reactions (e.g., Amy, 2004; Cao & Zhang, 2020; Carmeli et al., 2009; Edmondson, 1999; Huang & Jiang, 2012). Undoubtedly, all these learning behaviours benefit new idea generations as Amabile (1996) suggested factual knowledge learned from others is the foundation for all creative work. From this perspective, psychological safety can also benefit for improving expertise skills needed in creative work.

Therefore, by promoting risk-taking and learning behaviours, psychological safety may promote creative work involvement. Hypothesis 2 postulated like following:

Hypothesis 2: Psychological safety is positively related to employees' creative work involvement.

The Mediating Role of Psychological Safety (H₃)

Psychological safety mediates the relationship between organizational centralization and employee creative work involvement. The main reason is that employee engagement or disengagement at work largely depends upon the psychological conditions influenced by organizational factors (Alderfer, 1983; Hackman, 1986; Kahn, 1990; May et al., 2004). As mentioned before, the insurance firms in China have a centralized work environment and hierarchical relationship (Chan, 2011; Chen et al., 2009; Shen, 2000; Sun, 2003), so there is a clear chain of command and spheres of authority (Cooper & Withey, 2009; Halevy et al., 2011; Keltner et al., 2008) in the organization. When organizations appeal for innovation, all departments, resources and facilities will serve this goal. Relevant supportive measures, such as procedures or rules, will be prepared for creative work. Consequently, employees can know when, where, whom and how they seek help, request resources, or know who reports to whom about what, when and how. Such clarity might satisfy employees' psychological needs for certainty, predictability and structure (Schwartz, 2010; Whitson & Galinsky, 2008), or in other words, make them feel safe or supported in dealing with creative tasks. As a result, with fewer concerns about crossing boundaries, employees are more willing to engage in creative work. Moreover, according to the theory of hierarchy, hierarchy also serves as a clear guiding device for resources distribution, creates the order for resource allocation (De Cremer, 2003) and establishes terms for the engagement in competing for resources or upper rung of the ladder (McKinlay & Wilson, 2006). As a result, in creative work, the conflict over resource allocation can be reduced (Sondak & Bazerman, 1991). Thus employees feel safer engaging in creative work without worrying about conflicts.

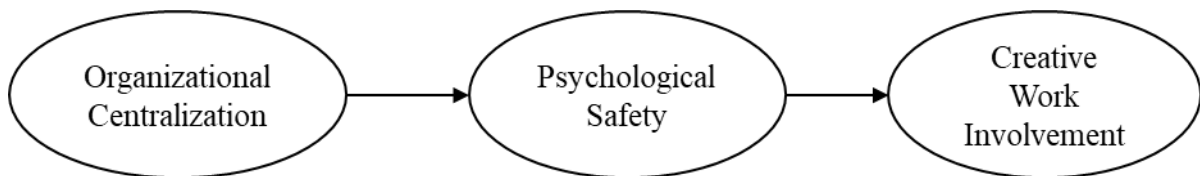
In addition to that, creative work is knowledge-intensive and requires interactive learning among organizational members (Amabile et al., 1996; Kanter, 2009). This nature decides innovation or any creative work that might need cooperation from different organisational

units. Hierarchy facilitates coordination (Magee & Galinsky, 2008) between different departments by prescribing clear tasks for specific roles or positions. Hence although the creative work task or innovation process is uncertain (Kanter, 2009), with the coordination and cooperation from different departments, employees in the creative process would feel supported and safe, thus making it possible to engage more in creative work. Based on the above analysis, hypothesis 3 was postulated, and the hypothetical model was presented in Figure 1.

Hypothesis 3: Psychological safety mediates the relationship between organizational centralization and creative work involvement, such that organizational centralization positively influences employee psychological safety and whereby positively influences employee creative work involvement.

Figure 1

Hypothetical Model



Research Methods

Study Place and Study Population

To test the hypothetical model, one conducted a field study in the insurance industry in China. As described before, the organizational structure of insurance companies in China is hierarchical and features organizational centralization (Chen et al., 2009; Heilmann, 2005). Due to the fierce competition they face, the whole insurance industry has been calling for service innovation for a long time (Lee et al., 2021; Sun, 2003; Yao et al., 2018). Considering the insurance firms in China have a collectivist cultural background where people act for the interests of the group (Hofstede, 1984, 2001), organizational members at different positions such as HR, marketing, product design, after-sales have a feeling of responsibility of being creative for winning the market share. So, one did not consider respondents' work positions and randomly distributed online survey questionnaires in three Insurance Knowledge Exchange WeChat groups. These groups are created for insurance company employees to exchange experience and knowledge. There were around 1678 group members in total.

Survey Questionnaire and Measurements

This study adopted an online survey questionnaire assessing employees' perceptions of organizational centralization, psychological safety, and involvement in creative work. Because some research questions (or measures) are about self-reported beliefs or perceptions, the questionnaire can capture the respondent's psychological process (Neuman, 2014; Pekrun, 2020). Given a 7-point Likert scale can effectively improve scale reliability and validity than those with fewer scale points by offering respondents explicit alternatives (Dawes, 2008; Neuman, 2014), each question was equipped with a 7-point Likert response rating scale (1 = strongly disagree, 7 = strongly agree). All the questions (measures) were borrowed or partly from previous literature and then translated into Chinese. Those measures are:

Employee Creative Work Involvement

Creative work involvement was measured using the 9-item validated and reliable scale of Carmeli and Schaubroeck (2007). Respondents were asked to self-report whether they exhibit various behaviours which are indicative of creative work involvement. Examples of items are: “I demonstrated originality at my work.” and “I took risks in terms of producing new ideas in doing my job.”

Psychological Safety

Respondent's perception of psychological safety was measured using a 4-item adjusted from Edmondson (2018), widely used in the research community. Initially, there were seven items (4 positively worded and three negatively worded) measuring psychological safety in Edmondson (2018). Considering those negatively worded items have risks of lowering the internal consistency reliability (Barnette, 2000), one only kept the four positively worded items. Example items are: “Members of this team can bring up problems and tough issues.” and “It is safe to take a risk on this team”.

Organizational Centralization

The 5-item measures of organizational centralization were modified from Hage and Aiken (1967), which has been confirmed to have good validity and reliability by Dewar et al. (1980). One merged “How frequently do you usually participate in the decision on the adoption of new programs?”, “How frequently do you usually participate in decisions on the adoption of new policies?”, “How frequently do you usually participate in the decision to hire new staff?” and “How frequently do you usually participate in the decisions on the promotions of any of the professional staff?” into one item, “How frequently do you usually participate in the decision-making process?”. The reason was that the organizational decisions in the current study mean any decisions relevant to the corporate business. Ultimately, example items are: “There can be little action taken until a supervisor make a

decision” and “A person who wants to make the decision would be quickly discouraged.”

Control Variables

Organizational tenure is chosen as a control variable because the length that respondent has worked for their organization might affect the level of familiarity and interaction in the organization and thus influence their perceptions of organizational centralization and psychological safety (De Hoogh et al., 2015; Lin et al., 2018). This study also controlled participants' ***age***, ***gender*** and ***educational level*** as they might influence employees' creative work involvement (Alpaugh et al., 1976; Amabile, 1996; Baer & Kaufman, 2008; Binnewies et al., 2008). By controlling these factors, one attempted to rule out some of the alternative explanations that need to be considered when examining the relationship between the variables in this study (Neuman, 2014).

Sample Size Analysis

Before collecting the data, one roughly calculated the sample size that this study might need. The “A-priori Sample Size Calculator for Structural Equation Models” was conducted to achieve this. The sample size needed was decided by “effect size”, “statistical power level”, “number of latent variables”, “number of observed variables”, and “probability level” (Frazier et al., 2004). The effect size estimates “the magnitude of effect or association between two or more variables (Ferguson, 2009, p. 532)” with resistance to the influence of the sample size. According to Ferguson (2009) and Cohen (1992), the effect size value was set at 0.2 for practical significance. The power to detect the effects was set at 0.80, as Aguinis et al. (2001) and Cohen (1992) recommended. The number of latent variables (organizational centralization, psychological safety and creative work involvement) and their indicators are 3 and 21, respectively. The probability level was set at 0.05, representing a 5 per cent chance that results happened due to the chance factors (Neuman, 2014). The calculator recommended the minimum sample size was 400.

Pretest and Data Collection

To guarantee the quality of translation, one searched the literature database in China, cnki.net, and borrowed the measures in the Chinese language. Moreover, the translated questions were sent to a small group of people to check whether those questions were understandable. This pretest group consists of 5 people with high school diplomas, 5 with bachelor's degrees and 5 with college degrees. Afterwards, one distributed the online questionnaire link to the three Insurance Knowledge Exchange WeChat groups with 1678 employees. The author offered a small bonus for each questionnaire to motivate participants to participate and treat those questions seriously. Simultaneously, for quality control, the time for answering each questionnaire was set between 2 and 10 minutes and one questionnaire with the permit of only one IP address. Based on these standards, the unqualified questionnaires were excluded automatically. After one week, the questionnaires were returned. The response rate was 42.4%, and 711 questionnaires were usable. The ultimate sample size (711) exceeded the required (400).

Data Analysis

Before the hypothesis testing, one first analyzed the reliability and validity of the constructs (organizational centralization, psychological safety, and employees' creative work involvement). There are several reasons. First, the constructs are not directly observable, so there might be a gap between the abstract concept (construct) and operationalized measures (Cheung et al., 2023; Neuman, 2014). In other words, there might always be measurement errors in practice. Second, although those measures of constructs have been repeatedly validated and used in previous studies, the established scales might not operate equally well in different populations and samples, especially when measures were translated into another language. Therefore, to ensure the items of one construct are capable of consistently measuring the construct they were supposed to measure (or construct validity), one analyzed

the *reliability and validity* of the constructs before testing the hypothesis (e.g., Cheung et al., 2023; Drost, 2011; Fornell & Larcker, 1981; Neuman, 2014; Sarstedt & Mooi, 2014).

Besides, the *model fit assessment* was applied by assessing the fit indices produced in the confirmatory factor analysis before interpreting the relationships between latent variables (Henseler et al., 2015; Kline, 2016; Sun, 2005). This step aims to assess whether the hypothetical model can reproduce the data best (Sarstedt & Mooi, 2014). If the model has a goodness-of-fit to the data, then there is no need to re-specify the model (Sun, 2005).

After the measurement model has established acceptable reliability and validity, one adopts the structural model analysis, specifically, *mediation analysis* with IBM SPSS Amos 28. There are a few reasons. First, considering the variables are unobservable and cannot be measured directly (called “latent variables”) so that the measurement error is unavoidable, Structural Equation Modeling can help manage the effects of measurement error (Hayes et al., 2017). Moreover, although structural equation modelling is based on the assumption that data is normally distributed and interval, simulation studies have verified that structural equation modelling is still robust when data is ordinal and not normally distributed (Carifio & Perla, 2008; Havlicek & Peterson, 1976; Norman, 2010). So in this study, one treated the 7-point Likert Scale response data as indicators of underlying continuous variables (Rhemtulla et al., 2012) and used Structural Equation Modeling.

Results

Construct Reliability and Cronbach's Alpha

Reliability means stability or consistency, which describes whether measures of the construct or variable can produce repeated, stable outcomes under identical or similar conditions (Neuman, 2014; Sarstedt & Mooi, 2014). There are two ways to evaluate reliability: test-retest and split-half approach (Sarstedt & Mooi, 2014). The former needs to make the same respondents fill out the questionnaire twice and then compare the results, which is unrealistic for the author, so the latter approach was adopted instead. In such a case, one calculated Cronbach's alpha (Cronbach, 1951) with the reliability analysis in SPSS. As a rule of thumb, a generally agreed lower limit for Cronbach's alpha is 0.7 (Bagozzi & Yi, 1988; Drost, 2011; Sarstedt & Mooi, 2014). So, Cronbach's alpha (Bonett & Wright, 2015) generated by reliability analysis in SPSS is evaluated. The results are displayed in **Table 1**.

Table 1

Constructs and Cronbach's Alpha

Constructs	Cronbach's Alpha	N of Items
Organizational Centralization	.791	5
Psychological Safety	.748	4
Creative Work Involvement	.927	9

From the above results, the values of Cronbach's alpha are greater than the threshold value of 0.70 suggested by researchers (Bonett & Wright, 2015; Cheung et al., 2023; Drost, 2011; Jaccard & Wan, 1995; Sarstedt & Mooi, 2014). With this reliability analysis, the author concluded no reliability issue with the study variables (or constructs). However, reliability is a necessary but not a sufficient condition for validity (Neuman, 2014; Sarstedt & Mooi, 2014). Hence one also assessed the validity, mainly convergent and discriminant validity.

Convergent and Discriminant Validity

Convergent validity and discriminant validity are the subtypes of construct validity. Construct validity refers to how well the conceptual and operational definitions mesh with each other (Neuman, 2014, p. 143). Specifically, the convergent validity of the construct refers to how closely the items measuring the same construct are related (Cheung et al., 2023). *Discriminant validity* means that the “measures of one variable need to be less substantially related to measures of different variables (Kline, 1998, p. 93)”. Based on the definition, constructs with acceptable convergent validity would demonstrate the indicators of the same construct have a high correlation with each other, while discriminant validity would demonstrate indicators of one construct have low correlations with indicators of other constructs; simultaneously, the convergent correlations should always be higher than the discriminant ones (Bhattacharjee, 2012). According to this, this study adopted *Average Variance Extracted* to test convergent validity and *HTMT ratio* for assessing discriminant validity. The Average Variance Extracted represents the average amount of variance that a construct explains in its indicators, and its value is greater than 0.5 when the convergent validity is established (Fornell & Larcker, 1981). The HTMT ratio was adopted to assess discriminant validity, which is the average of the heterotrait-heteromethod correlations to the average of the monotrait-heteromethod correlations. The threshold value for HTMT is 0.90 (Henseler et al., 2015). Results are presented in **Table 2** and **Table 3**:

Table 2

Convergent Validity

Constructs	AVE
Organizational Centralization	0.47 (0.56 after removing item 5)
Psychological Safety	0.44 (0.49 after removing item 4)
Creative Work Involvement	0.59

From the above results, one found that organizational centralization and psychological

safety had a relatively low Average Variance Extracted (AVE) value, 0.47 and 0.44, respectively. Considering AVE represents the average percentage of the variance explained among the items of that construct (Cheung et al., 2023), the author analyzed the factor loadings of the items, which refers to the variance explained by the item on the particular factor (Bhattacharjee, 2012). Bhattacharjee further mentioned the items belonging to the same construct should have factor loadings of 0.60 or higher on that single factor for adequate convergent validity (p. 60). One found that item 5 of organizational centralization has only a factor loading of 0.31, and item 4 of psychological safety has a factor loading of 0.519, below the requirement of 0.60. If deleted these two items, the AVE of organizational centralization and psychological safety became 0.56 and 0.49, respectively. By checking the meaning of those two items on the belonging construct, one found other items sharing a similar meaning, so removing them might not hurt their content validity (Neuman, 2014). Then the author deleted the two items for further analysis. Until now, organizational centralization has four indicators, psychological safety has three indicators, and employee's creative work involvement has nine indicators. The results of the HTMT ratio are exhibited as follows.

Table 3

Discriminant Validity

	Organizational Centralization	Psychological Safety	Employee's Creative Work Involvement
Organizational Centralization	--	0.30	0.23
Psychological Safety	0.30	--	0.87
Creative Work Involvement	0.23	0.87	--

As mentioned before, for adequate discriminant validity, the threshold value of the HTMT ratio is 0.90. The above results met the standard. Besides, as some researchers suggested, if the difference between the cross-factor loadings of the items and same-factor loadings is less than 0.10, then it is acceptable (Farrell, 2010). The cross-factor loadings were slightly up to this standard, so the author continued to the next step. See the Appendix for detailed calculations and cross-factor loadings.

Model Fit Assessment

To assess how much of the covariance between the items would be captured by the hypothesized model and how well the hypothesized model fits the observed data (Alavi et al., 2020), the model fit assessment in confirmatory factor analysis was applied. As Sun (2005) suggested, confirmatory factory analysis helps fit scores obtained from instruments to the factor structure of a measurement model (p. 241). Fit indices generated by confirmatory factor analysis indicate how well the scores from a single group fit the theoretical factor structure as evidence of construct validity (Hu & Bentler, 1999; Stone, 2021; Sun, 2005). A few goodness-of-fit indices (Hu & Bentler, 1999), including SRMR, TLI, RMSEA, CFI, GFI and X^2/df , were assessed. First, SRMR is most sensitive to factor covariance misspecification, while TLI, RMSEA and CFI are most sensitive to factor loading misspecification (Stone, 2021; Sun, 2005). Besides, multiple fit indices would provide a more holistic view of the goodness of fit and account for sample size and model complexity (Alavi et al., 2020). According to Jöreskog and Sörbom (1993) and Kline (1998), CFI, TLI and GFI are recommended to be greater than 0.90. Values in the ranges of .05 to .08 of RMSEA indicate proper fit, with values of 3-5 for X^2/df and 0.08 for SRMR (Hu & Bentler, 1999; Schumacker & Lomax, 2004). **Table 4** summarizes the results.

Table 4*Model Fit Indices*

Fit Indices	Recommended Value	Sources	Obtained Value
CMIN/df	3-5	Schumacker and Lomax (2004)	3.228
GFI	> 0.9	Jöreskog and Sörbom (1993); Kline (1998)	0.943
CFI	> 0.9	Jöreskog and Sörbom (1993); Kline (1998)	0.963
TLI	> 0.9	Jöreskog and Sörbom (1993); Kline (1998)	0.956
SRMR	< 0.08	Hu and Bentler (1999)	0.0348
RMSEA	< 0.08	Hu and Bentler (1999)	0.056

The model fit indices needed to assess the overall goodness-of-fit (CMIN/df, GFI, CFI, TLI, SRMR, RMSEA) reached acceptable levels (Hu & Bentler, 1999; Jöreskog & Sörbom, 1993; Kline, 1998). The three-factor model (organizational centralization, psychological safety and employee's creative work involvement) yielded a good fit for the data: CMIN/df = 3.228, GFI = 0.943, CFI = 0.963, TLI = 0.956, SRMR = 0.0348, RMSEA = 0.056.

Descriptive Statistics and Bivariate Correlations

In the attained sample (711 cases), 44.7 per cent were *female*. 44.16 per cent of employees aged 26-35 years old. 50.6 per cent of employees have a bachelor's degree as the highest *educational degree*. The percentages of *organizational tenure* "1-3 years" (not including three years), "3-5 years" (not including five years), and "5-7 years" were 21.94, 25.06 and 20.11 per

cent respectively. **Table 5** presents the bivariate correlations for the research variables (organizational centralization, psychological safety and creative work involvement). The goal was to check whether the variables have a linear relationship between them. The correlation coefficient ranges from -1 to 1, with negative numbers indicating a negative association and positive numbers a positive one (Neuman, 2014). A large number of the absolute value suggests a stronger association.

Table 5

Bivariate Correlations

	Variables	1	2	3
1	OC	-		
2	PS	.24**	-	
3	CW	.21**	.72**	-

Note. N = 711. OC, PS and CW mean organizational centralization, psychological safety and creative work involvement. ** Correlation is significant at the 0.01 level (2-tailed).

The above results indicate that psychological safety is positively associated with organizational centralization and creative work involvement ($r = .24$, $p = 0.01$; $r = .72$, $p = 0.01$). Organizational centralization is also positively associated with creative work involvement ($r = .21$, $p = 0.01$).

Mediation Analysis

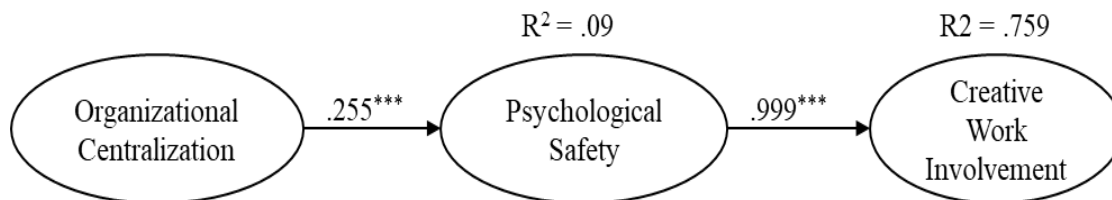
This study adopted mediation analysis in IBM SPSS Amos 28. The goal was to assess the indirect effect of organizational centralization on creative work involvement through psychological safety (Frazier et al., 2004; Preacher & Hayes, 2004). It is worth mentioning that the *bootstrap technique* was used to determine the significance. As Mallinckrodt et al. (2006) and Collier (2020) suggested, the bootstrap technique can create a pseudo-population using sample data and then take a random sample as a replacement to determine if the indirect effect falls within a confidence interval. The prediction would be more accurate using

the bootstrap technique.

So, a full structural model including all the measurement indicators and error terms was assessed. Notably, the significance and standardized path estimates were evaluated (Bagozzi & Yi, 1988; Kline, 2016; Kline, 1998; Sun, 2005). **Figure 2** summarizes the fully mediated model. For clarity, the indicators and error terms were not displayed in Figure 2, but it does offer standardized parameter estimates. See Appendix E for the full structural model.

Figure 2

Mediation Analysis



The multiple squared correlation coefficients (R^2 s) for psychological safety and creative work involvement were 0.09 and 0.759, respectively, which means only a 9% variance in psychological safety was accounted for by organizational centralization. Similarly, a 75.9% variance in creative work involvement was accounted for by psychological safety (Neuman, 2014). Since the goal of this study is to assess whether organizational centralization has a significant effect on psychological safety and whether psychological safety has a significant effect on creative work involvement as well as whether the mediator role of psychological safety exists, a low R-square value is acceptable if this value is statistically significant (Ozili, 2023). Based on this, although organizational centralization only explains a 9% variance of psychological safety, the value will not affect the judgement on whether psychological safety is the mediator between organizational centralization and creative work involvement.

As suggested by Hypothesis 1, the findings in Figure 2 predicted a positive relationship between organizational centralization and psychological safety (0.255, $p < .001$). Hypothesis 2 was also supported because psychological safety and creative work involvement were

significantly and positively related (0.999, $p < .001$). To assess Hypothesis 3 or the mediation effect, the indirect effect of the model was evaluated. From the output, the unstandardized indirect effect of organizational centralization on creative work involvement through psychological safety was 0.255, equal to the product of unstandardized regression weights of 0.255 from organizational centralization to psychological safety and 0.999 from psychological safety to creative work involvement. Besides, to know if the indirect effect was significant and if it fell within the 95% confidence interval, the results generated by the bootstrap technique (Mallinckrodt et al., 2006) were assessed: lower bound was 0.167; upper bound was 0.349. Since there is no zero between 0.167 and 0.349, this shows significant indirect effects (Tan & Tan, 2010). The p-value for the indirect effect of organizational centralization on creative work involvement through psychological safety was .000, which also showed a significant indirect effect. Hence, it was justified that psychological safety mediates the relationship between organizational centralization and creative work involvement. In other words, Hypothesis 3 was supported. Based on the above results, one concluded organizational centralization significantly and indirectly affects creative work involvement through psychological safety. Moreover, the direct effect of organizational centralization on creative work involvement was -0.03, and the p-value was .323, which described the direct effect as non-significant. Therefore, this mediation was full mediation. The following table is the summary of the mediation analysis:

Table 6*Mediation Analysis Summary*

Relationship	Direct Effect	Indirect Effect	Confidence Interval		P-value	Conclusion
Organizational Centralization -> Psychological safety -> Creative Work Involvement	-0.03 (.323)	0.255	Lower Bound 0.167	Upper Bound 0.349	0.000	Full Mediation

Analysis of Control Variables

Regression analysis was applied to assess whether the control variables (age, gender, education and tenure) have effects on the mediator (psychological safety) and the dependent variable (creative work involvement). Multiple regression analysis needs all the variables to be continuous (e.g., Neuman, 2014), while the control variables like gender and education in this study are categorical, so all these control variables had to be recoded further before regression analysis. According to some suggestions in the literature, a dummy coding method was adopted to recode those control variables into dichotomous variables (0's and 1's), which can be included as predictors in the regression model (e.g., Alkharusi, 2012). Neuman (2014) mentioned the effect of an independent variable on the dependent variable in multiple regression is measured by the standardized regression coefficient "Beta" (p. 301). Moreover, Darlington and Hayes (2016) also suggested the set of dummy variables can be viewed as a compound variable representing that categorical variable. So one first regressed dependent variable (creative work involvement) on psychological safety, the Beta was 0.718, and the p-value < .001. Then all the dummy variables were added, and the Beta became 0.704, p-value

< .001. The Beta coefficient was changed by 0.014 only. Similarly, the Beta of organizational centralization on psychological safety was 0.244, p-value < 0.001. After adding all the control variables, the Beta became 0.240, p-value < 0.001. The difference was 0.004.

According to the above analysis, one can conclude the control variables only have very weak impacts on the relationships of the three variables (organizational centralization, psychological safety and creative work involvement). Moreover, one added all the control variables into the full structural model. All these variables did not have a significant relationship with organizational centralization, psychological safety and creative work involvement, which also means that age, gender, tenure and education only have a weak influence on the model.

Discussion

The main goal of this study was to investigate the role of organizational centralization on employees' creative work involvement and the role of psychological safety as a possible mediator that mediates the relationship between organizational centralization and employee creative work involvement. The findings, as postulated, demonstrated organizational centralization is positively related to psychological safety and psychological safety is positively related to employee creative work involvement. Simultaneously, psychological safety fully mediates the relationship between organizational centralization and creative work involvement.

These findings emphasized the importance of creating a work environment which makes employees feel psychologically safe for enabling employees to be involved in creative work. Such findings are consistent with the previous studies regarding the role of psychological safety in creativity and innovation (e.g., Edmondson, 2018; Edmondson & Mogelof, 2006; Kark & Carmeli, 2009; May et al., 2004). For example, Edmondson (2018) and Amy (2004) suggested psychological safety is necessary for innovation, including involvement or engagement. Besides, similar to other empirical studies conducted in different cultural contexts, such as Cao and Zhang (2020) and Kark and Carmeli (2009), the role of psychological safety in creative work involvement was also emphasized. These studies, conducted in different cultural contexts, further demonstrated that psychological safety is necessary for employees to engage in creative work, whatever the cultural context they are located in.

Interestingly, many previous studies hold a negative view about the effects of organizational centralization on creative involvement because they thought centralization might create a non-participatory environment for employees (e.g., Chen & Huang, 2007; Damanpour, 1991; Germain, 1996). However, a limited number of studies viewed the

influence of organizational centralization on involvement from a psychological view. This study was one of the few studies empirically examining its possible impacts on psychological safety and, thus, creative work involvement. Surprisingly, the finding suggested a positive effect of organizational centralization on creative work involvement through psychological safety. Such differences demonstrated that when investigating the influence of organizational factors on employees' attitudes and behaviour, it is necessary to consider the former's influence on employees' psychological conditions. As researchers suggested, employees' attitudes and behaviours mainly depend on their psychological conditions (e.g., May et al., 2004). Based on this logic, one individual's involvement in creative work mainly depends on their psychological experience (psychological safety in particular) influenced by organizational centralization.

Moreover, this study investigated the positive influence of organizational centralization on psychological safety based on the hierarchy theory. Hierarchy has been confirmed to satisfy people's psychological needs for predictability, certainty and structure by offering a clear chain of command and spheres of authority (e.g., Anderson & Brown, 2010; Halevy et al., 2011; Magee & Galinsky, 2008). Unsurprisingly, organizational centralization, as the control mechanism of an organization and signified by hierarchy (Andrews et al., 2009), positively influences psychological safety by offering clear roles and procedures. More specifically, a centralized work environment usually has clear roles, work procedures and expectations (Mansfield, 1973). Employees only need to follow the rules and procedures, which might reduce interpersonal risks to some extent.

In addition, according to the contingency theory of organization (Donaldson, 2001), the reality is usually more complex than a single model in the study when evaluating the effects of organizational structural factors on some variables. So, some contingency factors, such as culture, organizational size, and task complexity, must also be considered. Researchers such

as Frazier et al. (2004) and MacKinnon (2011) also suggested that if A generated different effects on B, some moderators might need to be considered. This study examined the effects of organizational centralization on psychological safety by considering one of the cultural dimensions - power distance. In a high power-distance environment, people accept authority and the inequality of power distribution (Hofstede, 2001). It further illustrated that organizational centralization in Chinese insurance firms might not negatively influence people's perception of psychological safety.

Attention needs to be paid to the convergent validity of the measurement of organizational centralization. Most studies regarding organizational centralization have used the measurement scale generated by Hage and Aiken (1967). One found the convergent validity of this construct, represented by Average Variance Extracted (AVE), was lower than the threshold value of 0.5 (Fornell & Larcker, 1981; Henseler et al., 2015; Voorhees et al., 2016). For example, in Yang et al. (2015), the AVE of organizational centralization was 0.47. Although Dewar et al. (1980) once confirmed the reliability and validity of the construct (organizational centralization), no clear-cut empirical criteria were used. Instead, Dewar only used face validity and compared the median inter-item and off-diagonal correlation (Dewar et al., 1980, p. 5). In the current study, the original value of convergent validity was only 0.47, so one has to delete item 5 (without hurting the content validity) to increase it to 0.56. Therefore, one suggests that the measurement scale of organizational centralization should be assessed with a clear cutoff value for better reliability and validity.

Last, to increase the internal consistency reliability, one deleted the negatively worded items of psychological safety. The number of indicators was reduced from 7 to 4, and Cronbach's alpha was increased from 0.39 to 0.748. Many studies have expressed the controversy on using negatively worded items because this might decrease reliability (e.g., Barnette, 2000). The increased value of Cronbach's alpha after deleting negatively

worded items verified such a claim. Further, to increase its convergent validity, item 4 - "It is safe to take a risk in this organization", was also deleted, so three indicators were kept. One found that the measurement of psychological safety conducted in Western cultures usually generated good reliability, while studies sampled from China did not. Simultaneously, only 3 or 4 items were usually kept in studies conducted in China. Why is there a difference? To figure this out, one suggests a replicate study.

Limitations and Implications

Several limitations need to be paid attention to when interpreting the findings. The collected sample and statistical tool applied in the current study can only demonstrate the correlations between organizational centralization, psychological safety and creative work involvement instead causal relations. It is convincing to infer that organizational centralization positively influences employees' creative work involvement through psychological safety while inferring a causal relationship between them is inappropriate. The reason is that establishing a causal relationship requires the cause to precede the effect in time (Bhattacharjee, 2012), whereas the research design of this study cannot do so. To explore the causal relationship, experimental or longitudinal research is more appropriate.

This study adopted a self-reported questionnaire to assess employee involvement in creative work. Respondents' subjective assessment might differ from their actual behaviour. As Barker et al. (1994) suggested, such a self-reported questionnaire has a risk of getting socially desirable responses. Supervisors' observation and objective assessment criteria should be more accurate for assessing their degree of involvement.

Moreover, the current studies encountered convergent and discriminant validity issues when one used the original measurement scales, which had been widely used in other studies. Although one finally solved the issue by deleting some items, the reason was still unclear. One suggests replicating the study with different sampling methods to check if there is an issue and, if so, what the actual reason is. Besides, future studies can consider possible moderators, such as leadership style and cultural differences, because reality is usually more complicated than a mediated model in the current study.

This study also offered some practical implications for organizational management. Many previous studies usually emphasized the adverse effects of organizational centralization on organizational innovation. However, this study demonstrated its positive effects on

employees' psychological safety, which in turn positively impacts employee involvement in creative work. Such findings imply organizational centralization might affect creative work involvement differently in different cultural contexts. Furthermore, according to the hierarchy of theory, some countervailing forces might change the hierarchical order, such as the loss of legitimacy for hierarchy (Magee & Galinsky, 2008), so organizational centralization might also have a balance point for producing positive and negative effects (Diefenbach, 2013). It is a tricky problem for management to set an appropriate degree of centralization, especially in a centralized political environment. Simultaneously, the importance of psychological safety presented in the findings of this study is consistent with previous studies. This further tells organizations the importance of cultivating a psychologically safe work environment so employees can be more engaged or involved in creative tasks.

Notably, this study is written by a master student, who is an unexperienced and immature researcher in social science. As the first independently conducted research, there might be many limitations or shortcomings that the author couldn't recognize. So, any criticism and suggestions are welcomed by the author.

Conclusion

Innovation has been settled as a development compass or policy for Chinese insurance firms fighting for survival. This study examined the effects of organizational centralization on employee creative work involvement from a psychological view. Although many theoretical studies hold a negative view about the effects of centralization on innovation, few studies have viewed it from a psychological view. Based on previous findings, the current study postulated a mediated model explaining the relationships of organizational centralization (independent variable), psychological safety (mediator) and creative work involvement (dependent variable). To test the hypothetical (mediated) model, one collected 711 samples from insurance companies in China and performed a mediation analysis in AMOS.

The mediation analysis found that psychological safety fully mediates the relationship between organizational centralization and employee involvement in creative work. Simultaneously, organizational centralization was positively associated with psychological safety; psychological safety was positively associated with creative work involvement. Such findings contribute to the research community and practical world in three ways. First, organizational centralization positively influences employees' psychological safety in high power distance contexts like China, which enriches the theory of hierarchy and organizational centralization. Second, organizational centralization does not directly influence employee involvement in creative work. Instead, it indirectly influences their creative work involvement through psychological safety. This finding offered a clear-cut mechanism regarding how organizational centralization influences creative work involvement. Third, from the pragmatism view, centralization benefits organizations in cultivating a psychologically safe work environment for employees. Hence mindlessly calling for decentralization might not be a wise solution for some organizations in order to improve innovation. This study also has limitations, so caution is needed when generalizing the results in other contexts. It is necessary to conduct replicate

studies to verify the findings.

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Appendices

Appendix A: Measurement Items

Employee's Creative work involvement (Carmeli & Schaubroeck, 2007; Kark & Carmeli, 2009)

- CW1. I demonstrated originality in my work
- CW2. I took risks in terms of producing new ideas in doing the job
- CW3. I found new uses for existing methods or equipment
- CW4. I solved problems that had caused other difficulty
- CW5. I tried out new ideas and approached problems
- CW6. I identified opportunities for new products/processes
- CW7. I generated novel, but operable work-related ideas
- CW8. I generated ideas revolutionary to our field
- CW9. I served as a good role model for creativity

Psychological Safety (Edmondson, 2018)

- PS2. Members of this organization can bring up problems and tough issues
- PS6. No one in this organization would deliberately act in a way that undermines my efforts
- PS7. Working with members of this organization, my unique skills and talents are valued and utilized

Organizational Centralization (Dewar et al., 1980; Hage & Aiken, 1967)

- OC1. There can be little action taken until a leader makes a decision.
- OC2. A common employee who wants to make decisions would be quickly discouraged.
- OC3. Even small matters have to be referred to someone with more authority for a final decision.
- OC4. Any decision a common employee makes has to have his or her leader's approval

Control Variables

1. What is your age?

< 22 22-27 28-33 34-39 40-45 46-51 ≥ 52

2. Your gender is?

Female Male

3. What is your highest education qualification?

Below high school or equivalent degree

High school or equivalent degree

Bachelor degree

Master's degree

PhD degree

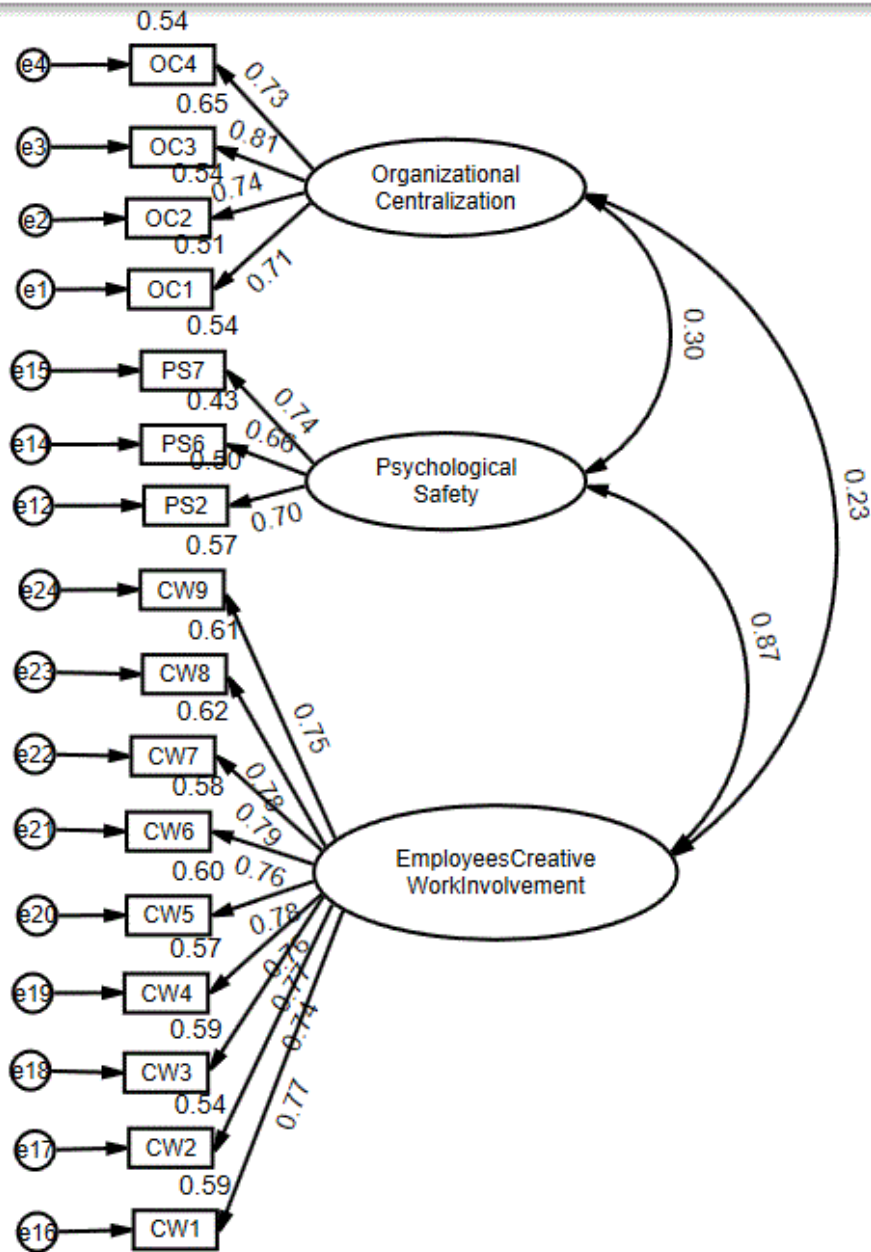
4. How long you have been working in your current company?

< 1 year 1 year \leq tenure < 2 years 2 years \leq tenure <3 years

3 years \leq tenure <4 years 4 years \leq tenure < 5 years

5 years \leq tenure < 6 years ≥ 6 years

Appendix B: Confirmatory Factor Analysis



Appendix C: Average Variance Extracted (AVE)

Latent Constructs	Standardized Loadings	Square of Standardized Loadings	Sum of the Square of Standardized Loadings	Number of Indicators	AVE
PS2	0.704	0.495616	1.470276	3	0.49009
PS6	0.658	0.432964			
PS7	0.736	0.541696			
OC1	0.714	0.509796	2.240026	4	0.56000
OC2	0.735	0.540225			
OC3	0.807	0.651249			
OC4	0.734	0.538756			
CW1	0.765	0.585225	5.267346	9	0.58526
CW2	0.737	0.543169			
CW3	0.767	0.588289			
CW4	0.755	0.570025			
CW5	0.776	0.602176			
CW6	0.764	0.583696			
CW7	0.786	0.617796			
CW8	0.781	0.609961			
CW9	0.753	0.567009			

Note. PS means “Psychological Safety”, OC means “Organizational Centralization” and CW means “Employee’s Creative Work Involvement”

Appendix D: HTMT Ratio

	CW9	CW8	CW7	CW6	CW5	CW4	CW3	CW2	CW1	OC4	OC3	OC2	OC1	PS7	PS6	PS2
CW9																
CW8	0.588															
CW7	0.591	0.613														
CW6	0.575	0.596	0.6													
CW5	0.585	0.607	0.61	0.593												
CW4	0.569	0.59	0.594	0.577	0.587											
CW3	0.577	0.599	0.603	0.586	0.596	0.58										
CW2	0.555	0.575	0.579	0.563	0.572	0.557	0.565									
CW1	0.576	0.597	0.601	0.584	0.594	0.578	0.587	0.564								
OC4	0.129	0.134	0.135	0.131	0.133	0.129	0.131	0.126	0.131							
OC3	0.142	0.147	0.148	0.144	0.146	0.142	0.144	0.139	0.144	0.592						
OC2	0.129	0.134	0.135	0.131	0.133	0.13	0.132	0.126	0.131	0.54	0.593					
OC1	0.125	0.13	0.131	0.127	0.13	0.126	0.128	0.123	0.128	0.524	0.577	0.525				
PS7	0.482	0.5	0.503	0.489	0.498	0.484	0.491	0.472	0.49	0.162	0.178	0.162	0.158			
PS6	0.431	0.448	0.45	0.438	0.445	0.433	0.44	0.422	0.439	0.145	0.159	0.145	0.141	0.484		
PS2	0.462	0.479	0.482	0.468	0.476	0.464	0.47	0.452	0.469	0.155	0.17	0.155	0.151	0.518	0.464	
Monotrait Correlation																
OC	0.5585															
PS	0.488667															
CW	0.585083															
Heterotrait Correlations																
OC-CW	0.133444															
PS-CW	0.465815															
OC-PS	0.15675															
HTMT Ratio																
OC-CW	0.233443															
PS-CW	0.87116															
OC-PS	0.300047															

Note. OC is “Organizational Centralization”; PS is “Psychological Safety”; CW is “Employee’s Creative Work Involvement”

Appendix E: Mediation Analysis in AMOS

