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Psychological mechanisms linking ethical climate to employee whistle-blowing intention

Employee
whistle-
blowing
intention

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Abstract

Purpose – The purpose of this paper is to explore how a perceived ethical climate influences employees' intention to whistle-blow through internal organizational channels and incorporates the mediating role of organizational identification and moral identity as well as the moderating role of individual risk aversion.

Design/methodology/approach – The five proposed hypotheses were tested using hierarchical regression analysis with two waves of data collected in 2016 from 667 employees in Chinese organizations.

Findings – The findings indicate that perceived ethical climate had a positive effect on employees' internal whistle-blowing intention, which was mediated by organizational identification and moral identity. Furthermore, employees' risk aversion weakened the effect of organizational identification, while the moderating role by moral identity on internal whistle-blowing intention was not validated.

Originality/value – This study explains the psychological mechanism of whistle-blowing intention from the perspective of social identity, which contributes to opening the “black box” of the transmitting processes from the perceived ethical climate to whistle-blowing intention. This study also extends the literature by defining a boundary condition of risk aversion that hinders organizational identification influence on employee whistle-blowing intention.

Keywords Perceived ethical climate, Whistle-blowing, Organizational identification, Moral identity, Risk aversion

Paper type Research paper

Introduction

Organizational wrongdoing impairs the rights and benefits of employees, the organization and the wider public. When employees are effectively motivated by an organization to find and report wrongdoings in the workplace, wrongdoings are attenuated and, over time, corrected. Whistle-blowing is the disclosure by current or former organizational members of wrongdoings (illegal, immoral or illegitimate practices) (Near and Miceli, 1985), which is an organizational autonomous characteristic of proactive, prosocial and ethical behavior (Treviño *et al.*, 2006). Because of the potential retaliation faced by whistle-blowers, many employees are unwilling to blow the whistle on peers' wrongdoings (Miceli *et al.*, 2009). As a result, organizations miss the opportunity to self-correct their wrongdoing and employees may notify outsiders, which could potentially lead to destroying the organizations' reputation, incurring legal costs, etc. (Miceli *et al.*, 2009). Therefore, whistle-blowing is a significant topic in organizational ethics management, one that concerns why employees are willing to whistle-blow and how to induce that behavior.

Academic progress has been made in the literature, where scholars have found that particular personal features influence whistle-blowing decision making, e.g., “Big Five” personality, self-efficacy, proactive personality, situation-specific leverage and different demographic characteristics (MacNab and Worthley, 2008; Rehg *et al.*, 2008; Bjørkelo *et al.*, 2010; Miceli *et al.*, 2012; Liu *et al.*, 2016). Organizational factors, such as ethical leadership, transformational leadership, co-worker validation, ethical culture, communication culture, team



norms and organizational support, have been shown to play important roles in the personal decision to be a whistle-blower (Keenan, 2002; Tavakoli *et al.*, 2003; Edwards *et al.*, 2009; Skivenes and Trygstad, 2010; Kaptein, 2011; Caillier, 2013; Latan *et al.*, 2016). However, perceived ethical climate, an organizational contextual factor that is both theoretical and empirical and a key determinant of ethical behaviors (Treviño *et al.*, 2006), remains underexplored. Such a climate refers to employees' perception of the procedures, policies and practices that are relevant to the ethics of the organization (Victor and Cullen, 1988). Perceived ethical climate helps employees to interpret what their organizations reward, support and expect regarding ethics, and what constitutes appropriate and desired behavior (Arnaud and Schminke, 2012). It not only prevents an undertaking of unethical acts but also enhances employees' willingness to speak up about organizational problems (Wang and Hsieh, 2013). Although scholars have proposed managers to motivate employee whistle-blowing by cultivating organizational ethical climate (Miceli *et al.*, 2009), how effective that ethical climate is in promoting employee whistle-blowing remains unknown. Therefore, our research is to examine the effect of perceived ethical climate on employee whistle-blowing.

The literature has been based mainly on the "cold" rational cognition of cost-benefit to explain the underlying psychological mechanisms of whistle-blowing (see the review of Miceli *et al.*, 2008). That is, individual and contextual factors influence the wrongdoing of observers to evaluate the costs (e.g. being exposed to retaliation and workplace bullying) and benefits (e.g. cessation of wrongdoings and receiving reward) of taking action about whistle-blowing (Keil *et al.*, 2010). Some scholars have claimed that the "cold" perspective ignores the role of "hot" cognitions involving moral responsibility, values, identity and emotion that may motivate individuals to spontaneously perform whistle-blowing (Gundlach *et al.*, 2003; Blenkinsopp and Edwards, 2008; Henik, 2008, 2015; Edwards *et al.*, 2009). As McLain and Keenan (1999) stated, these "hot" cognitions can explain behaviors that "appear irrational, foolish, or unintelligent to others" (p. 258), where whistle-blowers take personal risks in acting, even when expectations are unfavorable. This research follows with the "hot" cognition viewpoint to argue that perceived ethical climate works to promote employee whistle-blowing.

Vadera *et al.* (2009) also called for an examination of the roles of multiple identities and identifications in whistle-blowing. They stated that the identity perspective can capture a more dynamic part of human nature that takes into account situational and temporal changes other than individual motivators. Since identity is rooted in the very core of one's being and involves being true to oneself in action (Erikson, 1964), an identity approach may clarify the inconsistent findings of individual-level motivations in the whistle-blowing literature (Vadera *et al.*, 2009). Thus, our research examines the potential role of identity and identification in linking perceived ethical climate to whistle-blowing. Specifically, we focus on a social identity variable named organizational identification and a personal identity variable named moral identity. Organizational identification reflects the extent to which an individual perceives oneness with or belonging to an organization (Ashforth and Mael, 1989). Moral identity reflects the importance or centrality of moral consciousness in one's social self-schema (Aquino and Reed, 2002). Employees with high organizational identification tend to act in favor of the organization's most important interests rather than their own interests (Riketta, 2005), and employees with high moral identity tend to act in the "right" or "moral" way regardless of the action's results (Reed and Aquino, 2003). These propensities accord well with whistle-blowing, an ethical and risky behavior beneficial to organizations. Social identity theory states that identity is created or activated in a particular environment and determines behavior decisions (Tajfel, 1978). Using social identity (Tajfel, 1978) as our theoretical basis, we posit that organizational identification and moral identity might serve as potential mediators linking perceived ethical climate and whistle-blowing.

Fear of retaliation emerges as a concern of potential whistle-blowers in many studies and surveys, and avoidance of retaliation is a prominent theme in whistle-blowing advice and

advocacy websites (Mesmer-Magnus and Viswesvaran, 2005, Miceli *et al.*, 2008; Henik, 2015). We thus posit that the relationship between organizational identification and moral identity and whistle-blowing might vary depending on contingencies that affect individuals' perceptions and evaluations of personal risk in whistle-blowing. Accordingly, this research further examines the boundary conditions of the impact of organizational identification and moral identity on whistle-blowing. We identify the individual difference of risk aversion as one potentially important moderating factor. Risk aversion is defined as a function of differential attention to various stimuli in a risky situation (Judge *et al.*, 1999). We propose that high risk-averse employees might avoid engaging in personally risky behaviors such as whistle-blowing. Consequently, the tendency of risk aversion would weaken the effects of organizational identification and moral identity on whistle-blowing.

It should be noted that the potential whistle-blowers have different intentions on the report channel choices depending on the context (Nayir *et al.*, 2016). Our research focuses on internal whistle-blowing, i.e., the disclosure of wrongdoing to the management of the organization. Internal whistle-blowing benefits the organization because it provides it with an opportunity to self-correct unethical problems (Miceli *et al.*, 2009). External whistle-blowing, i.e., the disclosure of wrongdoing to persons or authorities outside the organization, may cause the organization public embarrassment and bring about government scrutiny, hefty fines and litigation (Berry, 2004). Internal whistle-blowing in China is especially difficult because it is often interpreted as challenging the organization's power structure or questioning its top management, which is a hypersensitive issue in the Chinese culture, which is characterized as having high power distance. Thus, focusing on internal whistle-blowing in modern organizations in China has special theoretical and practical implications.

The whistle-blowing decision-making process comprises four basic steps: observing wrongdoing in the organization, analyzing and judging the situation, forming a whistle-blowing intention and blowing the whistle (Dozier and Miceli, 1985; Gundlach *et al.*, 2003). Due to the hypersensitivity of whistle-blowing, it is quite a challenge for researchers to deliver a large-scale survey on actual whistle-blowers (Bjørkelo and Bye, 2014). Accordingly, a majority of studies have focused on the third phase, whistle-blowing intention, in their research (e.g. Rothwell and Baldwin, 2007; MacNab and Worthley, 2008; Kaptein, 2011; Latan *et al.*, 2016; Latan and Jabbour, 2017). Investigating employee whistle-blowing intention is less sensitive, and anyone, not only actual observers or whistle-blowers, can report their willingness to whistle-blow (Bjørkelo and Bye, 2014). The theory of planned behavior holds that individual behavior intention leads to behavior (Ajzen, 1991). In addition, the effects of organizational context can be more correctly reflected by measuring employee intention of whistle-blowing than by observing whistle-blowing that has actually occurred (Kaptein, 2011). Consistent with the literature, our study investigates individual whistle-blowing intention rather than actual whistle-blowing behavior.

Theoretical background and hypothesis development

Perceived ethical climate and employee whistle-blowing intention

Much of the existing empirical studies have applied the multi-dimensional perceived ethical climate scale to test their theoretical frameworks. Consistent with the approach of Bartels *et al.* (1998) and Kang *et al.* (2011), our research treated employees' perceived ethical climate as a bundle rather than as separable dimensions in order to capture an organization's broad normative characteristics and values. A perceived strong ethical climate means that the organization is concerned with employees' well-being in the pursuit of organizational goals and attaches importance to personal moral beliefs, laws and codes of conduct in ethical decision making (Martin and Cullen, 2006). By contrast, a perceived weak ethical climate means that the organization has norms and expectations that encourage ethical decision making from an egoistic perspective, where self-interest guides

individual and organizational behaviors even to the possible detriment of other people (Martin and Cullen, 2006).

Perceived ethical climate may positively relate to whistle-blowing intention. First, a perceived strong ethical climate improves employees' capacity for moral judgment. Employees make a judgment on the behavior observed depending on whether it hurts the interests of other people or the organization and whether it breaks moral criteria or accords with the applicable laws and regulations, which provides an antecedent for creating whistle-blowing intention. Second, the theory of planned behavior indicates that subjective norms create the social pressures to perform or not perform a given behavior (Ajzen, 1991). A perceived strong ethical climate transmits positive whistle-blowing norms. When employees perceive a strong ethical climate, they believe that whistle-blowing is welcomed by management and that the organization praises, appreciates and rewards the whistle-blower and regards whistle-blowing as employee contributions (Leung, 2008). Third, from a social exchange perspective, a perceived strong ethical climate enables employees to feel the organization's concern for employees' interests, which enhances employees' psychological attachment and organizational commitment. Preserving the organization from wrongdoing and causing harm is regarded as loyalty and a reward for organizational kindness.

In contrast, a perceived weak ethical climate may lead employees to an incorrect ethical judgment, disable them in identifying wrongdoing and even urge them to seek a righteous explanation in justifying wrongdoing. Even employees who hold correct moral judgments may free themselves of their moral responsibility under a prevalent self-interest code of the organization, since whistle-blowing is averse to a self-interest code. A perceived weak ethical climate may make employees feel that the existing wrongdoing implies the abstention or acquiescence of management. Therefore, whistle-blowing may be ignored, suppressed or retaliated against, especially when wrongdoings are encouraged by the organization to pursue short-term benefits (e.g. the common wrongdoings of commercial bribery and cheating customers). Empirical research studies support these propositions; e.g., Kaptein (2011) found that positive ethical culture predicted employees' intention of internal whistle-blowing, and Zhang *et al.* (2009) found that ethical culture enhanced the relationship between ethical judgment and employee internal whistle-blowing intention. Thus, we put forward the following hypothesis:

H1. The perceived ethical climate is positively related to whistle-blowing intention.

The mediating role of organizational identification between perceived ethical climate and whistle-blowing intention

Organizational identification is a special form of social identity that stems from the self-construct of organizational membership. Organizational identification is also the result of employees' cognition and internalization of organizational values and reveals individuals' emotional attachment to aspects such as a sense of belonging, pride and loyalty (Mael and Ashforth, 1992). According to social identity theory, individuals tend to establish social identities by choosing certain group qualifications, which comprise two parts, namely, identity approved and identity valuable. The major motives behind social identity establishment are to satisfy individuals' basic needs (such as pursuing a sense of safety, belonging and uncertainty avoidance) and to build self-esteem (Ashforth *et al.*, 2008). To satisfy these needs, a strong ethical climate plays an important role. First, organizations with strong ethical climates oppose wrongdoings that harm people's interests while encouraging care between the organization and employees, which bring a sense of safety and well-being to employees. Second, a strong ethical climate shows the justice and fairness of management and indicates that an organization attaches an importance to employees' value and contribution. These values can enhance employees' trust in the organization and their willingness to be attached to the organization. In addition, a strong ethical climate can

create a good social reputation and make employees value and take pride in organizational membership identity, which further strengthens employee self-esteem. The satisfaction of these basic needs and self-esteem makes the cognitive and emotional connection between employees and an organization more solid and affirms, in turn, the organization's identification. Conversely, a weak ethical climate cannot satisfy employees' self-esteem and other basic needs. Because of the discrepancy in values and moral codes between employees and organizations in such a climate, even if they superficially obey the moral rules, it is difficult for employees to feel that "I" is "we." In contrast, employees may question or even feel ashamed of their organizational identity, which creates emotional alienation from the organization and reduces organizational identification.

Previous research has found that organizational identification impacts various positive organizational behaviors, such as organizational citizenship and extra-role behaviors, since organizational identification increases the loyalty of employees and promotes employees to act in favor of an organization's most important interests (Riketta, 2005). Ashforth *et al.* (2008) emphasized that organizational identification can drive employees to self-regard as a microcosm of an organization and to consider organizational interests instead of personal interests. Employees with high organizational identification see themselves as the representatives of an organization and share its fate (Ashforth *et al.*, 2008). Accordingly, wrongdoing hurts the organization in the same way as employees hurt themselves, and the best action to take is what is best for themselves.

In summary, the preceding discussion suggests that perceived ethical climate reinforces organizational identification, which in turn provokes whistle-blowing intention. We thus expect organizational identification to mediate the impact of perceived ethical climate on whistle-blowing intention:

- H2.* Organizational identification mediates the relationship between perceived ethical climate and employee whistle-blowing intention.

The mediating role of moral identity between perceived ethical climate and whistle-blowing intention

Moral identity is a special form of social identification that reflects the importance of moral consciousness in individual social self-schema, which means the assimilation of a personal moral system and a moral system (Aquino and Reed, 2002). Aquino and Reed (2002) divided moral identification into two dimensions. The internalization dimension captures the extent to which the moral self-schema is experienced as being central to one's self-concept, and the symbolization dimension captures the extent to which the moral self-schema is projected outwardly through one's actions in the world. Since internalization is more consistent with the definition and tends to be more predictive than symbolization (Aquino and Reed, 2002; Reed and Aquino, 2003), this study examined the role of internalized moral identity.

Scholars have proposed that an organization's institutional context and cultural practices may be a source of moral identity (Weaver, 2006). Shao *et al.* (2008) indicated that social interactions, participation in moral actions and community/institutional contexts influence individual moral identity. In an organizational context with a strong ethical climate, the ethics-related experiences of employees are concerned with equality, care, respect and cooperation, and they construct a positive moral self-schema. According to self-perception theory (Bem, 1967), people draw inferences about themselves based on their behaviors. In a strong ethical climate, employees tend to behave by obeying laws and regulations, respecting rules and being ready to help others, and the managers and colleagues uphold them (Berry, 2004). By getting used to participating in and conducting such moral behaviors, employees enhance their self-affirmation of being moral individuals. In addition, a strong ethical climate transmits positive organizational ethical values and

behavioral standards and norms. These positive values may automatically be accepted as employees' personal ethical values and behavioral standards by the socialization process (referring to the process of internalizing the norms and ideologies of the organization, Clausen, 1968), further affirming the importance of employees' self-definition with integrity, honesty, bravery and other ethical characteristics. Finally, in a strong ethical climate, the leading role of moral ego in employees' self-schema becomes prominent, and a moral identity can be activated and promoted more easily. In a weak ethical climate, moral ethics are neglected, and self-interest gradually becomes employees' self-definition in agreement with the organization's standards, which lowers employees' moral identity.

Moral identity is the natural antithesis of wrongdoing, and it enables employees' whistle-blowing intention. First, the moral self-schema of people with high moral identity is chronically accessible (Lapsley and Lasky, 2001), which means that moral knowledge and experiences can be easily activated to process information regarding wrongdoing and then make moral and responsibility judgments (Blasi, 2004, 2005). Moral judgment and responsibility judgment are the prerequisites for acting in the "right" or "moral" way in a certain context. Second, moral identity is closely related to moral emotion, and individuals who have a strong moral emotion care about the general interests of their society and the interests of other people (Tangney *et al.*, 2007). When observing wrongdoing that is hurting the organization and others, individuals with a high moral identity may be motivated by anger to take action to stop that wrongdoing. Third, self-consistency theory indicates that individuals have a fundamental desire to keep actions consistent with their salient identity; otherwise, cognitive dissonance, psychological discomfort or self-condemnation will arise (Festinger, 1957). Therefore, when observing wrongdoing in an organization, employees with a high moral identity may think that whistle-blowing is the right way to conform to their moral identity. Finally, individuals with a high moral identity adhere to moral principles, while individuals with a low moral identity think that moral principles are changeable and flexible and that it is forgivable to abandon moral codes for the sake of self-interest (McFerran *et al.*, 2010). Accordingly, individuals with a high moral identity are more likely to take personal risks as whistle-blowers.

In summary, the preceding discussion suggests that perceived ethical climate reinforces employee moral identity, which in turn provokes whistle-blowing intention. We thus expect moral identity to mediate the impact of perceived ethical climate on whistle-blowing intention:

H3. Moral identity mediates the relationship between perceived ethical climate and employee whistle-blowing intention.

The moderating role of risk aversion on identities and whistle-blowing intention

Whistle-blowing has potential personal and organizational risks. For example, exposing wrongdoing in an organization may be regarded as questioning the capability of management, challenging the established hierarchy and the leaders' power and opposing organizational routines (Miceli *et al.*, 2008). Whistle-blowing may create a climate of suspicion, hostility and defensiveness in an organization, ruin employees' group identification, loyalty and morale and negatively influence organizational performance. Hence, regardless of whether whistle-blowing succeeds, it entails a high level of personal risk. For instance, a whistle-blower may be retaliated against by an organization, such as through career termination, placement on a "black list," destruction of inter-relationships, denial of a chance for promotion, loss of savings due to lawsuits, negative impacts on marriage and family or even loss of life (Miceli and Near, 1992).

The tendency of risk aversion is to view novel and risk-oriented situations negatively, to react to them with anxiety and to eventually seek to withdraw from them (Judge *et al.*, 1999). High risk-averse individuals are people who care about themselves

instead of their duties and responsibilities and who tend to avoid negative results, and these people are not willing to take risks when making decisions (Li *et al.*, 2016). Hence, we argue that risk aversion may weaken the relationship between organizational identification and whistle-blowing intention, as well as the relationship between moral identity and whistle-blowing intention. When wrongdoing observers are highly risk averse, they view risk-oriented situations negatively and react to them with anxiety (Judge *et al.*, 1999). Consequently, even though they have high levels of organizational identification and moral identity and are motivated to behave prosocially and ethically by organizational identification and moral identity, they would be less likely to choose to perform whistle-blowing, which, as emphasized previously, is personally risky. In contrast, wrongdoing observers who are low risk averse are more tolerant of or less sensitive to the risks entailed in whistle-blowing and enjoy taking risks to make decisions. Therefore, when these employees have a high level of organizational identification and moral identity, they will be more likely to engage in whistle-blowing if they observe wrongdoing in the organization. In other words, low risk aversion can enhance the positive linkages of organizational identification and moral identity to whistle-blowing:

- H4. Employee risk aversion moderates the relationship between organizational identification and whistle-blowing intention such that the relationship is weaker for high risk-averse employees than it is for low risk-averse employees.
- H5. Employee risk aversion moderates the relationship between moral identity and whistle-blowing intention such that the relationship is weaker for high risk-averse employees than it is for low risk-averse employees.

Research methodology

Sample and data collection procedure

Using a random sampling method, we selected 30 enterprises in China that were known to our friends in early 2016. The human resource managers were contacted to obtain their consent for their employees' participation, with a cover letter that explained the purpose of the study and assured the participants of the confidentiality and anonymity of their responses. Two waves of data collection with two-month intervals were conducted to reduce potential common method bias. In the first wave, 800 available participants were surveyed on company characteristics, demographic characteristics, perceived ethical climate, organizational identification, moral identity and risk aversion. A total of 723 participants returned the survey. In the second wave, the 723 respondents were surveyed on their whistle-blowing intention. A total of 680 participants returned the survey. There were 667 valid questionnaires, and the effective response rate was 83 percent. The descriptive statistics of the participants show that 51.1 percent were male, and 44.9 percent were from 21 to 30 years old, 33.5 percent from 31 to 40 and other ages 21.6 percent. As for education level, 23.1 percent had received senior high or secondary school education, 38.6 percent had attended a technological academy, 35.5 percent were undergraduates and 2.9 percent were post-graduates and above. Moreover, the average tenure was 7.07 years (standard deviation of 7.46 years). Regarding employment positions, 54 percent were ordinary employees, 30 percent were front-line managers and 16 percent were mid-level managers. The participants came from different companies, where 46.7 percent had over 500 employees, 40 percent were state-owned, 33.3 percent were private, 26.7 percent were foreign and 63.3 percent were manufacturing companies. The average firm age was 7.79 years.

Measurement instrument

Two-way translation was used to translate the scales for variables from the western literature into Chinese, and these translations were then compared and corrected by

consulting bilingual experts. To raise measurement quality, the order was reshuffled and some reversed questions were designed. All scales used five-point Likert scales (1 = “strongly disagree,” 5 = “strongly agree”).

Perceived ethical climate. Tsai and Huang (2008) developed a 14-item ethical climate scale to study employees in Taiwan, China. Consistent with the methods of Bartels *et al.* (1998) and Kang *et al.* (2011), we reversed several items with negative wording and merged other positively worded items. The internal consistency coefficient of the final version of the scale is 0.71. Samples of items are “Legal or vocational ethical standards are the main factor considered by the company before taking action” and “The company expects employees to do things in favor of the company regardless of the consequences.”

Organizational identification. The scale used by Mael and Ashforth (1992) comprised six items to measure organizational identification, and it has been widely applied in Chinese organization studies. The meta-analysis by Riketta (2005) showed that the scale has good validity and reliability. In this study, the internal consistency coefficient of this scale was 0.72. One sample is “When we talk about the company, I usually use ‘we’ instead of ‘they’.”

Moral identity. The moral identity scale developed by Aquino and Reed (2002) used five items to measure inner moral identity. A series of excellent moral traits, such as concern for others, sympathy, impartiality, generosity, helpfulness, diligence, honesty and kindness, was listed on the scale, and the respondents were asked how much they agreed with the descriptions in the questionnaires. Samples of items are “I feel good to be such a person with the above traits” and “The activities I participate in indicate that I possess the above traits.” In this study, the internal consistency coefficient was 0.73.

Risk aversion. We applied the scale with six items by Cable and Judge (1994) to measure risk aversion. A sample item is “I always play it safe, even if it means occasionally losing out on a good opportunity.” The internal consistency coefficient was 0.76.

Whistle-blowing intention. The four-item scale by Park *et al.* (2008) was used. Since we focus on internal whistle-blowing, and the intensity of wrongdoing may influence an employee’s whistle-blowing channel choice, we defined the wrongdoing in the questionnaire as rather common and individual-led behaviors in an organization, such as theft, false reimbursement and cheating customers because compared with serious illegal behaviors, these kinds are more conducive to internal whistle-blowing. A sample item is “I will report to my supervisor when I observe wrongdoing in the organization.” The internal consistency coefficient was 0.72.

Control variables. Previous studies have proposed that demographic characteristics, such as gender, age, tenure, position and educational background, affect whistle-blowing, and these characteristics were controlled in this study. As the company characteristics may exert an influence on employee behavior, we also controlled for firm type, firm industry, firm size and firm age.

Results

Confirmatory factor analysis and common method bias test

To test the construct differentiation of the variables, we conducted a confirmatory factor analysis of perceived ethical climate, organizational identification, moral identity, risk aversion and whistle-blowing intention. The results are reported in Table I. Compared with the other four models, the five-factor model was the best fit, which indicates that the five variables in this study possess good discriminant validity and that these are five different constructs.

A questionnaire-based measure makes common method bias a potential concern in our study. Following the advice of Podsakoff *et al.* (2003), we controlled for demographic variables when testing the hypotheses. We used two waves of data collection to control the common method variance (CMV). We tested the concerned variables with the Harman

single-factor test. The results indicate that the fit index is rather poor ($\chi^2/\text{df} = 8.50$; CFI = 0.75; IFI = 0.75; RMSEA = 0.11). In addition, half of the findings in our study were interaction effects. According to Evans (1985), CMV indeed reduces rather than exaggerates the effects of interaction. With these considerations in mind, we believe that the major findings of our study are not seriously threatened by CMV.

Descriptive statistical analysis

In Table II, the results of the descriptive statistical analysis of the variables (mean values, standard deviations and correlation coefficients) are presented. The hypothesized relationships among study variables appear to be well represented in the correlations. Specifically, the perceived ethical climate is positively related to organizational identification ($r = 0.25, p < 0.01$), moral identity ($r = 0.59, p < 0.01$) and whistle-blowing intention ($r = 0.25, p < 0.01$). We also found that the firm-level variables were not significantly related to the dependent variable. Thus, firm-level control variables were dropped from subsequent statistical analyses.

Test of hypotheses

A hierarchical regression analysis was used to test the hypotheses, which includes the effect of the perceived ethical climate on employees' whistle-blowing intention, the mediating roles of organizational identification and moral identity and the moderating role of risk aversion. The four conditions to test mediation that were proposed by Baron and Kenny (1986) were analyzed. The results are shown in Table III. After controlling the demographic variables, the perceived ethical climate was significantly related to employees' whistle-blowing intention ($M_2, \beta = 0.27, p < 0.01$), organizational identification ($M_{10}, \beta = 0.23, p < 0.01$) and moral identity ($M_{12}, \beta = 0.59, p < 0.01$). Organizational identification ($M_3, \beta = 0.15, p < 0.01$) and moral identity ($M_3, \beta = 0.30, p < 0.01$) significantly and positively affected whistle-blowing intention. After placing perceived ethical climate, organizational identification and moral identity in the regression model, the results indicate that organizational identification ($M_4, \beta = 0.14, p < 0.01$) and moral identity ($M_4, \beta = 0.24, p < 0.01$) significantly and positively affected employees' whistle-blowing intention, while the influence of the perceived ethical climate became non-significant ($M_4, \beta = 0.09, \text{ns}$). This indicates that the mediating effects of organizational identification and moral identity on perceived ethical climate and whistle-blowing intention were significant. Therefore, *H1–H3* were all supported.

H4 and *H5* concerned the moderating impact of risk aversion on the relationship between organizational identification and whistle-blowing intention, and the relationship between moral identity and whistle-blowing intention. Risk aversion, organizational identification and moral identity were entered first in each of the moderated regressions, followed by the interaction variables. The results of the moderated regression analyses show that risk aversion had a significant and negative moderating effect ($M_6, \beta = -0.13, p < 0.05$) on the relationship between organizational identity and whistle-blowing intention, and

Model	χ^2/df	CFI	IFI	RMSEA
5-factor model: PEC; OI; MI; RA; WBI	3.28	0.91	0.91	0.06
4-factor model: PEC; OI + MI; RA; WBI	4.50	0.87	0.87	0.07
3-factor model: PEC; OI + MI+RA; WBI	7.44	0.79	0.79	0.10
2-factor model: PEC; OI + MI+RA+WBI	8.30	0.76	0.76	0.11
1-factor model: PEC+OI + MI+RA+WBI	8.50	0.75	0.75	0.11

Notes: PEC, perceived ethical climate; OI, organizational identification; MI, moral identity; RA, risk aversion; WBI, whistle-blowing intention. The basis for variable merging is the relevance in concept or connotation of the variables

Table I.
Confirmatory factor
analysis results

Table II.
Mean values, standard deviations and correlation coefficients

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Gender	1.00														
2. Age	-0.19**	1.00													
3. Education	-0.03	-0.21**	1.00												
4. Tenure	-0.11**	0.63**	-0.25**	1.00											
5. Position	-0.20**	0.35**	0.16**	0.27**	1.00										
6. SMEs	-0.03	0.01	0.06	0.04	0.00	1.00									
7. SOEs	0.05	-0.04	0.05	-0.04	-0.06	0.23**	1.00								
8. Private	-0.04	0.08	-0.03	0.04	0.05	-0.37**	-0.76**	1.00							
9. Manufacturer	-0.01	0.00	0.10*	-0.03	0.00	0.57**	0.01	-0.18**	1.00						
10. Firm age	0.02	-0.02	0.03	-0.03	-0.03	0.26**	-0.15**	0.10*	0.43**	1.00					
11. PEC	-0.09*	0.03	-0.02	-0.10*	0.04	-0.05	-0.12**	0.03	0.11**	0.00	1.00				
12. OI	-0.02	0.00	-0.01	-0.01	0.03	0.01	0.01	-0.01	0.05	0.03	0.25**	1.00			
13. MI	-0.13**	0.08*	-0.01	-0.08*	0.08*	-0.03	-0.07	0.03	0.09*	-0.02	0.59**	0.26**	1.00		
14. RA	0.05	-0.06	0.03	-0.17**	-0.11**	0.07	0.12**	-0.14**	0.29**	-0.04	0.25**	-0.05	0.15**	1.00	
15. WBI	-0.02	0.08*	0.11**	0.07	0.14**	0.07	-0.03	-0.03	0.04	-0.01	0.25**	0.21**	0.31**	-0.07	1.00
Mean value	0.49	2.79	2.18	7.07	1.62	0.67	0.46	0.40	0.61	6.61	3.42	3.40	3.60	3.12	3.36
SD	0.50	0.87	0.82	7.46	0.75	0.47	0.50	0.49	0.49	4.50	0.44	0.54	0.57	0.62	0.61

Notes: SOE, state-owned enterprise; SME, small- and medium-sized enterprise. * $p < 0.05$; ** $p < 0.01$

Variable	WBI					OI			MI			
	M_1	M_2	M_3	M_4	M_5	M_6	M_7	M_8	M_9	M_{10}	M_{11}	M_{12}
Gender	0.01	0.04	0.05	0.07	0.02	0.05	0.06	0.06	-0.02	-0.00	-0.12**	-0.07*
Age	0.03	0.00	-0.02	-0.00	0.04	0.04	-0.02	-0.02	-0.01	-0.03	0.17**	0.11**
Education	0.11*	0.12**	0.13**	0.13**	0.12**	0.12**	0.12**	0.012**	-0.05	-0.04	-0.05	-0.01
Tenure	0.05	0.11*	0.13*	0.12	0.05	0.05	0.11*	0.11*	-0.04	0.00	-0.24**	-0.11*
Position	0.10*	0.09*	0.06	0.05	0.08	0.08	0.06	0.06	0.06	0.05	0.09*	0.07
<i>Independent variable</i>												
PEC		0.27**		0.09						0.23**		0.59**
<i>Mediating variable</i>												
OI			0.15**	0.14**	0.21**	0.23**						
MI			0.30**	0.24**			0.35**					
<i>Moderating variable</i>												
RA					-0.05	-0.03	-0.11**	-0.12**				
<i>Interaction effect</i>												
RA × OI						-0.13*						
RA × MI								0.02				
Adjusted R^2	0.02	0.09	0.14	0.15	0.07	0.08	0.13	0.13	0.00	0.04	0.06	0.40
ΔR^2	0.03*	0.07**	0.12**	0.06**	0.05**	0.02**	0.11**	0.00	0.01	0.05**	0.06**	0.34**
F	3.54**	10.52**	14.87**	13.50**	6.92**	7.40**	13.75**	12.04**	0.62	5.89**	7.57**	64.90**

Notes: * $p < 0.05$; ** $p < 0.01$ Employee
whistle-
blowing
intention

Table III.
Hierarchical
regression analysis
results of the
mediating effect and
moderating effect

risk aversion did not moderate the effect of moral identity on whistle-blowing intention (M_8 , $\beta = 0.02$, ns). Thus, $H4$ was supported and $H5$ was not supported. The nature of the interaction effect of organizational identification and risk aversion is illustrated in Figure 1. Figure 1 shows that for an employee with high risk aversion, the effect of organizational identification on whistle-blowing intention is reduced, which provides support for $H4$.

Discussion

The improvement of business practices in transition economies in China emphasizes the importance of ethical management. To avoid unethical behavior that harms the interests of organizations, employees and the public, organizations should induce their employees to be whistle-blowers when they observe wrongdoing in organizations. To understand why and when employees are willing to whistle-blow, we developed and examined a model that links organizational ethical climate and employee whistle-blowing intention and that includes organizational identification and moral identity as mediators and risk aversion as a moderator. The results show that perceived ethical climate was positively associated with whistle-blowing intention and that the relationship was mediated by organizational identification and moral identity. Furthermore, individual risk aversion weakened the effect of organizational identification on whistle-blowing intention but did not weaken the effect of moral identity on whistle-blowing intention. The results offer comprehensive insights into the mechanisms by which the perceived ethical climate manifests itself in whistle-blowing and the specific condition under which the motivation of organizational identification on intended whistle-blowing is weakened.

Theoretical implications

The popular focus of past research on ethical climate has been primarily on the relationship between ethical climate and (un)ethical behaviors (Treviño *et al.*, 2006). The findings of our research substantially widen the scope of the employee behavioral outcomes that are motivated by the perceived ethical climate to include an important but neglected aspect of a special kind of ethical behavior—whistle-blowing. As a result, we gain a more complete picture of the positive consequences of the perceived ethical climate. It is worth noting that our study extends whistle-blowing literature by providing evidence of the importance of perceived ethical climate in supporting whistle-blowing in Chinese organizations. Our study demonstrates that perceived ethical climate has great value and significance in enhancing employee willingness to whistle-blow in a situation without specific laws or policies governing whistle-blowing in China. In addition, despite previous

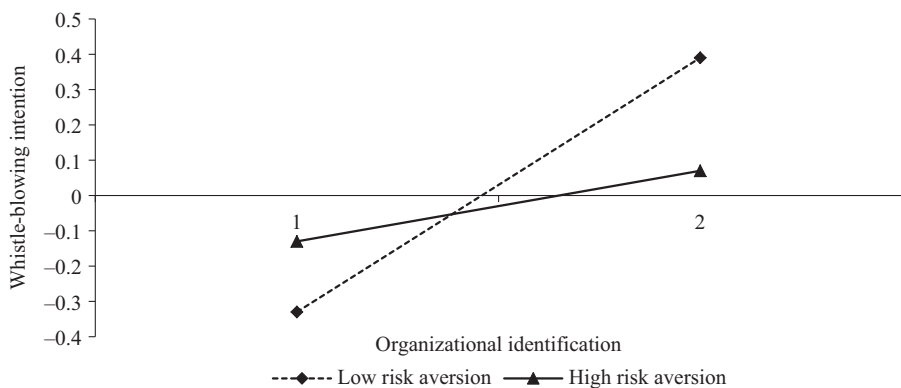


Figure 1. Moderating effect of risk aversion on the relationship between organizational identification and whistle-blowing intention

research in western countries that recognizes that some dimensions of organizational ethical climate affect employee whistle-blowing (e.g. Rothwell and Baldwin, 2007), the concept of ethical climate in our study of China revealed differences from the results found in western countries. Our study used an integrated approach to define the perceived ethical climate to capture an organization's broad normative characteristics and values. Because of serious business competition, some organizations and employees ignore the morality and the standards of law to pursue performance goals, forming a weak ethical climate, while other organizations and employees hold traditional Chinese moral beliefs which emphasize the ethical codes, ethical principles and the welfare of the entire society, forming a strong ethical climate. For example, some employees hold Confucian principles, which emphasize that the man of honor seeks righteousness and the man of disgrace only cares about benefits. The definition of perceived ethical climate in our research is particularly adapted to the Chinese economic transition context.

This study explains the psychological mechanism of whistle-blowing from the perspective of social identity and expands the prevailing literature that often explains whistle-blowing decision making from the perspective of economic rationality (Miceli *et al.*, 2008). This study demonstrates that the perceived ethical climate boosts the cognition and emotional bond between employees and an organization or promotes the integration of individuals' moral system and self-schema, which improve employees' organizational identification and moral identity and, as a consequence, enhance whistle-blowing intention. Specifically, whether employees obtain psychological satisfaction depends on their sense of belonging and attachment to an organization. When employees feel a sense of belonging and attachment to their organization, they are more willing to behave in conformity with organizational requirements and interests, hence their tendency to whistle-blow. A strong ethical climate promotes the moral awareness of employees and encourages employees to pursue moral values in their daily life. When moral beliefs occupy the central position of employees' self-schema, employees will make efforts to behave morally, for example, by whistle-blowing. By explicitly proposing and empirically testing organizational identification and moral identity as two mediating mechanisms that underlie the influence of the perceived ethical climate on whistle-blowing, our research establishes an important theoretical perspective to explain why employees are more likely to whistle-blow. This perspective contributes to opening the "black box" of the transmitting processes from the perceived ethical climate to employee whistle-blowing intention. Furthermore, by confirming the mediating roles of organizational identification and moral identity in the linkage between the perceived ethical climate and whistle-blowing, this research provides evidence for the suggestion by Vadera *et al.* (2009) that the identity perspective has critical implications for explaining the mechanism of whistle-blowing decision making. From an identity perspective, exploring Chinese employees' whistle-blowing has special implications. The unique function of organizational identification is particularly prominent in the Chinese context, since Chinese people tend to self-define in terms of social roles and inter-relationships (Markus and Kitayama, 1991). The role of moral identity is also prominent for Chinese people, because traditional Chinese moral cultivation doctrine emphasizes the unity of knowing and doing, and the concordance between deeds and words. It is consistent with the self-consistence theory, which explains how moral identity exerts its influence.

Moreover, this study identified the boundary condition for organizational identification effects in terms of individual traits. According to Van Dyne and LePine (1998), whistle-blowing is a form of prohibiting a voice from being challenging, autonomous and change-oriented in nature. Liu *et al.* (2010) found that organizational identification is an important motive for employee involvement in voice. Our research extends this literature by defining a boundary condition of risk aversion that hinders organizational identification and exerts its influence on employee whistle-blowing. The finding also provides evidence to

support Li *et al.* (2016), who found that risk aversion reduces the effect of organizational identification on employees who take charge with certain risks. Therefore, a more complete picture of the effectiveness of organizational identification is obtained. It is worth noting that risk aversion was not shown to moderate the relationship between moral identity and whistle-blowing in our findings. This result indicates that highly morally identified employees are willing to engage in whistle-blowing no matter how high the adverse risks. One possible explanation for this finding is that we underestimated the speaking-up tendency of highly morally identified employees. Another explanation may be that highly morally identified employees value right and wrong in their self-definition rather than other considerations (McFerran *et al.*, 2010), such as personal risks. The findings indicate that moral identity is a more powerful predictor of whistle-blowing relative to organizational identification. While Chinese culture values ethics and identity, it tends to emphasize high uncertainty avoidance and the high value of relationships and harmony in organizations (Chen *et al.*, 2009). As whistle-blowers face a series of risks that are related to these tendencies, risk aversion is a very important aspect of the study of Chinese employees' whistle-blowing intention.

Practical implications

From a practical point of view, organizations and managers should realize that whistle-blowing can correct wrongdoings and should take steps to induce employees' internal whistle-blowing. Our findings provide insights into how employee internal whistle-blowing can be enhanced by the perceived ethical climate. The creation and maintenance of a strong ethical climate is a long-term, comprehensive goal. The relevant policies and human resource systems can support the development of ethical climate, e.g., issue relevant policies to encourage ethical behavior and punish unethical behavior, communicate organizational norms and codes of conduct to employees by routine ethics training, encourage employees to freely communicate and voice their opinions and critical remarks (Skivenes and Trygstad, 2010, 2017), and appraise and promote employees according to their work performance as well as their moral behavior. When constructing an ethical climate, managers should act as ethical models and set the example for ethical attitudes and behaviors in order to increase employee trust in organizational justice (Miceli *et al.*, 2009). Organizations should establish a visible whistle-blowing system to provide confidential and convenient whistle-blowing channels (Miceli *et al.*, 2008), motivate whistle-blowers using financial incentives and exert efforts to ensure the safety of whistle-blowers from retaliation from wrongdoers and other interested groups (Miceli *et al.*, 2009). When receiving employees' whistle-blowing reports, managers should investigate the wrongdoing and provide prompt feedback. Once wrongdoing is confirmed, corrective measures should be taken immediately.

The buffering effect of risk aversion on organizational identification in our study indicates that organizations must not only enhance employees' organizational identification and moral identity by shaping a strong organizational ethical climate but also pay attention to employees' perception of risk aversion. Organizations must take steps to shape high risk-averse employees' perceptions of psychological safety and eliminate their concerns regarding the personal risk entailed in whistle-blowing. When recruiting, selecting and staffing, an organization should place employees with different risk-aversion tendencies according to the different requirements of various positions (Miceli *et al.*, 2009). For example, employees with low risk aversion should staff key positions that relate to ethical issues, such as the internal auditor position.

Limitations and future research directions

This study has some limitations that should be addressed in future research. From a methodological perspective, although we created the model by using longitudinal data, we

employed a survey design and measured self-reported whistle-blowing intention. Although evidence generally supports the validity of self-reports at work that involve ethics-related issues (Arnaud and Schminke, 2012), it is still important to be aware that self-reports are vulnerable to lenient bias that preclude any inference of strong causality. We also used a sample that is restricted to employees of Chinese corporations. This selection hinders the ability to generalize the theory to other regions and countries, especially since China has a unique ethical culture that exerts an influence on individuals' whistle-blowing intention. Future research may conduct cross-cultural studies to compare our findings and use experimental research designs that conform to academic ethics to observe real whistle-blowing phenomena. From a theoretical perspective, our research did not realize an integration analysis of the moderated mediating mechanisms. Considering the fact that whistle-blowing is a complicated phenomenon, future research must further explore other possible integrated moderated mediating mechanisms.

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