

Article

The Role of Enterprise Risk Management in Sustainable Decision-Making: A Cross-Cultural Comparison

Xin Liu 

School of Business, Pacific Lutheran University, Tacoma, WA 98447, USA; liuaa@plu.edu

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Abstract: The goal of this paper is to examine how cultural differences moderate the effectiveness of an organization's enterprise risk management (ERM) program in sustainable decision-making. Using an experimental design, this study found that Chinese participants, characterized by a stronger prevention focus, were more proactive in mitigating environmental, social and governance (ESG)-related risks under a loss-framed risk management philosophy, whereas American participants, characterized by a stronger promotion focus, were more proactive in mitigating ESG-related risks under a gain-framed risk management philosophy. This interactive effect of matching the risk management philosophy frame to the participants' regulatory focus was mediated by their perceived processing fluency. The implications for the literature and practice are discussed.

Keywords: culture; decision-making; enterprise risk management; sustainability

1. Introduction

In 2018, the Committee of Sponsoring Organizations of the Treadway Commission (COSO) and the World Business Council for Sustainable Development (WBCSD) released a “guidance for applying enterprise risk management (ERM) to environmental, social and governance (ESG)-related risks” [1]. This guidance provides significant implications for integrating COSO's ERM framework into managing ESG-related risks. Given the significant increase in sustainability-related issues, it is important for companies to employ risk management as a tool to manage ESG-related risks and ensure business operational sustainability [2,3]. This integration has a critical impact on an organization's sustainable development [4].

Risk management has been viewed as an important practice for improving sustainable decision-making [3–8]. Unsustainable behaviors can generate potential business risks to an organization's reputation and ultimately result in the collapse of an organization [9]. ESG-related risks arising from employees' unethical and unsustainable actions are preventable risks that are controllable and manageable through sound risk management [10]. Implementing an integrated framework of ERM provides an essential foundation ensuring corporate commitments to ethical sustainability [4,5,10]. Despite the importance of risk management in sustainable business, there is insufficient research regarding the relationship between ERM and sustainability in the prior literature [10], particularly regarding the impact of ERM on sustainable decision-making [11].

The purpose of this paper is to explore the impact of culture on the effectiveness of an ERM program. Specifically, this paper examines how employees with different cultural backgrounds respond to an organization's risk management philosophy framed congruently with their regulatory focus in sustainable decision-making. With the increased globalization of business, multicultural work environments generate a series of challenges to designing and implementing ERM among different cultural groups. As individuals from different countries may vary in their perception of risk control

systems, it is important to design a sound risk management framework compatible with employees' cultural background. The prior literature on regulatory focus suggests that individuals from Eastern collectivistic cultures tend to have a greater prevention focus, whereas individuals from Western individualistic cultures tend to have a greater promotion focus [12–14]. Drawing upon regulatory focus theory (RFT) [15], this paper found that Chinese participants were more proactive in mitigating ESG-related risks under a loss-framed risk management philosophy, whereas American participants were more proactive in mitigating ESG-related risks under a gain-framed risk management philosophy. This interaction effect was mediated by the participants' perceived processing fluency.

This study makes both theoretical and practical contributions. First, this study contributes to the scant ERM literature by responding to a call for more research regarding the role of culture in sustainable decision-making [16]. Despite the importance of risk management in corporate governance, a thorough search of the existing literature on risk management yielded limited empirical studies that have explicitly examined the antecedents of an effective ERM program [16–19]. Even fewer studies have explored the role of cultural factors in risk management [20,21]. Given the increasing trend toward multicultural work environments in globalization, it is important to understand how cultural incompatibility may affect the effectiveness of ERM and, in turn, influence employees' proactivity in managing ESG-related risks. Thus, this paper enriches the growing ERM literature by providing support to the argument in prior research that the success of an ERM system depends on the contextual factors surrounding organizations [22,23]. Second, this paper sheds light on sustainability literature by providing supportive evidence regarding the theoretical link between risk management and sustainability. While it is widely believed that risk management is crucial for ensuring sustainable business [2,9,10,24,25], research evidence regarding how risk management is linked to sustainability is limited [2,10,26]. By demonstrating that ERM is associated with employees' proactivity in mitigating ESG-related risks, this paper provides supportive evidence illustrating the link between risk management and sustainable business decision-making.

This study also provides practical implications for professional bodies and policy makers. Due to the increase in corporate scandals in the past decades, risk management has received greater attention in practice. An effective ERM can encourage employees to act proactively in risk management, corporate governance, and sustainable development [4,25,27]. The findings of this study highlight the importance of employees' characteristics in their acceptance of ERM components. An increased understanding of employees' acceptance of ERM components can facilitate organizations to implement risk management appropriately and effectively. In addition, recognition of the role of cultural factors in ERM is crucial given the disparities among different cultural groups in their decision-making and behaviors in day-to-day business activities. Designing an ERM framework that is congruent with cultural backgrounds can reduce such disparities.

2. Literature Review

2.1. Enterprise Risk Management (ERM)

The COSO described an integrated ERM framework as “a process, effected by an entity's board of directors, management and other personnel, applied in strategy setting and across the enterprise, designed to identify potential events that may affect the entity, and manage risk to be within its risk appetite, to provide reasonable assurance regarding the achievement of entity objectives” [28] (Volume 1, p. 2).

Traditional risk management manages risks in organizational “silos” in which each risk is treated separately and often addressed by different individuals within an organization [29–31]. For example, in the traditional risk management framework, the financial department will be responsible for managing financial risks, whereas the IT department will be responsible for managing IT risks. However, risks are often related and affect each other. One risk influences other risks. Interactions among risk categories (e.g., strategic risk, financial risk, operational risk) may influence the total risk

of an organization. Managing risks within one's own job scope without considering its impact on others may increase the total risk for other departments and the whole company [27,32,33]. Therefore, the silo-based approach in traditional risk management fails to consider the interactions of risks and lacks coordination in risk management across the organization [29].

Unlike traditional silo-based risk management, ERM requires management to consider potential interactions among various risks [25,28,29]. Work coordination and cooperation (e.g., information sharing and involvement in decision-making) among risk owners and co-owners are essential for an effective ERM program. Specific risks are not managed only by the related department. Instead, ERM requires commitments by the whole organization, from the enterprise level to the level of a specific business unit's operation [28]. The success of an ERM program depends on people at all levels of the organization [9,34]. More importantly, ERM makes significantly more proactivity demands on lower-level managers and employees than traditional risk management because many decisions influencing risks are decentralized [25,27,34–37]. It is important to ensure that all employees who receive compensation from the company are proactively involved in the risk management process [36,38]. Encouraging employees to proactively manage risks creates a greater level of assurance for sustainable business [35].

2.2. ERM and Sustainability

Risk management and sustainability are interrelated [2,9,10,39]. Doyle et al. propose that risk management provides an operational mechanism ensuring ethical and sustainable decision-making [26]. Unethical and unsustainable behaviors may generate potential business risks and harm an organization's sustainability [39]. For example, Drennan investigated the bankruptcy cases of Mirror Group Newspapers and Barings Bank [9]. The results of Drennan's study demonstrate that the failure to prevent unethical and unsustainable behavior in risk management systems was a key factor in the financial collapse of the two companies. To mitigate threats derived from unethical behavior and direct sustainable decision-making, it is necessary to employ a wide range of control mechanisms, such as risk management [2,3,9,10,26,40].

As a management control system, the purpose of ERM is to help an organization achieve sustainable outcomes [2,10]. An effective ERM program is essential for good corporate governance and the sustainable development of an organization [2,9,10,26,40–43], and risk management provides safeguards for an organization's ethics and sustainable values [44]. A sound ERM program encourages proactive risk management behaviors and provides risk management processes that enable employees to actively identify unsustainable behaviors, make sustainable decisions, mitigate risks when things go wrong, and ensure ethical sustainability [5,9,25]. The appropriate implementation of an ERM program could improve employees' sustainable commitments and reduce potential business risks [40,41].

2.3. Risk Management Philosophy

The commitment to ethical and sustainable business must start at the top [9,45,46], and an effective ERM program needs to originate from the top [47]. As outlined by the COSO, an organization's internal environment and governance set the tone at the top and establish the foundation for all other components of ERM [28,48]. A key element in the internal environment and governance is an organization's risk management philosophy. A risk management philosophy is "the set of shared beliefs and attitudes characterizing how the entity considers risk in everything it does, from strategy development and implementation to its day-to-day activities" [28] (Volume 2, p. 5). An organization's risk management philosophy sets the tone of top management regarding its views of risk control [48,49] and reinforces an ethical internal environment and governance [28] (Volume 2, p. 80).

To enhance the proactivity of employees in risk management, a clear and consistent ERM philosophy from the top must permeate the organization [35]. Top management needs to clarify the organization's risk management philosophy in order for employees to seek help from the risk

management philosophy and make better decisions [38,50]. Once companies develop an ERM philosophy, it must be promoted companywide and reflected in employees' decision-making [47].

The role of risk management philosophy is not to provide specific risk management approaches to mitigate risks but rather to create an atmosphere that influences employees' decision-making. The ERM philosophy is effective if it encourages employees to mitigate risks more proactively [27]. An organization needs to clearly communicate its risk management philosophy and expectations to employees [47]. The benefit of ERM will be reduced if the risk management philosophy is not broadly accepted or embraced by an organization's employees [27] (p. 36).

2.4. ERM and Culture

With the increased growth of globalization, it has become extremely important to maintain effective control over global business risks [51,52]. ERM processes aim to provide a mechanism for a global governance structure to mitigate a wide range of risks arising from complexities in the global market [42].

Limited research has explored the effects of culture on the effectiveness of ERM [20], and the results of prior research are mixed. For example, Arnold et al. found that organizations with stronger ERM processes were more likely to collaborate with partners from cultures with "less risky societal practices" [20] (p. 53). This finding demonstrates the impact of culture on organizations' selection of supply chain partners in risk management. However, Arnold et al. also found no significant relationship between culture and ERM benefits [21].

Cook suggested that the effectiveness of ERM might depend on the cultural compatibilities of the risk management components and communication among different cultural groups within an organization [53]. Simply adopting ERM dimensions without consciously considering cultural impacts is not sufficient to ensure effective risk management.

3. Hypotheses Development

3.1. Regulatory Focus Theory (RFT)

RFT proposes the following two distinct self-regulatory orientations: promotion focus and prevention focus [54,55]. According to RFT, individuals with a promotion focus emphasize advancement, achievement, and aspiration. People with a greater promotion focus strive to pursue gains, and they are more sensitive to the presence or absence of positive outcomes [56]. Therefore, these individuals are more likely to regulate their behaviors to maximize positive outcomes [57–60]. However, individuals with a prevention focus emphasize responsibilities, obligations, and security. People with a greater prevention focus strive to avoid losses, and they are more sensitive to the presence or absence of negative outcomes [56]. Therefore, these individuals are more likely to regulate their behaviors to minimize negative outcomes [57–60].

3.2. RFT and Culture

Lee et al. suggested that the cultural context might play an important role in fostering an individual's self-regulatory orientation [12]. Specifically, Lee et al. found that Chinese participants showed a bias toward prevention-focused emotions (e.g., anxiety), whereas American participants showed a bias toward promotion-focused emotions (e.g., happiness) [12]. Aaker and Lee found that Chinese participants paid more attention to and recalled more prevention-focused information, whereas American participants paid more attention to and recalled more promotion-focused information [13]. Similarly, Hamamura et al. found that Japanese participants recalled prevention-focused information more accurately, while the opposite was observed among North American participants [61]. Ouschan et al. found that Asian participants strongly endorsed prevention-focused strategies, whereas Euro-Australian participants strongly endorsed promotion-focused strategies [62]. These cross-cultural studies on regulatory focus demonstrate that

East Asians generally tend to have a stronger prevention focus, whereas Westerners tend to have a stronger promotion focus [12,13,62–66].

In Eastern collectivistic cultures, individuals tend to have a more interdependent view of themselves, which motivates them to maintain social harmony with others in their groups. Individuals from Eastern cultures tend to focus on avoiding behaviors that could disrupt their relationships with others [67–69]. Thus, people from collectivistic cultures are more likely to have a prevention focus that strives to avoid negative outcomes [12,59,70]. In Western individualistic cultures, individuals tend to have a more independent view of themselves, which motivates them to distinguish themselves from their groups. Individuals from Western cultures tend to focus on pursuing their personal achievements and aspirations [67–69]. Thus, people from individualistic cultures are more likely to have a promotion focus that strives to maximize positive outcomes [12,59,70]. In sum, the promotion focus is more prevalent among Western individualistic cultures, whereas the prevention focus is more prevalent among Eastern collectivistic cultures. Based on the existing literature on regulatory focus, the following is hypothesized.

Hypothesis 1. *Chinese participants will place a higher rating on the prevention focus scale than on the promotion focus scale, whereas American participants will place a higher rating on the promotion focus scale than on the prevention focus scale.*

3.3. The Moderating Effect of Culture

The existing literature on RFT has consistently demonstrated that a persuasive message is more effective when the framing of the message fits the recipients' regulatory focus [13,64,65,71–73]. People with a prevention focus strive to avoid losses and prefer to focus on negative rather than positive information, whereas people with a promotion focus strive to achieve gains and prefer to focus on positive rather than negative information [57–60]. As such, promotion-focused individuals are more sensitive to the presence or absence of potential positive outcomes, while prevention-focused individuals are more sensitive to the presence or absence of potential negative outcomes [15,58]. Framing a persuasive message in a way that is congruent with recipients' regulatory focus makes the message more accessible and favorable [13,74,75]. Therefore, people will be more alert to the persuasive message that fits their regulatory focus [75].

The persuasiveness of messages also depends on recipients' cultural background. For example, Uskul et al. found that East Asian participants were more persuaded (i.e., showed more favorable attitudes and stronger willingness to floss) when they received a loss-framed health message, while white British participants were more persuaded when they received a gain-framed health message [64]. Culture plays an important role in shaping the effectiveness of a persuasive message by influencing how the message will be understood and interpreted by its recipients [13,64].

In the context of risk management, the impact of risk management philosophy in an ERM program may also vary due to the self-regulatory orientations prevalent in each culture. As previously noted, Chinese people tend to be more sensitive to loss-framed information, whereas American people tend to be more sensitive to gain-framed information [64]. Based on the foregoing, it is predicted that the effectiveness of a risk management philosophy from top management may be moderated by the cultural background of the recipients such that a loss-framed risk management philosophy will be more persuasive among recipients from a collectivistic cultural background (i.e., Chinese), whereas a gain-framed risk management philosophy will be more persuasive among recipients from an individualistic cultural background (i.e., American). Accordingly, the following is hypothesized.

Hypothesis 2. *Chinese participants will be more proactive in mitigating ESG-related risks under a loss-framed risk management philosophy than under a gain-framed risk management philosophy, whereas American participants will be more proactive in mitigating ESG-related risks under a gain-framed risk management philosophy than under a loss-framed risk management philosophy.*

3.4. The Mediating Effect of Processing Fluency

As discussed earlier, the effectiveness of a persuasive message depends on the extent to which the message fits the regulatory focus of the recipients. Prior RFT studies have further demonstrated that the persuasive effect of matching message frame to recipients' regulatory focus appears to be mediated by the recipients' perceived processing fluency [12,14]. When a persuasive message is framed congruently with the recipients' regulatory focus, the recipients experience greater processing fluency, which makes the message easier to process [14]. The ease of processing is subsequently transferred into individuals' decision-making, such as being more persuaded by the appeal that fits their regulatory focus [14], favoring a product when the strategy to acquire the product fits their regulatory focus [71], and giving a higher evaluation to a conflict resolution that fits their regulatory focus [76]. This study also attempts to examine this mediating mechanism of processing fluency. Based on the foregoing, the following is hypothesized.

Hypothesis 3. *Participants' perceived processing fluency will mediate the effectiveness of matching the risk management philosophy frame to the participants' cultural backgrounds.*

4. Research Method

4.1. Participants

The participants were MBA students enrolled in two universities, and all the participants received extra credit for their participation. In total, 62 students were from an American university. This study excluded 11 students who were born or raised outside the U.S. In other words, only students who were born and raised in the U.S. were included in the data analysis. The American participants had an average age of 30.06 years ($SD = 2.27$ years), 43.1% of them were female, and their average full-time work experience was 6.59 years ($SD = 2.04$ years). In addition, 53 students were from a university in China. All the Chinese students were born and raised in China. The Chinese participants had an average age of 29.55 years ($SD = 1.86$ years), 47.2% of them were female, and their average full-time work experience was 6.21 years ($SD = 1.97$ years). Gender, age, and work experience were not significantly (all $p > 0.20$) related to the dependent variable.

4.2. Design

To test the hypotheses, this study employed a 2 (cultural background: Chinese vs. American) \times 2 (risk management philosophy: loss-framed vs. gain-framed) between-subjects design. The experiment was completed during a class session. At the beginning of the experiment, the participants were given a consent form to indicate their agreement to participate in the study. The participants were then randomly assigned to one of the two manipulated conditions of the risk management philosophy. After reading the risk management philosophy, the participants were required to read the experimental case and complete a series of questions. At the end of the experiment, manipulation checks were performed, and demographic information was collected. Finally, the participants were debriefed and thanked.

The original English version of the experimental materials was translated into Chinese and then back-translated into English following Brislin's back-translation method to ensure reliability [77]. Two bilingual Chinese professors reviewed the translation. There were no significant differences in the translation and back-translation.

4.3. Experimental Case

The experimental materials described a hypothetical corporation (LXC), which was a large manufacturer of electronic products. The company recently adopted an ERM program to manage its risks. After reading the background information about the company, the participants were provided with the company's risk management philosophy and information security policies. The participants

were then instructed to assume the role of a sales manager in LXC Corporation and informed of a problematic situation (i.e., a potential breach of confidential customer information in the accounting department). Specifically, the participants were informed that they happened to hear the manager of the accounting department communicating loudly to one of the staff members the password to a confidential customer database.

The information security policies were adapted from COSO [28] (Volume 2, p. 10–11) and the case was adapted from Hampton [33]. This case was used because data security and privacy have been identified as important ESG issues in business practice [4]. The results from a pilot test revealed that the case was realistic and reasonable.

4.4. Manipulation

The framing of risk management philosophy was manipulated following previous research in line with RFT [15,71,73,76]. The risk management philosophy statements were adapted from COSO [28] (Volume 2, p. 6–7). The statements consisted of four paragraphs. The last sentence of each paragraph was manipulated. For example, at the end of the first paragraph, the gain-framed condition described, “if we fulfill our enterprise risk strategy, we will gain superior capabilities to identify, assess and manage the full spectrum of risks.” In contrast, the loss-framed condition described, “if we don’t fulfill our enterprise risk strategy, we will lose superior capabilities to identify, assess and manage the full spectrum of risks.” The locations of the gain or loss frame were the same for the two conditions. The two statements were comparable in length and understandability. Appendix A shows all four manipulated sentences.

4.5. Measures

All measures in the experiment used a seven point Likert scale.

4.5.1. Dependent Variable

The three-item scale for proactivity was adapted from Parker and Collins’s study [78]. Specifically, the participants were required to respond to three statements regarding their willingness to devote their effort, energy, and time to mitigating the unsustainable issue in the case. The Cronbach’s alpha score was 0.88, which exceeded the generally accepted threshold of 0.70 [79].

4.5.2. Self-Construal Scale

Following previous RFT research [13,75], this study used the 24-item Self-Construal Scale to capture the independent variable of culture [80]. This scale consisted of a 12-item subscale for interdependence and a 12-item subscale for independence. Collectivism was represented by a high score on the interdependent self-construal subscale (Cronbach’s $\alpha = 0.95$), while individualism was represented by a high score on the independent self-construal subscale (Cronbach’s $\alpha = 0.95$). Each set of items was averaged to create scores for collectivism and individualism.

4.5.3. Regulatory Focus Scale

The participants’ regulatory focus was assessed by using the 18-item General Regulatory Focus Scale [81], which consisted of two subscales. This scale has been used in prior RFT research to assess cultural differences in regulatory focus [64,66,73]. Nine items measured prevention focus (Cronbach’s $\alpha = 0.94$), and nine items measured promotion focus (Cronbach’s $\alpha = 0.95$). Each set of items was averaged to create scores for the participants’ promotion and prevention focus.

4.5.4. Mediator

Following prior studies on RFT [13,14], this study assessed the participants’ perceived processing fluency using two items (i.e., easy to process, difficult to understand) regarding their perceptions of the ease of processing the information in the risk management philosophy (Cronbach’s $\alpha = 0.94$).

4.5.5. Control Variable

This study measured the participants' risk preference as a control variable. The control variable was assessed in two ways. First, the participants were asked to indicate their risk preference compared to that of their classmates [82]. Second, the participants were asked to indicate their willingness to place a bet [83]. The two items were averaged to create a score for risk preference. The regression model was not significant ($p > 0.30$) when the dependent variable was regressed on the control variable. Therefore, the control variable was excluded from the data analyses. The results were not affected by the inclusion of the control variable as a covariate.

4.5.6. Manipulation Checks

The manipulation check question asked the participants to indicate how much they agreed that the risk management philosophy emphasized potential losses if LXC's risk management program was not implemented. The participants were also asked to indicate whether they had learned the concept of ERM prior to the experiment. Other check questions asked the participants to evaluate how realistic the case was and their familiarity with ERM prior to the experiment.

5. Results

5.1. Culture

As expected, the Chinese participants (Mean = 4.29, SD = 1.00) scored higher on the interdependent (i.e., collectivism) scale than the American participants (Mean = 3.52, SD = 0.93), whereas the American participants (Mean = 4.90, SD = 1.05) scored higher on the independent (i.e., individualism) scale than the Chinese participants (Mean = 3.46, SD = 1.09). These differences were significant (all $p < 0.001$).

5.2. Hypotheses Testing

Compared to participants in the gain-framed condition (Mean = 2.23, SD = 1.10), participants in the loss-framed condition (Mean = 5.73, SD = 1.24) agreed to a greater extent that the risk management philosophy emphasized the potential losses of not implementing LXC's risk management program. The mean responses were significantly different ($p < 0.001$). All the participants had learned the concept of ERM prior to the study. There were no significant differences between the Chinese and American participants in their evaluations of the case realism or their familiarity with ERM (all $p > 0.20$).

5.2.1. Test of Hypothesis 1

To test Hypothesis 1, a repeated-measures analysis of variance (ANOVA) was performed separately for the Chinese and American participants using the two regulatory focus scores as the within-subjects variable. As predicted, the Chinese participants had significantly ($p = 0.002$) higher scores on the prevention focus scale (Mean = 4.99, SD = 1.28) than the promotion focus scale (M = 4.38, SD = 1.13). In contrast, the American participants had significantly ($p < 0.001$) higher scores on the promotion focus scale (Mean = 5.10, SD = 1.36) than the prevention focus scale (Mean = 4.21, SD = 1.14). Thus, Hypothesis 1 was supported. The finding indicated that the Chinese participants tended to be more prevention-focused, while the American participants tended to be more promotion-focused.

5.2.2. Test of Hypothesis 2

To test Hypothesis 2, an ANOVA was performed using proactivity as the dependent measure. Table 1 and Figure 1 show the results of the ANOVA. The predicted interaction between culture and philosophy was significant ($p < 0.001$). The analyses of the simple-effects contrasts showed that the Chinese participants were significantly ($p = 0.007$) more proactive in mitigating ESG-related risks under a loss-framed philosophy (Mean = 4.15, SD = 1.10) than under a gain-framed philosophy (Mean = 3.28, SD = 1.03). In contrast, the American participants were significantly ($p = 0.003$) more proactive in

mitigating ESG-related risks under a gain-framed philosophy (Mean = 4.49, SD = 1.23) than under a loss-framed philosophy (Mean = 3.51, SD = 1.21). Overall, Hypothesis 2 was supported. The finding indicated that the impact of the risk management philosophy depended on the extent to which it was congruent with the recipient's cultural background.

Table 1. ANOVA Results.

Panel A: ANOVA of Proactivity					
Variables	df	SS	MS	F	<i>p</i> -Value (Two-Tailed)
Culture	1.00	2.06	2.06	1.58	0.21
Philosophy	1.00	0.09	0.09	0.07	0.80
Culture × Philosophy	1.00	22.15	22.15	16.94	<0.001
Error	100.00	130.75	1.31		

Panel B: Cell Means		
Culture	Philosophy	
	Loss Frame	Gain Frame
Chinese	4.15 (1.10) n = 27	3.28 (1.03) n = 26
American	3.51 (1.21) n = 25	4.49 (1.23) n = 26

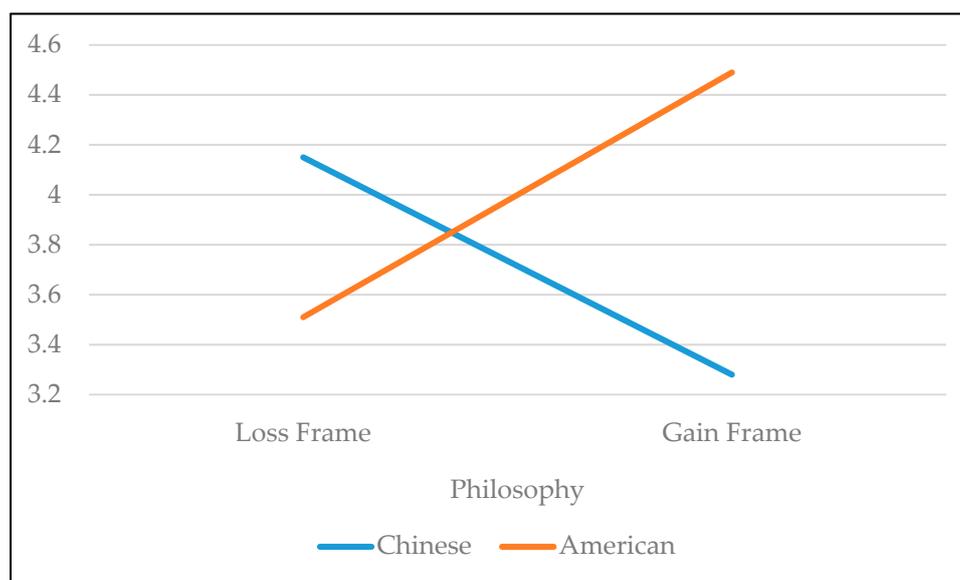


Figure 1. Interaction between Risk Management Philosophy Frame and Culture.

5.2.3. Test of Hypothesis 3

To test Hypothesis 3, a mediated moderation analysis was conducted using a series of regression analyses suggested by Baron and Kenny [84–86]. Table 2 shows the mediated moderation analysis. The first regression regressed proactivity onto culture, philosophy, and the interaction of culture and philosophy.

There was a significant interaction of culture and philosophy ($\beta = 0.38, p < 0.001$) with no significant main effects present. The second regression regressed processing fluency onto culture, philosophy, and the interaction of culture and philosophy. There was a significant interaction of culture and philosophy ($\beta = 0.47, p < 0.001$) with no significant main effects present. The third regression regressed the proactivity onto culture, philosophy, the interaction of culture and philosophy, and processing

fluency. The results indicated that processing fluency was significant ($\beta = 0.53, p < 0.001$), whereas the interaction of culture and philosophy was no longer significant ($\beta = 0.13, p = 0.16$). The mediation effect was significant ($z\text{-value} = 3.93, p < 0.001$) using a Sobel test [87]. Overall, Hypothesis 3 was supported. The finding indicated that the interaction effect between culture and philosophy was mediated by the participants' perceived processing fluency.

Table 2. Mediated Moderation Analysis.

	Regression 1 Criterion: Proactivity		Regression 2 Criterion: Processing Fluency		Regression 3 Criterion: Proactivity	
	β	<i>p</i> -Value	β	<i>p</i> -Value	β	<i>p</i> -Value
Culture	−0.12	0.21	−0.09	0.31	−0.07	0.40
Philosophy	−0.02	0.80	0.05	0.61	−0.05	0.56
Culture × Philosophy	0.38	<0.001	0.47	<0.001	0.13	0.16
Processing Fluency					0.53	<0.001

6. Discussion

Utilizing RFT, this paper demonstrates that individual cultural differences play an important role in the effectiveness of an ERM program. Specifically, the findings suggest that an organization's risk management philosophy is more effective in improving recipients' proactivity in mitigating ESG-related risks when there is a fit between the recipients' regulatory focus (i.e., prevention vs. promotion focus) and the framing (i.e., loss-framed vs. gain-framed) of the risk management philosophy. This joint effect is mediated by the recipients' perceived processing fluency. When recipients experience greater processing fluency, they are more proactive in mitigating unsustainable issues in risk management.

6.1. Implications

The findings of this study have implications for both research and practice. From a research perspective, this study contributes to the growing risk management literature by enriching the understanding of antecedents to effective risk management. A review of the existing literature finds limited research that has investigated factors that influence the implementation of ERM [47]. Even less research has explored the impact of culture [20]. The findings of this study suggest that effective risk management may be conditional on some cultural factors. The success of an ERM program may be dependent on the extent to which risk management components are framed congruently with the cultural background of employees. The findings also suggest that individual factors are likely to influence employees' perception and acceptance of an ERM program, which in turn influence their proactivity to manage risks. Although implementing ERM can improve organizational effectiveness [28], the effectiveness can be reduced if risk management components are not understood or accepted by employees [27]. Therefore, this study extends the growing literature related to ERM by exploring the conditions responsible for effective risk management and responding to a call for more research regarding the role of culture in risk management [20,88].

This study also adds implications to the existing literature regarding the link between risk management and sustainability. Although the prior literature has suggested that there is a theoretical connection between risk management and sustainability [2,7,25,38,44], this stream of research is still limited [2,26]. The findings of this study suggest that although there is a positive link between risk management and sustainability, simply adopting risk management elements is not sufficient for ensuring sustainable decision-making. To encourage employees to act proactively in mitigating ESG-related risks, the design and implementation of ERM need to consider how to communicate risk management components in a manner that can be easily understood and broadly accepted by employees with divergent cultural backgrounds.

From a practical perspective, this study offers some insights for organizations with multicultural work environments. Building an effective risk management framework is not only important but also

very challenging due to cultural incompatibilities [20]. The study attempts to provide some insights into how to implement ERM cross-culturally and effectively. The findings of this study emphasize the importance of designing an ERM program congruently with employees' cultural backgrounds to encourage proactive risk management in day-to-day business decision making. Firms with multicultural work environments may want to communicate risk management elements in a manner that fits employees' cultural characteristics to reinforce corporate governance and sustainable business.

6.2. Limitations and Future Research

The results of this study should be interpreted with caution in light of some limitations. First, the experimental design has limited external validity. The experimental participants were from China and the U.S. Future research is needed to extend the external validity of the results by examining the cross-cultural differences reported in this study in other countries or regions. Second, this study is limited to participants' self-reported responses regarding proactivity. Future research is needed to examine actual behavioral measures. Despite the lack of an observable behavioral measure in this study, the findings still make an important contribution to the existing literature by showing the moderating effect of cultural backgrounds on sustainable decision-making. While this paper provides supporting evidence regarding the role of culture in risk management and sustainability, this stream of research is still limited [20]. Future studies are needed to accumulate more evidence on the impact of culture on other components of the ERM framework. Such research could contribute to the existing literature and provide more insights to practitioners. Furthermore, the design of ERM programs needs take into consideration the influence of affective factors on managers' judgment of decision-making [89]. Decision makers' moods influence their decision-making processes [90–93]. Future research can investigate how managers' moods and emotions influence the way they make risk-related decisions. Such research could help establish policies to reduce emotional bias.

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Appendix A

Table A1. Manipulations.

Gain-Framed Condition	Loss-Framed Condition
If we fulfill our enterprise risk strategy, we will gain superior capabilities to identify, assess, and manage the full spectrum of risks.	If we don't fulfill our enterprise risk strategy, we will lose superior capabilities to identify, assess, and manage the full spectrum of risks.
If we implement our risk management program, we will gain best practices in enterprise risk management.	If we don't implement our risk management program, we will lose best practices in enterprise risk management.
If we integrate risk management into our organization's core values and beliefs, we will gain our competitive advantage.	If we don't integrate risk management into our organization's core values and beliefs, we will lose our competitive advantage.
If we follow these guiding principles, we will gain improved outcomes such as enhanced stewardship.	If we don't follow these guiding principles, we will lose improved outcomes such as enhanced stewardship.

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