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Defensive decision making: Operationalization and the relevance of psychological safety and job insecurity from a conservation of resources perspective

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Defensive decision making occurs when the decision-maker does not choose the option that is in the best interest of an organization or client but instead chooses a less effective but lower risk alternative that protects him or her in case something goes wrong. Such decisions are widespread across occupations and sectors and cause substantive damage to organizations. In a first step, we developed a scale to measure defensive decision making and test its validity. The scale covers two distinct but related dimensions: avoidance and approach. In a subsequent, two-wave study, we examined the antecedents of defensive decision making using conservation of resources theory as a theoretical lens. An environment characterized by higher psychological safety can reduce resource depletion and diminishes defensive decision making. In contrast, job insecurity can result in a threat to personal resources, which increases the likelihood that employees choose defensive decisions.

Practitioners points.

- People engage in defensive decision making as a means to protect their own resources from exhaustion.
- Organizations can reduce the number of defensive decisions by enhancing situational resources such as psychological safety.
- The short and preliminarily validated scale we developed can be used to make defensive decisions visible in organizations.

Decision-makers may choose the second-best alternative rather than what they believe is the best option for their organization, clients, or colleagues – for the sole purpose of protecting themselves from negative repercussions if something goes wrong (e.g.,

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Bublitzky, Alpers, & Pittig, 2017; Gigerenzer, 2014). Such defensive decision making can be observed, for instance, in personnel matters: There is an open position for which an internal candidate from the team as well as an external candidate applied. The external candidate is much better qualified, and it is clearly in the organization's interest to hire this person. Yet, this comes at the risk of a potential conflict with the internal candidate. Therefore, the defensive alternative is to hire the internal candidate as this decision includes less personal risk for the decision-maker (Artinger, Artinger, & Gigerenzer, 2019).

Defensive decision making can be observed across a wide range of domains. For instance, 93% of 824 U.S. physicians surveyed by Studdert et al. (2005) reported practising defensive medicine, including ordering unnecessary tests, antibiotics, biopsies, and surgery. This overuse of tests and procedures due to fear of malpractice litigation is estimated to amount to 2–3% of the total health care spending in the United States, which is about \$46 billion annually (Mello, Chandra, Gawande, & Studdert, 2010). Management studies have found that typically between 2 to 5 of the 10 most important decisions made by managers in the previous 12 months were defensive (Artinger et al., 2019; Gigerenzer, 2014). The main reasons for defensive decision making were psychological, such as avoiding conflict.

Defensive decision making is so common that there is even a colloquial term used by managers: cover your ass, or simply C.Y.A., which is even listed in the *Oxford Dictionary of English Idioms*. It is clear that defensive decision making is never in the organization's best interest and can cause significant damage. At the same time, this is not mere risk aversion: For instance, before the financial crisis of 2008, quite a few financial analysts understood that they were sitting on toxic papers. Selling these would benefit their financial institution, yet they went along with everyone else to protect themselves from being blamed if the bubble did not burst (Gigerenzer, 2014). Here, defensive decisions exposed the organizations to higher rather than lower risk.

Ashforth and Lee (1990) argued that defensive behaviour is context-dependent: An individual may decide defensively in one context, such as work, but in a very constructive manner in another context, such as leisure. Most decision-making research has tended to neglect the social context. Yet, the social context can be crucial to improving the decisions that people make and underestimating the power of situational factors as an explanation of behaviour leads to reduced accuracy in predicting what decisions are taken (Larrick, 2016; Weber, 2019). For instance, Kakkar, Tangirala, Srivastava, and Kamdar (2016) showed that whether employees speak up and voice their concerns is determined not only by their personal disposition of avoidance orientation (behaviour 'directed by negative or undesirable events'; Elliot, 1999, p. 170) but also by their beliefs about what type of voice they are expected to express (e.g., improving vs. cautionary). This highlights that voice behaviour is sensitive to situational cues that can help people overcome their personal inhibition.

Building on this insight, we investigated if the organizational context is similarly central to defensive decision making, intending to make two primary contributions. First, although defensive decision making is a widespread phenomenon in organizations (Artinger et al., 2019), empirical research on defensive behaviour in the work context has focused on the phenomenon of organizational silence, which is when individuals decide to withhold negative information because they fear of appearing in a poor light, damaging their personal relationships, or being punished after disclosing such information (Detert & Edmondson, 2011; Morrison, 2014). We developed a state-based measure to operationalize defensive decision making in organizations and tested its validity in two studies. The

defensive decision making scale will make defensive decision making visible in organizations, which is a crucial first step before investigating its antecedents and establishing countermeasures. As a short and efficient measure of defensive decision making, the scale can be used within organizational employee surveys to facilitate a better understanding of the prevalence of defensive decisions in organizations and to identify business units that are particularly affected by defensive decision making. Along with the knowledge of the impact of organizational culture and team climate on this harmful decision-making behaviour, the results provided by the defensive decision making scale allow organizations to implement measures that counteract defensive decision making. We followed the best practices for scale construction in organizational research recommended by Wright, Quick, Hannah, and Hargrove (2017).

Second, we built on conservation of resources (COR) theory (Hobfoll, 1989) to develop our operationalization of defensive decision making and integrate it into the decision-making literature. Research on organizational behaviour (e.g., Chernyak-Hai & Rabenu, 2018; Cropanzano & Mitchell, 2005; Ng & Feldman, 2012) has often been grounded in social exchange theory (SET; Blau, 1964). SET focuses on dyadic relationships. Dyadic exchanges are typically based on reciprocity norms or individually negotiated rules, but may also be formed by other rules and norms (for an overview, see Cropanzano & Mitchell, 2005). Because of its focus on the dyadic relationship, the theory neglects factors within the wider social context that inhibit employees from contributing to organizational goals in a desirable manner (Cropanzano, Anthony, Daniels, & Hall, 2017). Moreover, SET tends to ignore the resource context and its impact on workplace behaviour and social exchange (Bordia, Restubog, Bordia, & Tang, 2017). Resources may play a crucial role in the occurrence of defensive decision making. Since individuals have only limited resources available, they are careful and strive not to deplete these. For this reason, employees take their perceived level of resources into account when deciding whether to take personal risks (Ng & Feldman, 2012) and respond to uncertainty with either approach motivation (i.e., the willingness to consider and choose decisions that might involve risk or uncertainty) or avoidance motivation (i.e., the intention to reduce harm to oneself by monitoring possible threats in one's environment and to avoid risky or uncertain decisions) (Bublatzky et al., 2017; Latack & Havlovik, 1992).

Following COR theory, resource affluence is fundamental to risk taking as employees avoid personal risks to conserve resources when they lack capacity or fear losses but are willing to accept personal risks when they perceive their resources to be sufficient (Chen, Westman, & Hobfoll, 2015). Therefore, we propose that both organizational (here, psychological safety and job insecurity) and personal (here, regulatory focus, i.e., the motivation to base decisions either on potential gains or on avoiding potential failures) resources and stressors need to be considered to obtain a differentiated understanding of the occurrence of defensive decision making. Psychological safety is 'a shared belief that the team is safe for interpersonal risk taking' (Edmondson, 1999, p. 354), which should decrease defensive decision making. In contrast, job insecurity, the 'perceived powerlessness to maintain desired continuity in a threatened job situation' (Greenhalgh & Rosenblatt, 1984, p. 438), should increase such decisions. We assume that an individual's regulatory focus may affect the individual's resources and the perception of possible resource threats (Brockner & Higgins, 2001; Elliott, 2008). We tested these assumptions in a third study ($N = 153$), using a two-wave lagged design.

In the following, we first introduce our theoretical framework to conceptualize defensive decisions in more detail and highlight the importance of social context. We then outline the scale developed to measure defensive decision making in organizations and

test our core assumptions regarding the relevance of a situational resource (psychological safety) and a situational resource constraint (job insecurity) for defensive decision making and the influence of individual dispositions.

Defensive decision making in organizations from a COR perspective

Ashforth and Lee (1990) conceptualized defensive behaviour as an action that is determined primarily by the context in which the individual is situated and that is performed to 'reduce a perceived threat to or avoid an unwanted demand of an individual or group' (p. 622). They distinguished three motives for defensive behaviour: to avoid blame, to avoid action, and to avoid change. Defensive decision making is a form of defensive behaviour (Argyris, 1977, 1985, 1990) and a response of an individual or group facing a situation of either risk or uncertainty.

Defensive decision making and organizational silence share self-protection and blame avoidance as underlying motives. Several studies have found blame avoidance to be a central element in structuring organizational processes (Leong & Howlett, 2017; Novak, 2013). For example, members of the European Council (the highest decision-making board of the European Union) sometimes use consensus instead of formal voting because formal voting would disclose members' identities, potentially exposing them to the risk of criticism or retaliation by other participants in the decision-making process, if their choice deviates from the majority (Novak, 2013). Likewise, accountability, that is, being held responsible for one's actions, can hinder people from performing in the best possible manner because the greater the extent of perceived accountability, the more people might focus on protecting themselves (Waring, Alison, Cunningham, & Whitfield, 2013).

Generally, people tend to prefer inaction over action if decisions can lead to a bad outcome. A negative outcome of an action is evaluated as particularly harmful if it could have been avoided by not making any decision (Ritov & Baron, 1995). But defensive decision making not only includes inaction, such as remaining silent, but also action, when a person deliberately chooses the option that is second-best from the perspective of the organization (Artinger et al., 2019). Recent research confirmed these arguments by indicating that self-protection does not inevitably cause behavioural inhibition but can generate active behaviour and even faster decision-making to limit potential threats and to avoid potential negative consequences, especially if accountability is high (Power & Alison, 2017; Waring et al., 2013).

Given the incentives for avoiding blame and action, employees often face a conflict between working towards the organization's goals and developing their own resources and career within that organization (Westman, Hobfoll, Chen, Davidson, & Laski, 2004). To illustrate how such a conflict can lead to defensive decision making, we adopted the view of COR theory (Hobfoll, 1989), which we outline in the following.

Conservation of resources theory consists of two tenets: resource conservation and resource acquisition. Resources are used to address job demands (e.g., performance requirements) and can either be provided by the organization or stem from the individual (Hobfoll, Shirom, & Golembiewski, 2000). Hobfoll (1989, p. 516) defined resources as 'those objects, personal characteristics, conditions or energies that are valued by the individual'. This definition emphasizes the individual component of resources: The value of certain resources can vary significantly between individuals and is a function of the individuals' experience and current situation (Halbesleben, Neveu, Paustian-Underdahl, & Westman, 2014). Furthermore, research has shown that the perceived level of resources can affect the individual's behaviour regardless of the actual situation (Clarkson,

Hirt, Ria, & Alexander, 2010). Individuals have limited resources and are motivated to protect these from depletion and acquire new resources that help them deal with stressful situations in the future (Hobfoll, 1989). Therefore, individuals strive to create pleasurable situations for themselves and avoid situations that might lead to the loss of valued resources. This motivation is especially prevalent when there is a lack of resources or a threat of resource depletion, which is perceived as stressful. Individuals react by seeking additional resources or conserving their current resources by reducing resource expenditure in another context (Hobfoll, 2002). However, the working environment sometimes makes it impossible to avoid consuming one's own resources. Changes in work processes or organizational structures and the inherent uncertainty can lead to further inevitable strains on resources (Westman et al., 2004).

Latack and colleagues (e.g., Latack & Havlovic, 1992) examined two strategies by which employees cope with uncertain situations, namely approach behaviour, such as addressing a problem, and avoidance behaviour, which helps the employee escape the stressful situation. A large number of studies have demonstrated that individuals react differently to such risk and uncertainty, with some driven by avoiding potential failure (such as being punished) and others driven by potential successes (such as being rewarded; Artinger, Petersen, Gigerenzer, & Weibler, 2015; Busemeyer & Townsend, 1993; Corr, 2013; Curley, Yates, & Abrams, 1986; Gray, 1975).

We propose that individuals' responses to uncertainty and risk depend on the availability of situational and personal resources. From the perspective of COR theory, we argue that individuals with replenished resources will be willing to take risks (see also Ito & Brotheridge, 2003). They will see the opportunities in the situation, such as increasing their reputation in their team because they made an important contribution to developing a new product. However, employees whose resources have already been exhausted or fear a loss of resources will be less willing to accept personal risks. To protect themselves against further resource drain, these employees are likely to prefer the safer option to the one they actually judge as best for the organization. Although drained individuals may similarly be aware of the potential gains of choosing the riskier option, Hobfoll, Halbesleben, Neveu, and Westman (2018) showed that individuals are more strongly motivated by avoiding further resource losses than by potential gains.

Combining the resource perspective from COR theory with an individual's approach-avoidance motivation, we conceptualize defensive decision making as having two dimensions, which we define as decision-making approach and decision-making avoidance. Depending on the individual's perception of available resources, they will primarily engage in one or the other. Decision-making approach is characterized by an awareness that decisions should be made even if they are burdened with uncertainty or their consequences cannot be assessed completely. Drawing from previous results (Latack & Havlovic, 1992; Ng & Feldman, 2012), we assume that decision-making approach can be resource depleting as it involves personal risk, and thus, it will be less likely when resources are already low. Consequently, employees should engage in decision-making approach when they perceive their resources as sufficient. Decision-making avoidance, on the other hand, embodies the attempt to avoid or to pass on personal risky or uncertain decisions to colleagues or the manager and occurs particularly when individual resources are becoming scarce in an attempt not to risk further loss through negative personal consequences.

Whereas defensive decision making is destructive at the organizational level, individuals may engage in such behaviour to cope with stressful situations at work by protecting their personal resources against depletion. In brief, we assume that defensive

decision making can result from a lack of resources or high demand on resources (such as high uncertainty) and an individual's attempt to cope with such challenges (Penney, Hunter, & Perry, 2011).

Drawing on the COR theory, we next focus on four factors that can affect defensive decision making. These are two individual factors: prevention and promotion focus, and two organizational factors: psychological safety and job uncertainty.

Individual and organizational antecedents of defensive decision making

Prevention and promotion focus

Several studies have shown that regulatory focus influences decision-making and personal risk taking (Higgins & Cornwell, 2016). More specifically, a certain outcome can be perceived as either a positive or a negative risk, depending on the individual's regulatory focus (Higgins, 1998). Therefore, the personal risk associated with a decision's outcome may be judged differently by employees with a promotion versus prevention focus, leading to different decisions: constructive or defensive. The different assessments of potential personal risks can be reinforced depending on the individual resources of the employees. According to COR theory, employees will try to protect their personal resources, particularly when they perceive their work environment as stressful (Hobfoll, 1989). However, because of differences in regulatory focus (Higgins, 1998), not all workers will be equally motivated to protect their resources.

Prevention-focused employees are conflict avoidant and perceive higher psychological stress after losing resources and, therefore, are highly motivated to minimize resource losses. They will evaluate personal risk more negatively and, in consequence, are more prone to engage in decision-making avoidance. Promotion-focused individuals are more gain-seeking and opportunity-oriented. Thus, they are less sensitive to resource loss, because the loss is perceived as less stressful (van den Tooren & de Jonge, 2011). Rather, they are more confident that they can attain new resources in the future. This leads them to judge risks more positively as opportunities and engage in decision-making approach. Therefore, we predicted that:

Hypothesis 1a. Prevention focus is positively related to decision-making avoidance.

Hypothesis 1b. Promotion focus is positively related to decision-making approach.

Psychological safety

A situational resource that should reduce the likelihood of defensive decision making is psychological safety. Argyris (1990) argued that anxiety arising from potential failure generates defensive routines, through which an organization internalizes defensive decisions, and these reinforce themselves by shaping the organizational culture. In a climate of psychological safety, there is a shared belief that it is safe to take personal risks and that mistakes nourish future learning (Edmondson & Lei, 2014). When employees feel safe, they can utilize all of their available resources to meet their job demands and achieve their work goals (Halbesleben et al., 2014; Mao, Chiang, Chen, Wu, & Wang, 2019). They will be more motivated to engage in approach behaviour, such as constructive decision-making, and accept personal risk (Bublitzky et al., 2017; Edmondson & Mogelof, 2006;

Sarooghi, Libaers, & Burkemper, 2015). Employees who are not worried that mistakes will have negative repercussions for them personally take responsibility even for risky or uncertain decisions (Newman, Donohue, & Eva, 2017; Schein, 1993). Together with COR theory, these results suggest that individuals with greater resources are less vulnerable to resource loss and more capable of orchestrating resource gain through using their existing resources (Hobfoll, 2011). On the other hand, when employees feel unsafe, they will focus on protection of resources, which leads to distraction from job demands. Ultimately, they will be reluctant to accept responsibility or personal risk because they fear negative consequences, which can be perceived as a threat of resource depletion. Therefore, we predicted:

Hypothesis 2a. Psychological safety is negatively related to decision-making avoidance.

Hypothesis 2b. Psychological safety is positively related to decision-making approach.

Job insecurity

Job insecurity is a second important organizational factor that can affect defensive decision making. If employees experience job insecurity, for instance, because their company is planning to downsize, they may start worrying about their future (Keim, Landis, Pierce, & Earnest, 2014). These concerns about the future can exhaust personal resources as being employed is more than just a way to earn money for most employees. Rather than that, long-term employment is a resource in itself and being successful at work increases employees' self-confidence. Perceived job insecurity, therefore, threatens not only employees' financial situation but also their resources. That people are more sensitive to the risk of losing objects than they are to the possibility of gaining the same object mirrors the phenomenon of loss aversion (Kahneman & Tversky, 1979). Therefore, an expected loss of resources is disproportionately more severe than a gain in resources (Hobfoll et al., 2018). When individuals' resources are exploited, they enter into a defensive mode to preserve the self (Halbesleben et al., 2014; Hobfoll et al., 2018). As a result, we assume that they try to minimize the possibility of an unfavourable decision outcome, such as avoiding decisions that involve personal risks. If employees are confronted with a threat to their valued resource of employment, they do not wait for this loss to occur but instead actively try to put themselves in a favourable position (Lee, Huang, & Ashford, 2018; Sender, Arnold, & Staffebach, 2017). Defensive decision making is such a strategic behaviour that might be useful for protecting resources. Therefore, we predicted that:

Hypothesis 3a. Job insecurity is positively related to decision-making avoidance.

Hypothesis 3b. Job insecurity is negatively related to decision-making approach.

In the following, we first describe the two studies we conducted to develop an operationalization of the two components of defensive decision making. We then describe Study 3, in which we tested our hypotheses. We summarize our theoretical model in Figure 1.

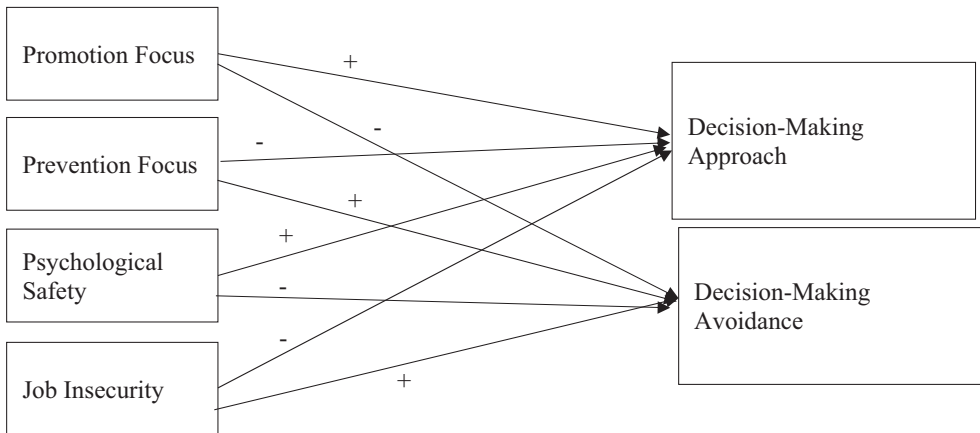


Figure 1. Research model for Study 3.

STUDY 1: SCALE DEVELOPMENT AND STRUCTURE OF DEFENSIVE DECISION MAKING

Method

Participants

As defensive decision making is not limited to a particular type of organization, job, or employee, we aimed to develop a scale that can capture the construct independent of sector or industry. To this end, we used the commercial platform Clickworker (the German equivalent of MTurk) to collect data. To derive our sample size, we relied on the suggestions by MacCallum, Widaman, Zhang, and Hong (1999), who proposed that the expected level of communality of the variables and the number of factors determine the necessary sample size: For moderate levels of communality between .50 and .70 and well-determined factors, the sample size should be in the range of 100–200. Usable responses were received from 145 individuals (51% men). All participants had been in an employment relationship at some point within the last 5 years. In terms of age, 3% of respondents were between 18 and 24 years, 47% between 25 and 34 years, 30% between 35 and 44 years, 15% between 45 and 54 years, and 5% were 55 years or older. Work experience was also assessed in categorical classes, with 3% of respondents having less than 1 year of experience, 11% having 1–3 years, 37% having 4–10 years, 29% having 10–20 years, and 20% having over 20 years. Each participant was paid 0.75 for completing the questionnaire, which was administered in German.

Measures

Formulation of the items was based on Ashforth and Lee's (1990) preliminary model of defensive behaviour and operationalization of defensive decision making. We aimed to develop new items to capture both dimensions (approach and avoidance) of defensive decision making. The initial item pool can be found in Appendix A. Content validity of the initial items was evaluated by a panel of five expert raters (Netemeyer, Bearden, & Sharma, 2007), following the procedure recommended by Lynn (1986). To identify potential experts, we relied on recommendations from fellow scholars working in the subject area. Despite its risk of a popularity effect, this so-called process of social acclamation

represents a reasonable approach (Shanteau, Weiss, Thomas, & Pounds, 2002). Four men and one woman qualified as experts. All of them held at minimum a diploma degree (the German equivalent of a combined bachelor and master degree) in psychology and had working experience in the relevant field of at least 10 years. Three were members of universities or research institutes with a research focus on individual decision-making, and two held positions in a large international company dealing with organizational decision-making culture. The five experts were provided with the definition of defensive decision making and were asked to rate each item's relevance for assessing defensive decision making on a 4-point Likert scale of 1 (*not relevant*) to 4 (*highly relevant*). We calculated the content validity index (I-CVI) for each item as the number of ratings of 3 or 4 divided by the number of judges. According to Lynn (1986), the I-CVI should be 1.00 if the expert panel consists of five or fewer experts. Following this criterion, we eliminated six items that scored below the cut-off. The final item pool for Study 1 thus consisted of 16 items (see Appendix B). Participants in Study 1 were asked to respond to each item on a scale of 1 (*disagree strongly*) to 7 (*agree strongly*).

Analysis

We used the following criteria to analyse the item set: First, item commonalities should exceed .60, as recommended by MacCallum et al. (1999). Second, factor loadings should be higher than .50 to indicate solid factors (Osborne, 2008; Osborne, Costello, & Kellow, 2008). Third, we used scree tests as well as the eigenvalue-above-one criterion to determine the number of factors. As recommended by Netemeyer et al. (2007), we conducted a principal component analysis (PCA) with varimax rotation on the 16 items to examine whether they captured the two dimensions of defensive decision making.

Results

The factor analysis revealed three factors with an eigenvalue greater than 1. These factors explained 62.65% of the variance. We removed six items (Items 7, 10, 13, 14, 15, and 16) because they did not meet our criteria introduced above. Items 11 ('The company's senior management should make all risky decisions') and 12 ('I always check with my management before making decisions') had commonalities below .60 (.45 and .43) but satisfactory factor loadings (.67 and .68). Additionally, both of these items related to interacting with superiors when making decisions, which (a) might explain why they had somewhat lower commonalities and (b) rendered them important for fully capturing defensive decision making. We, therefore, decided to keep them in our item pool.

We performed an additional PCA with varimax rotation on the remaining 10 items to examine whether the removal of the six items affected the factor structure of defensive decision making. The results are presented in Table 1.

The results for the revised item set confirmed the predicted underlying two-dimensional structure of defensive decision making. This two-factor solution explained 62.53% of the variance. The first factor, which explained 33.34% of the variance, comprised five items and represents *decision-making approach*. The items loading on this factor reflect employees' willingness to make decisions that might involve personal risk, have an uncertain outcome, and include a progress focus (e.g., to have a successful career, to implement innovative ideas). The second factor, which explained 29.19% of the variance, likewise comprised five items and represents *decision-making avoidance*. The

Table 1. Factor structure and descriptive statistics of the final item set for Study 1

No.	Item	Decision-making approach (.87)	Decision-making avoidance (.80)	Commonalities	M	SD
6	I try to avoid risky decisions.	—	.79	.67	4.42	1.55
8	I like to leave risky decisions to others.	—	.76	.63	4.27	1.73
9	I feel uncomfortable when I have to make decisions and cannot predict the consequences.	—	.78	.60	4.90	1.62
11	The company's senior management should make any risky decisions.	—	.67	.45	5.22	1.40
12	I always check with my management before making decisions.	—	.68	.43	5.39	1.29
1	I make risky decisions when I feel they are right.	.81	—	.70	5.30	1.37
2	I make decisions even when I cannot predict every aspect of their consequences.	.76	—	.64	4.48	1.36
3	To have a successful career, you need to make risky decisions from time to time.	.76	—	.59	5.43	1.30
4	To implement innovative ideas, it is important to make decisions even if they involve some level of risk.	.82	—	.70	5.54	1.15
5	I have the courage to make decisions even if they involve some level of risk for me.	.83	—	.78	4.68	1.34

Note. Factor loadings above .50 are presented. Cronbach's alphas are shown in parentheses.

items loading on this factor reflect the attempt to avoid personal risky or uncertain decisions by leaving them for others to make. The two factors were negatively correlated ($r = -.27$, 95% confidence interval, CI $[-0.44, -0.08]$). The internal consistencies (Cronbach's α) of the two subscales were good (.87, 95% CI $[0.83, 0.90]$ for decision-making approach; .80, 95% CI $[0.75, 0.85]$ for decision-making avoidance).

STUDY 2: CONSTRUCT VALIDITY

To cross-validate the results of Study 1, we conducted a second study to test the scale's convergent and divergent validity. Establishing convergent validity (i.e., substantial correlations with similar constructs) and divergent validity (i.e., low correlations with dissimilar constructs) are two important steps in scale validation (Netemeyer et al., 2007; Weiber & Mühlhaus, 2014). Therefore, we compared our scale with an established construct that should be related to defensive decision making (employee voice) to assess its convergent validity and with a construct that should be unrelated (decision-making style) to test its divergent validity.

Employee voice is the proactive provision of information intended to improve organizational functioning, even if it is critical or challenges the company's status quo (Detert & Burris, 2007; Morrison, 2014; Van Dyne, Ang, & Botero, 2003). A recent study by Liang, Shu, and Farh (2018) showed that both promotive voice (expression of new ideas

that deviate from the status quo) and prohibitive voice (expression of concerns about possible problems) enhance team innovation. Although withholding information may harm organizational success, there is evidence that employee voice is suppressed in many organizations (Milliken, Morrison, & Hewlin, 2003). Employees fear that they will be viewed as troublemakers and lose support from others or that their reputation will suffer (Brinsfield, 2013). As a consequence, many employees hesitate to communicate potentially relevant issues. The more personally risky an employee perceives speaking up to be, the less likely the employee will be to raise ideas or concerns (Milliken et al., 2003; Morrison, 2014). Both employee voice and defensive decision making entail personal risk to the extent that they can have negative consequences for the self (Morrison, 2014). If individuals do not speak out on critical issues in the organization for fear of negative consequences, they are unlikely to make a decision that renders them vulnerable, even if they know it is the right one.

For this reason, we assume that employees who do not engage in voice behaviour will also not choose the best decision from the organization's perspective. So, employee voice and defensive decision making should be related, as they share some key aspects, such as personal risk and potential negative consequences. However, they are also distinct, as employee voice aims to improve the organization and defensive decision making serves a personal purpose.

Scott and Bruce (1995) defined decision-making style as 'the learned habitual response pattern exhibited by an individual when confronted with a situation requiring a decision. It is not a personality trait, but a habit-based propensity to react in a certain way in a specific decision context' (p. 820). The key differences among styles involve the amount of information considered during the decision and the number of alternatives identified when reaching decisions. A rational decision-making style is characterized by a thorough search for and logical evaluation of alternatives, whereas intuitive decision-making is characterized by a reliance on feelings and hunches (Scott & Bruce, 1995). Bruine de Bruin, Parker, and Fischhoff (2007) reported a very weak positive relationship between a rational decision-making style and general decision-making competence and a very weak negative relationship between avoidant and spontaneous decision-making styles and general decision-making competence. We chose decision-making style for establishing divergent validity because we aimed to provide evidence that defensive decision making is not a way of making decisions due to differences in information processing but the conscious act of choosing a suboptimal option. This should underline our assumption that individuals who engage in defensive decision making in their work environment are quite capable of making courageous and constructive decisions in private matters, whereas the tendency to use intuitive or reflective thinking is trait-like and stable across time and context (Phillips, Fletcher, Marks, & Hine, 2016). Defensive decision making does not mean a low level of decision-making competence, which is the case for certain decision-making styles.

Method

Participants

We used G*Power 3.1.9.2 (Faul, Erdfelder, Lang, & Buchner, 2007) to determine the necessary sample size. With $\alpha = .05$ and power = .95, the sample size needed to detect a medium effect size according to Cohen's (2013) criteria was approximately $N = 175$. Participants were employees in different sectors and were recruited via the

online business network Xing. The survey was administered in German. We recruited 170 participants. 50% of the respondents were men. In terms of age, 3% of respondents were between 18 and 24 years old, 49% between 25 and 34 years, 25% between 35 and 44 years, 16% between 45 and 54 years, and 7% were 55 or older. Three percent of respondents had less than 1 year of work experience, 13% had 1–3 years, 38% had 4–10 years, 24% had 10–20 years, and 22% more than 20 years.

Measures

Defensive decision making

Participants rated the 10 items developed in Study 1 on a 7-point Likert scale of 1 (*disagree strongly*) to 7 (*agree strongly*). Confirmatory factor analysis (CFA) showed that the correlated two-factor structure fit the data well, $\chi^2(34) = 55.29$, comparative fit index (CFI) = .94, Tucker–Lewis index (TLI) = .92, root mean square error of approximation (RMSEA) = .06. Cronbach's alphas were satisfactory, at .72 (95% CI [0.65, 0.79]) for decision-making avoidance and .80 (95% CI [0.75, 0.85]) for decision-making approach.

Employee voice

We used the 6-item scale developed by Van Dyne and LePine (1998) to assess employee voice. The items were rated on a 7-point Likert scale of 1 (*disagree strongly*) to 7 (*agree strongly*). A sample item is 'I develop and make recommendations concerning issues that affect my workgroup'. Cronbach's alpha was .88 (95% CI [0.84, 0.90]).

Decision-making style

We used the Rational and Intuitive Decision Style Scale (Hamilton, Shih, & Mohammed, 2016) to measure the different decision-making styles. Items were rated on a 7-point Likert scale of 1 (*disagree strongly*) to 7 (*agree strongly*). Sample items are 'I get all the information I need before I decide' (rational decision-making style) and 'I usually trust my first intuition when making decisions' (intuitive decision-making style). Cronbach's alphas were .89 (95% CI [0.86, 0.91]) for rational decision-making style and .87 (95% CI [0.83, 0.90]) for intuitive decision-making style.

Analysis

We used MPlus 8.0 (Muthén & Muthén, 2017a) to conduct a CFA to test our scale's distinctness.

To explore the distinctness of our scale, we ran several CFAs, in which we compared our scale with employee voice and both dimensions of decision-making style. For each of these, we specified one benchmark model, in which the items of the comparison constructs loaded on their theoretically founded factor (Models 1, 1a, 1c, 2, and 3). In addition to the benchmark models, we provided alternative models in which items were merged to create synthetic factors (Models 1b, 1d, 2a, 2b, 3a, and 3b). If the fit of the benchmark model is significantly better than that of the alternative, it can be assumed that the comparison items form their own factor and are distinct from the new items (Moosbrugger & Kelava, 2012; Netemeyer et al., 2007). To test the convergent and discriminant validity of our scale, we used Pearson correlations.

Results

Descriptive analysis and correlations

The correlations of the latent factors were in the expected directions (see Table 2). Decision-making avoidance was negatively associated with employee voice ($r = -.28$, 95% CI $[-0.41, -0.21]$), and decision-making approach was positively associated with employee voice ($r = .40$, 95% CI $[0.22, 0.56]$). Rational decision-making style was slightly positively associated with decision-making avoidance ($r = .20$, 95% CI $[0.04, 0.36]$) but not with decision-making approach ($r = .06$, 95% CI $[-0.10, 0.21]$). Intuitive decision-making style was not associated with either decision-making avoidance ($r = -.10$, 95% CI $[-0.26, 0.07]$) or decision-making approach ($r = .09$, 95% CI $[-0.07, 0.23]$). To summarize, all of our assumptions were confirmed, providing preliminary evidence for convergent and discriminant validity.

Results of structural equation modelling

Initially, we tested if the two dimensions of defensive decision making, decision-making approach and decision-making avoidance, were distinct from employee voice. Our results confirmed this assumption. In all models, the model fits were significantly better for the three-factor (Model 1) and two-factor (Model 1a, Model 1b) solutions than for the one-factor solution (Model 1c): decision-making approach/employee voice: $\chi^2_{\text{diff}}(1) = 108.82$, $p < .001$; decision-making avoidance/employee voice: $\chi^2_{\text{diff}}(1) = 128.94$, $p < .001$.

In the next series of CFAs, we investigated the distinctness of defensive decision making and rational and intuitive decision-making styles, respectively (Model 2, Model 2a, and Model 2b). Our results indicate that decision-making approach and decision-making avoidance were distinct from rational and intuitive decision-making styles: $\chi^2_{\text{diff}}(5) = 216.44$, $p < .001$.

Finally, we incorporated all validation constructs (decision-making approach, decision-making avoidance, employee voice, rational decision-making style) into our analysis. The model fit was significantly better if all constructs loaded on separate factors (Model 3a), $\chi^2_{\text{diff}}(10) = 936.70$, $p < .001$. So, we can conclude that both dimensions of defensive decision making are distinct from existing constructs. The results are presented in Table 3.

STUDY 3: ANTECEDENTS OF DEFENSIVE DECISION MAKING

Having developed a reliable scale to operationalize defensive decision making in organizations, we further explored the nomological network surrounding defensive decision making and tested our Hypotheses 1–3 in a two-wave study.

Table 2. Descriptive statistics, reliabilities, and correlations in Study 2

Variable	M	SD	1	2	3	4	5
1 Decision-making avoidance	4.35	1.11	(.72)				
2 Decision-making approach	5.20	0.98	-.35**	(.80)			
3 Rational decision-making style	5.03	1.03	.20**	.06	(.89)		
4 Intuitive decision-making style	4.06	1.12	-.10	.09	-.25**	(.86)	
5 Employee voice	5.20	0.99	-.28**	.40**	.11	.06	(.88)

Note. Cronbach's alphas are shown in parentheses. $N = 170$.

* $p < .05$, ** $p < .01$.

Table 3. Initial results of the confirmatory factor analysis test of validity in Study 2

Model	χ^2	df	χ^2/df	CFI	TLI	RMSEA
Model 1	129.13	101	1.28	.96	.95	.04
Model 1a	54.65	43	1.27	.98	.97	.04
Model 1b	186.94	44	9.83	.71	.63	.14
Model 1c	57.20	43	1.33	.98	.97	.04
Model 1d	186.13	44	4.23	.79	.73	.14
Model 2	263.86	164	1.61	.91	.90	.06
Model 2a	628.95	169	3.72	.60	.55	.13
Model 2b	1,325.41	170	6.98	.33	.25	.16
Model 3	406.17	289	1.41	.93	.92	.05
Model 3a	511.39	293	1.75	.86	.85	.07
Model 3b	1,534.67	299	5.13	.22	.15	.16

CFI = comparative fit index; TLI = Tucker–Lewis index; RMSEA = root mean square error of approximation. Model 1: Decision-making avoidance (DMAv), decision-making approach (DMAp), employee voice (EV) – three factors; Model 1a: DMAp, EV – two factors; Model 1b: DMAp, EV – one factor; Model 1c: DMAv, EV – two factors; Model 1d: DMAv, EV – one factor; Model 2: DMAv, DMAp, rational decision-making style (ratDMS), intuitive decision-making style (intDMS) – four factors; Model 2a: DMAv DMAp, ratDMS, intDMS – two factors (DMAv & ratDMS, DMAp & intDMS); Model 2b: DMAv, DMAp, ratDMS, intDMS – one factor; Model 3: DMAv, DMAp, EV, ratDMS, intDMS – five factors; Model 3a: DMAv, DMAp, EV, ratDMS, intDMS – four factors (Defensive decision making, EV, ratDMS, intDMS); Model 3b: DMAv, DMAp, EV, ratDMS, intDMS – one factor.

Method

Participants

We used G*Power 3.1.9.2 (Faul et al., 2007) to determine the necessary sample size. To correct for multiple hypothesis testing, we applied a conservative Bonferroni-adjusted p -value of $.05/7 = .007$ as a significance threshold throughout. With $\alpha = .05$, power = .95, and seven predictors in the regression analysis, the sample size needed to detect a medium effect size according to Cohen's (2013) criteria was $N = 153$. To reduce common method biases, we temporally separated the assessment of the predictors at Time 1 and of decision-making approach and decision-making avoidance at Time 2. Furthermore, we displayed the items of the different scales in a randomized sequence as recommended by Podsakoff, MacKenzie, Lee, and Podsakoff (2003). We used the commercial platform Prolific for data collection. To assess the possibility of bias based on language differences in our scale, participants were required to speak English as their native language and reside in the United Kingdom. To ensure that we had sufficient data for the analysis, we initially recruited 225 participants, having followed the recommendations of the platform to select about 30% more participants at the first measurement point, as not all of them would participate at Time 2. Of the 225, 187 participated at Time 2, six weeks later (83% retention rate). In the final sample, 29% of participants were men. In terms of age, 21% of respondents were between 18 and 24 years old, 41% between 25 and 34 years, 23% between 35 and 44 years, 13% between 45 and 54 years, and 2% were 55 years or older. Regarding work experience, 2% had less than 1 year, 14% had 1–3 years, 30% had 4–10 years, 33% had 10–20 years, and 21% more than 20 years. Each participant was paid £2.70 for completing the questionnaires, which were administered in English.

Measures

Psychological safety at Time 1

We used the items developed by Edmondson (1999) to assess psychological safety (sample item: 'It is safe to take a risk on this team') at Time 1. Items were rated on a 7-point Likert scale of 1 (*very inaccurate*) to 7 (*very accurate*). Cronbach's alpha was good, at .85 (95% CI [0.80, 0.87]).

Job insecurity at Time 1

We used the English translation of the Job-Insecurity Scale by DeWitte at Time 1 (Vander Elst, De Witte, & De Cuyper, 2014). Items were rated on a 5-point Likert scale of 1 (*totally disagree*) to 5 (*totally agree*). A sample item is 'Chances are, I will soon lose my job'. Cronbach's alpha was good, at .87 (95% CI [0.85, 0.90]).

Regulatory focus at Time 1

We assessed the regulatory focus using the Regulatory Focus Scale (Fellner, Holler, Kirchler, & Schabmann, 2007). Items were rated on a 7-point Likert scale of 1 (*definitely untrue*) to 7 (*definitely true*). Sample items are 'I prefer to work without instructions from others' (promotion focus) and 'Rules and regulations are helpful and necessary for me' (prevention focus). Cronbach's alphas were almost satisfactory, at .64 (95% CI [0.66, 0.79]) for prevention focus and .59 (95% CI [0.4, 0.70]) for promotion focus.

Defensive decision making at Time 2

We used the translation-backtranslation method (Brislin, 1970) to translate our items from German to English. Participants rated the 10 items developed in Studies 1 and 2 on a 7-point Likert scale of 1 (*disagree strongly*) to 7 (*agree strongly*). CFA showed again that the correlated two-factor structure fit the data well, $\chi^2(34) = 60.273$, CFI = .93, TLI = .90, RMSEA = .06. Cronbach's alpha was satisfactory, at .68 (95% CI [0.66, 0.78]) for decision-making avoidance and .69 (95% CI [0.65, 0.76]) for decision-making approach.

Control variables at Time 1

A number of studies (e.g., Detert & Burris, 2007; Morrison, 2014) have found that gender influences employees' willingness to voice critical issues. We also controlled for age and organizational tenure because prior research indicated that more experienced and senior employees tend to speak up rather than keeping silent (Liang, Farh, & Farh, 2012; Tangirala & Ramanujam, 2008, 2012). Therefore, we controlled for age, gender, and work experience.

Analysis

We used MPlus 8.0 (Muthén & Muthén, 2017a) to conduct a multivariate multiple regression analysis with decision-making approach and decision-making avoidance at Time 2 as criterion variables and psychological safety, job insecurity, and regulatory focus at Time 1 as predictors. Compared to conducting two separate regressions, this approach

provides the advantage of integrating both dimensions of defensive decision making into one equation (Everitt, 2009).

Results

Descriptive results and correlations

Table 4 provides means, standard deviations, and correlations for all relevant variables. The correlations provide initial support of Hypotheses 1a and 1b as prevention focus at Time 1 was positively associated with decision-making avoidance at Time 2 ($r = .15$, 95% CI [0.02, 0.28]), and promotion focus at Time 1 was positively associated with decision-making approach at Time 2 ($r = .32$, 95% CI [0.17, 0.45]). Considering the organizational antecedents, we found a negative relation between psychological safety at Time 1 and decision-making avoidance at Time 2 ($r = -.20$, 95% CI [-0.31, -.02]; Hypothesis 2a) and a positive relation between psychological safety at Time 1 and decision-making approach at Time 2 ($r = .30$, 95% CI [0.12, 0.39]; Hypothesis 2b). Moreover, job insecurity at Time 1 was positively associated with decision-making avoidance at Time 2 ($r = .20$, 95% CI [0.05, 0.35]; Hypothesis 3a) and negatively associated with decision-making approach at Time 2 ($r = -.18$, 95% CI [-0.31, -0.03]; Hypothesis 3b).

Results of hypothesis testing

Table 5 shows the results of the regression analysis with decision-making avoidance and decision-making approach at Time 2 as the dependent variables. In line with our hypotheses, a higher level of psychological safety was associated with a lower level of decision-making avoidance ($\beta = -.28$, $p < .05$) and a higher level of decision-making approach ($\beta = .31$, $p < .001$). A similar picture emerged for job insecurity. The higher participants scored in job insecurity, the higher they scored in decision-making avoidance ($\beta = .19$, $p < .05$) and the lower they scored in decision-making approach ($\beta = -.11$, $p < .01$). Individuals with a high prevention focus were more likely to engage in decision-making avoidance ($\beta = .16$, $p < .03$), whereas promotion-oriented employees were more likely to engage in decision-making approach ($\beta = .24$, $p < .001$). The results for gender as a control variable were inconsistent: Although we did not find an effect of gender on decision-making avoidance, we found that women scored higher in decision-making approach ($\beta = .29$, $p < .01$).

Results of bias analysis

Our analysis of bias in the defensive decision making scale due to language differences between employees from the United Kingdom and those from Germany is reported in Appendix C.

GENERAL DISCUSSION

Building on COR theory, we conceptualized defensive decision making as a result of resources loss or fear of future resource loss in the present research. In two separate studies, we combined an approach/avoidance distinction as an employee's response to uncertainty with COR theory to develop and preliminarily validate a measure to operationalize the two factors of defensive decision making : decision-making approach

Table 4. Descriptive statistics, reliabilities, and correlations of variables at T1 and T2 in Study 3

Variable	M	SD	1	2	3	4	5	6	7	8	9
Age	—	—									
Gender	—	—									
Work experience	—	—									
Prevention Focus (T1)	5.50	.82	-.07	-.24**	-.04	(.64)					
Promotion Focus (T1)	4.27	.83	.11	.10	.22**	-.02	(.59)				
Decision-making avoidance (T2)	4.82	.91	-.08	-.16*	-.14	.15*	-.36**	(.68)			
Decision-making approach (T2)	5.04	.72	-.01	.20**	-.06	.08	.32**	-.39**	(.69)		
Psychological Safety (T1)	4.02	.55	.02	.03	-.05	.07	.14	-.20**	.30**	(.85)	
Job Insecurity (T1)	2.51	.57	.14	.02	.13	-.03	-.09	.20**	-.18**	.02	(.87)

Note. Cronbach's alphas are shown in parentheses. *N* = 187. T1 = Time 1; T2 = Time 2.

p* < .05, *p* < .01.

Table 5. Regression analysis of the effects of regulatory focus, psychological safety, and job insecurity on decision-making avoidance and decision-making approach

Variables	Decision-making avoidance at T2			Decision-making approach at T2		
	B	SE B	p	B	SE B	p
Age	.02	.09	.824	.09	.08	.287
Gender	-.16	.12	.175	.29	.10	.003
Work experience	-.10	.09	.296	-.14	.08	.087
Promotion focus T1	-.30	.08	<.001	.24	.06	<.001
Prevention focus T1	.16	.08	.032	.09	.07	.177
Psychological safety T1	-.28	.13	.027	.31	.08	<.001
Job insecurity T1	.19	.06	.002	-.11	.04	.010
Total R ²	.22	.05	<.001	.24	.06	<.001

Note. N = 187. T1 = Time 1; T2 = Time 2.

* $p < .05$, ** $p < .01$.

and decision-making avoidance. Our assumptions regarding the relevance of situational resources for defensive decision making were supported in a third study. We found that psychological safety as a situational resource relates to less decision-making avoidance (Hypothesis 2a) and more decision-making approach (Hypothesis 2b). By contrast, as hypothesized, job insecurity promotes decision-making avoidance (Hypothesis 3a) and hampers decision-making approach (Hypothesis 3b). As proposed in Hypotheses 1a and 1b, we examined differences in engaging in either decision-making avoidance or decision-making approach as a result of an individual's disposition.

Theoretical contributions

This work expands the research on organizational decision-making and contributes to investigating antecedents of defensive decisions. First, despite finding an overlap of defensive decisions with other constructs, such as employee voice, we demonstrated that defensive decision behaviour is a related yet clearly different phenomenon. Given the substantive damage that defensive decisions can cause in organizations, these results illustrate the demand for in-depth investigations of this harmful behaviour and emphasize the need to develop a scale to make defensive decision making in organizations visible.

Second, whereas research on related organizational behaviour has been grounded primarily in SET (Blau, 1964; Van Dyne & LePine, 1998), we enriched the understanding of defensive decision-making by offering an alternative perspective. By adopting the view of COR theory, we provided a perspective that focuses on employee's resources rather than positive or negative reciprocation to explain why employees engage in defensive decision making. We chose this approach because we supposed that engaging in defensive decision making is not necessarily the result of a destructive relationship between two parties or the breach of obligations between an employee and his or her supervisor. Moreover, we assumed, and thereby highlighted the relevance of situational factors, that a scarcity of resources causes defensive decision making.

As a result, our research leads to a better understanding of why individuals engage in defensive decision making despite knowing that such behaviour is not in the organization's best interest. It is important to note that we do not propose that avoidance

orientation is negative per se and always results in negative outcomes (see, for instance, Power & Alison, 2017). However, we argue that defensive decision making as choosing the second-best option despite knowing better, with the sole purpose to avoid being blamed, is destructive and should be reduced. We acknowledge that if focusing exclusively on the individual level, defensive decision making can have, at least short-term, benefits for employees. Individuals may choose the safer option to cope with stressful situations at work. Therefore, it can be beneficial for them not to risk resource depletion by choosing the option in the organization's best interest but suffering negative personal consequences if the decision subsequently turns out to be a failure. From the organizational perspective, defensive decision making is destructive, as the clearly better option is passed up. Moreover, defensive decision making can expose organizations to higher or even unnecessary risks if employees make decisions not to benefit the organization but solely to protect themselves in case of failure (Gigerenzer, 2014).

The conducive role of psychological safety in developing employees' resources and individuals' willingness to accept interpersonal risk, thereby promoting organizational behaviour (such as employee voice or whistleblowing), has been extensively demonstrated (e.g., Edmondson & Lei, 2014; Newman et al., 2017). Our research extends the wide scope of psychological safety by showing its relevance for employees' willingness to choose the option that is clearly in the best interest of the organization. A threatening organizational environment, such as in cases of job insecurity, has far-reaching consequences, not only for employees' work behaviour but also for their health (for a review, see Sverke, Hellgren, & Näswall, 2002). If exposed to such a hazardous environment, employees feel the need to protect themselves because they perceive that their resources are already exhausted or may not be sufficient to take personal risks. Not choosing the best option might be an inability of the employee rather than a deliberate refusal to contribute to the organization. In addition to demonstrating that the organizational environment drives defensive decision making, we furthermore provided initial evidence that an individual's disposition also impacts the occurrence of defensive decision making – not in the sense that defensive decision making has a trait-like character, but rather that individuality causes differences in the motivation to protect resources, which leads to different judgements of situations and anticipated outcomes. In summary, choosing COR theory as our theoretical framework allowed us to integrate situational and individual factors into one nomological network to obtain a nuanced understanding of the reasons for the occurrence of defensive decision making.

Practical implications

First, our research provides organizations and their management a sound understanding of this harmful decision-making behaviour. We developed a ready-to-use scale and pointed out important aspects of the organizational environment that can influence the employees' resources and thus affect defensive decisions, namely psychological safety and job insecurity.

Our scale can be used to investigate defensive decision making systematically and is suitable for many occasions: One conceivable application is in an employee survey as part of an organizational analysis. Here, the scale provides managers with an overview of the current state: How often do employees make defensive decisions? Are there specific areas in the company where defensive decisions are made with conspicuous frequency? These results can serve as a starting point for developing targeted measures. The scale can also be used to evaluate the success of interventions already implemented after a certain period of

time. A benefit of translating and using an English version of the defensive decision making scale in Study 3 is that this version is now available to a larger research audience without the need for translation and validation.

A recent paper investigated the effectiveness of team-building interventions to improve psychological safety and concluded that a panacea does not exist. Rather, long-term, recurrent, and multifaceted interventions appear to generate psychological safety (O'Donovan & McAuliffe, 2020). Edmondson (2018) argued that leaders play a vital role in creating a psychologically safe environment. Low psychological safety often manifests itself in fear of failure. Therefore, leaders must understand and communicate that failures can be a learning opportunity (Edmondson, 2018). If mistakes occur, leaders should replace reproach with curiosity: Instead of blaming the employee, they should jointly identify what caused the error and explore factors that can be improved in the future (Delizonna, 2017). But employees also observe how their leaders deal with their own mistakes and whether they openly admit these or try to cover them up (Edmondson, 2018).

Despite the undeniably crucial function of leaders in creating a psychologically safe environment, they often cannot fundamentally change existing organizational practices and structures. Rather, senior management has to establish an overarching framework within which a leader can operate, for example, by designing an organization's incentive systems in a way that process accountability rather than outcome accountability is rewarded because the latter enhances the desire to please management, which also leads employees to stick to previous decisions despite knowing better, so as not to expose themselves to criticism (Simonson & Staw, 1992). Providing employees with transparent guidelines and unambiguous goals strengthens their perception of organizational justice. Employees prefer justice as it allows them to predict the consequences of their behaviour (such as decisions) and therefore reduces the inherent uncertainty.

A continuous dialogue across all organizational levels has been identified as an effective way to establish psychological safety on the one hand and counteract job insecurity on the other (Edmondson & Lei, 2014; Keim et al., 2014). Developing psychological safety through communication means that organizations should encourage openness to constructive feedback and critical discussion about existing procedures and approaches (Edmondson & Lei, 2014).

Improved communication between the organization and its employees can also be beneficial when the employees' prospects for continued employment are uncertain. Organizational change happens at an ever-increasing pace and is often unavoidable for organizations to survive in changing and competitive environments. But every change initiative can cause employees to fear losing their jobs. Therefore, companies should inform them at an early stage about impending changes in their working environment and take into account their concerns. Meaningful and frequent communication can counteract the uncertainty associated with change and, in turn, reduce job insecurity (Keim et al., 2014). When organizations involve employees in the redesign of their working environment, their perception of personal control increases and encourages them to appraise their working environment as less threatening, decreasing fear about job insecurity (Huang, Niu, Lee, & Ashford, 2012).

Future research

Our results highlight some aspects that reduce or increase defensive decisions. Yet, our research can only be a start to a better understanding. For instance, the organizational

climate is often influenced by leaders' behaviour (Kaluza, Schuh, Kern, Xin, & van Dick, 2018). Leaders serve as a key information source, given their higher status and direct involvement and interactions with followers (Chiu, Owens, & Tesluk, 2016). Employees try to derive useful information from statements and their leaders' behaviour to form their perceptions of the work environment and act based on the situational desirability of certain behaviour (Lu, Zhang, & Jia, 2019). A positive and trustful relationship between leader and follower can be a powerful resource that mitigates negative aspects of the organizational environment (e.g., job insecurity) and enhances positive ones (e.g., psychological safety). Therefore, employees do not have to worry about protecting their resources, which should reduce defensive decision making.

The present paper focused on the antecedents of defensive decision making. Exploring the consequences of such behaviour for the individual would be an important next step in understanding this form of decision-making. Defensive decision making may be related to increased cognitive dissonance among employees. Defensive decision making reveals a discrepancy between the employee's evaluation of the best alternative from the organization's perspective and the safer option for them personally. Festinger (1957) argued that cognitive dissonance is psychologically uncomfortable so that individuals strive to reduce such discrepancies. According to Festinger (1964), adjusting one's beliefs and opinions is one way to reduce dissonance. That is, individuals may persuade themselves that the rejected alternative, evaluated retrospectively, would not have been favourable to the organization, or they may search for additional arguments that justify their decision.

Limitations

As with any new construct, scale development is an iterative process that requires ongoing research to confirm and improve validity. Although our work makes many contributions to theory and practice, there are particularly two limitations that warrant mention. First, data were exclusively derived from self-report questionnaires. It is possible that relations were overestimated due to common method and common-source bias (Moosbrugger & Kelava, 2012; Netemeyer et al., 2007). We separated the assessment of our predictor and our criterion variables in Study 3 to reduce this risk.

Nevertheless, it would be important to include other-ratings or behavioural measures of defensive decision making in future studies. Second, our data are correlational rather than experimental, which implies that we cannot make any causal inferences. Although our theoretical framework supports our assumptions of defensive decision making being a consequence of psychological safety and job insecurity rather than an antecedent, it may be that individuals try to justify their defensive actions by falsely 'blaming' their organizations. That is, reverse causality may also be possible. Experimental combined with longitudinal studies that assess all measures several times are necessary to overcome these limitations in future research.

Conclusion

Combining COR theory with an approach/avoidance motivation, we operationalize the two factors of defensive decision making: decision-making avoidance and decision-making approach and offer a short scale that organizations can use to uncover these decisions. We emphasize the role of psychological safety in diminishing defensive

decision making and pointing out the impact of job insecurity on this destructive decision-making.

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Conflicts of interest

All authors declare no conflict of interest.

Data availability statement

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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Appendix A:**Item pool, Study I**

#	Item
1	I make risky decisions when I feel they are right.
2	I make decisions even when I cannot predict every aspect of their consequences.
3	To have a successful career, you need to make risky decisions from time to time.
4	To implement innovative ideas, it is important to make decisions even if they involve some level of risk.
5	I have the courage to make decisions even if they involve some level of risk for me.
6	I try to avoid risky decisions.
7	I try to avoid decisions whose consequences I cannot predict.
8	I like to leave risky decisions to others.
9	I feel uncomfortable when I have to make decisions and cannot predict the consequences.
10	I try to avoid taking responsibility for risky decisions.
11	The company's senior management should make any risky decisions.
12	I always check with my management before making decisions.
13	When making decisions, you should always consider the consequences they may have for you personally.
14	I take care not to exceed my decision-making authority.
15	I make risky decisions only when they are unavoidable.
16	I leave decisions to my manager, even if they involve only a small risk.
17	When I have made a decision that turns out to be wrong, I try to find reasons that make it right.
18	I pretend to be busy to avoid having to make risky decisions.
19	I am always able to justify my decisions.
20	In our organization, hierarchy is more important than objective arguments.
21	I only support colleagues if doing so does not risk negative consequences for me personally.
22	In my organization, employees lose face if they admit to making a mistake.

Appendix B:**16 Items, Study I**

#	Item
1	I make risky decisions when I feel they are right.
2	I make decisions even when I cannot predict every aspect of their consequences.
3	To have a successful career, you need to make risky decisions from time to time.
4	To implement innovative ideas, it is important to make decisions even if they involve some level of risk.
5	I have the courage to make decisions even if they involve some level of risk for me.
6	I try to avoid risky decisions.
7	I try to avoid decisions whose consequences I cannot predict.
8	I like to leave risky decisions to others.
9	I feel uncomfortable when I have to make decisions and cannot predict the consequences.

Continued

Appendix B. (Continued)

#	Item
10	I try to avoid taking responsibility for risky decisions.
11	The company's senior management should make any risky decisions.
12	I always check with my management before making decisions.
13	When making decisions, you should always consider the consequences they may have for you personally.
14	I take care not to exceed my decision-making authority.
15	I make risky decisions only when they are unavoidable.
16	I leave decisions to my manager, even if they involve only a small risk.

Appendix C:

Language differences

Language differences of the final item set

Note

Dimension	Germany			United Kingdom			<i>p</i>	95% CI
	<i>N</i>	Mean	<i>SD</i>	<i>N</i>	Mean	<i>SD</i>		
Decision-making avoidance	170	4.35	1.09	170	4.76	0.89	.00	[−0.62, −0.20]
Decision-making approach	170	5.20	0.98	170	5.05	0.74	.13	[−0.04, 0.32]

p is a two-sided *p*-value for a *t* test of equal population country means; 95% CI is the confidence interval for the difference in German and British population means.

Our results regarding language differences in the defensive decision making scale revealed mixed results. For decision-making approach, the 95% CIs for population mean differences included zero and were satisfactorily narrow, allowing us to conclude that language bias in this subdimension of defensive decision-making scale is small. The results for decision-making avoidance differed from those for decision-making approach. The 95% CIs for population mean differences did not include zero and were not satisfactorily narrow. Consequently, further research is necessary to investigate potential biases due to language differences.