

**The Effect of Decisional Leader Procrastination on Employee Innovation:
Investigating the Moderating Role of Employees' Resistance to Change**

Abstract

Most prior research has examined procrastination as a type of *self*-defeating behavior. The present research, however, focused on the social consequences of procrastination, and this by investigating how decisional leader procrastination as a leader trait affects *others* in the workplace. We specifically developed the argument that the way in which employees deal with changes plays a critical moderating role in the relationship between leader procrastination and employee innovation. More precisely, we hypothesized that decisional leader procrastination negatively impacts employee innovation, but only so for employees who are *low* (compared to *high*) in resistance to change. This prediction was tested in an experimental study (Study 1) and two double-source survey studies (Studies 2 and 3). In support of our prediction, the results showed that an indecisive leader indeed undermines innovation of those employees who embrace—rather than resist—changes. Critically, however, our findings also illustrated that when being supervised by a decisive leader, these particular employees are actually most likely to bring forward the process of innovation. Theoretical and practical implications of our results are discussed.

Keywords: decisional leader procrastination; employee innovation; resistance to change; leader–subordinate interaction

The Effect of Decisional Leader Procrastination on Employee Innovation:**Investigating the Moderating Role of Employees' Resistance to Change**

Most organizations face an increasing pressure to innovate. Unfortunately, within organizations many obstacles exist that can hamper innovation. The present research examines leader procrastination as a potential barrier for employee innovation. Previous research has largely focused on the self-defeating consequences of procrastination. The current study takes a different approach by examining the social consequences of procrastination on other people, and more specifically how decisional leader procrastination influences employee innovation. We propose that the relationship between decisional leader procrastination and employee innovation is dependent on how resistant to change these employees are. More precisely, we develop the hypothesis that an indecisive leader has the most adverse impact on employee innovation among those employees who embrace rather than resist change. By investigating this prediction, we aim to identify the subgroup of employees for whom procrastinating leadership most strongly undermines innovation.

Research Background and Hypothesis Development

Contemporary organizations work in a global world that is characterized by high competition and rapid environmental changes. Under such circumstances, organizations are faced with the challenge to implement change and refrain from forces promoting a status quo condition (Thomas, Sargent, & Hardy, 2011). An important managerial task nowadays is thus to ensure that the workforce is flexible in adapting to changes and bringing forward the process of innovation (Roth & Sneader, 2006; Tellis, Prabhu, & Chandy, 2009). An increasing number of studies have demonstrated the importance of employees' generation of creative ideas and their implementation for innovation processes to be able to promote the organization's success and sustainable competitive advantage (e.g., Axtell et al., 2000; Baer, 2012; Kim, Min, & Cha, 1999). As such, cherishing *employee innovation*, which can be

defined as “employees’ behaviors that are directed toward the initiation, intentional introduction, and application of new and useful ideas, processes, products, or procedure that are valuable to the organization” (Zhou, Ma, Cheng, & Xia, 2014, p. 1269; also see Janssen, 2004), is considered to be a critical leadership responsibility within today’s organizations (Janssen & Van Yperen, 2004; Yuan & Woodman, 2010).

Decisional leader procrastination as a potential barrier for employee innovation

Various leadership variables have been examined in relationship with employee innovation (see Hughes, Lee, Tian, Newman, & Legood, 2018, for an overview; also see Bednall, Rafferty, Shipton, Sanders, & Jackson, 2018; Herrmann & Felfe, 2014; Ribeiro, Duarte, Filipe, & Torres de Oliveira, 2020, for examples). Yet, most prior studies in this domain have primarily focused on the ability of leaders to inspire employees to challenge the status quo in relationship to the process of innovation (e.g., Bass, 1985; Bass & Riggio, 2006; Berson & Avolio, 2004). Although this stream of research is insightful with respect to pointing out several leadership behaviors and traits leading to employee innovation, in order for change to become a reality, we argue that it is necessary to also take a closer look at the manner in which leaders make decisions. In this vein, one specific leader trait—that received only scant attention in the leadership literature—is a leader’s tendency to delay actions and decisions, a concept that has been referred to as *leader procrastination* (De Cremer, 2013; also see Legood, Lee, Schwarz, & Newman, 2018).

The word procrastination is derived from Latin, in which *pro* means “forward, forth, or in favor of” and *crastinus* means “of tomorrow.” While some authors see functional forms of procrastination (for examples, see Chu & Choi, 2005; Schraw, Wadkins, & Olafson, 2007; Westgate, Wormington, Oleson, & Lindgren, 2017), most scholars take the view that procrastination is an irrational delay that has no functional aspects (e.g., Corkin, Shirley, & Lindt, 2011; Ellis & Knaus, 1977; Silver & Sabini, 1981). In line with the latter perspective,

procrastination has been defined as purposefully postponing the performance of a task or the making of a decision, despite expecting to be worse off because of the delay (Ferrari, 2001; Milgram, Mey-Tal, & Levison, 1998; Steel, 2007). In the context of our work, we adapt the term leader procrastination to refer to individual differences in leaders' tendency to postpone making important decisions. In other words, we particularly focus on the decisional component of leader procrastination (Ferrari, Crum, & Pardo, 2018) and consider this to be an important leader characteristic (De Cremer, 2013).

Procrastination is a widespread phenomenon. Ferrari, Diaz-Morales, O'Callaghan, Diaz, and Argumendo (2007), for instance, reported that for a quarter of the adult population procrastination appears to be a defining personality trait (see Harriott & Ferrari, 1996; McCown & Johnson, 1989, for similar numbers). However, it must be stressed that most prior research on procrastination has focused on the manifestation of this trait in general and academic contexts (Klingsieck, 2013). Although this research has convincingly illustrated that procrastination is a prevalent trait among adults, Göncü Köse and Metin (2018) aptly noted that "empirical findings are still not enough to fully understand this phenomenon within [the] work domain" (p. 246). Moreover, most prior studies view procrastination as a counterproductive trait that results in various negative outcomes, such as reduced career success (Nguyen, Steel, & Ferrari, 2013), increased stress levels (Flett, Blankstein, & Martin, 1995), and decreased well-being (Tice & Baumeister, 1997). However, as mentioned above, several studies have shown that there may also be a bright side to procrastination (e.g., Chu & Choi, 2005; Westgate et al., 2017). Shin and Grant (in press), for instance, reported that a moderate procrastination level can foster the procrastinator's own creativity, at least when he or she has the intrinsic motivation and the opportunity to generate new ideas.

What is critically, however, is that these prior studies have neglected the fact that procrastination may not only—either negatively or positively—affect the procrastinator him

or herself, but that procrastination may also have implications for the people he or she works with. To illustrate the negative impact that procrastination may have on others in the workplace, in a recent *Forbes* article entitled “Five Ways Leaders Can Embrace and Manage Their Procrastination,” Tegan Trovato (founder and CEO of Bright Arrow, an executive and team coaching firm) provided the following anecdote: “Almost everything we touch at work these days is delivered via intra-team or inter-departmental partnerships. You can’t allow your procrastination to affect other people’s ability to deliver. Where I see this happen most often at the executive level is during board “prep.” Typically, one executive is responsible for collecting updates from the other executive team members for the board packet. Inevitably, one of the other Cs is habitually late to turn their slides or updates in. Not only does this prevent the collective team from preparing ahead of time as planned, but it also leaves the entire team to inherit the one procrastinator’s stress.” (Trovato, 2020).

Although it seems reasonable that procrastination not only affects the individual engaging in procrastination, empirical research on the broader consequences of leader procrastination is—at least to our knowledge—almost non-existent. A sole exception in this regard is the recent work of Legood and colleagues (2018), who examined how leader procrastination impacts employees’ attitudes and behaviors. Their findings illustrate that perceptions of leader procrastination relate negatively to subordinates’ levels of discretionary behavior, in terms of less organizational citizenship behavior and more deviant behavior. Because employees are often highly dependent on their leader to get things done and to be able to move forward with their work, a central assumption of the present contribution is that a procrastinating leader may also hamper the innovative intentions of his or her employees.

In line with this assumption, prior decision-making research has shown that a procrastinating leader runs counter to the idea of effective leadership, which is assumed to involve “good decisions in a timely way” (Hogan & Kaiser, 2005, p. 173; also see

Haesevoets et al., 2016; Vroom & Jago, 1988; Yukl, 1998). Making timely decisions has indeed been associated in prior research with positive outcomes in terms of leadership effectiveness and organizational performance (see Bluedorn & Denhardt, 1988; Jacobs, 2005; Snowden & Boone, 2007). The postponement of important decisions, on the contrary, has been shown to negatively affect employees' perceptions of leadership and organizational outcomes (e.g., Gilliland, 1993; Mohammed, Hamilton, & Lim, 2009; Truxillo, Bauer, Campion, & Paronto, 2002). Cha and Edmonston (2006), for example, found that time delays in completing performance reviews and responding to issues were perceived by employees as laziness and even hypocrisy.

Even more important for our research question, prior research has shown that leader procrastination also promotes a status quo condition (Ellis & Knaus, 1977; Ferrari, Parker, & Ware, 1992), which impairs the pursuit of a proactive work culture that facilitates employee innovation. These findings suggest that a procrastinating leader might impede the implementation of new ideas, and as a result may undermine the innovative efforts of his or her employees (cf. De Cremer, 2013; Tükel & Rom, 1998). Indeed, a leader who displays procrastination can be seen as fostering a status quo mindset, yet “the essence of innovation is to challenge the status quo” (Ryan & Tipu, 2013, p. 2119). Ireland and Hitt (1999) have identified leader support and involvement as a key requirement for promoting innovation. An indecisive leader can thus be expected to hinder employees' ability to innovate. Or, to put it more straightforwardly, we expect a negative relationship between decisional leader procrastination and employee innovation.

The moderating role of employees' resistance to change

But are all employees equally affected by a procrastinating leader? Or, are some employees more negatively affected than others? A vast number of studies show that people have an aversion for delays, especially when the delay affects desired outcomes and incurs costs

(Blount & Janicik, 2001). Yet, we suggest that individual variations may exist. As procrastination prevents change from happening, it can reasonably be expected that not all employees will experience negative consequences because of such delays. Change brings uncertainty, and people seem to differ in how comfortable and receptive they are towards uncertain and new situations, displaying individual differences in *resistance to change* (McClosky, 1958; Oreg, 2003).

A particularly interesting framework in this regard is the contingency theory of leadership, which assumes that the effectiveness of a specific leader trait may be contingent on a variety of factors, including employees' personality (see Fiedler, 1964; Fiedler & Garcia, 1987). Drawing on theory and research supporting leadership contingency approaches (e.g., De Cremer & Tyler, 2011; Hersey & Blanchard, 1977; Vroom & Yetton, 1973; Yukl, 1998), we develop the argument that the impact of decisional leader procrastination on employee innovation may be contingent on how resistant to change these employees are. Within the literature, resistance to change has been defined as "an individual's tendency to resist or avoid making changes, to devalue change generally, and to find change aversive across diverse contexts and types of change" (Oreg, 2003, p. 680). Although resistance to change is a multidimensional disposition that comprises behavioral, cognitive, and affective components (Oreg, 2003; Piderit, 2000), within the broader literature this concept is most frequently seen as a behavioral phenomenon (Mumby, 2005). Because of this, in our study we particularly focus on the behavioral dimension of the resistance to change concept, which comprises the degree to which people feel comfortable with and maintain routines in their lives (Oreg, 2003, 2018).

Several constructs have been linked to people's inclination to resist change. Oreg (2003), for instance, reported that resistance to change is strongly correlated with other personality traits. Specifically, people who are high in sensation seeking, who are not risk averse, and who are high in tolerance for ambiguity generally score low on resistance to change. Moreover, a study

by Oreg and Berson (2011) reported that in work settings leaders' dispositional resistance to change is positively related to followers' intentions to resist the given change. Particularly interesting in the context of the present research question are prior studies which suggest a negative association between resistance to change and innovative performance (e.g., Oreg, 2018; Oreg & Goldenberg, 2015). Within the latter body of research, resistance to change is generally viewed as an obstacle on the way to innovation. However, from this prior research it is still unclear how *high* versus *low* levels of resistance to change among employees affect the relationship between decisional leader procrastination and employee innovation.

Because a procrastinating leader fosters the status quo of the organization, it can be expected that this type of leader will fit well with those employees who are characterized by a *high* inclination to resist change. Indeed, employees who resist and avoid change are actually served in their desires by a leader who prevents change from happening. As a result of this, we expect that the innovative behaviors of employees who score high on resistance to change will not be affected much—not negatively, neither positively—by the procrastination level of their leader. More specifically, we expect that employees who are characterized by a high resistance to change level will show rather low levels of innovation, and this regardless of whether their leader is high or low in decisional procrastination.

Conversely, employees who are characterized by a *low* inclination to resist change are expected to be stymied by a procrastinating leader, as such a leader is in conflict with their willingness to move forward and implement changes. Building upon this logic, a leader high in decisional procrastination can be expected to negatively affect the innovative behaviors of those employees who embrace change, rather than resist it. We thus assume that indecisive leaders are not generally ineffective, but instead that they create obstacles and frustration for those employees who score low on resistance to change. In other words, we expect that the predicted negative relationship between decisional leader procrastination and employee innovation only

holds true for those employees who are characterized by a low resistance to change level. Taken the above presented arguments together, we present the following moderation hypothesis:

Employees' resistance to change moderates the relationship between decisional leader procrastination and employee innovation: Decisional leader procrastination is negatively related to employee innovation, but only so for employees who are low (rather than high) in resistance to change.

The Present Research

Figure 1 depicts our hypothesized moderation model. To test this model, we conducted a series of three empirical studies. We started our empirical research endeavor by conducting an experimental study. In this first study, we measured individual differences in participants' resistance to change level and experimentally manipulated the level of decisional leader procrastination. Towards this end, participants read a vignette about the workings of a fictitious company and the procrastination level of their leader, which was described as either being low (decisive) or high (indecisive). Participants were asked to imagine the described situation and respond to a series of items measuring their intention to innovate. The advantage of such an experimental approach is that it allowed us to obtain evidence that is high in internal validity. However, this design type is relatively low in ecological validity and may suffer from demand characteristics. To address these issues, our two subsequent studies collected data via a double-source method, which allowed us to test our proposed moderation model in existing leader–subordinate relationships. In Study 2, leaders provided ratings on their own tendency to procrastinate decisions, whereas subordinates reported their own resistance to change as well as their own innovative potential. Study 3 was similar to Study 2, but this time leaders were asked to peer-rate the innovative behaviors of their subordinate. As such, Study 3 provides a measure of employees' actual innovative performance.

Insert Figure 1 about here

Study 1: Experimental Study

Method

Sample and design. We recruited 128 adults living in the United States through Amazon's Mechanical Turk (<https://www.mturk.com>), which provides a subject pool representative of the US population (Buhrmester, Kwang, & Gosling 2011). We restricted participation to respondents currently in employment. Eleven participants (8.6%) were excluded from our analyses because they failed to appropriately respond to our check questions (i.e., they provided answers to at least one of three items stating: "please do not answer this question"). As such, the final sample consisted of 117 participants. Participants' mean age was 31.44 years ($SD = 8.12$) and 63.2% were male. On average, participants had 12.26 years of work experience ($SD = 8.19$) and worked 38.31 hours per week ($SD = 9.42$). We employed a 2 (decisional leader procrastination: low vs. high) \times 2 (employees' resistance to change: low vs. high) between-subjects design. Participants were randomly assigned to one of the two procrastination conditions. Their resistance to change level was measured, and this individual difference measure served as a quasi-factor in the conducted analyses.

Procedure and measures.

Employees' resistance to change. The Resistance to Change scale of Oreg (2003) consists of four interrelated subscales, those being: Routine Seeking, Emotional Reaction, Short-Term Focus, and Cognitive Rigidity. Oreg (2003) has found that, of these four subscales, the Routine Seeking subscale (which taps into the behavioral dimension of the construct) is actually the most important contributor to resistance to change—that is, this particular subscale has the highest explained variance and most strongly correlates with the total scale.¹ We have therefore decided to only administer the five-item Routine Seeking

subscale in our study. A sample item of this subscale is: “I like to do the same old things rather than try new and different ones” (1 = *strongly disagree*, 5 = *strongly agree*; $M = 2.96$, $SD = 0.78$, Cronbach’s $\alpha = .82$). The full item list can be found in Appendix A.

Manipulation of leader procrastination. Participants were subsequently asked to imagine that they were working for a company, and that their team is responsible for research and product development. In the *low* decisional leader procrastination condition ($n = 57$), the text stated:

Your team leader is someone who can be characterized as follows: He takes important decisions immediately. He does not waste a lot of time on trivial matters before getting to a decision. Indeed, he is the kind of person who does not wait to make a decision until he really has to.

In the *high* decisional procrastination condition ($n = 60$), participants read the following:

Your team leader is someone who can be characterized as follows: He delays making important decisions. He wastes a lot of time on trivial matters before getting to a decision. Indeed, he is the kind of person who waits to make a decision until he really has to.

Employee innovation. After reading this information, participants’ innovative intentions were measured using the thirteen-item scale of Zhou and George (2001). We specifically asked participants to answer the items with reference to the described situation. A sample item is: “In this team with this leader, I would suggest new ways to achieve goals or objectives” (1 = *strongly disagree*, 5 = *strongly agree*; $M = 3.29$, $SD = 0.89$, Cronbach’s $\alpha = .96$; see Appendix A for the full item list).

Manipulation checks. At the end of the study, participants answered the following two manipulation checks: “This leader is someone who procrastinates” and “This leader is someone who puts off making decisions” (1 = *strongly disagree*, 5 = *strongly agree*).

Results

Manipulation checks. We first tested the effectiveness of our leader procrastination manipulation by conducting a one-way ANOVA. The results of this analysis revealed a significant main effect of the leader procrastination manipulation on the two aggregated manipulation checks, $F(1, 115) = 390.97, p < .001$. As expected, participants reported that their leader procrastinated more in the *high* decisional procrastination condition ($M = 4.53, SD = 0.87$) than in the *low* decisional procrastination condition ($M = 1.39, SD = 0.85$).

Hypothesis testing. We subsequently conducted a hierarchical regression analysis to test our moderation hypothesis. Towards this end, we regressed employees' innovative intentions on the leader procrastination manipulation (effect-coded), the measure of employees' resistance to change (mean-centered), and the interaction term of leader procrastination and employees' resistance to change. The two main effects were entered in the first step of the analysis, the interaction was added in the second step. Table 1 provides an overview of the coefficient estimates. This Table shows that there is a significant interaction between leader procrastination and employees' resistance to change; which is visualized in Figure 2. In line with our prediction, subsequent simple slope analyses indicate that decisional leader procrastination only had a negative effect on employee innovation among those employees who are *low* in resistance to change ($b = -.46, SE = .11, p < .001$). In contrast, decisional leader procrastination did not have a significant impact on employee innovation for those employees who are *high* in resistance to change ($b = -.14, SE = .11, p = .201$).

Discussion

The results of Study 1 provide first evidence for our hypothesis that an indecisive leader negatively impacts employee innovation, but solely for those employees who want to move forward and implement changes. The purpose of our next study was to replicate these

findings using a multi-source survey study. Specifically, we collected data from two different sources (i.e., leaders and their subordinates) to ecologically validate the present findings.

Insert Table 1 and Figure 2 about here

Study 2: Multi-Source Survey Study

Method

Sample and procedure. To reach a broad sample of the working population, we recruited participants through Flycatcher, a professionally managed panel established by the University of Maastricht. Flycatcher meets the ISO quality requirements for social scientific research, market research, and opinion polls (i.e., ISO-26362 certification for access panels). This platform allows researchers to advertise their studies to approximately 16,000 working Dutch citizens. For the present study, we only invited participants who had a leadership position at work. Leaders were asked to identify one of their subordinates to answer a brief survey. By entering the subordinate's email address, a message was automatically generated that asked this person to participate in the study. Subordinates anonymously entered the survey by clicking on a hyperlink in the email invitation, which could only be activated once.

Several steps were taken to optimize data validity and to ensure that survey responses corresponded to the correct organizational role. First of all, when introducing the study, we noted to all participants that integrity is crucial in the scientific process and, therefore, compliance with the instructions is necessary. Moreover, it was also clarified that it was necessary and important that the leader and the corresponding subordinate filled out the correct survey. Finally, when participants submitted their online survey, time stamps and IP addresses were recorded to ensure that the surveys were submitted at different times and with different IP addresses. No irregularities in the responses were found (see Van Dijke, De Cremer, Langendijk, & Anderson, 2018, for a similar approach).

A total of 95 leader–subordinate dyads participated in our study. The mean age of the leaders was 45.67 years ($SD = 11.21$), 67.4% of which were male. On average, the leaders had worked for 12.86 years ($SD = 11.03$) for their current organization and tenure in their current position was 7.19 years ($SD = 6.51$). The mean age of the matched group of subordinates was 38.94 years ($SD = 11.51$), 49.5% of which were male. On average, the subordinates had worked for 8.43 years ($SD = 9.41$) for their current organization and tenure in their current position was 5.05 years ($SD = 5.07$).

Measures. Leaders provided ratings on their own tendency to procrastinate decisions, whereas subordinates answered measures probing into their own resistance to change and their own innovative potential. All items were answered on five-point Likert scales, ranging from (1) *strongly disagree* to (5) *strongly agree*. The full scales are included in Appendix A.

Leader procrastination. We measured the decisional procrastination level of the leader with the five-item Decisional Procrastination Scale of Mann (1982; also see Mann, Burnett, Radford, & Ford, 1997). A sample item is: “I waste a lot of time on trivial matters before getting to the final decision” ($M = 2.04$, $SD = 0.71$, Cronbach’s $\alpha = .89$). This scale was answered by the leader him or herself.

Employees’ resistance to change. Employees’ resistance to change was probed with a different measure than in Study 1. More specifically, in the present study we used a three-item scale of which the items are adapted from McClosky (1958). A sample item is: “It is better to stick by what you have than to be trying new things you really don’t know about” ($M = 2.74$, $SD = 0.73$, Cronbach’s $\alpha = .64$). This scale was answered by the subordinate him or herself.

Employee innovation. Similar to the prior study, employee innovation was again measured using Zhou and George’s (2001) thirteen-item scale on innovative potential. A

sample item is: “I suggest new ways to achieve goals or objectives” ($M = 3.43$, $SD = 0.61$, Cronbach’s $\alpha = .93$). This scale was also answered by the subordinate him or herself.

Results

Hypothesis testing. A hierarchical regression analysis was conducted to test our predicted moderation model. The main effects of leader procrastination and employees’ resistance to change were entered in the first step (both mean-centered). In the second step, the interaction term was added. Employees’ innovative potential was included as the dependent variable. As shown in Table 2, the results revealed a significant interaction between leader procrastination and employees’ resistance to change.² This interaction is visualized in Figure 3. Simple slope analyses indicate that decisional leader procrastination was negatively related to employee innovation for employees who score *low* on resistance to change ($b = -.55$, $SE = .15$, $p < .001$), whereas decisional leader procrastination did not relate to employee innovation for employees who score *high* on resistance to change ($b = -.13$, $SE = .11$, $p = .251$). We further analyzed this interaction with the Johnson-Neyman (1936) technique, which explores the conditional effect of the independent variable on the dependent variable for all values of the moderator variable, and returns a “region of significance” where this conditional effect is significantly different from zero. By examining all score levels of the moderator, this method presents a more complete picture of the interaction effect and yields more informative results than the traditional pick-a-point-based approaches (such as 1 SD below and above the mean; see Bauer & Curran, 2005). As shown in Figure 4, the results based on the Johnson-Neyman technique illustrate that once employees’ resistance to change has a value of 3.25 or more, leader procrastination has no significant effect anymore on employee innovation.

Discussion

The results of Study 2 show that decisional leader procrastination also negatively impacts employee innovation among those employees who embrace rather than resist change in existing work relationships. Important to note is that this interaction effect was found in both a controlled (Study 1) and a more realistic field setting (Study 2). However, an important limitation of Studies 1 and 2 is that employees in these studies were asked to rate their own innovation. It is questionable if such self-ratings of innovation converge with ratings from sources other than the employee. Therefore, we have conducted an additional study in which leaders were asked to peer-rate the innovative behaviors of their focal subordinate.

Insert Table 2 and Figures 3 and 4 about here

Study 3: Multi-Source Survey Study

Method

Sample and procedure. As in Study 2, data were again collected through a panel managed by Flycatcher. The panels of Study 2 and Study 3 were independent and did not overlap. Similar to Study 2, we only invited participants who had a leadership position at work. These leaders were asked to identify one of their subordinates to answer a brief survey. A total of 101 leader–subordinate dyads participated in the present study. The average age of the leaders was 40.86 years ($SD = 11.91$), 65.3% of which were male. They had worked for 11.46 years ($SD = 9.72$) at their current organization and had 9.07 years ($SD = 8.01$) of leadership experience. The average age of the matched group of subordinates was 37.80 years ($SD = 10.91$), 58.4% of which were male. They had worked for 7.55 years ($SD = 7.50$) at their current organization and for 4.71 years ($SD = 4.57$) with their current leader. We took the same steps as in Study 2 to optimize data validity and to ensure proper matching of focal subordinate and leader data.

Measures. Leaders provided ratings on their own tendency to procrastinate decisions and their subordinate's innovative work behavior. Subordinates completed a measure on their own resistance to change. All scales were again answered on five-point Likert scales (1 = *strongly disagree*, 5 = *strongly agree*). The full scales are included in Appendix A.

Leader procrastination. We measured the decisional procrastination level of the leader with Mann's (1982) five-item Decisional Procrastination Scale, which was also used in Study 2 ($M = 2.21$, $SD = 0.93$, Cronbach's $\alpha = .93$). Similar to Study 2, this scale was again answered by the leader him or herself.

Employees' resistance to change. To measure employees' resistance to change, similar to Study 1, we again used the five-item Routine Seeking subscale of Oreg's (2003) measure ($M = 2.58$, $SD = 0.91$, Cronbach's $\alpha = .86$). Like in Study 2, the subordinate answered this scale him or herself.

Employee innovation. As mentioned above, in the present study the leader provided ratings on his or her subordinate's innovative behaviors. To measure this construct, we employed the short four-item innovation scale of Farmer, Tierney, and Kung-McIntyre (2003; also see Hirst, Van Knippenberg, Chen, & Sacramento, 2011).³ A sample item is: "This employee seeks new ideas and ways to solve problems" ($M = 3.49$, $SD = 0.69$, Cronbach's $\alpha = .86$).

Results

Hypothesis testing. To test our moderation hypothesis, we conducted a similar hierarchical regression analysis as in Study 2. In this analysis, the main effects of leader procrastination and employees' resistance to change were entered in the first step (both mean-centered), whereas the interaction term was again added in the second step. Employees' innovative behavior was included as the dependent variable. The results of this analysis, which are summarized in Table 3, again revealed a significant interaction between leader

procrastination and employees' resistance to change.⁴ As depicted in Figure 5, simple slope analyses indicate that decisional leader procrastination was negatively related to employee innovation for those employees who score *low* on resistance to change ($b = -.39$, $SE = .13$, $p = .003$); however, decisional leader procrastination did not relate to employee innovation for those employees who score *high* on resistance to change ($b = -.00$, $SE = .09$, $p = .991$). Like in the prior study, the interaction was again further analyzed using the Johnson-Neyman procedure. The results of this analysis indicate that once employees' resistance to change has a value of 2.70 or more, leader procrastination has no longer a significant effect on employee innovation (see Figure 6).

Discussion

Echoing the findings of our prior studies, and in line with our prediction, the results of Study 3 revealed that employees' resistance to change level moderates the relationship between decisional leader procrastination and employees' innovative behaviors. More specifically, we again found that leaders who are high in decisional procrastination get in the way of those employees' who attempt to implement changes.

 Insert Table 3 and Figures 5 and 6 about here

General Discussion

Previous research has highlighted employee innovation as a core element for organizations to maintain competitive advantage (Anderson, De Dreu, & Nijstad 2004; Bledow, Frese, Anderson, Erez, & Farr, 2009; Choi & Chang, 2009). However, it has also been argued that many obstacles exist that may hinder innovation (e.g., Aaltonen, & Hytti, 2014; Madrid-Guijarro, Garcia, & Van Auken, 2009). The present research introduced the concept of procrastination as an important leader trait that may hamper employee innovation. More specifically, drawing on leadership contingency approaches (e.g., Fiedler, 1964; Fiedler

& Garcia, 1987), we proposed that the relationship between decisional leader procrastination and employee innovation is contingent on how resistant to change these employees are. As expected, the results of three empirical studies—one experimental study and two double-source survey studies—illustrated that some employees are indeed more negatively affected by an indecisive leader than others. Specifically, we consistently found that decisional leader procrastination negatively affects employee innovation, but only so among those employees who are *low* (versus *high*) in resistance to change.

Theoretical Contributions

Our research builds further on the recent work of Legood et al. (2018), who were the first to illustrate that the dysfunctional effects of leader procrastination extend beyond the individual who procrastinates, by also negatively affecting employees who rely on the procrastinator's timely performance. Although the study of Legood and colleagues (2018) makes an important contribution to the literature, from this line of research it is still unclear for which particular group of employees a procrastinating leader is most obstructive. Our research fills this void by showing that the negative impact of leader procrastination on employee innovation depends on employees' resistance to change level. We found that employees who are characterized by a low resistance to change level are most obstructed by a leader high in decisional procrastination. Most critically, however, is that our study also demonstrates that this particular subgroup of employees is actually most likely to bring new ideas to the foreground when they are being supervised by a decisive leader who does not have the tendency to postpone decisions.

Of course, leadership does not occur in a vacuum. Rather, it is very much a group phenomenon where leaders and subordinates are interdependent on each other. Although the role that both leaders and their subordinates play in the process of innovation have already been investigated quite extensively (for examples and reviews, see Anderson, Potočník, &

Zhou, 2014; Hughes et al., 2018; Shalley & Gilson, 2004), the combination of characteristics of both these parties in affecting innovative processes has received only scarce empirical attention. Marion and Uhl-Bien (2001), for instance, have argued that, for leaders to create innovation, they may have to create the conditions that spark innovation rather than creating an ability to innovate in the individual. Or, to say it in their words, “Leaders are part of a dynamic rather than being the dynamic itself” (p. 414). This quote illustrates that leaders are one element of an interactive network that is far bigger than themselves. In this sense, on a broader level, our research also emphasizes that in order to gain a better understanding of important organizational outcomes (like employee innovation) it is of crucial importance to take the dynamic interplay between leaders and subordinates into consideration (cf. Howell & Shamir, 2005; Lord, Brown, & Freiberg, 1999).

Another issue that must be mentioned here is that, although several studies have reported a negative link between resistance to change and various innovation-related outcomes (e.g., Oreg, 2003, Study 6; Oreg, 2018; Oreg & Goldenberg, 2015; also see Miller, Johnson, & Grau, 1994; Piderit, 2000; Rush, Schoel, & Barnard, 1995), in none of our three studies we found a direct relationship between employees’ resistance to change level and their innovative potential. How can these inconsistent findings be explained? We propose that these findings indicate that several variables might moderate the relationship between resistance to change and innovation. This reasoning is supported by Battistelli, Montani, and Odoardi (2013), who investigated the moderating role of two task design characteristics (those being, task autonomy and feedback from the job) with respect to the relationship between resistance to change and innovation. These authors reported that there is actually a positive association between dispositional resistance to change and innovative work behavior, but only when feedback from the job and (to a lesser extent) task autonomy are high rather

than low. We encourage future studies to also take such task-related characteristics into consideration when investigating leader procrastination effects on employee innovation.

Practical Implications

The present findings also hold some practical implications for managers. Because leader procrastination is only obstructive for a particular subgroup of employees, leaders who score high on decisional procrastination may be able to stay under the radar for years because they do not hinder a large part of the workforce, who actually seem to be served in their desires by a leader who procrastinates. At the same time, however, we believe that it is important that organizations are able to detect expressions of procrastination in an early phase, in order to prevent it to become a routine within the organization to delay actions and decisions. If procrastination becomes a routine issue, then organizations are likely to suffer from inertia, which may hamper their performance (De Cremer, 2013).

So, when organizations operate in a context in which innovation is vital to maintain organizational effectiveness, it is important to find ways to overcome leader procrastination (see Kaftan & Freund, 2020; Owens, Bowman, & Dill, 2008). In this vein, we first of all advise organizations to train leaders in place—and especially those who have a high tendency to procrastinate decisions—so that they are better equipped to act in a timely manner and become bold decision-makers. Obviously not only training sessions for leaders in place will be needed, but, for organizations emphasizing the value of innovation to their business model, it will also be necessary to select new leaders who already possess the ability to make prompt decisions. Therefore, we additionally also advice organizations to select new leaders who are low in decisional procrastination. Together, these two initiatives can help organizations to mitigate potential negative consequences of leader procrastination.

Limitations and Directions for Future Research

Of course, the present research also has its limitations. In our two survey studies, we measured procrastination from the viewpoint of the leader. However, such self-reports may not always correspond with actual responses. One specific factor that may have threatened the credibility of our procrastination measure in these studies is the social desirability bias, which reflects the tendency to answer questions in a manner that will be viewed favorably by others. In light of our studies, social desirability can take the form of under-reporting ones' own decisional procrastination level, as indecisiveness is generally considered to be an undesirable trait. Future research is encouraged to test if the present findings also occur when peer-ratings of leader procrastination are used, or, alternatively, when leaders' actual behaviors are observed in a field setting.

Moreover, in our work we did not control for other traits and behaviors that are closely related to leader procrastination, of which laissez-faire leadership is probably the most apparent one (Skogstad, Einarsen, Torsheim, Aasland, & Hetland, 2007; Wong & Giessner, 2018). As a matter of fact, procrastination and laissez-faire can both be seen as avoidance leadership styles that involve delay or absence of decision-making. Despite this similarity, Legood et al. (2018) have argued that laissez-faire leadership is conceptually different from leader procrastination as it represents the complete absence of leadership (with no involvement or attempt to motivate employees), whereas procrastination refers more specifically to delaying a course of action. Legood and colleagues (2018) have also empirically demonstrated the discriminant and relative predictive validity of leader procrastination on leadership effectiveness, compared with laissez-faire leadership. However, because procrastinating leadership (and especially decisional leader procrastination) is a relatively new area of study, future research is needed to further demonstrate its predictive validity, relative to similar leader traits and behaviors.

Another limitation of our work concerns our measurement of resistance to change. Within the literature, this trait-like orientation is generally operationalized as a multidimensional construct that comprises several interrelated components, which reflect the behavioral, affective, and cognitive dimensions of resistance to change (see Oreg, 2003, 2018, for more information). However, it must be stressed that in our studies we only included the behavioral dimension which consists of people's inclination to adopt routines. Because of this, it is unclear if the presently observed interaction effect also occurs for the other dimensions of Oreg's (2013) measure. Future studies are therefore encouraged to take the whole resistance to change scale into account when investigating how employees' resistance to change level interacts with their leader's procrastination level.

Employee innovation served as the focal outcome measure in our studies. To measure this concept, our first two studies employed self-ratings of employees whereas our last study used peer-ratings of leaders. Several scholars have argued that innovation involves two separate stages, those being, the generation of new ideas and the later implementation of these ideas (George, 2007; Axtell et al., 2000). However, our research did not make this distinction, but instead treated innovation as a more generic concept. We did so because a host of prior studies has shown that generation and implementation are indicative of the same underlying concept (e.g., Hülsheger, Anderson, Saigado, 2009; Janssen, 2000, 2001; Janssen & Van Yperen, 2004; Miron, Erez, & Naveh, 2004; Scott & Bruce, 1994). Although the present study has made important strides toward providing a comprehensive understanding of how the interactive relationship between leaders and their subordinates shapes the innovation process, by treating innovation as a unitary concept, it is unclear if our findings apply to both innovation stages. Future research is required to investigate if leader procrastination and employees' resistance to change differently affect the two innovation phases.

On a final note, we would like to mention that, despite these limitations, the present findings testify well with respect to the issues of robustness and generalizability. First of all, very similar findings were demonstrated among two different nationalities, those being, the United States (Study 1) and the Netherlands (Studies 2 and 3). Moreover, our hypothesized moderation model was replicated using both an experimental study (Study 1) and two multi-source surveys (Studies 2 and 3). Finally, with respect to our measurement of employee innovation, employees' self-ratings (Studies 1 and 2) were complemented with peer-ratings of the leader (Study 3). Despite these differences, our three studies revealed very similar results, as such promoting our confidence in the robustness of the reported findings.

Concluding Remarks

By exploring the effects that decisional leader procrastination has on the innovative potential of employees, the present research goes beyond the interpersonal costs of workplace procrastination. The main message of our research is that an indecisive leader can undermine the emergence of employee innovation, and that this effect is most noticeable among the group of employees who are most important for innovation to take place—that is, those employees who embrace change, rather than resist it. Given the detrimental impact that a procrastinating leader may have on his or her employees, we strongly encourage future studies in this domain to investigate the mechanisms that underlie the negative consequences of leader procrastination for employee innovation and to search for ways in which these negative consequences can be mitigated.

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Footnotes

¹ Oreg (2003, Study 1) reported that the four subscales together explained just over 57% of the variance. Of this percentage, 38.7% was explained by the Routine Seeking subscale, 8% by the Emotional Reaction subscale, 5.6% by the Short-Term Focus subscale, and 5% by the Cognitive Rigidity subscale.

² To assess the influence of potential outliers, we ran a Bonferroni outlier detection test (Fox & Weisberg, 2019). This test uses a t -distribution to assess whether the observation with the largest studentized residual value is statistically different from the other observations in the model. This test was not statistically significant ($p = .288$). Further, removing this observation from the analysis still resulted in a significant interaction effect, $b = .28$, $SE = .12$, $p = .025$.

³ We have conducted a pretest ($N = 193$; recruited through Prolific) to investigate if this short four-item innovation scale is an appropriate substitute for the longer thirteen-item innovation scale that was used in Studies 1 and 2. The results of this study revealed that the two innovation scales were actually very highly correlated ($r = .92$, $p < .001$).

⁴ As in the previous study, we ran a Bonferroni outlier detection test to assess the influence of potential outliers. The largest residual error did not significantly differ from the others, that is, no studentized residuals had a Bonferroni-corrected p -value below .05. Nevertheless, we tested whether removing the observation with the largest residual error influenced our findings. Here too, results showed that the interaction term was still significant, $b = .23$, $SE = .07$, $p = .003$.

Figure Captions

Figure 1. Hypothesized moderation model.

Figure 2. The effect of decisional leader procrastination on employee innovation as moderated by employees' resistance to change (Study 1).

Figure 3. The effect of decisional leader procrastination on employee innovation as moderated by employees' resistance to change (Study 2).

Figure 4. Regions of significance plot of the effect of decisional leader procrastination on employee innovation as moderated by employees' resistance to change (Study 2). Grey zones represent 95% confidence intervals for the effect of decisional leader procrastination as a function of employees' resistance to change.

Figure 5. The effect of decisional leader procrastination on employee innovation as moderated by employees' resistance to change (Study 3).

Figure 6. Regions of significance plot of the effect of decisional leader procrastination on employee innovation as moderated by employees' resistance to change (Study 3). Grey zones represent 95% confidence intervals for the effect of decisional leader procrastination as a function of employees' resistance to change.

Table 1.

The impact of decisional leader procrastination (manipulated) and employees' resistance to change (self-rated by participant) on employee innovation (self-rated by participant) in Study 1

Predictors	Step 1			Step 2		
	<i>b</i>	<i>SE</i>	<i>p</i>	<i>b</i>	<i>SE</i>	<i>p</i>
Intercept	3.30	0.08	< .001	3.31	0.08	< .001
Procrastination	-0.30	0.08	< .001	-0.30	0.08	< .001
Resistance to change	-0.16	0.10	.103	-0.14	0.10	.178
Procrastination × Resistance to change				0.20	0.10	.046
R ²	.13			.16		
R ² -change				.03		

Table 2.

The impact of decisional leader procrastination (self-rated by leader) and employees' resistance to change (self-rated by subordinate) on employee innovation (self-rated by subordinate) in Study 2

Predictors	Step 1			Step 2		
	<i>b</i>	<i>SE</i>	<i>p</i>	<i>b</i>	<i>SE</i>	<i>p</i>
Intercept	3.43	0.06	< .001	3.38	0.06	< .001
Procrastination	-0.29	0.09	.002	-0.34	0.09	< .001
Resistance to change	-0.07	0.09	.441	-0.02	0.09	.794
Procrastination × Resistance to change				0.28	0.13	.029
R ²	.14			.18		
R ² -change				.04		

Table 3.

The impact of decisional leader procrastination (self-rated by leader) and employees' resistance to change (self-rated by subordinate) on employee innovation (peer-rated by leader) in Study 3

	Step 1			Step 2		
Predictors	<i>b</i>	<i>SE</i>	<i>p</i>	<i>b</i>	<i>SE</i>	<i>p</i>
Intercept	3.49	0.07	< .001	3.39	0.07	< .001
Procrastination	-0.11	0.09	.202	-0.20	0.09	.029
Resistance to change	-0.07	0.09	.418	-0.05	0.09	.572
Procrastination × Resistance to change				0.22	0.08	.006
R ²	.05			.12		
R ² -change				.07		

Appendix A

Overview of measures used in Studies 1-3

Leader Procrastination

Items used in Studies 2 and 3 (self-rated by leader):

1. I waste a lot of time on trivial matters before getting to the final decision.
2. Even after I have made a decision I delay acting upon it.
3. When I have to make a decision I wait a long time before starting to think about it.
4. I delay making decisions until it is too late.
5. I put off making decisions.

Employees' Resistance to Change

Items used in Study 1 (self-rated by participant) and Study 3 (self-rated by subordinate):

1. I'd rather be bored than surprised.
2. I'll take a routine day over a day full of unexpected events any time.
3. Whenever my life forms a stable routine, I look for ways to change it. (R)
4. I generally consider changes to be a negative thing.
5. I like to do the same old things rather than try new and different ones.

Items used in Study 2 (self-rated by subordinate):

1. I would want to know that something would really work before I would be willing to take a chance on it.
2. It is better to stick by what you have than to be trying new things you really don't know about.
3. If you start trying to change things very much, you usually make them worse.

Employee Innovation

Items used in Study 1 (self-rated by participant) and Study 2 (self-rated by subordinate):

1. I suggest new ways to achieve goals or objectives.
2. I come up with new and practical ideas to improve performance.
3. I search out new technologies, processes, techniques, and/or product ideas.
4. I suggest new ways to increase quality.
5. I am a good source of creative ideas.
6. I am not afraid to take risks.

7. I promote and champions ideas to others.
8. I exhibit creativity on the job when given the opportunity to.
9. I develop adequate plans and schedules for the implementation of new ideas.
10. Often I have new and innovative ideas.
11. I come up with creative solutions to problems.
12. Often I have a fresh approach to problems.
13. I suggest new ways of performing work tasks.

Items used in Study 3 (peer-rated by leader):

1. This employee seeks new ideas and ways to solve problems.
2. This employee generates ground-breaking ideas related to the field.
3. This employee is a good role model for innovation.
4. This employee tries new ideas and methods to problems.

Note. All items were measured on five-point Likert scales that ranged from (1) *strongly disagree* to (5) *strongly agree*. R = reverse-coded item. Leader procrastination was experimentally manipulated (low versus high) in Study 1. In Study 1, we asked participants to answer the Employee Innovation items with a specific reference to the described situation.