UNIVERSITY
INSTITUTE
OF LISBON

**Do they need us? Linking functional indispensability and voice behaviors: The roles of psychological ownership, job insecurity and organizational ambidexterity**

Diogo Filipe Caetano Alves

Master's Degree in Social and Organizational Psychology

Supervisor:
Dr. Sílvia Silva, Associate Professor,
ISCTE – University Institute of Lisbon

October, 2020

[This page was deliberately left blank]

Department of Social and Organizational Psychology

**Do they need us? Linking functional indispensability and voice behaviors: The roles of psychological ownership, job insecurity and organizational ambidexterity**

Diogo Filipe Caetano Alves

Master's Degree in Social and Organizational Psychology

Supervisor:
Dr. Sílvia Silva, Associate Professor,
ISCTE – University Institute of Lisbon

October, 2020

[This page was deliberately left blank]

## Acknowledgements

“I will go anywhere as long as it is forward.”
- David Livingston

This dissertation is the concluding project on a journey I am very proud of. It has been a journey during which I have learned many lessons that I will carry with me all my life. No man walks this journey alone and, as such, I could not fail to recognize and appreciate the people who have meant the most to me during this journey:

To my mom, for being a fighter, for teaching me that sacrifices are necessary to accomplish the life we dream of, and for being an example of kidness and human values.

To my dad, for being an example of hard work and resilience.

To my sister, for making me laugh like no one else and for being wiser than me even though I’m the older brother.

To Guilherme, for being not only a great colleague but also an incredible friend with whom I can share the good and the bad.

To Catarina, for being an incredible friend who has always been there for me and that I can always count on.

To Ricardo, for putting up with me on the days when I was most stressed, and for the many things he has taught me. For his companionship throughout this process.

To MY CHANGE and its incredible team: Maria João, Teresa, Rute, Gonçalo, Marta, Mariana, Camila, Daniela, Luísa. For helping me become a better professional in helping people in organizations everyday.

To Professor Sílvia, for believing in my ideas, for supporting me all the way and for her valuable feedback throughout this process.

To all the teachers who have taught me and encouraged me to always look for knowledge, ask questions and be curious about people and organizations.

Last but not least, to all the participants without whom I could not have accomplished this dissertation.

To everyone, **thank you**.

## Resumo

No atual contexto de rápida mudança, as organizações dependem cada vez mais do trabalho em equipa (Mathieu et al., 2014) e os gestores precisam de mais *input* dos colaboradores para aumentar o desempenho e o funcionamento organizacional (Hsiung, 2012). Ao nosso conhecimento, contudo, nenhum estudo explorou como a perceção de indispensabilidade da equipa para os resultados da organização influencia o *input* que os colaboradores dão aos seus gestores adotando comportamentos de voz. Este estudo preenche esta lacuna ao explorar como a indispensabilidade funcional motiva os colaboradores a adotar comportamentos de voz promotiva, e que fatores influenciam esta relação. Os dados foram recolhidos através de um questionário de auto-reporte distribuído online a membros de várias organizações. Com uma amostra de 875 participantes, os resultados sugerem que a indispensabilidade funcional da equipa está positivamente associada à adoção de comportamentos de voz promotiva por parte do colaborador e que esta relação é parcialmente mediada por sentimentos de propriedade psicológica promotiva sobre a organização. Ademais, os resultados revelam que a insegurança quantitativa do trabalho modera e enfraquece a relação entre a indispensabilidade funcional e a propriedade psicológica promotiva. Como esperado, a ambidestria organizacional modera e aumenta a força da associação entre a indispensabilidade funcional e a adoção de comportamentos de voz promotiva. Contribuindo para o estudo da indispensabilidade nas organizações e para os antecedentes dos comportamentos de voz, este estudo oferece contribuições teóricas e implicações práticas que serão discutidas em detalhe, assim como as limitações deste estudo e as indicações para investigação futura.

**Palavras-chave**: indispensabilidade funcional, comportamentos de voz promotiva, propriedade psicológica promotiva, insegurança quantitativa do trabalho, ambidestria organizacional, inovação.

**Categorias e Códigos de Classificação da APA**:
**3640** Management & Management Training
**3650** Personnel Attitudes & Job Satisfaction
**3660** Organizational Behavior

[This page was deliberately left blank]

## Abstract

In today's rapidly changing business environment, organizations rely more on teamwork than ever before (Mathieu et al., 2014) and managers need more input from their employees to increase organizational performance and functioning (Hsiung, 2012). To our knowledge, however, no previous research has addressed how perceptions of team indispensability to the organization's outcomes influence employees giving their input to managers such as through engaging in voice behaviors. Our study addresses this gap in literature by exploring how perceived functional indispensability of the team motivates employees to engage in promotive voice behaviors, and what factors influence this relationship. We collected our data through a self-report questionnaire distributed online to members of various organizations. With a sample of 875 participants, our results suggest functional indispensability of the team is positively associated with the employee's engagement in promotive voice behaviors and that this relationship is partially mediated by feelings of promotive psychological ownership towards the organization. Furthermore, our findings revealed that quantitative job insecurity moderated and weakened the link between functional indispensability and promotive psychological ownership. As we predicted, organizational ambidexterity moderated the relationship between functional indispensability and promotive voice behaviors by fostering this association. Contributing to the study of indispensability within organizations and the antecedents of voice behaviors, our research provides several theoretical contributions as well as practical implications for managers seeking their employees' input to innovate and promote organizational success. These theoretical contributions and practical implications, as well as the limitations of our study and future directions for research are discussed.

**Keywords**: functional indispensability, promotive voice behaviors, promotive psychological ownership, quantitative job insecurity, organizational ambidexterity, innovation.

**APA Classification Categories and Codes**:
**3640** Management & Management Training
**3650** Personnel Attitudes & Job Satisfaction
**3660** Organizational Behavior

[This page was deliberately left blank]

## Contents

## List of Tables

[This page was deliberately left blank]

## List of Figures

[This page was deliberately left blank]

## List of Abbreviations

| | |
|---|---|
| CEM | Collective effort model |
| OBSE | Organization-based self-esteem |
| JI | Job insecurity |
| POQ | Psychological ownership questionnaire |
| CFA | Confirmatory factor analysis |

[This page was deliberately left blank]

## Introduction

In today's rapidly changing business environment, the adaptive challenges that organizations face (e.g., intense competition, high costumer expectations and a marked focus on quality) demand greater effort not only from managers but also from the employees who directly observe and engage in the daily tasks and operations of the core business (Van de Ven et al., 2007). As a result, managers need input from their employees to increase organizational performance and functioning (Hsiung, 2012; Bindl & Parker, 2010). Furthermore, organizations today rely more on teamwork than ever before (Kozlowski & Ilgen, 2006; Mathieu et al., 2014), which potentially impacts how much effort employees exert at work. Thus, not only are employees more indispensable to their organizations than ever before, teams as a work unit are as well, which prompts higher investments in resources (Barsky et al., 2011). Because of this, work groups (i.e., teams) require guidance as to how this collective work arrangement can be managed to yield the best results (Hertel et al., 2018). The effect working in a group has on an individual's effort has been among the first subjects of research in psychology (e.g., Triplett, 1898) and some studies have reported a motivating effect of teamwork over working alone (i.e., a motivation gain when working in a team) (Larson et al., 2018), especially when the individual perceives their contribution to be indispensable for the team's outcome (Karau & Williams, 1993). Recently, Guerra et al. (2016) extended on the concept of indispensability by proposing the dimension of functional indispensability which they define as the perceived instrumentality of a group's contribution to a desirable superordinate outcome, such as a team's contribution to the organization's outcomes. As previously noted, managers increasingly need more input from their employees (Hsiung, 2012; Bindl & Parker, 2010) and organizations rely more on teamwork today than ever before (Kozlowski & Ilgen, 2006; Mathieu et al., 2014), which generally makes their contributions more indispensable. One of many ways employees may contribute to the success of their organization is, for instance, by engaging in extra-role behaviors like voice behaviors (LePine & Van Dyne, 1998).

Voice behavior is a form of organizational citizenship behavior that is defined as the employee's discretionary expression of ideas, opinions and suggestions about work-related issues (LePine & Van Dyne, 1998; Morrison, 2011; Bashshur & Oc, 2015) and proactive encouragement of change in the current state of affairs (i.e., the status quo) (Detert & Burris, 2007; Kim et al. 2009) with the intention to improve organizational performance and effectiveness (Van Dyne & LePine, 1998). A central issue in voice research is to understand when employees speak up, identifying the antecedents of voice behaviors (Avery & Quinones, 2002) to learn how different contexts affect them in order to guide managers in their allocation of the organization's resources to promote these behaviors (Bergeron & Thompson, 2020). However, research has failed to explore the role functional indispensability perceptions may play as the very source of motivation for employees to engage in voice behaviors. We extend on previous research by addressing this important issue which has practical implications because if managers allocate more resources to teams that are functionally indispensable for the organization's outcomes but these teams do not perceive such high indispensability, this may reduce the usefulness of allocated resources and hinder the employees' engagement in voice behaviors, causing the organization to miss valuable contributions from the members of their most indispensable teams.

The purpose of the current study is to fill this gap in research by considering the following research question: "Does perceived functional indispensability increase the employees' engagement in voice behaviors?" Our study extends the recent literature on functional indispensability by showing how it leads employees to contribute to the organization's outcomes beyond what is formally expected from them and engage in extra-role behaviors such as voice behaviors. We also extend the literature on the antecedents of employee voice behaviors. First, we highlight the positive link between perceived functional indispensability of one's team and the employee's engagement in voice behaviors, and how such relationship develops through feelings of psychological ownership towards the organization. Second, we consider some of the factors that influence these relationships in a negative way (e.g., quantitative job insecurity) and a positive way (e.g., organizational ambidexterity). In sum, the current study expands both theoretical and practical knowledge of how managers can better allocate organizational resources to promote perceived functional indispensability of teams and prompt employees to engage in voice behaviors that may ultimately improve organizational effectiveness and performance.

# Chapter 1. Theoretical framework

## 1.1. Indispensability and voice behaviors

According to social comparison theory (Festinger, 1954; Gerber et al., 2018), people need to assess their own performance level and compare it with the performance of others, especially if their context is highly competitive. Because of this social comparison process, performance heterogeneity in work groups can lead to both motivation gains and motivation losses (Stroebe et al., 1996). Motivation gains and losses can be expected when individuals work interdependently as a group, as well as when they work alone but receive performance feedback (Wittchen et al., 2007). However, motivation gains that exceed the effects of social comparison can occur during group work when the individual effort is relevant not only for personal outcomes but for other group members as well (Wittchen et al., 2007).

Past research on the subject of motivation gains and losses includes various studies showing that people exert less effort in group tasks than they put into tasks performed individually (i.e., a motivation loss when working in groups) (e.g., Harkins, 1987; Kerr, 1983; Kerr & Bruun, 1983; Kravitz & Martin, 1986; Weldon & Mustari, 1988; Williams et al., 1989). However, a number of other studies have suggested that people do not always put less effort into a task when working in groups. It is shown that, under some circumstances, people may actually exert more effort in group tasks than in tasks performed individually (i.e., a motivation gain when working in groups) (e.g., Weber & Hertel, 2007; Larson, 2010). As such, the literature supports the notion that under some circumstances, when people work in a group, their motivation to exert effort sometimes decreases (Karau & Williams, 1993). However, under some conditions, the opposite can occur and group members exert more effort in a task than individual performers (Kerr & Hertel, 2011).

Psychological research has often focused on the negative antecedents of performance in work groups, predominantly exploring sources of motivation losses such as the effects of social loafing (Karau & Williams, 1993) and free riding (Kerr & Bruun, 1983). However, some studies have begun to explore the possible effects of motivation gains in groups under controlled conditions (Hertel et al., 2000; Messé et al., 2002; Williams & Karau, 1991). Within this line of research, member indispensability has been identified as a possible source of motivation gains when working in a group setting. The concept of indispensability was introduced by the work of anthropologist Bronislaw Malinowski but the concept is fairly new in social psychology. His original definition pointed to the idea that every type of civilization fulfills a fundamental function, has a task to perform, and serves as an indispensable part within a working whole (Merton, 1968). Indispensability reflects the extent to which a group member can impact the group's outcome in a positive or a negative way: the greater their impact, the more indispensable they are (Hertel et al., 2000a). This notion posits that when the group (e.g., team) outcome is strongly affected by an individual's contribution, this becomes a source of motivation gains as it brings to light various social responsibility norms, concerns about holding back the group's performance, or the possibility of harming one's reputation within the group (Hertel et al., 2000a). Furthermore, being indispensable, and thus responsible for the outcome of others, is considered in theories of intrinsic motivation (e.g., "meaningfulness for others"; Hackman & Oldham, 1976) and prosocial motivation (Grant & Berg, 2011). Additionally, fulfilling responsibilities towards the team should lead to positive outcomes such as being recognized and accepted as a member of the group (Hertel et al., 2018).

The psychological mechanism underlying indispensability can be explained by Instrumentality x Value models of motivation in groups (Karau & Williams, 2001; Shepperd, 1993; Vroom, 1964) such as the collective effort model (CEM), according to which team members incorporate multiple assessments of an action's consequences to decide how much effort they want to invest during team work (Karau & Williams, 2001). As such, the CEM proposes that team members' intentions to exert effort on a task are determined by three factors. First, expectancy relates to the expectation that an individual's high effort will result in high individual performance (Karau & Williams, 2001). Second, instrumentality designates three expectation elements: the expectations that higher individual performance will result in higher team performance, that higher team performance will lead to a desired outcome, and that the team's desired outcomes will lead to desired individual outcomes (Karau & Williams, 2001). Third, valence is defined as the perceived value of an achievable outcome (Karau & Williams, 2001). As such, an individual's effort depends on how instrumental their effort is for achieving valued outcomes. This assumes that the effort exerted by an individual is determined by its perceived instrumentality for valued goals (Karau & Williams, 1993). The effect of indispensability on member motivation suggests that the willingness to make an effort on behalf of the group is a function of its perceived instrumentality for obtaining highly valued outcomes, which may include group success, positive outcomes for oneself and others, and favorable evaluations (Hertel et al., 2000; Karau & Williams, 1993; Kerr et al., 2007; Lount et al., 2008).

High instrumentality perceptions also lead to another type of motivation gains within working groups, described as the Köhler effect (Stroebe et al., 1996; Kerr & Hertel, 2011). In his experiments, Köhler (1926) showed that team members will exert greater effort compared with individual work tasks when performing with a superior colleague on a conjunctive group task (Steiner, 1972). Indeed, this effect has received empirical support from past research (e.g., De Witte, 1989; Hertel et al., 2000). The main element contributing to the Köhler motivation gain effect is pointed by literature as the individual's perceived social indispensability (i.e., the perceived high instrumentality of their own contribution for the team output) (Hertel et al., 2000).

Motivation gains in groups due to perceived social indispensability can occur as a result of two conditions: first, when individuals can increase their own effort in order to boost group outcomes (i.e., collective orientation), and second, when individuals seek to maximize their chances of achieving individual outcomes by maintaining a favorable evaluation and avoiding the consequences of being responsible for letting the group down (i.e., individualistic orientation) (Hertel et al., 2000). Such social indispensability effects in working groups are assumed to occur because the perception of being essential for the group's outcome increases the individual's perceived impact and meaningfulness of their contribution (Karau & Williams, 1993; Hertel et al., 2000). Furthermore, social indispensability increases the perceived meaningfulness of a task because supporting the team often leads to positive outcomes such as recognition and reciprocity from other team members (Hertel et al., 2018). Affective (i.e., mood) and cognitive (i.e., perceived task meaningfulness) processes have been shown to mediate indispensability effects on team effort gains (Hertel et al., 2018). These results are consistent with the premise that perceived indispensability increases positive mood and task meaningfulness because of the anticipation of pride and recognition by team members in addition to ingroup norms, which should increase an individuals' willingness to exert more effort for the team (Hertel et al., 2018). On the other hand, failing to support the team when a contribution is highly needed is followed by negative social sanctions (Hertel et al., 2018). Previous research has brought evidence that social indispensability can trigger effort gains as compared to working alone, because individuals may receive contemporaneous feedback from their partner and use them as a reference to self-assess their performance (Hertel et al., 2008; Kerr et al., 2007a; Weber & Hertel, 2007), which is not possible when working alone. Moreover, effort gains resulting from social indispensability have been shown even in conditions where team members could not be identified and social sanctions were not possible (e.g., Hertel et al., 2008).

This indispensability explanation of motivation gains within work groups has been challenged by Haslam (2004) in light of social identity theory. The author suggested that group motivation gains take place when the group member's social identity is salient and group norms call for more effort. Similarly, Fielding and Hogg (2000) suggested that social identity is important for motivation in working groups due to depersonalization processes (i.e., the individual self is assimilated to a group prototype which leads the group's thoughts, feelings and behaviors to become that individual's own thoughts, feelings and behaviors). This means that if the group norms require a certain level of performance, the individual's own performance goals should align with the performance level demanded by the group norms (i.e., the individual would be more motivated). Many studies have attested the importance of group identification for group motivation gains (e.g., Karau & Williams, 1997; Williams & Sommer, 1997; Ouwerkerk et al., 1999). However, while Haslam (2004) suggested that the indispensability of an individual's effort increases group member task motivation because high perceived indispensability would boost the individual's identification with the group, Instrumentality x Value models predict that as long as group members value any outcome that is dependent on their own effort (e.g., group recognition), group members should in fact exert more effort when they perceive their contribution to be more indispensable than not, whether they strongly identify with the group or not (Gockel et al., 2008).

In line with this view, the results of Hertel et al. (2003) showed motivation gains in computer supported groups under anonymous working conditions due to high perceived social indispensability. In this experiment, individuals worked with a partner through a computer network with no information about their partner's name. Because significant motivation gains were reported, these results suggest social indispensability effects can occur even when identification is not present. Additionally, Gockel et al. (2008) showed that individuals who knew the outcomes of others depended on their performance were more motivated than individuals who were not indispensable. Moreover, the authors reported no significant effect of identification on motivation, which provides support for Instrumentality x Value models in explaining motivation gains within working groups (Williams & Karau, 1991). These findings suggest it is possible for motivation gains to arise even in groups that are not highly cohesive and in the absence of strong group identification, as long as perceived indispensability of group member effort is high (Gockel et al., 2008).

Following this notion of indispensability, research has sought to study the functional relations between groups, specifically in relation to Sherif's study of superordinate goals and realistic conflict theory (Sherif et al., 1961) and in group motivation gains within working groups (e.g., teams) (Weber & Hertel, 2007). In social psychology, most literature on ingroup indispensability focused on understanding the extent to which different groups perceived themselves to be crucial components to define a superordinate commom identity (Ng Tseung-Wong & Verkuyten, 2010; Verkuyten & Martinovic, 2015). However, recent research has advanced this concept by proposing specific types of indispensability. Specifically, it has been shown that immigrants can be perceived as being indispensable to their host society in terms of their economic and social contributions (Guerra et al., 2015). As such, Guerra et al. (2016) showed groups can also be regarded as functionally indispensable by contributing to the host society's economy and prosperity and not be perceived as indispensable to the host society's national identity. The authors then define functional indispensability as "the perceived instrumentality of a group's contribution to a desirable superordinate outcome" (Guerra et al., 2016), which relies on previous literature on the subject of group motivational gains and social indispensability (i.e., the perceived instrumentality of one individual's effort towards the group outcome) (Hertel et al., 2008). This conceptualization of indispensability relies on the principle that in various contexts, as is the case of organizations and working teams, membership is not always determined by prototypical similarity but by the complementarity of heterogenous and diverse components (e.g., working teams) which are all crucial, and therefore indispensable, because they establish a functional relationship to the desired outcomes (e.g., effectiveness) of the superordinate category (e.g., the organization) (Ng Tseung-Wong & Verkuyten, 2010). But, as it is noted by Verkuyten and Martinovic (2016), individuals may perceive their own group to be more indispensable than other groups to the superordinate group.

In organizational settings, recent research has underlined the role of functional indispensability in mergers (Rosa et al., 2020). Specifically, their results suggest functional indispensability is associated with perceptions of representativeness in the post-merger group and increases post-merger identification and change commitment. This points that perceived high functional indispensability can motivate lower-status subgroups to feel more represented in the post-merger group and, therefore, support and commit to the changes a merger implies (Rosa et al., 2020). But, surprisingly, the role of functional indispensability has been neglected in the study of extra-role behaviors like employee voice behaviors.

Voice behaviors were defined by LePine and Van Dyne (2001) as an individual's change-oriented attempt to make a positive contribution to their group (e.g., their organization). When employees engage in voice behaviors, organizations can accomplish process improvement (Nemeth, 1997), innovate on products or services (Ryan & Oestreich, 1998), respond effectively to changing environmental demands (Weick & Sutcliffe, 2001) and perform better (MacKenzie et al., 2011). Moreover, it is important to note that these voice behaviors may have different targets within the organization such as top management, supervisors or peers (Liu et al., 2013).

Because voice behaviors have been described to play such a critical role in organizations' effectiveness, much research has sought to extend our knowledge on the various outcomes of employees engaging in these behaviors. At the individual level, possible outcomes include higher employee productivity (Hunton et al., 1996), higher ratings of performance (Ng & Feldman, 2012; Bashshur & Oc, 2015; Fuller et al., 2015; Grant, 2014; Whiting et al., 2008), higher job satisfaction (Wanberg & Kammeyer-Mueller, 2000), promotions and salary increases (Seibert et al., 2001). Nonetheless, organizations also value employee voice behaviors because they can result in various benefits for the organization as a whole (Bashshur & Oc, 2015; Bindl & Parker, 2010). As such, at the organizational level, several outcomes of voice behaviors have also been identified by literature. For example, Morrison and Milliken (2000) concluded that voice behaviors lead to better error detection, increased learning and better decision making. Other possible outcomes include higher levels of creativity and innovation (Rank et al., 2004), more successful implementation of new practices (Edmondson, 2003), and higher overall organizational performance (Frazier & Bowler, 2015; Lanaj et al., 2013).

However, despite all their positive outcomes, engaging in voice behaviors can prove to be risky for employees because there is the possibility that expressing their new ideas and suggestions for things to be done differently can lead managers to perceive it as an attack on them (Burris, 2012; Liang et al., 2012) and harm interpersonal relationships at work (Burris, 2012; Detert & Edmondson, 2011). As such, employees often hesitate to engage in voice behaviors to avoid sabotaging interpersonal relationships at work, especially with their managers who often control resources and rewards (Gupta et al., 2018). Because of this, voice behaviors are considered one of the more challenging types of organizational citizenship behaviors (Van Dyne & LePine, 1998) and employees who consider speaking up often experience psychological conflicts (Hsiung & Tsai, 2017).

Given the risky nature of voice behaviors, previous research attempted to identify their antecedents in order to better understand what drives individuals to take the risk and speak up to benefit their organization's performance and effectiveness (Morrison, 2014). Under this line of study, a meta-analysis by Chamberlin et al. (2017) uncovered various antecedents of voice behavior such as consciousness, felt responsibility, job satisfaction, social support, organizational identification, organizational commitment, psychological safety and transformational leadership. Other studies have also identified antecedents of voice behavior such as self-esteem (LePine & Van Dyne, 1998), self-efficacy (Frese et al., 1999), and individual demographics including gender, ethnicity, tenure, and hierarchical position (Detert & Burris, 2007; Tangirala & Ramanujam, 2008).

As previously noted, the risk of engaging in voice behaviors stems from the harm it may bring to interpersonal relationships at work, especially with managers (Gupta et al., 2018). As such, various studies have highlighted the relationship between leadership and voice behavior (Duan et al., 2017; Dutton et al., 2002; Liu et al., 2010; Svendsen & Joensson, 2016; Tangirala & Ramanujam, 2012) because employees will assess their leaders to decide whether it is safe and worthwhile to speak up (Detert & Burris, 2007). Among these studies, some have identified the positive association of different leadership styles such as transformational leadership (Liu et al., 2010), ethical leadership (Hu et al., 2018), empowering leadership (Qian et al., 2018), and employee voice behaviors.

However, Morrison (2011) argued that individual employees differ in their dispositional characteristics (Tangirala et al., 2013), assessments of the environment (Burris, 2012) and personal beliefs about voice (Detert & Edmondson, 2011), which suggests members of the same work group or organization may not necessarily display voice behaviors with the same frequency (Bliese et al., 2007).

Extending on previous definitions of voice behaviors, recent research has distinguished between different types of voice behaviors because when employees speak up, the nature and content of their message may focus on different goals (Maynes & Podsakoff, 2014). Specifically, Liang et al. (2012) have distinguished between prohibitive voice and promotive voice behaviors. The authors define prohibitive voice as the employee's expressions of concern about work practices, incidents or employee behavior that may impact work processes and be harmful to their organization (e.g., lack of coordination). As such, it aims to prevent negative consequences by bringing attention to factors that may harm the status quo (e.g., behaviors that may result in the failure of work processes) (Liang et al., 2012). In constrast, the authors follow the more traditional view of employee voice in defining promotive voice as the employee’s expressions of new ideas or suggestions to improve the overall functioning of their work unit or organization and improve the status quo (Liang et al., 2012). As such, promotive voice is focused on visualizing a future ideal state of what things could be and suggesting possible ways of doing things to perform better in the future and guide the team in the direction of such possibilities (Liang et al., 2012). In sum, prohibitive voice is related to the suppression of potentially harmful work practices and promotive voice is related to the implementation of new work methods (Li et al., 2017).

In some organizations, prohibitive voice may have a bigger impact than promotive voice because the development of new ideas and solutions may require the investment of resources that some organizations cannot afford (Liang et al., 2012). The literature on prohibitive voice shows it generally implies a higher personal risk for the employee because speaking up about possible harm to the organization may bring attention to the failure of the individuals who caused it (Svendsen et al., 2018). Moreover, the good motives underlying prohibitive voice may not be easily recognized and the employee may risk being seen as a complainer (Liang et al., 2012). Indeed, Chamberlin et al. (2017) concluded that managers' responses depend on the content of voice (i.e., prohibitive versus promotive). Specifically, prohibitive voice is associated with more negative evaluations from managers, while promotive voice leads to managers attributing more posive evaluations of performance (Chamberlin et al., 2017).

Conversely, because promotive voice is positive in tone and future-oriented, employees who engage in it may be positively viewed as making a positive contribution to the organization (Liang et al., 2012). As a result, these employees are likely to be recognized for these promotive voice behaviors (e.g., by receiving higher ratings of job performance) (Chamberlin et al., 2017). Additionally, promotive voice may encourage other organizational members to reflect on new possibilities that were not thought of previously (Higgins, 1998; Li et al., 2017) and the more members engage in promotive voice, the more the team aspires for higher standards of performance to maximize rewards and avoid missing on opportunities (Lin & Johnson, 2015).

In sum, promotive voice behaviors are proactive and they promote, encourage or cause things to happen. In turn, prohibitive behaviors are preventative and a way of speaking out to stop behaviors that may harm the organization. In our research, we focus on promotive voice behaviors. This focus on promotive over prohibitive voice behaviors derives from our interest in organizational innovation.

As previously noted, managers need their employees' input to increase organizational performance and functioning (Hsiung, 2012; Bindl & Parker, 2010) and organizations rely more on teamwork today than ever before (Kozlowski & Ilgen, 2006; Mathieu et al., 2014), which potentially impacts how much effort employees exert at work (e.g., motivation gains when working in a group). Following this notion, the question arises: is it possible that the perceived functional indispensability of one's team towards the organization's outcomes leads the employee to engange in more promotive voice behaviors?

According to Landau (2009), employees need to believe they are competent at their jobs in order to be able to come up with areas where improvement is possible. Furthermore, employees need to perceive a high level of relevance of their behavior to motivate themselves and engage in extra-role behaviors (Xiong & King, 2015). And when they feel a sense of autonomy and perceive control over their work, employees may offer new ideas (Lam & Mayer, 2014). Thus, one can argue that when an employee perceives their team to be functionally indispensable to the organization's outcomes, not only do they believe they are competent at their jobs, they also experience a high level of relevance within their organization because they are part of the team which they perceive to be highly indispensable. This should, in turn, be associated with higher perceived control over their work and result in employees offering new ideas (i.e., engage in promotive voice behaviors). Moreover, functional indispensability may be linked to projected continuity (i.e., what the employee can do to achieve future goals) (Ullrich et al., 2005; Lupina-Wegener et al., 2013) and, because promotive voice is also future-oriented (Liang et al., 2012), higher perceived indispensability of one's team should result in employees engaging in more promotive voice behaviors.

Furthermore, from a perspective of social exchanges, defined by Blau (1964) as the "voluntary actions of individuals that are motivated by the returns they are expected to bring and typically do in fact bring from others" (p. 91), we may expect a reciprocal flow of transactions (Emerson, 1976) which occurs between the employee and their organization. For instance, employees offer their work outputs and services in exchange for benefits which may be tangible (e.g., salary) and socioemotional (e.g., recognition) (Angle & Perry, 1983). Employees take into account various aspects of their exchange relationship with the organization in order to determine their work outputs and how much extra effort they should exert (Niehoff & Moorman, 1993). In line with social exchange theory, employees develop beliefs about the extent to which their organization values their contributions (Eisenberger et al., 1986; Eisenberger et al., 1990) and they use this information to assess the probability that their organization will recognize and reward such contributions which in turn motivates the employees to respond in reciprocity to such treatment (Eisenberger et al., 2001; Peelle, 2007).

Following this notion, when an employee perceives their team to be more functionally indispensable to the organization, they may develop the belief that the organization values their contributions and will reward them, thus motivating the employee to respond in reciprocity by engaging in extra-role behaviors such as promotive voice behaviors. As such, we offer the following hypothesis:

**Hypothesis 1**: Perceived functional indispensability of one's team towards the organization increases the employee's engagement in promotive voice behaviors.

### 1.2. Psychological ownership as mediator

Because the link between functional indispensability of one's team and the promotive voice behaviors has not been tested by previous research, it is especially important to understand the underlying process that may bring this relationship to develop. In the current study, we explore psychological ownership as a mediator between functional indispensability and promotive voice behaviors. According to Dittmar (1992), people often experience a psychological connection between the self and various targets of possession (e.g., homes, cars, and other people). These possessions come to play a central role in the individual's identity because they become part of their extended self (Dittmar, 1992). Although ownership is commonly experienced in person–object relations, it can also be felt towards nonphysical entities such as ideas, words and artistic creations (Pierce et al., 2003). As a result of these feelings of ownership, research has shown the owner experiences pleasure (Beggan, 1992) and a higher sense of efficacy and competence (White, 1959).

The literature shows that the exercised control over an object increases feelings of ownership over that object (Furby, 1978a; McClelland, 1951). For example, Furby's control model of ownership (Furby, 1978a) posits that the greater the amount of control a person can exercise over certain objects, the more they will be psychologically experienced as part of the self. Moreover, people become psychologically tied to things as a result of their active participation or association with those things (Pierce et al., 2003). We argue that such feelings of psychological ownership will mediate the relationship between functional indispensability of one's team and the employee's engagement in promotive voice behaviors.

Scholars (e.g. Dittmar, 1992; Heider, 1958) consider feelings of ownership as a natural part of the human condition. Building upon this perspective of the possession literature (e.g. Furby, 1978; Litwinski, 1947), psychological ownership is described by Pierce et al. (2003) as "the state in which individuals feel as though the target of ownership or a piece of it is 'theirs'" (p. 86) and, as such, it reflects a relationship between an individual and an object (material or immaterial in nature) in which the target is experienced as having a close connection with the self (Furby, 1978a; Wilpert, 1991). Psychological ownership is a cognitive-affective state that characterizes people who develop feelings of ownership for a variety of targets, even if they don't legally or formally own such targets (Pierce et al., 2003), which has captivated the interest of research in organizational contexts (e.g., Dirks et al., 1996; Pierce et al., 2001; Van Dyne & Pierce, 2004; Avey et al., 2012). Feelings of psychological ownership are often expressed by the owner's use of phrases such as "my job," "my organization," or "this is MINE" (Pierce et al., 2001; Vandewalle et al., 1995). Psychological ownership towards the organization is concerned with individual members' feelings of possession and psychological connection to their organization as a whole (Mayhew et al., 2007).

Following such reasoning, three fundamental human needs can be satisfied through psychological ownership: (a) the need for efficacy and effectance, (b) the need for self-identity, and (c) the need to have a place (Rau et al., 2019). And, as a result of such feelings of ownership, the individual exerts more effort to take care of the target of possession and is motivated to direct their behavior towards its benefit (Furby, 1978). Additionally, individuals tend to value goods that they own more highly than identical goods that they do not own (Reb & Connolly, 2007).

Building on the construct of psychological ownership, Avey et al. (2009) specify two distinct dimensions of psychological ownership: promotive and preventative. The basis for this conceptualization of psychological ownership is derived from regulatory focus theory (Higgins, 1998). This theory proposes two self-regulatory systems of individuals. First, the promotive self-regulation system relates to accomplishments and aspirations and, second, the preventative self-regulation system is concerned with duties and obligations. Such self-regulation systems determine how individuals set personal goals, and individuals who use a promotive self-regulation approach develop goals that reflect their hopes and aspirations (Higgins, 1998). In contrast, individuals who use a preventative self-regulatory approach establish goals to reduce the probability of sanctions and to follow obligations and rules. Following these principles, Avey et al. (2009) suggest each of these self-regulation approaches have an effect on psychological ownership. The authors established promotive psychological ownership as comprising of four sub-constructs: self-efficacy, belongingness, self-identity, and accountability (Avey et al., 2009). Under this dimension of psychological ownership, individuals feel more efficacious about working with the target of ownership, they feel more accountable for what happens to the target, experience a greater sense of belongingness to the target, and experience a sense of personal identification with the target of ownership (Avey et al., 2012). On the other hand, preventive psychological ownership relates with meeting obligations and avoiding sanctions, and it can be associated with individuals being overly possessive and territorial about their organizational targets of ownership (Avey et al., 2009). In sum, promotive psychological ownership is concerned with accomplishments and aspirations, while preventative psychological ownership relates to duties and obligations (Dawkins et al., 2017).

The results of Avey et al. (2009) suggest significant relationships between promotive psychological ownership from the employee towards the organization and positive organizational behavior constructs. Specifically, the authors found that promotive psychological ownership was positively related to transformational leadership, suggesting transformational leaders may be able to create the necessary conditions to increase feelings of psychological ownership (Avey et al., 2009). Moreover, their results found strong positive relationships between promotive psychological ownership and employee commitment, job satisfaction and intentions to stay in the organization, all of which are desirable employee attitudes to cultivate in today's organizations (Avey et al., 2009). The authors suggested future research should seek to further explore the conditions in organizations, work groups and individuals that enhance psychological ownership, as well as to better understand the relationship between psychological ownership and other workplace attitudes that lead employees to engage in organizational citizenship behaviors (Avey et al., 2009). Following this evidence, the current study focuses on the role promotive psychological ownership may play in the relationship between functional indispensability of one's team and the employee's engagement in promotive voice behaviors. As such, we follow Avey and colleagues' view that individuals experiencing high levels of promotive psychological ownership towards the target are "individuals feeling more efficacious about working with the target, feeling more accountable for what happens with respect to the target, experiencing a greater sense of belongingness to the target, and feeling a sense of personal identification with the target of ownership" (Avey et al., 2012).

Because organization-based promotive psychological ownership can be a strong predictor of key employee attitudes (Dawkins et al., 2017), research has begun to address the antecedents of psychological ownership (e.g. Brown et al., 2014, Pierce et al., 2004). The literature has identified three main ways through which employees develop a sense of psychological ownership towards the organization (e.g., Brown et al., 2014; Hulland et al., 2015; Pierce et al., 2003). Specifically, (a) when employees perceive control over their work decisions, (b) when they develop intimate knowledge of their jobs, and (c) when they invest their time, effort and ideas into their jobs, they are more likely to develop feelings of psychological ownership that motivate their behavior. According to Pierce et al. (2003), people come to ownership feelings by exercising control and investing the self into the target of ownership. Jobs today require more knowledge and effort from employees, which promotes employees experiencing self-efficacy and finding a sense of purpose through their jobs, causing employees to develop psychological ownership towards their jobs (Brown et al., 2014). The exercise of control over their job causes the individual to invest in both the job and the organization for whom the job is performed, which in turn leads to a sense of psychological ownership towards the organization (Peng & Pierce, 2015). The amount of control an individual exercises over a target leads to feelings of ownership toward that target and increases the experience of the it being part of the self (Jussila et al., 2015). Thus, when employees perceive they can actively contribute and influence (i.e., control) the outcome of the organization via their team's performance (i.e., high functional indispensability), they are likely to feel psychological ownership towards the organization.

Moreover, in the context of mergers, the results of Rosa et al. (2020) suggest functional indispensability is associated with perceptions of representativeness in the post-merger group and increases post-merger identification and change commitment. This points to the possibility that when employees perceive their team to be functionally indispensable for the organization, this may lead to higher perceived representativeness of the team in the organization as a whole and increased organizational identification, resulting in the employee's stronger sense of promotive psychological ownership towards the organization.

Additionally, Pierce and Gardner (2004) define organization-based self-esteem (OBSE) as "the degree to which an individual believes him/herself to be capable, significant, and worthy as an organizational member" (p. 593). Following this reasoning, we can assume that individuals who perceive their team to be high in functional indispensability for the organization also experience higher levels of self-expression and success within the organization, which leads these employees to higher levels of OBSE (Pierce & Gardner, 2004). As such, perceived functional indispensability should not only be associated with the employee's exercise of control and investment of the self in both the job and the organization, it should also be a source of OBSE. For this reason, we present the following hypothesis:

**Hypothesis 2**: Perceived high functional indispensability of one's team enhances the employee's promotive psychological ownership towards the organization.

Within the organizational context, psychological ownership is increasingly seen as a core feeling in relation to work (Brown et al., 2014) leading to many positive individual and organizational outcomes such as work motivation, job satisfaction, organizational commitment, and work performance (Jussila et al., 2015). This psychological state has been pointed to help employees fulfill their need to belong and, because of this, they are likely to reciprocate by contributing to the organization (Ng & Feldman, 2012). Employees start to protect their organization, take care of it and constantly seek more information about it, and they invest their time, skills, as well as physical, psychological, and intellectual energies to better the organization (Pierce et al., 2001). Furthermore, psychological ownership stimulates the employee's constant search for new ways to serve its customers and educate other employees (Rau et al., 2019).

According to O'Reilly and Chatman (1986), psychologically attached employees are more likely to uphold the values and goals of their organizations, even when these require behaviors that extend beyond in-role responsibilities. Specifically, highly committed employees who have a strong sense of ownership tend to assimilate the organization's interests as their own. These employees are more likely to share creative ideas voluntarily, to give warnings, and to encourage constructive changes (Liu et al., 2010; Tangirala & Ramanujam, 2008). Additionally, employees with high levels of affective commitment have been shown to exert more effort on behalf of their organization with the goal of improving organizational functioning, even when these improvements go against the status quo (LePine & Van Dyne, 1998).

However, despite the many studies linking promotive psychological ownership to various positive organizational outcomes (e.g., Avey et al., 2009; Van Dyne & Pierce, 2004) and to employee discretionary effort (Morrison, 2011), limited research has examined how psychological ownership contributes to more risky organizational citizenship behaviors (i.e., voice) (Morrison, 2011). Some recent studies, nonetheless, have begun to explore this relationship. For instance, in the context of the hospitality industry, it has been shown that employees are more likely to engage in voice behaviors when they develop a sense of psychological ownership toward the organization. These employees invest ideas, time and effort into building the organization (Xiong et al., 2019).

LePine and Van Dyne (1998) concluded that self-esteem is an important predictor of voice behavior. Following our hypothesis that perceived high indispensability of one’s team weighs in as a source of organization-based self-esteem leading to increased promotive psychological ownership, we expect such ownership towards the organization should also enhance the employee's willingness to engage in promotive voice behaviors.

Psychological ownership fulfills the individual’s need for having a sense of place, efficacy and effectance, and self-identity (Pierce et al., 2003). From a social exchange perspective (Blau, 1964), the fulfillment of these needs may give rise to a strong sense of obligation to benefit the organization by reciprocating. As such, employees with a high sense of promotive psychological ownership towards their organization are more likely to assume the personal risk of commenting on problems that are detrimental to the health and well-being of their organizations, and they are also more likely to offer suggestions to promote situations that benefit their organization (Wang et al., 2019).

Moreover, existing literature (e.g., Pierce et al., 2001; Van Dyne & Pierce, 2004) suggests a positive and significant link between psychological ownership and the employee’s engagement in extra-role behaviors. In fact, the motivation to protect what is psychologically owned causes individuals to change their behavior (Avey et al., 2009; Hernandez, 2012) and the promotive focus of psychological ownership is closely connected with fulfilling hopes and aspirations (Avey et al., 2009). This notion aligns with Liang and colleagues' (2012) definition of promotive voice behaviors as they are focused on visualizing a future ideal state (i.e., hopes and aspirations) of what things could be and suggesting possible ways of doing things to perform better in the future and guide the team in the direction of such possibilities. As such, promotive psychological ownership towards the organization may result in knowledge sharing of these benefits (i.e., possible ways to perform better) with their organization, because individuals perceive this as personally fulfilling (Dawkins et al., 2017). This leads us to the following hypotheses:

**Hypothesis 3**: Promotive psychological ownership of the employee towards the organization is positively associated with the employee's engagement in promotive voice behaviors.

**Hypothesis 4**: Promotive psychological ownership of the employee towards the organization partially mediates the relationship between perceived functional indispensability of the employee's team and their engagement in promotive voice behaviors.

### 1.3. Job insecurity as moderator

With the fast-paced development of technology and economic globalization, organizations have to continuously change in order to stay competitive and to survive (Sora et al., 2010; Baard et al., 2014; Rafferty et al., 2013). To cope with competition, management in organizations often needs to reduce costs through personnel reduction (e.g., downsizing, mergers, acquisitions) (Ito & Brotheridge, 2007) and other reform measures at work that require employees to deal with new demands such as adapting to changes in their job or mastering new tasks. For employees, these changes result in a sense of job insecurity (Greenhalgh & Rosenblatt, 1984). Such feelings are expected to have a strong psychological impact on employees because there is a risk of losing economic status and other valued aspects of life (Ashford et al., 1989). As a result, scholars have attempted to better understand job insecurity and its potential consequences. We argue that job insecurity reduces feelings of promotive psychological ownership.

Job insecurity (JI) refers to one's perceptions about potential involuntary job loss (De Witte, 1999), or the individual's overall concern for the continued existence of their job in the future (Sverke & Hellgren, 2002). Greenhalgh and Rosenblatt (1984), define JI as the "perceived powerlessness to maintain desired continuity in a threatened job situation" (p. 438). Klandermans et al. (1991) stated that this concern about the continuity of the job consists of the perceived probability and the perceived severity of losing one's job. More recently, JI was defined as the perceived threat to the continuity and stability of employment as it is currently experienced (Shoss, 2017). Hellgren et al. (1999) expanded on the concept by proposing qualitative and quantitative dimensions of JI. Qualitative JI is described in reference to the perceived threats of a reduction of quality in the employment exchange, which may be a deterioration of working conditions, a decrease in career opportunities, and salary reduction. On the other hand, the quantitative dimension of JI refers to the consequences of losing the job and its valued features, such as the lack of job opportunities, the loss of insurance.

JI is a subjective experience (De Witte, 1999) and, because of this, two individuals in the same objective situation may experience different levels of JI (Van Vuuren et al., 1991). Moreover, JI reflects a forecast about an event of potential job loss, which may or may not happen at some point in the future (Shoss, 2017). As such, the study of JI is the study of how people perceive and respond to visualized job or job feature loss (Greenhalgh & Rosenblatt, 1984), which does not always coincide with actual job or job feature loss.

JI threatens resources that are essential for well-being and are acquired through work (e.g., identity, income, social connection, and social status) (Jiang & Probst, 2014; Schreurs et al., 2010). Literature on the field of JI points out that uncertainty itself is stressful (De Witte, 1999). Furthermore, JI violates basic psychological needs for autonomy and competence (Deci & Ryan, 2000; Vander Elst et al., 2012; Van den Broeck et al., 2014). As such, it seems easy to understand how these concerns may pose a negative influence for various individual and organizational outcomes. Indeed, as a hindrance stressor, JI has a negative impact on various indicators of work-related well-being (Klandermans et al., 2010). A recent meta-analysis revealed several harmful outcomes of job insecurity (Jiang & Lavaysse, 2018) which can be physical, psychological and behavioral (Robbins & Judge, 2011). Among these harmful outcomes, JI leads to low levels of job satisfaction, organizational commitment, organizational trust, overall performance, creativity, and adaptability (Cheng & Chan, 2008; De Witte et al., 2016). Job insecurity leads to negative emotions and cognitive thoughts (Schreurs et al., 2012), which may decrease performance due to distraction from the tasks at hand (Beal et al., 2005). Additionally, JI is associated with turnover intention and absenteeism (Sverke et al., 2002), and it increases feelings of exhaustion and burnout (Dekker & Schaufeli, 1995).

It is important to note that the antecedents of job insecurity have been far less explored in the literature compared to its outcomes. However, and although JI is a perceptual phenomenon, the limited research on the factors that trigger job insecurity suggests these perceptions are often based on environmental threats (Klandermans et al., 2010) such as changes in the business environment (e.g., globalization) that reduce labor demand and job opportunities (Jiang et al., 2013). Because of this, most research has focused mainly on studying the relationship between the business environment (e.g. economic conditions, technology and policy change), type of employment (e.g. permanent vs. temporary contract) and job insecurity.

Some studies suggest that, in comparison to quantitative JI, qualitative JI tends to lack the expected significant relationship with other variables (e.g., well-being, Hellgren et al., 1999; psychosomatic complaints, Ashford et al., 1989). Quantitative JI is often assumed to be more threatening than qualitative JI (De Witte, 1999), which explains the mentioned results. To better understand this argument, one can assume that because quantitative JI implies the potential loss of all the financial and social benefits and resources associated with employment, it presents to individuals as a bigger stressor than potential job changes that, while negative and challenging, do not cause the employee to lose their current job position. As such, the anticipation of job loss (i.e., quantitative JI) has considerable consequences for the quality of life outside work (De Witte et al., 2016), which is not necessarily the case of qualitative JI. For this reason, in the current study, we turn our focus on the potential effect of quantitative JI in reducing the employee's sense of promotive psychological ownership towards the organization.

Scholars who argue that job insecurity has a negative effect on behavioral outcomes consider it to be a hindrance stressor that brings undesirable strain reactions (De Witte, 1999; LePine et al., 2005). A hindrance stressor can be defined as excessive or undesirable work-related demands that interfere with the employee's work achievement (Cavanaugh et al., 2000). One way to cope with such a stressor is to behaviorally withdraw from the situation (Lazarus & Folkman, 1984). Literature shows that behavioral withdrawal can manifest itself in the forms of decreased in-role performance or reduced engagement in organizational citizenship behaviors, as well as increased turnover intention or absenteeism (e.g. Davy et al., 1997; King, 2000).

Quantitative job insecurity highlights the employee's concern about the possibility of losing their current job. Employees in this condition are more sensitive to risks. As a result, they may not engage in behaviors that are risky, hoping to reduce the possibility of losing their job (Davis et al., 2015). Providing an identity status is recognized as one of the main implicit purposes of work and employment (Jahoda, 1997). From a social identity theory perspective, employment can be understood as a social group membership that is part of an individual's self-concept (Haslam, 2004). The process of identity salience can be triggered by various factors such as a change in the group composition (Randel, 2002). Previous research has linked the threat to a preferred social category (e.g., 'employment') to negative outcomes (Tajfel & Turner, 1986). These outcomes include reduced in-group loyalty and reduced commitment to group goals

(Jetten et al., 2003). Therefore, in a situation of perceived high job insecurity, an individual fears becoming unemployed (Selenko et al., 2017). In other words, the individual becomes aware of an unwanted social category (i.e., 'unemployment') which is in opposition to their current social group (i.e., 'employed') (Selenko et al., 2017). In this situation, an individual's social identity as an employed person will become more salient as it is perceived to be under threat (Selenko et al., 2017). Indeed, individuals who perceive their job to be more insecure are also less likely to define themselves as employed people (Selenko et al., 2017). In line with these results, there is some research that demonstrates the threat to a valued identity can result in decreased well-being, less commitment to the group and less willingness to put forward effort for the group (Haslam, 2004; Jetten et al., 2003; Schmitt & Branscombe, 2001). Because fulfilling a need for belonging and self-identity is one of the main precursors for the development of an individual's psychological ownership towards the organization (Pierce et al., 2003) and perceived high job insecurity threatens the individual's current identity as 'employed' and their perception of 'belonging' to the organization, we expect that when individuals perceive high job insecurity they feel less psychological ownership towards the organization.

Proactive coping has been described in literature as it captures people's attempts to cope with job or job feature loss before it happens and while such a possible loss is still uncertain (Aspinwall & Taylor, 1997). For example, some individuals may begin to network or search for other job opportunities in anticipation of job loss (Klehe et al., 2012). Moreover, researchers have studied various factors that influence how job insecurity negatively affects both organizations and individuals (Debus et al., 2014), reduced perceptions of control (Shoss, 2017). As such, if individuals develop ownership feelings by exercising control and investing the self into the target of ownership (Pierce et al., 2003; Jussila et al., 2015) and perceived job insecurity reduces perceptions of control, we expect job insecurity to reduce the employee's psychological ownership towards the organization.

Additionally, from a social exchange perspective, we can look at JI as an imbalance in the exchange relationship between the employee and the organization (Shoss, 2017). Hence, it is possible that when employees perceive their team to be functionally indispensable for the organization they expect bigger rewards (in number and/or in value) in return, but when they perceive high quantitative JI, this represents a violation of the expected exchange relationship and a breach of the psychological contract in which the employees exchange loyalty and commitment for security and other financial and social benefits from their organization (De Cuyper & De Witte, 2007). In sum, JI may reduce the rewards that employees receive for their efforts and, as a consequence, it is likely to be perceived as an unfair situation (Piccoli & De Witte, 2015) which may lead the employee to withdraw their efforts in an attempt to even the exchange relationship with the organization. This should be particularly evident in the condition of perceived high functional indispensability because such employees should also expect more from their organization. But because they perceive high job insecurity, they may be particularly alert to such imbalance in their exchange relationship with the organization because they perceive such a breach to be bigger than employees who perceive their teams to be lower in functional indispensability for the organization and, thus, expect less rewards from the exchange relationship. We therefore present the following hypothesis:

**Hypothesis 5**: Quantitative job insecurity moderates the relationship between functional indispensability and promotive psychological ownership, such that the higher the quantitative job insecurity the weaker the association between functional indispensability and promotive psychological ownership towards the organization.

### 1.4. Organizational ambidexterity as moderator

Often in organizational life, behavior is not only influenced by individual factors (e.g., personality), but also by contextual factors specific to the organization itself. As such, we explore organizational ambidexterity as one of these contextual factors influencing the previously hypothesized relationships in our study. The increasing pace at which innovation occurs in many organizations has drawn attention to organizational innovation and its antecedents, with particular interest in how organizations allocate their resources to the innovation strategy that best suits their particular context (Kiss et al., 2019). Innovation can be incremental or discontinuous innovation, which translate to both exploitative and exploratory innovation, respectively (O'Reilly & Tushman, 2013). Incremental or exploitative innovation refers to the organization's activity that builds on existing knowledge and extends existing products and services for existing customers (Benner & Tushman, 2003). On the other hand, discontinuous or exploratory innovation refers to the organization's activity that pursues new knowledge creation and develops new products and services for emerging customers or markets (Jansen et al., 2006). Firms must choose the most adequate strategy to innovate and reach competitive advantage. Deciding in what proportion to invest in exploiting current knowledge (i.e., exploitation) and/or exploring new knowledge (i.e., exploration) brings a challenge to the organization from a learning perspective (Ricciardi et al., 2016) which results in the need to manage resources efficiently. One way of combining exploitation and exploration innovation efforts consists on simultaneously engaging in both, which is known as organizational ambidexterity (Solís-Molina et al., 2018). In the current research, we explore the possible role of organizational ambidexterity, as perceived by the employees, in facilitating their engagement in promotive voice behaviors.

Duncan (1976) was the first author to use the term organizational ambidexterity, but it was March's (1991) article that is often cited in literature as the main source of interest in the concept. March (1991) proposed that exploitation and exploration are two different learning activities between which organizations divide their focus and resources. The author suggests that "maintaining an appropriate balance between exploration and exploitation is a primary factor in system survival and prosperity".

Organizational ambidexterity refers to organizations that are able to not only explore new opportunities but are also capable of exploiting existing knowledge (Simsek et al., 2009). It is relevant to point out that ambidexterity concerns not only the number of activities occupied in the pursuit of exploitation and exploration, but also the ability of the organization and its workforce to contribute skillfully in the pursuit of both processes (Atuahene-Gima, 2005; Brix, 2019). Hence, a clearer definition of this construct is suggested by Lubatkin et al. (2006): "organizations [that] are capable of exploiting existing competencies, as well as exploring new opportunities with equal dexterity" (Lubatkin et al., 2006).

Some authors have argued that many organizations lack the necessary resources to engage in activities to pursue both exploitation and exploration innovation, which sparked a debate among scholars as to which would be the best strategy for organizations to adopt. However, focusing on exploitation activities may increase short-term performance, but it can lead organizations to be unable to respond adequately to environmental changes (Ahuja & Lampert, 2001). In contract, relying solely on activities centered on exploration may boost the organizations's capability of renewing its knowledge but also cause organizations to enter a repetivive cycle of search and idle change (Volberda & Lewin, 2003). Therefore, finding an adequate organizational response to the "ambidexterity dilemma" greatly depends on the specific context on each organization (Simsek, 2009). Thus, there is no set of ambidexterity directions that all organizations can follow to accomplish their desired innovation outcomes (Brix, 2019).

Organizational ambidexterity is of key strategic importance to organizations because it allows them to successfully adapt to changing circumstances in their environment without losing their competitive edge (O'Reilly & Tushman, 2013). In general, the literature posits that the simultaneous use of exploitation and exploration strategies is an antecedent of organizations' performance both in the short and long-term (Brown & Duguid, 2001; Benner

& Tushman, 2003; Gupta et al., 2006; Fernhaber & Patel, 2012). Following this notion, research has begun to characterize exploration and exploitation as independent activities that organizations can choose to engage in at high levels at the same time (Gupta et al., 2006). However, the importance of maintaining the balance of effort and resources allocated to the pursuit of both strategies does not consequently mean that organizations must implement and develop the same number of exploration and exploitation activities. Instead, it suggests that organizations and their workforce must strive to successfully fulfill the tasks associated with both of these innovation processes (Atuahene-Gima, 2005). In sum, the central aspect of ambidexterity is that organizations derive long-term economic profits from pursuing two strategies instead of focusing solely on one (Smith, 2014).

Scholars have identified various factors associated with the achievement of ambidexterity. Much of the research on the antecedents of ambidexterity has highlighted the importance of structural separation and the differentiation of units that focus on exploitative and exploratory innovation, as well as the mechanisms (e.g., processes and culture) that enable such separation and differentiation (Gibson & Birkinshaw, 2004; Jansen et al., 2009). Recently, scholars have started to investigate leadership characteristics that enable organizations to manage and embrace the contradictions that they face (Beckman, 2006; Lubatkin et al., 2006). Specifically, the role of managers in the successful pursuit of both exploratory and exploitative innovation (Smith & Tushman, 2005; O'Reilly & Tushman, 2013) because it may rely on the ability of managers to recognize and manage the conflicts or tensions that arise when simultaneously pursuing exploitative and exploratory innovation and to create and maintain organizational connections, which is particularly challenging on a cognitive level (Danneels, 2011; Raisch et al., 2009; Taylor & Helfat, 2009).

One of the most frequently addressed questions by empirical research on organizational ambidexterity is whether it is in fact associated with organizational performance as the original theory suggests. Previous studies have, indeed, shown that ambidexterity is positively associated with sales growth (Caspin-Wagner et al., 2012; Geerts et al., 2010), subjective ratings of performance (Burton et al., 2012; Cao et al., 2009), innovation (Adler et al., 1999; Burgers et al., 2009; Phene et al., 2012), and firm survival (Hill & Birkinshaw, 2014). To date, there has been few research on ambidexterity at the individual level (Turner et al., 2013). Following this evidence, research has often focused on identifying the elements leading to ambidexterity and far less studies have considered its outcomes (Simsek et al., 2009), specifically when it comes to the effect it may have on employee attitudes and behaviors such as their engagement in promotive voice behaviors which play an essential role in organizational innovation, which is one of the goals of organizations seeking ambidexterity.

Employees' voice behavior is desirable not only as a way of communication with management, but also as a means of change-oriented communication intended to improve the situation (LePine & Van Dyne, 2001). Bashshur and Oc (2015) suggested future research should seek to better understand how workplace contextual factors, such as perceptions of organizational politics and organizational support influence voice behaviors. In our current study, we seek to better understand how the employees' perceived organizational ambidexterity may influence their willingness to engage in promotive voice behaviors.

Literature on organizational learning theory has often focused on learning processes occurring at both the individual and organizational levels (Cangelosi & Dill, 1965). Organizational learning scholars became interested in March's (1991) article which defined exploration and exploitation in light of organizational learning (Kim, 1993). Following this notion, Argote (1999) suggested that organizational learning happens because knowledge is created, retained and transferred at both the group and the organizational levels through the procedures organizational members follow as they search for ways as to how work tasks can be fulfilled more efficiently and, as a result, they become more knowledgeable. In line with Argote's (1999) proposition, we assume that when employees perceive their organization to be highly ambidextrous, they also know how organizational learning processes (e.g., knowledge sharing) work in their specific context, which should aid them in assessing which may be the best way to speak up and whether it is safe to do so in sharing new ideas and suggestions. Thus, perceived high organizational ambidexterity should facilitate employees engaging in promotive voice behaviors.

Crossan et al. (1999) posit that the processes of exploration and exploitation are the result of the transitions between four micro-processes across different levels in organizations. These four micro-processes refer to: intuiting, interpreting, integrating and institutionalizing. Intuiting and interpreting arise at the individual level. Interpreting and integrating develop at the team level, whereas the integrating and institutionalizing micro-processes happen at the organizational level (Crossan et al., 1999). Here, it is critical to highlight the communication between organizational members as they aim to interpret their own individual intuition in relation to newly identified opportunities and integrate the insights from these opportunities in such a manner that it would be viable to institutionalize them in the organization as a new or better way of working (Brix, 2019). The majority of tasks and projects in organizations are carried out by working groups or teams and not only individual employees within the organization (Crossan et al., 1999; Brix, 2017). This means individuals validate and develop their own insights about new opportunities by communicating them to other organizational members, making this communication of new opportunities a common and necessary process by which organizational ambidexterity is promoted and achieved. Hence, the employees' engagement in promotive voice behaviors is not only desired for innovation, it is also theoretically expected. As such, perceived organizational ambidexterity should facilitate employees engaging in promotive voice behaviors.

Given the risky nature of voice behaviors, employees' willingness to speak up may largely depend on whether the surrounding environment favors speaking up (Morrison, 2011; Ruck et al., 2017). Innovation demands the exploration of new possibilities through activities that are novel and improve upon the status quo (Liang et al., 2019). Liang and colleagues have defined promotive voice behaviors as the employee's expressions of new ideas or suggestions to improve the overall functioning of their work unit or organization and improve the status quo. Hence, we argue that when employees perceive their organization to be highly ambidextrous, this will encourage them to engage in promotive voice behaviors because such perceived contextual openness to improve upon the status quo should decrease their anticipation that speaking up poses a risk. Instead, they should perceive that the organization welcomes their ideas and suggestions. This leads us to our final hypotheses:

**Hypothesis 6**: Organizational ambidexterity moderates the relationship between functional indispensability and promotive voice behaviors, such that the higher the organizational ambidexterity the stronger the association between functional indispensability and the employee's engagement in promotive voice behaviors.

**Hypothesis 7**: Organizational ambidexterity moderates the relationship between promotive psychological ownership and promotive voice behaviors, such that the higher the organizational ambidexterity the stronger the association between the employee's promotive psychological ownership towards the organization and their engagement in promotive voice behaviors.

Our complete theoretical model can be found in Figure 1.1.

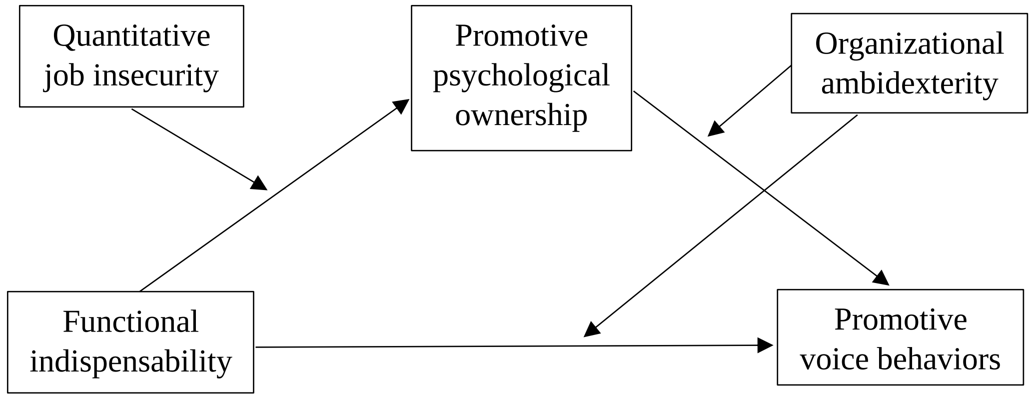



**Figure 1.1**. Theoretical model.

# Chapter 2. Method

## 2.1. Sample and procedure

Our data was collected through an online survey in Qualtrics. The participants were recruited online by distributing the link to the survey in both social and professional platforms. Thus, our data results from a non-probability sampling method (i.e., convenience sampling). Before completing the survey, participants were asked to read the study purpose on the cover page and sign an informed consent form for their voluntary participation. Confidentiality and anonymity were assured to all participants. The survey was administered in Portuguese.

A total of 930 participants completed the questionnaire. However, participants who were currently unemployed were excluded from our analyses because their status meant they had no organizational setting and current work experiences as a basis to reflect on the extent to which they agreed with the statements composing the measures in our research. Therefore, after excluding them, our final sample size comprised 875 participants. Among them, 53% were female and 2 participants did not indicate their sex. Participants were aged between 25-29 years old (28.3%) and between 30-34 years old (21.1%). Educational level was generally high, with most respondents having obtained either a bachelor degree (33.3%) or a masters degree (37.3%). The vast majority of participants worked in the private sector (90.3%) and in organizations with 250 employees or more (63.8%). Respondents were mostly working full-time (97.4%) and a considerable number of participants had a leadership position within their organization (38%). As for tenure, 25.7% of our sample had been in the same organization for less than 1 year, and 36.9% had between 1 and 3 years of experience within their current organization.

## 2.2. Measures

The measures used in the current research were translated and back-translated following the procedures recommended by Brislin (1970). All items were translated from English to Portuguese by two independent contributors and then back-translated by a third contributor. Back-translation confirmed that the meaning of most items had been preserved in the process. The items that were unsatisfactorily translated were analyzed a second time and their translation corrected. Then, the final version of the translation was verified.

### *2.2.1. Functional indispensability*

Functional indispensability was measured by adapting 6 items from the Functional and Identity Indispensability Scale developed by Guerra et al. (2016). Originally developed to assess the extent to which minority group members (e.g., immigrants) can claim to be indispensable in relation to majority group (e.g., host society) outcomes, our adaptation of these items aimed at measuring the extent to which the employee perceived their team's contribution to be functionally indispensable for the outcomes of their organization (e.g., performance, economic strength). A sample of items is "The performance of my organization depends on the contributions of my team" and "My organization's profit depends heavily on my team's performance". Participants used a seven-point Likert scale (1 = "strongly disagree" to 7 = "strongly agree") to provide their answers. A higher score indicates the employee perceives their team to be more indispensable to the organization. In our study, the scale showed good internal consistency (α = .89).

### *2.2.2. Promotive voice behaviors*

Promotive voice behaviors were assessed by adapting 10 items from the scale developed by Maynes and Podsakoff (2014). Originally developed to measure the employee's voice behaviors through the assessment of a supervisor, our adaptation of these items aimed to collect the employee's self-reported voice behaviors. A sample of items is "I express my support for productive work procedures when other people criticize them unnecessarily" and "I often suggest changes in tasks or work projects to make them better". Participants used a seven-point Likert scale (1 = "strongly disagree" to 7 = "strongly agree") to provide their answers. A higher score reflects the employee's more frequent adoption of promotive voice behaviors. In our study, the scale showed good internal consistency (α = .93).

### *2.2.3. Promotive psychological ownership*

Promotive psychological ownership was measured with 12 items from the Psychological Ownership Questionnaire (POQ) (Avey & Avolio, 2009). The POQ assesses the four dimensions of promotive psychological ownership: self-efficacy, accountability, sense of belongingness, and self-identity. Here is a sample item for each dimension: "I am confident I can make a positive difference in this organization" (self-efficacy), "I would challenge anyone in my organization if I thought something was done wrong" (accountability), "I feel I belong in this organization" (sense of belongingness), and "I feel being a member in this organization helps define who I am" (self-identity). Participants could respond to the items using a six-point

Likert scale, ranging from 1 (“strongly disagree”) to 6 (“strongly agree”). A higher score reflects a higher sense of promotive psychological ownership towards the organization. The scale showed good internal consistency (α = .89).

### *2.2.4. Quantitative job insecurity*

Quantitative job insecurity was measured with a 4-item scale designed by Vander Elst et al. (2014). A sample of items is “Chances are, I will soon lose my job” and “I think I might lose my job in the near future”. Participants used a seven-point Likert scale (1 = “strongly disagree” to 7 = “strongly agree”) to provide their answers. A higher score represents a stronger perceived probability of job loss in the near future. In our study, the scale showed good internal consistency (α = .90).

### *2.2.5. Organizational ambidexterity*

Organizational ambidexterity was assessed with a 12-item scale developed by Jansen et al. (2006). This measure assesses two dimensions of organizational ambidexterity: exploratory innovation and exploitative innovation. Here is a sample item for each dimension: “We invent new products and services” (exploratory innovation), and “We regularly implement small adaptations to existing products and services” (exploitative innovation). Participants used a seven-point Likert scale (1 = “strongly disagree” to 7 = “strongly agree”) to provide their answers. A higher score indicates the employee perceives their organization to be more ambidextrous. The scale showed good internal consistency (α = .92).

## 2.3. Control variables

In our study, we controlled for the possible confounding effects of some relevant variables on our dependent and mediator variables (i.e., promotive voice behaviors and promotive psychological ownership, respectively) by including them in our analyses.

### *2.3.1. Demographic variables*

**Sex.** We collected information regarding the participants’ sex (0 = female; 1 = male) because this has been shown to be a significant predictor of promotive voice behaviors (Morrison, 2011). Indeed, in our study, we found a significant correlation between sex and promotive voice behaviors ($r_{(873)}$ = .10, $p$ = .004). We also found sex to be significantly correlated to promotive psychological ownership ($r_{(873)}$ = .16, $p$ < .001).

### *2.3.2. Employment status variables*

**Tenure.** We collected information about the participants' tenure (1 = less than a year; 2 = between 1 and 3 years; 3 = between 3 and 5 years; 4 = between 5 and 7 years; 5 = between 7 and 10 years; 6 = more than 10 years) because this has been shown to be a significant predictor of both promotive psychological ownership (Mayhew et al., 2007) and promotive voice behaviors (LePine & Van Dyne, 1998). Indeed, in our study, we found a significant correlation between tenure and promotive psychological ownership ($r_{(871)}$ = .15, $p$ = < .001), and promotive voice behaviors ($r_{(871)}$ = .11, $p$ = .001).

### *2.3.3. Other variables*

**Core self-evaluations.** Core self-evaluations were assessed by using a 12-item scale by Judge et al. (2003). A sample of items is "When I try, I generally succeed" and "I determine what will happen in my life". Participants used a seven-point Likert scale (1 = "strongly disagree" to 7 = "strongly agree") to provide their answers. A higher score represents generally higher perceived self-esteem, generalized self-efiicacy, neuroticism and an internal locus of control. In our study, the scale showed good internal consistency (α = .85). This was a relevant control variable because core self-evaluations have been shown to be a significant predictor of promotive voice behaviors (Avery, 2003). Indeed, in our study, we found a significant correlation between core self-evaluations and promotive voice behaviors ($r_{(875)}$ = .40, $p$ = < .001). Additionally, we also found a significant correlation between core self-evaluations and promotive psychological ownership ($r_{(875)}$ = .47, $p$ = < .001).

**Covid.** Because our data was collected both before and during the Covid-19 pandemic, we sought to examine its possible effect on our model and, indeed, we found a significant correlation between the participants' date of submission (0 = before the pandemic; 1 = during the pandemic) and promotive voice behaviors ($r_{(875)}$ = .09, $p$ = .006). As a point of reference in time, we used the date of March 19th 2020 to establish those who submitted their response to our survey before or during the pandemic, because it was the first day of the state of emergency officially decreeted by the Portuguese government which brought organizations to adopt a specific set of measures in response do the pandemic.

## 2.4. Data analysis

In the statistical analyses of our study, we first focused on analysing the psychometric quality of our adapted measure of functional indispensability by conducting a Confirmatory Factor

Analysis (CFA) to assess if our adapted version of the measure retained its psychometric quality (Brown, 2015). The model fit in CFA is assessed in light of a set of criteria by Hu and Bentler (1995), Hair et al. (2010), and Byrne (2001). These criteria are: CMIN/DF < 3.0, Comparative Fit Index (CFI > .90), Root Mean-Square Residual (SRMR) below .09 or Tucker Lewis Index (TLI > .90), or Root Mean Square of Approximation (RMSEA) below .08 plus SRMR below .09. In our analyses, we used IBM SPSS Statistic with the extensions IBM SPSS AMOS (version 27).

### *2.4.1. Functional indispensability confirmatory factor analysis*

The results of the CFA show that the expected one-factor solution does not meet all the criteria for the model fit (CMIN/DF = 11.6, CFI = .97, TLI = .95, RMSEA = .11, SRMR = .03). Because these values are unsatisfactory, we checked the modification indices which revealed the error of item 6 was significantly correlated with the errors of items 1, 2, 4 and 5. As such, we drew the covariance paths to correlate these errors in order to improve the measurement model. After the introduction of these paths, the results of the CFA improved, indicating that the expected one-factor solution does meet the criteria for the model fit (CFI = .99, TLI = .98, RMSEA = .06, SRMR = .03), with the exception of CMIN/DF < 3.0 (CMIN/DF = 4.34) but, because this value is sensitive to sample size and ours is a large sample, we consider the one-factor model to fit the criteria. The factor loadings of all six items presented satisfactory values between .71 and .83 (see Appendices A and B).

### *2.4.2. Preliminary analysis*

Because our data relies on self-report, we conducted Harman's single-factor test to determine if common method variance significantly reduced the validity of our findings (Podsakoff et al., 2003). Our analysis shows the single common factor accounted for 25.3% of the variance, which is well below 50% threshold suggested by the literature (Podsakoff et al., 2003). We also used the marker variable technique (Williams et al., 2010) by measuring the participants' degree of agreement to the statement “I prefer to work with more experienced people” because we predicted no significant relation between this variable and the remaining variables in our study. Indeed, we found no significant correlation between this marker variable and the other variables (Table 3.1). Thus, we find no evidence that the validity of our findings is threatened by common method bias.

### *2.4.3. Data analysis strategy*

We then tested our model's hypotheses. In our analyses, we used IBM SPSS Statistic (version 27) with the extension Process Macro (version 3.4) with model 28 (Hayes, 2013).

# Chapter 3. Results

## 3.1. Descriptive statistics

The means, standard deviations and correlations among the variables of our study are shown in Table 3.1. Participants reported generally high promotive voice behaviors (*M* = 5.61, *SD* = 0.87), functional indispensability (*M* = 5.18, *SD* = 1.25), organizational ambidexterity (*M* = 5.09, *SD* = 1.12) and core self-evaluations (*M* = 4.97, *SD* = 0.70). Overall, participants also reported high perceptions of promotive psychological ownership (*M* = 4.46, *SD* = 0.81) and low levels of quantitative job insecurity (*M* = 2.53, *SD* = 1.34).

As expected, the bivariate correlations show that functional indispensability was positively related to promotive voice behaviors ($r_{(875)} = .208$, $p < .001$) and to promotive psychological ownership ($r_{(875)} = .263$, $p < .001$). Promotive psychological ownership was also positively related to promotive voice behaviors ($r_{(875)} = .589$, $p < .001$). As for our moderator variables, quantitative job insecurity was negatively related to promotive psychological ownership ($r_{(875)} = -.359$, $p < .001$), and organizational ambidexterity was positively related to promotive voice behaviors ($r_{(875)} = .257$, $p < .001$).

**Table 3.1**. Means, standard deviations, and correlations of study variables.

| Variable | *M* | *SD* | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|---|---|
| 1. Functional indispensability | 5.18 | 1.25 | | | | | | |
| 2. Promotive voice behaviors | 5.61 | 0.87 | .208** | | | | | |
| 3. Promotive psychological ownership | 4.46 | 0.81 | .263** | .589** | | | | |
| 4. Quantitative job insecurity | 2.53 | 1.34 | -.045 | -.241** | -.359** | | | |
| 5. Organizational ambidexterity | 5.09 | 1.12 | .045 | .257** | .417** | -.216** | | |
| 6. Core self-evaluations | 4.97 | 0.70 | .173** | .398** | .473** | -.387** | .256** | |
| 7. Marker variable | 4.45 | 1.37 | .045 | -.032 | .005 | .014 | .016 | -.018 |

*Note.*
*p < .05. **p < .01.

### 3.2. Hypotheses testing

We used SPSS extension Process Macro (version 3.4) model 28 (Hayes, 2013) to test our hypotheses. Overall, our model explains 32.5% ($R^2$ = .325) of the variance in promotive psychological ownership ($F_{(7,862)}$ = 59,171, $p$ < .001), and it accounts for 37.6% ($R^2$ = .376) of the variance in promotive voice behaviors ($F_{(9,860)}$ = 57,602, $p$ < .001). Table 3.2 presents the results of our main effects and mediation effect hypotheses testing.

Hypothesis 1 predicted that perceived functional indispensability of one's team towards the organization increases the employee's engagement in promotive voice behaviors. Results revealed that perceived functional indispensability was significantly and positively related to promotive voice behaviors ($B$ = .107, $t$ = 4.891, $p$ < .001). Thus, hypothesis 1 is supported.

In hypothesis 2, we expected a positive association between perceived functional indispensability of one's team and the employee's promotive psychological ownership towards the organization. The relationship between perceived functional indispensability and promotive psychological ownership was indeed positive and statistically significant ($B$ = .128, $t$ = 6.844, $p$ < .001). Thus, hypothesis 2 is supported.

Hypothesis 3 suggested that promotive psychological ownership of the employee towards the organization is positively associated with the employee's engagement in promotive voice behaviors. The results showed a significant positive relationship between promotive psychological ownership and promotive voice behaviors ($B$ = .528, $t$ = 14.057, $p$ < .001). These results provide support for hypothesis 3.

Hypothesis 4 predicted that promotive psychological ownership of the employee towards the organization partially mediates the relationship between perceived functional indispensability of the employee's team and their engagement in promotive voice behaviors. Results showed a significant indirect effect of perceived functional indispensability on promotive voice behaviors via promotive psychological ownership ($B$ = .067, 95% CI [.046, .091]) which is smaller than the total effect of perceived functional indispensability on promotive voice behaviors ($B$ = .107, $t$ = 4.891, $p$ < .001), meaning there is a partial mediation effect. Thus, hypothesis 4 is supported.

**Table 3.2**. Regression of promotive voice behaviors on functional indispensability and promotive psychological ownership.

| Predictor variables | Promotive psychological ownership | | | Promotive voice behaviors | | |
|---|---|---|---|---|---|---|
| | *B* | *SE* | 95% CI | *B* | *SE* | 95% CI |
| Control variables | | | | | | |
| Sex[a] | .139** | .046 | [.048, .230] | -.008 | .048 | [-.102, .087] |
| Core self-evaluations | .397** | .036 | [.326, .468] | .187** | .039 | [.111, .262] |
| Tenure[b] | .049** | .014 | [.021, .076] | .019 | .015 | [-.010, .048] |
| Covid-19[c] | .105* | .049 | [.009, .202] | .108* | .051 | [.008, .208] |
| Direct effect | | | | | | |
| Constant | -2.485** | .198 | [-2.873, -2.097] | 4.456** | .217 | [4.029, 4.883] |
| Functional indispensability | .128** | .019 | [.092, .165] | .041* | .020 | [.002, .080] |
| Promotive psychological ownership | | | | .528** | .038 | [.454, .602] |
| Total effect | | | | | | |
| Functional indispensability | | | | .107** | .022 | [.064, .149] |
| Indirect effect | | | | | | |
| Functional indispensability | | | | .067* | .012 | [.046, .091] |
| $R^2$ | .325 | | | .376 | | |
| *F* | 59.171** | | | 57.602** | | |

*Note*.
[a] 0 - female, 1 - male; [b] 1 - less than 1 year, 2 - 1-3 years, 3 - 3-5 years, 4 - 5-7 years, 5 - 7-10 years, 6 - more than 10 years;
[c] 0 - before the pandemic, 1 - during the pandemic.
*p < .05. **p < .01.

In hypothesis 5, we expected quantitative job insecurity to moderate the relationship between perceived functional indispensability of the employee's team and their promotive psychological ownership towards the organization, such that the higher the quantitative job insecurity the weaker the association between perceived functional indispensability and promotive psychological ownership towards the organization. Table 3.3 summarizes the results of our moderation hypothesis 5. We found a significant negative main effect of quantitative job insecurity on promotive psychological ownership ($B$ = -.127, $t$ = -6.769, $p$ < .001). The results also showed a significant interaction between quantitative job insecurity and perceived functional indispensability ($B$ = -.031, $t$ = -2.330, $p$ = .020). As shown in Figure 3.1, the higher the quantitative job insecurity the weaker the association between perceived functional indispensability and promotive psychological ownership towards the organization ($B_{\text{Low}}$ = .170, $t$ = 6.690, $p$ < .001; $B_{\text{Medium}}$ = .128, $t$ = 6.844, $p$ < .001; $B_{\text{High}}$ = .087, $t$ = 3.288, $p$ = .001). These results provide support for hypothesis 5.

**Table 3.3**. Regression of promotive psychological ownership on functional indispensability and quantitative job insecurity.

| Predictor variables | Promotive psychological ownership | | |
|---|---|---|---|
| | *B* | *SE* | 95% CI |
| Constant | -2.485** | .198 | [-2.873, -2.097] |
| Functional indispensability | .128** | .019 | [.092, .165] |
| Quantitative job insecurity | -.127** | .019 | [-.164, -.090] |
| Interaction | | | |
| FI x QJI | -.031* | .013 | [-.057, -.005] |
| $R^2$ = | .325 | | |
| $F_{(7, 862)}$ = | 59.171** | | |

*Note*. FI = functional indispensability; QJI = quantitative job insecurity.

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

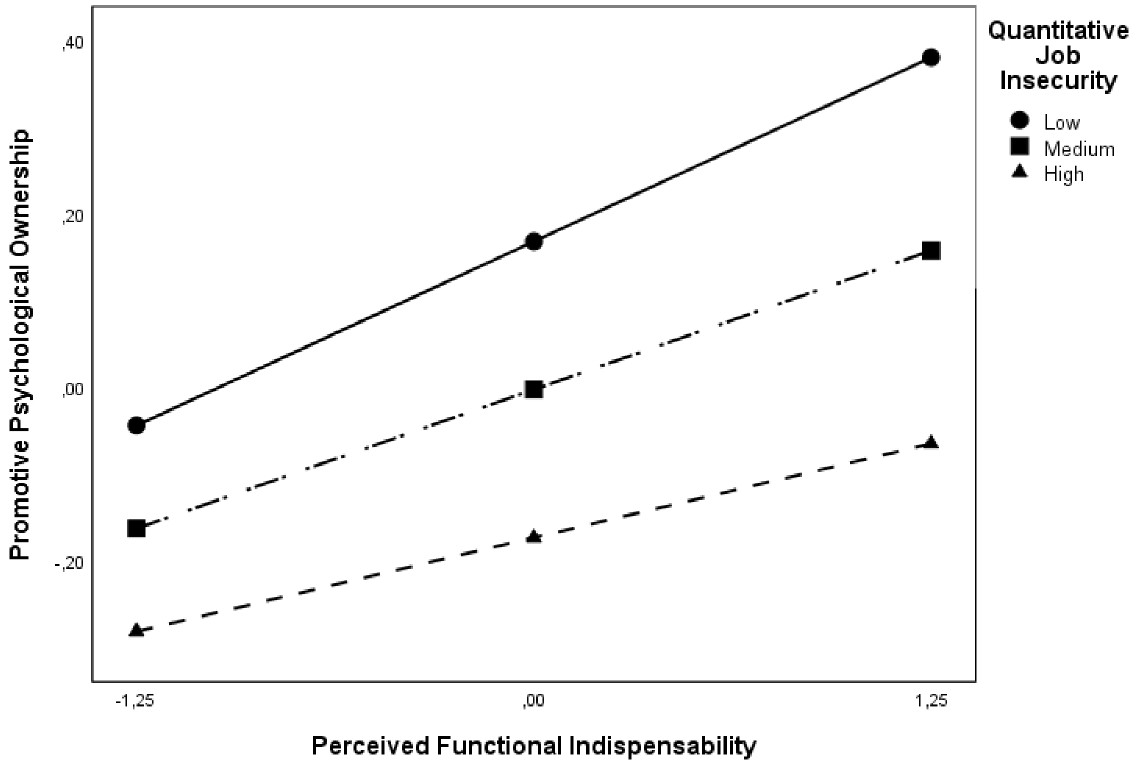



**Figure 3.1**. Moderating effect of quantitative job insecurity on the association between perceived functional indispensability and promotive psychological ownership.

Hypothesis 6 predicted that perceived organizational ambidexterity moderates the relationship between perceived functional indispensability and promotive voice behaviors, such that the higher the organizational ambidexterity the stronger the association between perceived functional indispensability and the employee's engagement in promotive voice behaviors. Table 3.4 summarizes the results of our moderation hypothesis 6. We found no significant main effect of organizational ambidexterity on promotive voice behaviors ($B$ = -.002, $t$ = -0.067, $p$ = .946). The results showed a significant interaction between perceived organizational ambidexterity and perceived functional indispensability ($B$ = .033, $t$ = 2.069, $p$ = .039). As shown in Figure 3.2, perceived low organizational ambidexterity has no effect on the association between perceived functional indispensability and promotive voice behaviors, but the higher the perceived organizational ambidexterity the stronger the association between perceived functional indispensability and the employee's engagement in promotive voice behaviors ($B_{\text{Low}}$ = .004, $t$ = .158, $p$ = .874; $B_{\text{Medium}}$ = .041, $t$ = 2.045, $p$ = .041; $B_{\text{High}}$ = .077, $t$ = 2.815, $p$ = .005). Although these are small effects, they are still statistically significant. These results provide support for hypothesis 6.

**Table 3.4**. Regression of promotive voice behaviors on functional indispensability, promotive psychological ownership and organizational ambidexterity.

| Predictor variables | Promotive voice behaviors | | |
|---|---|---|---|
| | *B* | *SE* | 95% CI |
| Constant | 4.456** | .217 | [4.029, 4.883] |
| Functional indispensability | .041* | .020 | [.002, .080] |
| Promotive psychological ownership | .528** | .038 | [.454, .602] |
| Organizational ambidexterity | -.002 | .024 | [-.049, .045] |
| Interactions | | | |
| FI x OA | .033* | .016 | [.002, .063] |
| PPO x OA | .001 | .024 | [-.045, .048] |
| $R^2$ = | .376 | | |
| $F_{(9, 860)}$ = | 57.602** | | |

*Note.* FI = functional indispensability; PPO = promotive psychological ownership; OA = organizational ambidexterity.
*p < .05. **p < .01.

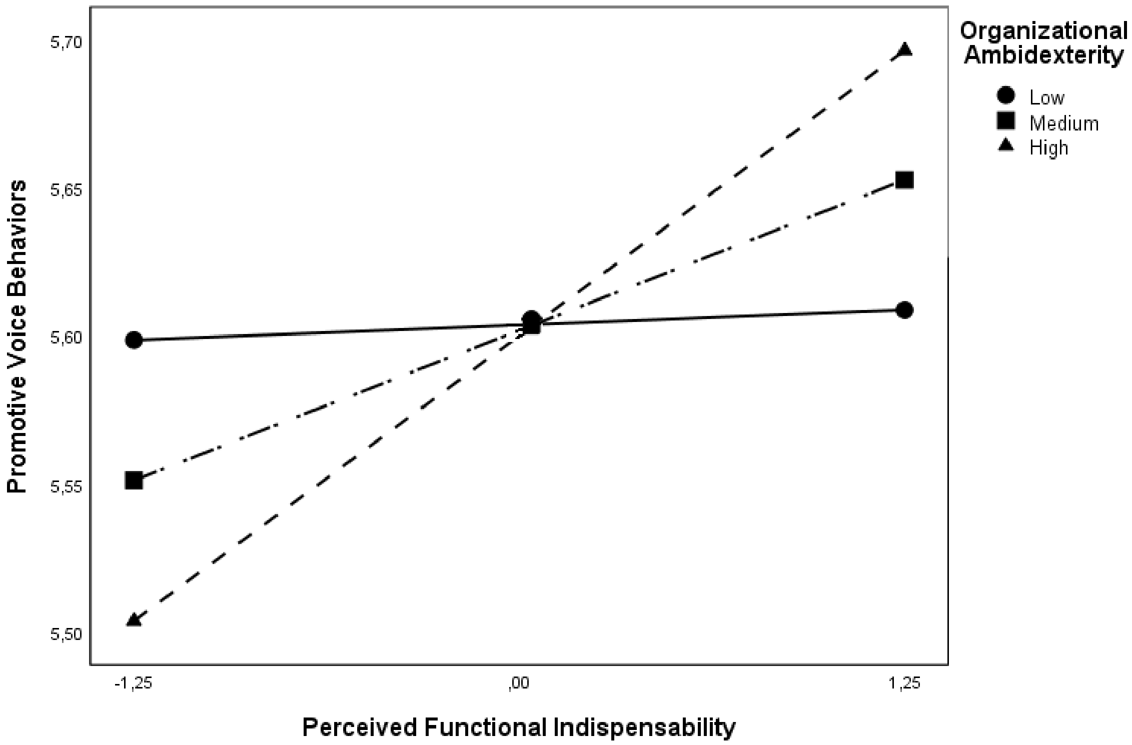



**Figure 3.2**. Moderating effect of perceived organizational ambidexterity on the association between perceived functional indispensability and promotive voice behaviors.

Hypothesis 7 suggested that perceived organizational ambidexterity moderates the relationship between promotive psychological ownership towards the organization and promotive voice behaviors, such that the higher the perceived organizational ambidexterity the stronger the association between the employee's promotive psychological ownership towards the organization and their engagement in promotive voice behaviors. As shown in Table 3.4, the results revealed no significant interaction between perceived organizational ambidexterity and promotive psychological ownership ($B$ = .001, $t$ = .058, $p$ = .954). As such, higher perceived organizational ambidexterity has no significant effect on the association between promotive psychological ownership and the employee's engagement in promotive voice behaviors. Thus, hypothesis 7 is not supported.

[This page was deliberately left blank]

## Chapter 4. Discussion

This study aimed to explore the link between functional indispensability of one's team towards the organization's desired outcomes (e.g., performance, economic strength) and the employee's engagement in promotive voice behaviors. Specifically, we also investigated the role that promotive psychological ownership plays in mediating the association between functional indispensability and promotive voice behaviors. Moreover, the second goal of the current study was to identify some of the factors that influence these associations, such as quantitative job insecurity and organizational ambidexterity.

### 4.1. Findings

The results of our research support six of our seven hypotheses. Specifically, hypotheses 1 through 6 were supported, but hypothesis 7 was not. As such, our data suggest that the perceived functional indispensability of one's team is positively associated with employees' engagement in promotive voice behaviors (hypothesis 1). Functional indispensability was linked to increased promotive psychological ownership (hypothesis 2), which in turn was positively associated with promotive voice behaviors (hypothesis 3). The relationship between functional indispensability and promotive voice behaviors was partially mediated by the employee's feelings of promotive psychological ownership towards the organization (hypothesis 4). We also found that quantitative job insecurity moderated and weakened the link between functional indispensability and promotive psychological ownership (hypothesis 5). As for the moderating role of organizational ambidexterity, we did find the expected role of ambidexterity in fostering the link between functional indispensability and promotive voice behaviors (hypothesis 6), whereas ambidexterity had no effect on the association between promotive psychological ownership and promotive voice behaviors, thus not supporting our hypothesis 7.

In light of our findings, our results point to some effects which we consider particularly relevant to further discuss. For instance, our finding that quantitative job insecurity not only weakened the positive link between perceived functional indispensability and promotive psychological ownership but was also directly and negatively associated with promotive psychological ownership. These results suggest it is possible that the development of feelings of psychological ownership of the individual towards the organization depend, to an extent, on the individual's expectation of continuity of the employment relationship between them and the organization. Because quantitative job insecurity reflects a prediction of potential job loss, which may or may not happen at some point in the future (Shoss, 2017), the individual may perceive and anticipate a break in the continuity of the current employment relationship, resulting in lower feelings of promotive psychological ownership.

In our study, we expected that organizational ambidexterity would moderate the relationship between functional indispensability and promotive voice behaviors such that the higher the organizational ambidexterity, the stronger the association between functional indispensability and promotive voice behaviors. Indeed, our hypothesis was supported by our data. We did not, however, predict our finding that when functional indispensability is low, individuals who perceive high organizational ambidexterity engage in promotive voice behaviors less frequently than individuals who perceive low organizational ambidexterity. It is possible that when individuals perceive low functional indispensability and low organizational ambidexterity, they may feel an increased need to prove their worth to the organization and if the organization doesn't actively aim to innovate, they may hope their voicing of ideas and suggestions will be especially 'out of the box' and particularly valuable to the organization by promoting innovation themselves. And, while they may perceive it is possible for more indispensable individuals to offer better suggestions than their own or they may risk facing negative consequences of speaking up, the chance of proving their worth and increasing their indispensability may motivate them to decide to take the risk and engage in promotive voice behaviors to challenge the status quo. At the same time, individuals who perceive low functional indispensability and high organizational ambidexterity may choose to engage less frequently in promotive voice behaviors because they may fear speaking up would reinforce their low indispensability instead of increasing it under the assumption that in a context where innovation is sought for, someone else will speak up with more valuable suggestions than their own (i.e., their contributions may be less valuable in comparison to the contributions of highly indispensable individuals), causing these individuals to feel it may be pointless to engage in promotive voice behaviors to try and prove their worth. Additionally, we found that when functional indispensability is high, individuals who perceive high organizational ambidexterity engage in promotive voice behaviors more frequently than individuals who perceive low organizational ambidexterity. It is possible that when individuals perceive high functional indispensability and low organizational ambidexterity, they may feel they don't have to prove their worth by voicing their ideas and suggestions because the organization doesn't actively seek to innovate and their worth to the organization is, in theory, already established as they perceive themselves to be highly indispensable to the organization. As a result, these individuals engage less frequently in promotive voice behaviors because if they seek to maintain or reinforce their indispensability, speaking up may not be the way to do it in an organization where innovation is not a priority. At the same time, when individuals perceive high functional indispensability and high organizational ambidexterity, they may engage in promotive voice behaviors more frequently because they perceive that their voicing of ideas and suggestions should not only be more valued because they are indispensable to the organization's outcomes, but it should also be expected since they perceive the organization actively seeks to innovate. As such, these individuals may perceive that engaging in promotive voice behaviors is an opportunity to maintain or reinforce their indispensability to the organization while speaking up in a context where the risk of engaging in voice is possibly reduced because innovation is sought after.

We found that organizational ambidexterity did not influence the positive relationship between promotive psychological ownership and promotive voice behaviors. Hence, hypothesis 7 was not supported by our data. We advance two possible explanations for this evidence. First, it is possible that the link between promotive psychological ownership and promotive voice behaviors may be less susceptible to the influence of contextual factors and more susceptible to other individual factors. Still, it is also possible that contextual factors may play a role when they represent particularly negative aspects (e.g., incivility in the workplace). However, little research has sought to understand the link between promotive psychological ownership and promotive voice behaviors, and far less research has explored which contextual or individual factors play a role in influencing this relationship. This notion is further discussed in our suggestions for future directions in research. A second possible explanation for our results is that when employees have a strong feeling of promotive psychological ownership towards the organization, they may perceive the organization belongs to them, is a part of them, and because of this they are motivated to take the risk of speaking up in order to encourage promotive changes in the status quo regardless of whether they perceive the organization actively seeks to innovate or not.

### 4.2. Theoretical contributions

In light of our tested hypotheses and presented arguments, we believe our results make several theoretical contributions. First, to our knowledge, we present the first test of functional indispensability as a predictor of employees' engagement in promotive voice behaviors and, in doing so, we not only extend the literature on the antecedents of promotive voice behaviors, we also add to the recent literature introducing functional indispensability as a variable of interest in organizational settings (e.g., Rosa et al., 2020).

Second, the concept of psychological ownership has drawn increased attention from recent studies because it influences various outcomes for both the organization and its members, such as increased employee commitment, job satisfaction and reduced turnover intentions (Avey et al., 2009; Dawkins et al., 2017). Because of this, identifying the antecedents of psychological ownership is important both theoretically and for managerial practice. Still, little research has sought to explore how feelings of ownership emerge in the workplace (Wang et al., 2018). As such, our finding that functional indispensability of one's team is positively associated with the employee's promotive psychological ownership towards the organization, as well as our finding that quantitative job insecurity is negatively associated with promotive psychological ownership, are both important theoretical contributions to the literature on the antecedents of psychological ownership.

Third, previous research by Xiong et al. (2019) has suggested that feelings of psychological ownership are associated with an increase in employee voice behaviors in a hospitality context. We extend the existing literature in two ways: first, our results support the link between psychological ownership and employee voice behaviors in a number of industries and organizational contexts other than hospitality and, second, we validate these findings in a Portuguese sample which had not been done before.

And, fourth, the present study extends our understanding of organizational ambidexterity. Most research on this construct has focused on identifying the antecedents of ambidexterity and far less studies have sought to explore its outcomes (Simsek et al., 2009). Specifically, what effect it may have on influencing employees' engagement in voice behaviors with the intention to foster innovation, which is one of the main goals of organizations investing their resources in an effort to achieve ambidexterity. Our research fills both these gaps in the literature by suggesting that organizational ambidexterity does indeed foster promotive voice behaviors but this is not always the case (e.g., we found ambidexterity has a moderating role in the association between functional indispensability and promotive voice behaviors, but it does not influence the link between promotive psychological ownership and promotive voice behaviors).

### 4.3. Practical implications

Our results bring some relevant implications for practitioners. First, our data suggest if managers seek to encourage their employees to engage in promotive voice behaviors, their efforts should be invested in the development and implementation of initiatives to increase the employees' perception that their team is functionally indispensable in the achievement of organizational outcomes. This increase in perceived functional indispensability should not only lead to more promotive voice behaviors directly, but also lead to an increase in promotive psychological ownership towards the organization which is also associated with promotive voice behaviors. As such, we highlight the relevance of practitioners aiming to promote functional indispensability perceptions within their workforce not only as a means to benefit from their engagement in promotive voice behaviors, but also benefit from both individual and organizational outcomes associated with promotive psychological ownership of the employees towards the organization (e.g., employee commitment, job satisfaction and intentions to stay in the organization) (see Avey et al., 2009).

Second, our results suggest quantitative job insecurity represents a considerable hindrance effect on feelings of promotive psychological ownership. For practitioners, this may imply that when organizations rely heavily on temporary contracts as a type of employment, they are not only risking being affected by its negative outcomes (e.g., increased turnover intentions, reduced overall performance) (see Jiang & Lavaysse, 2018), they are also risking missing out on the positive outcomes of employees feeling high levels of promotive psychological ownership. As such, while the organization may benefit from a financial reduction in employment costs by relying on temporary contracts with their employees, they may be jeopardizing their overall performance. For this reason, practitioners may benefit from investing their efforts and organizational resources in reducing quantitative job insecurity, not only by considering employment contracts of longer duration but also by exploring other means.

Third, we found organizational ambidexterity to foster the positive link between functional indispensability and promotive voice behaviors. These results imply that practitioners may benefit from investing in promoting perceptions of ambidexterity within their workforce if their goal is to innovate. However, our results suggest if managers seek to further encourage employees to offer their input through promotive voice behaviors, increasing perceived organizational ambidexterity alone may actually lead employees with perceived low functional indispensability to speak up less frequently than if they perceived low ambidexterity. Thus, in order for the organization to reap the most input from their employees, managers should not only promote higher perceptions of ambidexterity, they must also seek to make their employees feel their teams are highly indispensable so they engage in promotive voice behaviors more frequently.

Finally, our findings suggest employees engage in promotive voice behaviors a bit more often during the Covid-19 pandemic than before. This may encourage practitioners to be more receptive of promotive voice behaviors in times of uncertainty because it seems employees are naturally more motivated to offer their input which may be particularly helpful for managers during a potential crisis.

### 4.4. Limitations and future directions

Despite the theoretical and practical contributions of our research, the current study has some limitations that should be considered by future research. First, because our data are cross-sectional, we cannot derive causal links between the studied variables or rule out other possible interpretations of the found results (e.g., functional indispensability and promotive psychological ownership as predictors of promotive voice behaviors). However, the current study does support the correlational link between these variables, which we recognize as a meaningful contribution to the existing literature. Moreover, our large sample increases the statistical power of our analyses, allowing us to uncover small effects and interactions between a number of variables, which enables a closer representation of the complexity of organizational experiences. Nonetheless, our results must be interpreted with caution because, while statistically significant, some of the effects we found are small. Furthermore, our sample is generally comprised by data with a relatively small kurtosis. As such, it could be interesting to revisit our hypotheses with different samples and with more extreme deviation patterns.

The second limitation is that our data were self-reported which, despite our analysis concluding common method bias doesn't pose a significant threat to the validity of the results of the current study, it may still be present. Future research could seek to collect their data over different points in time as a means to reduce the possible influence of common method bias (MacKenzie & Podsakoff, 2012). While it is also possible to collect their data from different sources (e.g., measure promotive voice behaviors as rated by peers or supervisors) (Ng & Feldman, 2012), this may lead to an underreported accounting of promotive voice behaviors. This is because individuals other than the employee engaging in these behaviors may not capture voice behaviors that the employee directed at other organizational members and may not notice all of the employee's attempts to engage in voice.

The third limitation relates to the objectivity of our independent variable (i.e., functional indispensability). Even though the results confirm our hypotheses that functional indispensability is positively associated to both promotive psychological ownership and promotive voice behaviors, we did not give our participants a concrete definition of 'team' in our operationalization of the variable. As such, it is possible that some of the participants responded on the basis of different criteria as to what their team is and who in relation to them is a part of the team, and some participants may not work in a team. Future studies could aim at replicating our results with the added definition of what ‘team’ is in the context of this line of research and ensure the participants do work in a team. Furthermore, our study focused on the operationalization of team indispensability to the organization as perceived by the employee and it would also be interesting to obtain a more integrated knowledge of indispensability in organizations by exploring its various forms (e.g., indispensability of the individual to the team and to the organization, indispensability of the team to the individual, indispensability of the organization to the team and to the individual).

The fourth limitation of our study is we began our data collection with the intention to use multilevel analysis given the nature of our variables (e.g., promotive psychological ownership at the individual level, and organizational ambidexterity at the organizational level). However, preliminary analyses of our data showed unsatisfactory rwg(j) values which led us to not follow through with the multilevel analysis of our data. However, future research could benefit from following a more structured data collection approach which may allow for multilevel analysis.

The fifth limitation of the current study is we did not conduct a confirmatory factor analysis of organizational ambidexterity to test whether our data fit the hypothesized measurement model because the measure we used comprised two first-order factors and in order to identify a confirmatory factor analysis model, there must be three or more first-order factors or the direct effects of the second-order factor on the first-order factors may be underidentified (Kline, 2011, p. 249). Because we did not validate this measure for our Portuguese sample, our results concerning the moderating role of organizational ambidexterity on the link between functional indispensability and promotive voice behaviors, as well as the link between promotive psychological ownership and promotive voice behaviors, should be interpreted with caution. Future research could aim to replicate our findings while using a validated measure of organizational ambidexterity for Portuguese samples.

Lastly, another limitation of our study is that our participants were members of several organizations and, because of this, some contextual factors which we did not control for may actually be influencing the relationships found between the variables of our study. Some of these contextual factors may be organizational culture and leadership style, which have been linked to employees’ engagement in voice behaviors (Liu et al., 2010). As such, the further study of these relationships under more controlled settings may prove to be a relevant path for future research.

In addition to overcoming the limitations of the current study, we see a number of possible paths of interest for future research. First, research on functional indispensability has only recently begun studying its outcomes in organizational settings (e.g., support for the merger)

(Rosa et al., 2020). As such, future work could aim to further investigate not only the outcomes of functional indispensability but also its antecedents in order to understand what factors managers must take into account if they seek to promote perceptions of indispensability within their teams.

Our results suggest that perceptions of high functional indispensability are associated with more frequent engagement in promotive voice behaviors. From a managerial perspective, it is expected that teams higher in functional indispensability also receive access to more organizational resources than teams that are not as indispensable to the organization's desired outcomes. This, however, may not always mean that employees' perceptions of functional indispensability align with managers' perceived functional indispensability of those teams. Moreover, it may not always mean that all the members of a highly indispensable team perceive such indispensability on the same level. This may result in some members of highly indispensable teams engaging less frequently in promotive voice behaviors, and some members of less indispensable teams engaging more in these behaviors. For this reason, it would be relevant for future research to address this issue and investigate whether team members' perceptions of functional indispensability align with the perceived indispensability of other members within their team, as well as with the perceptions of the managers who allocate organizational resources in an effort to maximize desired outcomes.

We found the link between functional indispensability and promotive voice behaviors to be fostered by organizational ambidexterity, but we saw no effect of ambidexterity on the association between promotive psychological ownership and promotive voice behaviors which, as previously discussed, may imply that the latter is not as susceptible to the influence of contextual factors. Future research should seek to test this hypothesis by exploring other contextual factors as potential moderators (e.g., organizational culture, leadership styles) and individual moderators (e.g., personality traits, perceived competence), exploring whether there is indeed a pattern of contextual moderators having weaker effects than individual moderators on the association between promotive psychological ownership and promotive voice behaviors.

While previous studies have linked psychological ownership to voice behaviors (Xiong et al., 2019), the present research focused on testing the association between the specifically promotive dimensions of both constructs. However, psychological ownership can be preventative (Avey et al., 2009) and voice behaviors can be prohibitive in nature (Liang et al., 2012). It could be interesting for future research to uncover whether preventative psychological ownership is also significantly linked to prohibitive voice behaviors. The answer to this question may extend the literature on the antecedents of prohibitive voice and further our understanding of why employees engage in voice behaviors prohibitive in nature, especially when they are deemed to be more risky for employees than promotive voice behaviors (Svendsen et al., 2018).

Our study found quantitative job insecurity to have both a direct negative effect on promotive psychological ownership, as well as a moderating role on decreasing the link between functional indispensability and feelings of promotive psychological ownership towards the organization. As previously discussed, it is possible that the development of psychological ownership depends on an expectation of continuity of the employment relationship between the employee and the organization. But the possibility of involuntarily losing one's job is not the only circumstance under which an employment relationship may come to an end. For instance, older employees close to retirement may also expect their employment relationship to be close to an end. Moreover, employees at any career stage may seek new professional challenges and opportunities outside their current organization, which would mean their current employment relationship would come to an end as a result of their own choosing. If this is the case, future research could benefit from exploring the possible relationship between occupational future life perspective which Weikamp and Göritz (2016) define as "how much remaining time and how many remaining opportunities people perceive themselves as having left in future occupational life" (p.11) and promotive psychological ownership. Furthermore, future studies could explore a potential link between boundaryless career orientation which relates to an individual's orientation to build their career without being bound to one single organizational setting (i.e., boundaryless) (Arthur & Rousseau, 1996) and promotive psychological ownership.

## 4.5. Conclusion

Innovation is essential for the survival and success of organizations in the long-term (O'Reilly & Tushman, 2013) and it comprises not only the recognition but also the development of new ideas and solutions that challenge previously adopted practices and procedures (Benner & Tushman, 2003). Organizations today rely more on teamwork than ever before (Kozlowski & Ilgen, 2006; Mathieu et al., 2014) and managers increasingly need more input from their employees (Hsiung, 2012; Bindl & Parker, 2010). Nonetheless, if employees have new ideas and solutions but do not speak up and share them with other organizational members, the innovation process is interrupted and the organization's success may be hindered as a result. Our research model contributes to the existing literature by exploring the antecedents of promotive voice behaviors as well as the outcomes of functional indispensability that ultimately benefit the organization. We not only describe one of the mechanisms through which employees come to engage in promotive voice behaviors, but we also provide new insights into some of the factors that influence this mechanism (i.e., quantitative job insecurity and organizational ambidexterity), which managers should consider when allocating organizational resources to their teams in order to optimize desired outcomes such as innovation. Moreover, we hope our work encourages further research on functional indispensability, a fairly new concept in organizational behavior literature with relevant implications for both literature and practice.

## References


Adler, P. S., Goldoftas, B., & Levine, D. I. (1999). Flexibility versus efficiency? A case study of model changeovers in the Toyota production system. *Organization Science*, *10*(1), 43-68. DOI: 10.1287/orsc.10.1.43

Ahuja, G., & Morris Lampert, C. (2001). Entrepreneurship in the large corporation: A longitudinal study of how established firms create breakthrough inventions. *Strategic Management Journal*, *22*(6-7), 521-543. DOI: 10.1002/smj.176

Angle, H. L., & Perry, J. L. (1983). Organizational commitment: Individual and organizational influences. *Work and Occupations*, *10*(2), 123-146. DOI: 10.1177/0730888483010002001

Argote, L. (1999). *Organizational Learning: Creating, retaining, and transferring knowledge*. Kluwer. *Norwell, MA*.

Arthur, M. B., & Rousseau, D. M. (Eds.). (2001). *The boundaryless career: A new employment principle for a new organizational era*. Oxford University Press on Demand.

Ashford, S. J., Lee, C., & Bobko, P. (1989). Content, cause, and consequences of job insecurity: A theory-based measure and substantive test. *Academy of Management Journal*, *32*(4), 803-829. DOI: 10.2307/256569

Aspinwall, L. G., & Taylor, S. E. (1997). A stitch in time: Self-regulation and proactive coping. *Psychological Bulletin*, *121*(3), 417. DOI: 10.1037/0033-2909.121.3.417

Atuahene-Gima, K. (2005). Resolving the capability–rigidity paradox in new product innovation. *Journal of Marketing*, *69*(4), 61-83. DOI: 10.1509/jmkg.2005.69.4.61

Avery, D. R. (2003). Personality as a predictor of the value of voice. *Journal of Psychology*, *137*(5), 435-446. DOI: 10.1080/00223980309600626

Avery, D. R., & Quiñones, M. A. (2002). Disentangling the effects of voice: the incremental roles of opportunity, behavior, and instrumentality in predicting procedural fairness. *Journal of Applied Psychology*, *87*(1), 81. DOI: 10.1037/0021-9010.87.1.81

Avey, J. B., Avolio, B. J., Crossley, C. D., & Luthans, F. (2009). Psychological ownership: Theoretical extensions, measurement and relation to work outcomes. *Journal of Organizational Behavior*, *30*(2), 173-191. DOI: 10.1002/job.583

Avey, J. B., Wernsing, T. S., & Palanski, M. E. (2012). Exploring the process of ethical leadership: The mediating role of employee voice and psychological ownership. *Journal of Business Ethics*, *107*(1), 21-34. DOI: 10.1007/s10551-012-1298-2

Baard, S. K., Rench, T. A., & Kozlowski, S. W. (2014). Performance adaptation: A theoretical integration and review. *Journal of Management*, *40*(1), 48-99. DOI: 10.1177/0149206313488210

Barsky, A., Kaplan, S. A., & Beal, D. J. (2011). Just feelings? The role of affect in the formation of organizational fairness judgments. *Journal of Management*, *37*(1), 248-279. DOI: 10.1177/0149206310376325

Bashshur, M. R., & Oc, B. (2015). When voice matters: A multilevel review of the impact of voice in organizations. *Journal of Management*, *41*(5), 1530-1554. DOI: 10.1177/0149206314558302

Beal, D. J., Weiss, H. M., Barros, E., & MacDermid, S. M. (2005). An episodic process model of affective influences on performance. *Journal of Applied Psychology*, *90*(6), 1054. DOI: 10.1037/0021-9010.90.6.1054

Beckman, C. M. (2006). The influence of founding team company affiliations on firm behavior. *Academy of Management Journal*, *49*(4), 741-758. DOI: 10.5465/amj.2006.22083030

Beggan, J. K. (1992). On the social nature of nonsocial perception: The mere ownership effect. *Journal of Personality and Social Psychology*, *62*(2), 229. DOI: 10.1037/0022-3514.62.2.229

Benner, M. J., & Tushman, M. L. (2003). Exploitation, exploration, and process management: The productivity dilemma revisited. *Academy of Management Review*, *28*(2), 238-256. DOI: 10.5465/amr.2003.9416096

Bergeron, D. M., & Thompson, P. S. (2020). Speaking Up at Work: The Role of Perceived Organizational Support in Explaining the Relationship Between Perceptions of Organizational Politics and Voice Behavior. *The Journal of Applied Behavioral Science*, *56*(2), 195-215. DOI: 10.1177/0021886319900332

Bindl, U. K., & Parker, S. K. (2010). Proactive work behavior: Forward-thinking and change-oriented action in organizations. In *APA Handbook of Industrial and Organizational Psychology*. (pp. 567-598). American Psychological Association.

Blau, P. (1964). *Exchange and power in social life*. New York: Wiley.

Bliese, P. D., Chan, D., & Ployhart, R. E. (2007). Multilevel methods: Future directions in measurement, longitudinal analyses, and nonnormal outcomes. *Organizational Research Methods*, *10*(4), 551-563. DOI: 10.1177/1094428107301102

Brislin, R. W. (1970). Back-translation for cross-cultural research. *Journal of Cross-Cultural Psychology*, 1, 185-216. DOI: 10.1177/135910457000100301

Brix, J. (2017). Exploring knowledge creation processes as a source of organizational learning: A longitudinal case study of a public innovation project. *Scandinavian Journal of Management, 33*(2), 113-127. DOI: 10.1016/j.scaman.2017.05.001

Brix, J. (2019). Ambidexterity and organizational learning: revisiting and reconnecting the literatures. *The Learning Organization, 26(4),* 337-351. DOI: 10.1108/TLO-02-2019-0034

Brown, G., Pierce, J. L., & Crossley, C. (2014). Toward an understanding of the development of ownership feelings. *Journal of Organizational Behavior*, *35*(3), 318-338. DOI: 10.1002/job.1869

Brown, J. S., & Duguid, P. (2001). Knowledge and organization: A social-practice perspective. *Organization Science*, *12*(2), 198-213. DOI: 10.1287/orsc.12.2.198.10116

Brown, T. A. (2015). *Confirmatory factor analysis for applied research*. Guilford publications.

Burgers, J. H., Jansen, J. J., Van den Bosch, F. A., & Volberda, H. W. (2009). Structural differentiation and corporate venturing: The moderating role of formal and informal integration mechanisms. *Journal of Business Venturing*, *24*(3), 206-220. DOI: 10.1016/j.jbusvent.2009.01.006

Burris, E. R. (2012). The risks and rewards of speaking up: Managerial responses to employee voice. *Academy of Management Journal*, *55*(4), 851-875. DOI: 10.5465/amj.2010.0562

Burton, M. D., O'Reilly, C. A., & Bidwell, M. (2012). Management systems for exploration and exploitation: The micro-foundations of organizational ambidexterity. In *Annual Meetings of the Academy of Management, Boston*. DOI: 10.5465/AMBPP.2012.11809abstract

Byrne, B. M. (2001). *Structural equation modeling with AMOS: basic concepts, applications, and programming (multivariate applications series).* New York: Taylor & Francis Group, *396*, 7384.

Cangelosi, V. E., & Dill, W. R. (1965). Organizational learning: Observations toward a theory. *Administrative Science Quarterly*, *10*(2) 175-203. DOI: 10.2307/2391412

Cao, Q., Gedajlovic, E., & Zhang, H. (2009). Unpacking organizational ambidexterity: Dimensions, contingencies, and synergistic effects. *Organization Science*, *20*(4), 781-796. DOI: 10.1287/orsc.1090.0426

Caspin-Wagner, K., Ellis, S., & Tishler, A. (2012). Balancing exploration and exploitation for firm's superior performance: The role of the environment. In *Academy of Management Proceedings*. Briarcliff Manor, NY 10510: Academy of Management.

Cavanaugh, M. A., Boswell, W. R., Roehling, M. V., & Boudreau, J. W. (2000). An empirical examination of self-reported work stress among US managers. *Journal of Applied Psychology, 85*(1), 65. DOI: 10.1037/0021-9010.85.1.65

Chamberlin, M., Newton, D. W., & Lepine, J. A. (2017). A meta-analysis of voice and its promotive and prohibitive forms: Identification of key associations, distinctions, and future research directions. *Personnel Psychology*, *70*(1), 11-71. DOI: 10.1111/peps.12185

Chen, A. S. Y., & Hou, Y. H. (2016). The effects of ethical leadership, voice behavior and climates for innovation on creativity: A moderated mediation examination. *The Leadership Quarterly*, *27*(1), 1-13. DOI: 10.1016/j.leaqua.2015.10.007

Cheng, G. H. L., & Chan, D. K. S. (2008). Who suffers more from job insecurity? A meta-analytic review. *Applied Psychology*, *57*(2), 272-303. DOI: 10.1111/j.1464-0597.2007.00312.x

Crossan, M. M., Lane, H. W., & White, R. E. (1999). An organizational learning framework: From intuition to institution. *Academy of management review*, *24*(3), 522-537. DOI: 10.5465/amr.1999.2202135

Danneels, E. (2011). Trying to become a different type of company: Dynamic capability at Smith Corona. *Strategic management journal*, *32*(1), 1-31. DOI: 10.1002/smj.863

Davis, P. R., Trevor, C. O., & Feng, J. (2015). Creating a more quit-friendly national workforce? Individual layoff history and voluntary turnover. *Journal of Applied Psychology*, *100*(5), 1434. DOI: 10.1037/apl0000012

Davy, J. A., Kinicki, A. J., & Scheck, C. L. (1997). A test of job security's direct and mediated effects on withdrawal cognitions. *Journal of Organizational Behavior*, *18*(4), 323-349. DOI: 10.1002/(SICI)1099-1379(199707)18:4<323::AID-JOB801>3.0.CO;2-#

Dawkins, S., Tian, A. W., Newman, A., & Martin, A. (2017). Psychological ownership: A review and research agenda. *Journal of Organizational Behavior*, *38*(2), 163-183. DOI: 10.1002/job.2057

De Cuyper, N., & De Witte, H. (2007). Job insecurity in temporary versus permanent workers: Associations with attitudes, well-being, and behaviour. *Work & Stress*, *21*(1), 65-84. DOI: 10.1080/02678370701229050

De Witte, E. H. (1989). Köhler rediscovered: The anti-ringelmann effect. *European Journal of Social Psychology*, *19*(2), 147-154. DOI: 10.1002/ejsp.2420190206

De Witte, H. D. (1999). Job insecurity and psychological well-being: Review of the literature and exploration of some unresolved issues. *European Journal of Work and Organizational Psychology*, *8*(2), 155-177. DOI: 10.1080/135943299398302

De Witte, H., Pienaar, J., & De Cuyper, N. (2016). Review of 30 years of longitudinal studies on the association between job insecurity and health and well-being: Is there causal evidence?. *Australian Psychologist*, *51*(1), 18-31. DOI: 10.1111/ap.12176

Debus, M. E., König, C. J., & Kleinmann, M. (2014). The building blocks of job insecurity: The impact of environmental and person-related variables on job insecurity perceptions. *Journal of Occupational and Organizational Psychology*, *87*(2), 329-351. DOI: 10.1111/joop.12049

Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, *11*(4), 227-268. DOI: 10.1207/S15327965PLI1104_01

Dekker, S. W., & Schaufeli, W. B. (1995). The effects of job insecurity on psychological health and withdrawal: A longitudinal study. *Australian Psychologist*, *30*(1), 57-63. DOI: 10.1080/00050069508259607

Detert, J. R., & Burris, E. R. (2007). Leadership behavior and employee voice: Is the door really open?. *Academy of Management Journal*, *50*(4), 869-884. DOI: 10.5465/AMJ.2007.26279183

Detert, J. R., & Edmondson, A. C. (2011). Implicit voice theories: Taken-for-granted rules of self-censorship at work. *Academy of Management Journal*, *54*(3), 461-488. DOI: 10.5465/AMJ.2011.61967925

Dirks, K. T., Cummings, L. L., & Pierce, J. L. (1996). Psychological ownership in organizations: Conditions under which individuals promote and resist change. In R. W. Woodman, & W. A. Pasmore (Eds.), *Research in organizational change and development* (Vol. 9 pp. 1–23). Greenwhich, CT: JAI Press.

Dittmar, H. (1992). *The social psychology of material possessions: To have is to be*. New York: St. Martin’s Press.

Duan, J., Li, C., Xu, Y., & Wu, C. H. (2017). Transformational leadership and employee voice behavior: A Pygmalion mechanism. *Journal of Organizational Behavior*, *38*(5), 650-670. DOI: 10.1002/job.2157

Duncan, R. B. 1976. The ambidextrous organization: Designing dual structures for innovation. In R. H. Kilmann, L. R. Pondy, & D. Slevin (Eds.), *The management of organization*, (Vol. 1: 167–188). New York: North-Holland.

Dutton, J. E., Ashford, S. J., Lawrence, K. A., & Miner-Rubino, K. (2002). Red light, green light: Making sense of the organizational context for issue selling. *Organization Science*, *13*(4), 355-369. DOI: 10.1287/orsc.13.4.355.2949

Edmondson, A. C. (2003). Speaking up in the operating room: How team leaders promote learning in interdisciplinary action teams. *Journal of Management Studies*, *40*(6), 1419-1452. DOI: 10.1111/1467-6486.00386

Eisenberger, R., Cummings, J., Armeli, S., & Lynch, P. (1997). Perceived organizational support, discretionary treatment, and job satisfaction. *Journal of Applied Psychology*, *82*(5), 812. DOI: 10.1037/0021-9010.82.5.812

Eisenberger, R., Fasolo, P., & Davis-LaMastro, V. (1990). Perceived organizational support and employee diligence, commitment, and innovation. *Journal of Applied Psychology*, *75*(1), 51. DOI: 10.1037/0021-9010.75.1.51

Eisenberger, R., Huntington, R., Hutchison, S., & Sowa, D. (1986). Perceived organizational support. *Journal of Applied Psychology*, *71*(3), 500. DOI: 10.1037/0021-9010.71.3.500

Emerson, R. M. (1976). Social exchange theory. *Annual Review of Sociology*, *2*(1), 335-362. DOI: 10.1146/annurev.so.02.080176.002003

Fernhaber, S. A., & Patel, P. C. (2012). How do young firms manage product portfolio complexity? The role of absorptive capacity and ambidexterity. *Strategic Management Journal*, *33*(13), 1516-1539. DOI: 10.1002/smj.1994

Festinger, L. (1954). A theory of social comparison processes. *Human Relations*, *7*(2), 117-140. DOI: 10.1177/001872675400700202

Fielding, K. S., & Hogg, M. A. (2000). Working hard to achieve self-defining group goals: A social identity analysis. *Zeitschrift für Sozialpsychologie*, *31*(4), 191–203. DOI: 10.1024/0044-3514.31.4.191

Folkman, S., & Lazarus, R. S. (1984). *Stress, appraisal, and coping* (pp. 150-153). New York: Springer Publishing Company.

Frazier, M. L., & Bowler, W. M. (2015). Voice climate, supervisor undermining, and work outcomes: A group-level examination. *Journal of Management*, *41*(3), 841-863. DOI: 10.1177/0149206311434533

Frese, M., Teng, E., & Wijnen, C. J. (1999). Helping to improve suggestion systems: Predictors of making suggestions in companies. *Journal of Organizational Behavior*, *20*(7), 1139-1155. DOI: 10.1002/(SICI)1099-1379(199912)20:7<1139::AID-JOB946>3.0.CO;2-I

Fuller, B., Marler, L. E., Hester, K., & Otondo, R. F. (2015). Leader reactions to follower proactive behavior: Giving credit when credit is due. *Human Relations*, *68*(6), 879-898. DOI: 10.1177/0018726714548235

Furby, L. (1978). Possession in humans: An exploratory study of its meaning and motivation. *Social Behavior and Personality: An International Journal*, *6*(1), 49-65. DOI: 10.2224/sbp.1978.6.1.49

Furby, L. (1978a). Possessions: Toward a theory of their meaning and function throughout the life cycle. In P. B. Baltes (Ed.), *Life span development and behavior* (pp. 297–336). New York: Academic Press.

Geerts, A., Blindenbach-Driessen, F., & Gemmel, P. (2010). Achieving a balance between exploration and exploitation in service firms: a longitudinal study. In *Academy of Management Proceedings* (pp. 1-6). Briarcliff Manor, NY 10510: Academy of Management.

Gerber, J. P., Wheeler, L., & Suls, J. (2018). A social comparison theory meta-analysis 60+ years on. *Psychological Bulletin*, *144*(2), 177. DOI: 10.1037/bul0000127

Gibson, C. B., & Birkinshaw, J. (2004). The antecedents, consequences, and mediating role of organizational ambidexterity. *Academy of Management Journal*, *47*(2), 209-226. DOI: 10.2307/20159573

Gockel, C., Kerr, N. L., Seok, D. H., & Harris, D. W. (2008). Indispensability and group identification as sources of task motivation. *Journal of Experimental Social Psychology*, *44*(5), 1316-1321. DOI: 10.1016/j.jesp.2008.03.011

Grant, A. M. (2013). Rocking the boat but keeping it steady: The role of emotion regulation in employee voice. *Academy of Management Journal*, *56*(6), 1703-1723. DOI: 10.5465/amj.2011.0035

Grant, A. M., and Berg, J. M. (2011). Prosocial motivation at work: when, why, and how making a difference makes a difference. In Cameron. K. & Spreitzer G. (Eds.) *Oxford Handbook of Positive Organizational Scholarship* (pp. 28-44). New York, NY: Oxford University Press.

Greenhalgh, L., & Rosenblatt, Z. (1984). Job insecurity: Toward conceptual clarity. *Academy of Management Review*, *9*(3), 438-448. DOI: 10.2307/258284

Guerra, R., Gaertner, S. L., António, R., & Deegan, M. (2015). Do we need them? When immigrant communities are perceived as indispensable to national identity or functioning of the host society. *European Journal of Social Psychology*, *45*(7), 868-879. DOI: 10.1002/ejsp.2153

Guerra, R., Rodrigues, D., Gaertner, S. L., Deegan, M., & António, R. (2016). The functional and identity indispensability scale (FIIS). *International Journal of Intercultural Relations, 54,* 34-46. DOI: 10.1016/j.ijintrel.2016.07.001

Gupta, A. K., Smith, K. G., & Shalley, C. E. (2006). The interplay between exploration and exploitation. *Academy of Management Journal*, *49*(4), 693-706. DOI: 10.5465/AMJ.2006.22083026

Gupta, M., Ravindranath, S., & Kumar, Y. L. N. (2018). Voicing concerns for greater engagement. In *Evidence-based HRM: A global forum for empirical scholarship*. Emerald Publishing Limited.

Hackman, R. J., & Oldham, G. (1976). Motivation through the design of work: Test of a theory. *Organizational Behavior and Human Performance*, *16*(2), 250-279. DOI: 10.1016/0030-5073(76)90016-7

Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. (2010). *Multivariate data analysis*. Uppersaddle River.

Harkins, S. G. (1987). Social loafing and social facilitation. *Journal of Experimental Social Psychology*, *23*(1), 1-18. DOI: 10.1016/0022-1031(87)90022-9

Haslam, S. A. (2004). *Psychology in organizations: The social identity approach* (2nd ed.). London, UK & Thousand Oaks, CA: Sage.

Hayes, A. F. (2013). *Introduction to mediation, moderation, and conditional process analysis*. New York: The Guilford Press.

Heider, F. (1958). *The Psychology of Interpersonal Relations*. New York: Wiley.

Hellgren, J., Sverke, M., & Isaksson, K. (1999). A two-dimensional approach to job insecurity: Consequences for employee attitudes and well-being. *European Journal of Work and Organizational Psychology*, *8*(2), 179-195. DOI: 10.1080/135943299398311

Hernandez, M. (2012). Toward an understanding of the psychology of stewardship. *Academy of Management Review*, *37*(2), 172-193. DOI: 10.5465/amr.2010.0363

Hertel, G., Deter, C., & Konradt, U. (2003). Motivation Gains in Computer-Supported Groups. *Journal of Applied Social Psychology*, *33*(10), 2080-2105. DOI: 10.1111/j.1559-1816.2003.tb01876.x

Hertel, G., Kerr, N. L., & Messé, L. A. (2000). Motivation gains in performance groups: Paradigmatic and theoretical developments on the Köhler effect. *Journal of Personality and Social Psychology*, *79*(4), 580.

Hertel, G., Niemeyer, G., & Clauss, A. (2008). Social Indispensability or Social Comparison: The Why and When of Motivation Gains of Inferior Group Members. *Journal of Applied Social Psychology*, *38*(5), 1329-1363. DOI: 10.1111/j.1559-1816.2008.00350.x

Hertel, G., Nohe, C., Wessolowski, K., Meltz, O., Pape, J. C., Fink, J., & Hüffmeier, J. (2018). Effort Gains in Occupational Teams–The Effects of Social Competition and Social Indispensability. *Frontiers in Psychology, 9*, 769. DOI: 10.3389/fpsyg.2018.00769

Higgins ET. (1998). Promotion and prevention: Regulatory focus as a motivational principle. In Zanna MP (Ed.). *Advances in experimental social psychology* (Vol. 30, pp. 1–46). San Diego, CA: Academic Press.

Hill, S. A., & Birkinshaw, J. (2014). Ambidexterity and survival in corporate venture units. *Journal of Management, 40*(7), 1899-1931. DOI: 10.1177/0149206312445925

Hsiung, H. H. (2012). Authentic leadership and employee voice behavior: A multi-level psychological process. *Journal of Business Ethics*, *107*(3), 349-361. DOI: 10.1007/s10551-011-1043-2

Hsiung, H. H., & Tsai, W. C. (2017). The joint moderating effects of activated negative moods and group voice climate on the relationship between power distance orientation and employee voice behavior. *Applied Psychology*, *66*(3), 487-514. DOI: 10.1111/apps.12096

Hu, L. & Bentler, P. (1995). Evaluating model fit. In R. Hoyle (Eds). *Structural equation modeling: Concepts, issues, and applications* (pp. 1-15). Thousand Oaks: Sage.

Hu, S., Jiang, L., Probst, T. M., & Liu, M. (2018). The relationship between qualitative job insecurity and subjective well-being in Chinese employees: The role of work–family conflict and work centrality. *Economic and Industrial Democracy*. DOI: 10.1177/0143831X18759793

Hulland, J., Thompson, S. A., & Smith, K. M. (2015). Exploring uncharted waters: Use of psychological ownership theory in marketing. *Journal of Marketing Theory and Practice*, *23*(2), 140-147.

Hunton, J. E., Price, K. H., & Hall, T. W. (1996). A field experiment examining the effects of membership in voting majority and minority subgroups and the ameliorating effects of postdecisional voice. *Journal of Applied Psychology*, *81*(6), 806. DOI: 10.1037/0021-9010.81.6.806

Ito, J., & Brotheridge, C. (2007). Exploring the predictors and consequences of job insecurity's components. *Journal of Managerial Psychology*, 22, 40–64. DOI: 10.1108/02683940710721938

Jahoda, M. (1997). Manifest and latent functions. In N. Nicholson, R. S. Schuler, & A. H. Van de Veen (Eds.), *The Blackwell encyclopedic dictionary of organizational behavior* (pp. 317–318). Oxford: Blackwell.

Jansen, J. J., Van Den Bosch, F. A., & Volberda, H. W. (2006). Exploratory innovation, exploitative innovation, and performance: Effects of organizational antecedents and environmental moderators. *Management Science*, *52*(11), 1661-1674. DOI: 10.1287/mnsc.1060.0576

Jansen, J. J., Vera, D., & Crossan, M. (2009). Strategic leadership for exploration and exploitation: The moderating role of environmental dynamism. *The Leadership Quarterly*, *20*(1), 5-18. DOI: 10.1016/j.leaqua.2008.11.008

Jetten, J., Branscombe, N. R., Spears, R., & McKimmie, B. M. (2003). Predicting the paths of peripherals: The interaction of identification and future possibilities. *Personality and Social Psychology Bulletin*, *29*(1), 130-140. DOI: 10.1177/0146167202238378

Jiang, L., & Lavaysse, L. M. (2018). Cognitive and affective job insecurity: A meta-analysis and a primary study. *Journal of Management*, *44*(6), 2307-2342. DOI: 10.1177/0149206318773853

Jiang, L., & Probst, T. M. (2014). Organizational communication: A buffer in times of job insecurity?. *Economic and Industrial Democracy*, *35*(3), 557-579. DOI: 10.1177/0143831X13489356

Jiang, L., Probst, T. M., & Sinclair, R. R. (2013). Perceiving and responding to job insecurity: The importance of multilevel contexts. In A. Antoniou & C. Cooper (Eds.), *The psychology of the recession on the workplace* (pp. 176–195). Cheltenham, UK: Edward Elgar.

Judge, T. A., Erez, A., Bono, J. E., & Thoresen, C. J. (2003). The core self-evaluations scale: Development of a measure. *Personnel psychology*, *56*(2), 303-331. DOI: 10.1111/j.1744-6570.2003.tb00152.x

Jussila, I., Tarkiainen, A., Sarstedt, M., & Hair, J. F. (2015). Individual psychological ownership: Concepts, evidence, and implications for research in marketing. *Journal of Marketing Theory and Practice*, *23*(2), 121-139.

Karau, S. J., & Williams, K. D. (1993). Social loafing: A meta-analytic review and theoretical integration. *Journal of Personality and Social Psychology*, *65*(4), 681. DOI: 10.1037/0022-3514.65.4.681

Karau, S. J., & Williams, K. D. (1997). The effects of group cohesiveness on social loafing and social compensation. *Group Dynamics: Theory, Research, and Practice*, *1*(2), 156. DOI: 10.1037/1089-2699.1.2.156

Karau, S. J., & Williams, K. D. (2001). Understanding individual motivation in groups: The collective effort model. In M. E. Turner (Ed.), *Applied social research. Groups at work: Theory and research* (p. 113–141). Lawrence Erlbaum Associates Publishers.

Kerr, N. L. (1983). Motivation losses in small groups: A social dilemma analysis. *Journal of Personality and Social Psychology*, *45*(4), 819-828. DOI: 10.1037/0022-3514.45.4.819

Kerr, N. L., & Bruun, S. E. (1983). Dispensability of member effort and group motivation losses: Free-rider effects. *Journal of Personality and Social Psychology, 44*(1), 78. DOI: 10.1037/0022-3514.44.1.78

Kerr, N. L., & Hertel, G. (2011). The Köhler group motivation gain: How to motivate the ‘weak links’ in a group. *Social and Personality Psychology Compass*, *5*(1), 43-55. DOI: 10.1111/j.1751-9004.2010.00333.x

Kerr, N. L., Messé, L. A., Seok, D. H., Sambolec, E. J., Lount Jr, R. B., & Park, E. S. (2007). Psychological mechanisms underlying the Köhler motivation gain. *Personality and Social Psychology Bulletin*, *33*(6), 828-841. DOI: 10.1177/0146167207301020

Kim, D.H. (1993). The link between individual and organizational learning. *Sloan Management Review, 35(1)*, 37-50. DOI: 10.1177/1350507606070220

Kim, T. Y., Rosen, B., & Lee, D. R. (2009). South Korean managerial reactions to voicing discontent: The effects of employee attitude and employee communication styles. *Journal of Organizational Behavior, 30*(7), 1001-1018. DOI: 10.1002/job.612

King, J.E. (2000). White-collar reactions to job insecurity and the role of the psychological contract: Implications for human resource management. *Human Resource Management, 39(1)*, 79-92. DOI: 10.1002/(SICI)1099-050X(200021)39:1<79::AID-HRM7>3.0.CO;2-A

Kiss, A. N., Libaers, D., Barr, P. S., Wang, T., & Zachary, M. A. (2019). Ceo Cognitive Flexibility, Information Search, And Organizational Ambidexterity. *Strategic Management Journal*, 1-34. DOI: 10.1002/smj.3192

Klandermans, B., Hesselink, J. K., & Van Vuuren, T. (2010). Employment status and job insecurity: On the subjective appraisal of an objective status. *Economic and Industrial Democracy, 31*(4), 557-577. DOI: 10.1177/0143831X09358362

Klandermans, B., Van Vuuren, T., & Jacobson, D. 1991. Employees and job insecurity. In J. Hartley, D. Jacobson, B. Klandermans, & T. Van Vuuren (Eds.), *Job insecurity: Coping with jobs at risk* (pp. 40-54). London: Sage.

Kline, R. B. (2011). *Principles and practice of structural equation modeling*. Guilford publications.

Köhler, O. (1926). Kraftleistungen bei Einzel-und Gruppenarbeit [Physical performance in individual and group work]. *Industrielle Psychotechnik*, *3*, 274-82.

Kozlowski, S. W., & Ilgen, D. R. (2006). Enhancing the effectiveness of work groups and teams. *Psychological Science in the Public Interest*, *7*(3), 77-124. DOI: 10.1111/j.1529-1006.2006.00030.x

Kravitz, D. A., & Martin, B. (1986). Ringelmann rediscovered: The original article. *Journal of Personality and Social Psychology*, 50(5), 936–941. DOI: 10.1037/0022-3514.50.5.936

Lam, C. F., & Mayer, D. M. (2014). When do employees speak up for their customers? A model of voice in a customer service context. *Personnel Psychology*, *67*(3), 637-666. DOI: 10.1111/peps.12050

Lanaj, K., Hollenbeck, J. R., Ilgen, D. R., Barnes, C. M., & Harmon, S. J. (2013). The double-edged sword of decentralized planning in multiteam systems. *Academy of Management Journal*, *56*(3), 735-757. DOI: 10.5465/amj.2011.0350

Landau, J. (2009). To speak or not to speak: Predictors of voice propensity. *Journal of Organizational Culture, Communications and Conflict*, *13*(1), 35-54.

Larson Jr, J. R., Bihary, J. G., & Egan, A. C. (2018). Motivation gains on divisible conjunctive group tasks. *Group Processes & Intergroup Relations*, *21*(8), 1125-1143. DOI: 10.1177/1368430217702724

Larson, J. R. (2010). *In search of synergy in small group performance*. New York, NY: Psychology Press.

LePine, J. A., & Van Dyne, L. (1998). Predicting voice behavior in work groups. *Journal of Applied Psychology*, *83*(6), 853-868. DOI: 10.1037/0021-9010.83.6.853

LePine, J. A., & Van Dyne, L. (2001). Voice and cooperative behavior as contrasting forms of contextual performance: evidence of differential relationships with big five personality characteristics and cognitive ability. *Journal of Applied Psychology*, *86*(2), 326-336. DOI: 10.1037/0021-9010.86.2.326

LePine, J. A., Podsakoff, N. P., & LePine, M. A. (2005). A meta-analytic test of the challenge stressor–hindrance stressor framework: An explanation for inconsistent relationships among stressors and performance. *Academy of Management Journal*, *48*(5), 764-775. DOI: 10.5465/AMJ.2005.18803921

Li, N., Chiaburu, D. S., & Kirkman, B. L. (2017). Cross-level influences of empowering leadership on citizenship behavior: Organizational support climate as a double-edged sword. *Journal of Management*, *43*(4), 1076-1102. DOI: 10.1177/0149206314546193

Liang, J., Farh, C. I., & Farh, J. L. (2012). Psychological antecedents of promotive and prohibitive voice: A two-wave examination. *Academy of Management Journal*, *55*(1), 71-92. DOI: 10.5465/amj.2010.0176

Liang, J., Shu, R., & Farh, C. I. (2019). Differential implications of team member promotive and prohibitive voice on innovation performance in research and development project teams: A dialectic perspective. *Journal of Organizational Behavior*, *40*(1), 91-104. DOI: 10.1002/job.2325

Lin, S. H. J., & Johnson, R. E. (2015). A suggestion to improve a day keeps your depletion away: Examining promotive and prohibitive voice behaviors within a regulatory focus and ego depletion framework. *Journal of Applied Psychology*, *100*(5), 1381-97. DOI: 10.1037/apl0000018

Litwinski, L. (1947). The psychology of “mine.” *Philosophy*, 22, 240–251. DOI: 10.1017/S0031819100005702

Liu, W., Tangirala, S., & Ramanujam, R. (2013). The relational antecedents of voice targeted at different leaders. *Journal of Applied Psychology*, *98*(5), 841-851. DOI: 10.1037/a0032913

Liu, W., Zhu, R., & Yang, Y. (2010). I warn you because I like you: Voice behavior, employee identifications, and transformational leadership. *The Leadership Quarterly*, *21*(1), 189-202. DOI: 10.1016/j.leaqua.2009.10.014

Lount Jr, R. B., Kerr, N. L., Messé, L. A., Seok, D. H., & Park, E. S. (2008). An examination of the stability and persistence of the Köhler motivation gain effect. *Group Dynamics: Theory, Research, and Practice*, *12*(4), 279.

Lubatkin, M. H., Simsek, Z., Ling, Y., & Veiga, J. F. (2006). Ambidexterity and performance in small-to medium-sized firms: The pivotal role of top management team behavioral integration. *Journal of Management*, *32*(5), 646-672. DOI: 10.1177/0149206306290712

Lupina-Wegener, A., Drzensky, F., Ullrich, J., & van Dick, R. (2013). Focusing on the bright tomorrow? A longitudinal study of organizational identification and projected continuity in a corporate merger. *British Journal of Social Psychology*, *53*(4), 752-772. DOI: 10.1111/bjso.12056

MacKenzie, S. B., & Podsakoff, P. M. (2012). Common method bias in marketing: Causes, mechanisms, and procedural remedies. *Journal of Retailing*, *88*(4), 542-555. DOI: 10.1016/j.jretai.2012.08.001

MacKenzie, S. B., Podsakoff, P. M., & Podsakoff, N. P. (2011). Challenge-oriented organizational citizenship behaviors and organizational effectiveness: Do challenge-oriented behaviors really have an impact on the organization's bottom line?. *Personnel Psychology*, *64*(3), 559-592. DOI: 10.1111/j.1744-6570.2011.01219.x

March, J. G. (1991). Exploration and exploitation in organizational learning. *Organization Science*, *2*(1), 71-87. DOI: 10.1287/orsc.2.1.71

Mathieu, J. E., Tannenbaum, S. I., Donsbach, J. S., & Alliger, G. M. (2014). A review and integration of team composition models: Moving toward a dynamic and temporal framework. *Journal of Management*, *40*(1), 130-160. DOI: 10.1177/0149206313503014

Mayhew, M. G., Ashkanasy, N. M., Bramble, T., & Gardner, J. (2007). A study of the antecedents and consequences of psychological ownership in organizational settings. *The Journal of Social Psychology*, *147*(5), 477-500. DOI: 10.3200/SOCP.147.5.477-500

Maynes, T. D., & Podsakoff, P. M. (2014). Speaking more broadly: An examination of the nature, antecedents, and consequences of an expanded set of employee voice behaviors. *Journal of Applied Psychology*, *99*(1), 87-112. DOI: 10.1037/a0034284

McClelland, D. C. (1951). Measuring motivation in phantasy: The achievement motive. In *Groups, leadership and men; research in human relations* (pp. 191-205). Oxford, England: Carnegie Press.

Merton, R. K. (1968). *Social theory and social structure*. New York: The Free Press.

Messé, L. A., Hertel, G., Kerr, N. L., Lount Jr, R. B., & Park, E. S. (2002). Knowledge of partner's ability as a moderator of group motivation gains: An exploration of the Köhler discrepancy effect. *Journal of Personality and Social Psychology*, *82*(6), 935-946. DOI: 10.1037/0022-3514.82.6.935

Morrison, E. W. (2011). Employee voice behavior: Integration and directions for future research. *Academy of Management Annals*, *5*(1), 373-412. DOI: 10.1080/19416520.2011.574506

Morrison, E. W. (2014). Employee voice and silence. *Annual Review of Organizational Psychology and Organizational Behavior*, *1*(1), 173-197. DOI: 10.1146/annurev-orgpsych-031413-091328

Morrison, E. W., & Milliken, F. J. (2000). Organizational silence: A barrier to change and development in a pluralistic world. *Academy of Management Review, 25*(4), 706-725. DOI: 10.2307/259200

Nemeth, C. J. (1997). Managing innovation: When less is more. *California management review*, *40*(1), 59-74. DOI: 10.2307/41165922

Ng Tseung-Wong, C., & Verkuyten, M. (2010). Intergroup evaluations, group indispensability and prototypicality judgments: A study in Mauritius. *Group Processes & Intergroup Relations*, *13*(5), 621-638. DOI: 10.1177/1368430210369345

Ng, T. W., & Feldman, D. C. (2012). Employee voice behavior: A meta-analytic test of the conservation of resources framework. *Journal of Organizational Behavior, 33*(2), 216-234. DOI: 10.1002/job.754

Niehoff, B. P., & Moorman, R. H. (1993). Justice as a mediator of the relationship between methods of monitoring and organizational citizenship behavior. *Academy of Management Journal*, *36*(3), 527-556. DOI: 10.2307/256591

O'Reilly III, C. A., & Tushman, M. L. (2013). Organizational ambidexterity: Past, present, and future. *Academy of Management Perspectives*, *27*(4), 324-338. DOI: 10.5465/amp.2013.0025

O'Reilly, C. A., & Chatman, J. (1986). Organizational commitment and psychological attachment: The effects of compliance, identification, and internalization on prosocial behavior. *Journal of Applied Psychology*, *71*(3), 492-499. DOI: 10.1037/0021-9010.71.3.492

Ouwerkerk, J. W., Ellemers, N., & de Gilder, D. (1999). Group commitment and individual effort in experimental and organizational contexts. In N. Ellemers, R. Spears, & B. Doosje (Eds.), *Social identity: Context, commitment, content* (pp. 184–204). Oxford: Blackwell.

Peelle, H. E. (2007). Reciprocating perceived organizational support through citizenship behaviors. *Journal of Managerial Issues*, 554-575.

Peng, H., & Pierce, J. L. (2015). Job- and organization-based psychological ownership: Relationship and outcomes. *Journal of Managerial Psychology*, *30*(2), 151-168. DOI: 10.1108/JMP-07-2012-0201

Phene, A., Tallman, S., & Almeida, P. (2012). When do acquisitions facilitate technological exploration and exploitation?. *Journal of Management*, *38*(3), 753-783. DOI: 10.1177/0149206310369939

Piccoli, B., & De Witte, H. (2015). Job insecurity and emotional exhaustion: Testing psychological contract breach versus distributive injustice as indicators of lack of reciprocity. *Work & Stress, 29*(3), 246-263. DOI: 10.1080/02678373.2015.1075624

Pierce, J. L., & Gardner, D. G. (2004). Self-esteem within the work and organizational context: A review of the organization-based self-esteem literature. *Journal of Management*, *30*(5), 591-622. DOI: 10.1016/j.jm.2003.10.001

Pierce, J. L., Kostova, T., & Dirks, K. T. (2001). Toward a theory of psychological ownership in organizations. *Academy of Management Review*, *26*(2), 298-310. DOI: 10.5465/amr.2001.4378028

Pierce, J. L., Kostova, T., & Dirks, K. T. (2003). The state of psychological ownership: Integrating and extending a century of research. *Review of General Psychology*, *7*(1), 84-107. DOI: 10.1037/1089-2680.7.1.84

Pierce, J. L., O'driscoll, M. P., & Coghlan, A. M. (2004). Work environment structure and psychological ownership: The mediating effects of control. *The Journal of Social Psychology*, *144*(5), 507-534. DOI: 10.3200/SOCP.144.5.507-534

Podsakoff, N. P. (2003). Common method biases in behavioral research: a critical review of the literature and recommended remedies. *Journal of Applied Psychology*, *88*(5), 879-903. DOI: 10.1037/0021-9010.88.5.879

Qian, J., Song, B., Jin, Z., Wang, B., & Chen, H. (2018). Linking empowering leadership to task performance, taking charge, and voice: the mediating role of feedback-seeking. *Frontiers in Psychology*, *9*, 2025. DOI: 10.3389/fpsyg.2018.02025

Rafferty, A. E., Jimmieson, N. L., & Armenakis, A. A. (2013). Change readiness: A multilevel review. *Journal of Management*, *39*(1), 110-135. DOI: 10.1177/0149206312457417

Raisch, S., Birkinshaw, J., Probst, G., & Tushman, M. L. (2009). Organizational ambidexterity: Balancing exploitation and exploration for sustained performance. *Organization Science*, *20*(4), 685-695. DOI: 10.1287/orsc.1090.0428

Randel, A. E. (2002). Identity salience: A moderator of the relationship between group gender composition and work group conflict. *Journal of Organizational Behavior*, *23*(6), 749-766. DOI: 10.1002/job.163

Rank, J., Pace, V. L., & Frese, M. (2004). Three avenues for future research on creativity, innovation, and initiative. *Applied Psychology*, *53*(4), 518-528. DOI: 10.1111/j.1464-0597.2004.00185.x

Rau, S. B., Werner, A., & Schell, S. (2019). Psychological ownership as a driving factor of innovation in older family firms. *Journal of Family Business Strategy*, *10*(4). DOI: 10.1016/j.jfbs.2018.03.001

Reb, J., & Connolly, T. (2007). Possession, feelings of ownership, and the endowment effect. *Judgment and Decision Making*, *2*(2), 107-114.

Ricciardi, F., Zardini, A., & Rossignoli, C. (2016). Organizational dynamism and adaptive business model innovation: The triple paradox configuration. *Journal of Business Research*, *69*(11), 5487-5493. DOI: 10.1016/j.jbusres.2016.04.154

Robbins, S.P., & Judge, T.A., 2011. *Organizational Behavior*. Pearson Educational Limited., Edinburgh.

Rosa, M., Giessner, S., Guerra, R., Waldzus, S., Kersting, A. M., Veličković, K., & Collins, E. C. (2020). They (Don't) Need Us: Functional Indispensability Impacts Perceptions of Representativeness and Commitment When Lower-Status Groups Go Through an Intergroup Merger. *Frontiers in Psychology*, *10*. DOI: 10.3389/fpsyg.2019.02772

Ruck, K., Welch, M., & Menara, B. (2017). Employee voice: an antecedent to organisational engagement?. *Public Relations Review*, *43*(5), 904-914. DOI: 10.1016/j.pubrev.2017.04.008

Ryan, K. D., & Oestreich, D. K. (1998). *Driving fear out of the workplace: Creating the high trust, high performance organization* (2nd ed.). San Francisco, CA: Jossey-Bass.

Schmitt, M. T., & Branscombe, N. R. (2001). The good, the bad, and the manly: Threats to one's prototypicality and evaluations of fellow in-group members. *Journal of Experimental Social Psychology, 37*(6), 510-517. DOI: 10.1006/jesp.2001.1476

Schreurs, B. H., Hetty van Emmerik, I. J., Günter, H., & Germeys, F. (2012). A weekly diary study on the buffering role of social support in the relationship between job insecurity and employee performance. *Human Resource Management*, *51*(2), 259-279.

Schreurs, B., Van Emmerik, H., Notelaers, G., & De Witte, H. (2010). Job insecurity and employee health: The buffering potential of job control and job self-efficacy. *Work & Stress*, *24*(1), 56-72. DOI: 10.1080/02678371003718733

Seibert, S. E., Kraimer, M. L., & Crant, J. M. (2001). What do proactive people do? A longitudinal model linking proactive personality and career success. *Personnel Psychology, 54*(4), 845-874. DOI: 10.1111/j.1744-6570.2001.tb00234.x

Selenko, E., Mäkikangas, A., & Stride, C. B. (2017). Does job insecurity threaten who you are? Introducing a social identity perspective to explain well-being and performance consequences of job insecurity. *Journal of Organizational Behavior*, *38*(6), 856-875. DOI: 10.1002/job.2172

Shepperd, J. A. (1993). Productivity loss in performance groups: A motivation analysis. *Psychological Bulletin*, *113*(1), 67-81. DOI: 10.1037/0033-2909.113.1.67

Sherif, M., Harvey, O. J., White, B. J., Hood, W. R., and Sherif, C. W. (1961). *Intergroup Conflict and Cooperation: The Robbers Cave Experiment*. Greenville, NC: University Book Exchange.

Shoss, M. K. (2017). Job insecurity: An integrative review and agenda for future research. *Journal of Management*, *43*(6), 1911-1939. DOI: 10.1177/0149206317691574

Simsek, Z. (2009). Organizational ambidexterity: Towards a multilevel understanding. *Journal of Management Studies*, *46*(4), 597-624. DOI: 10.1111/j.1467-6486.2009.00828.x

Simsek, Z., Heavey, C., Veiga, J. F., & Souder, D. (2009). A typology for aligning organizational ambidexterity's conceptualizations, antecedents, and outcomes. *Journal of Management Studies*, *46*(5), 864-894. DOI: 10.1111/j.1467-6486.2009.00841.x

Smith, W. K. (2014). Dynamic decision making: A model of senior leaders managing strategic paradoxes. *Academy of Management Journal*, *57*(6), 1592-1623. DOI: 10.5465/amj.2011.0932

Smith, W. K., & Tushman, M. L. (2005). Managing strategic contradictions: A top management model for managing innovation streams. *Organization Science*, *16*(5), 522-536. DOI: 10.1287/orsc.1050.0134

Solís-Molina, M., Hernández-Espallardo, M., & Rodríguez-Orejuela, A. (2018). Performance implications of organizational ambidexterity versus specialization in exploitation or exploration: The role of absorptive capacity. *Journal of Business Research*, *91*, 181-194. DOI: 10.1016/j.jbusres.2018.06.001

Sora, B., Caballer, A., & Peiró, J. M. (2010). The consequences of job insecurity for employees: The moderator role of job dependence. *International Labour Review*, *149*(1), 59-72. DOI: 10.5209/rev_SJOP.2011.v14.n2.29

Steiner, I. D. (1972). *Group process and productivity*. New York: Academic Press.

Stroebe, W., Diehl, M., & Abakoumkin, G. (1996). Social compensation and the Köhler effect: Toward a theoretical explanation of motivation gains in group productivity. In E. Witte & J. Davis (Eds.), *Understanding group behavior: Small group processes and interpersonal relations* (pp. 37– 65). Mahwah, NJ: Erlbaum.

Svendsen, M., & Joensson, T. S. (2016). Transformational leadership and change related voice behavior. *Leadership & Organization Development Journal*, *37*(3), 357-368. DOI: 10.1108/LODJ-07-2014-0124

Svendsen, M., Unterrainer, C., & Jønsson, T. F. (2018). The effect of transformational leadership and job autonomy on promotive and prohibitive voice: A two-wave study. *Journal of Leadership & Organizational Studies*, *25*(2), 171-183. DOI: 10.1177/1548051817750536

Sverke, M., & Hellgren, J. (2002). The nature of job insecurity: Understanding employment uncertainty on the brink of a new millennium. *Applied Psychology*, *51*(1), 23-42. DOI: 10.1111/1464-0597.0077z

Sverke, M., Hellgren, J., & Näswall, K. (2002). No security: a meta-analysis and review of job insecurity and its consequences. *Journal of Occupational Health Psychology*, *7*(3), 242-264. DOI: 10.1037/1076-8998.7.3.242

Tajfel, H., & Turner, J. (1986). The social identity theory of intergroup behavior. In S. Worchel, & W. Austin (Eds.), *Psychology of Intergroup Relations* (pp. 7–24.). Chicago: Nelson Hall.

Tangirala, S., & Ramanujam, R. (2008). Exploring nonlinearity in employee voice: The effects of personal control and organizational identification. *Academy of Management Journal*, *51*(6), 1189-1203. DOI: 10.5465/AMJ.2008.35732719

Tangirala, S., & Ramanujam, R. (2012). Ask and you shall hear (but not always): Examining the relationship between manager consultation and employee voice. *Personnel Psychology*, *65*(2), 251-282. DOI: 10.1111/j.1744-6570.2012.01248.x

Tangirala, S., Kamdar, D., Venkataramani, V., & Parke, M. R. (2013). Doing right versus getting ahead: The effects of duty and achievement orientations on employees' voice. *Journal of Applied Psychology*, *98*(6), 1040-1050. DOI: 10.1037/a0033855

Taylor, A., & Helfat, C. E. (2009). Organizational linkages for surviving technological change: Complementary assets, middle management, and ambidexterity. *Organization Science*, *20*(4), 718-739. DOI: 10.1287/orsc.1090.0429

Triplett, N. (1898). The dynamogenic factors in pacemaking and competition. *The American Journal of Psychology*, *9*(4), 507-533. DOI: 10.2307/1412188

Turner, N., Swart, J., & Maylor, H. (2013). Mechanisms for managing ambidexterity: A review and research agenda. *International Journal of Management Reviews*, *15*(3), 317-332. DOI: 10.1111/j.1468-2370.2012.00343.x

Ullrich, J., Wieseke, J., & Dick, R. V. (2005). Continuity and change in mergers and acquisitions: A social identity case study of a German industrial merger. *Journal of Management Studies*, *42*(8), 1549-1569. DOI: 10.1111/j.1467-6486.2005.00556.x

Van de Ven, A. H., Sapienza, H. J., & Villanueva, J. (2007). Entrepreneurial pursuits of self- and collective interests. *Strategic Entrepreneurship Journal*, *1*(3-4), 353-370. DOI: 10.1002/sej.34

Van den Broeck, A., Sulea, C., Vander Elst, T., Fischmann, G., Iliescu, D., & De Witte, H. (2014). The mediating role of psychological needs in the relation between qualitative job insecurity and counterproductive work behavior. *Career Development International*, *19*(5), 526-547. DOI: 10.1108/CDI-05-2013-0063

Van Dyne, L., & LePine, J. A. (1998). Helping and voice extra-role behaviors: Evidence of construct and predictive validity. *Academy of Management Journal*, *41*(1), 108-119. DOI: 10.2307/256902

Van Dyne, L., & Pierce, J. L. (2004). Psychological ownership and feelings of possession: Three field studies predicting employee attitudes and organizational citizenship behavior. *Journal of Organizational Behavior*, *25*(4), 439-459. DOI: 10.1002/job.249

Van Vuuren, T., Klandermans, B., Jacobson, D., & Hartley, J. (1991). Employees' Reactions to Job Insecurity. In Hartley, D., Jacobson, D., Klandermans, B., & Van Vuuren, T. (Eds). *Job Insecurity: Coping with Jobs at Risk*. (pp. 79–103). London: Sage.

Vander Elst, T., De Witte, H., & De Cuyper, N. (2014). The Job Insecurity Scale: A psychometric evaluation across five European countries. *European Journal of Work and Organizational Psychology*, *23*(3), 364-380. DOI: 10.1080/1359432X.2012.745989

Vander Elst, T., Van den Broeck, A., De Witte, H., & De Cuyper, N. (2012). The mediating role of frustration of psychological needs in the relationship between job insecurity and work-related well-being. *Work & Stress*, *26*(3), 252-271. DOI: 10.1080/02678373.2012.703900

Vandewalle, D., Van Dyne, L., & Kostova, T. (1995). Psychological ownership: An empirical examination of its consequences. *Group & Organization Management*, *20*(2), 210-226. DOI: 10.1177/1059601195202008

Verkuyten, M., & Martinovic, B. (2015). Behind the ethnic–civic distinction: public attitudes towards immigrants' political rights in the Netherlands. *Social Science Research*, *53*, 34-44. DOI: 10.1016/j.ssresearch.2015.05.002

Verkuyten, M., & Martinovic, B. (2016). Dual identity, in-group projection, and out-group feelings among ethnic minority groups. *European Journal of Social Psychology*, *46*(1), 1-12. DOI: 10.1002/ejsp.2131

Volberda, H. W., & Lewin, A. Y. (2003). Co-evolutionary dynamics within and between firms: From evolution to co-evolution. *Journal of Management Studies*, *40*(8), 2111-2136. DOI: 10.1046/j.1467-6486.2003.00414.x

Vroom, V. H. (1964). *Work and Motivation*. Oxford, England: Wiley.

Wanberg, C. R., & Kammeyer-Mueller, J. D. (2000). Predictors and outcomes of proactivity in the socialization process. *Journal of Applied Psychology*, *85*(3), 373-385. DOI: 10.1037/0021-9010.85.3.373

Wang, H. J., Demerouti, E., Blanc, P. L., & Lu, C. Q. (2018). Crafting a job in 'tough times': When being proactive is positively related to work attachment. *Journal of Occupational and Organizational Psychology*, *91*(3), 569-590. DOI: 10.1111/joop.12218

Wang, H., Wu, W., Liu, Y., Hao, S., & Wu, S. (2019). In what ways do Chinese employees speak up? An exchange approach to supervisor–subordinate guanxi and voice behavior. *The International Journal of Human Resource Management*, *30*(3), 479-501. DOI: 10.1080/09585192.2016.1253030

Weber, B., & Hertel, G. (2007). Motivation gains of inferior group members: a meta-analytical review. *Journal of Personality and Social Psychology*, *93*(6), 973-993. DOI: 10.1037/0022-3514.93.6.973

Weick, K. E., & Sutcliffe, K. M. (2001). *Managing the unexpected: Assuring high performance in an age of complexity*. San Francisco, CA: Jossey-Bass.

Weikamp, J. G., & Göritz, A. S. (2016). Organizational citizenship behaviour and job satisfaction: The impact of occupational future time perspective. *Human Relations*, *69*(11), 2091-2115. DOI: 10.1177/0018726716633512

Weldon, E., & Mustari, E. L. (1988). Felt dispensability in groups of coactors: The effects of shared responsibility and explicit anonymity on cognitive effort. *Organizational Behavior and Human Decision Processes*, *41*(3), 330-351. DOI: 10.1016/0749-5978(88)90033-7

White, R. W. (1959). Motivation reconsidered: The concept of competence. *Psychological Review*, *66*(5), 297-333. DOI: 10.1037/h0040934

Whiting, S. W., Podsakoff, P. M., & Pierce, J. R. (2008). Effects of task performance, helping, voice, and organizational loyalty on performance appraisal ratings. *Journal of Applied Psychology*, *93*(1), 125-139. DOI: 10.1037/0021-9010.93.1.125

Williams, K. D., & Karau, S. J. (1991). Social loafing and social compensation: The effects of expectations of co-worker performance. *Journal of Personality and Social Psychology, 61*(4), 570-581. DOI: 10.1037/0022-3514.61.4.570

Williams, K. D., & Sommer, K. L. (1997). Social ostracism by coworkers: Does rejection lead to loafing or compensation?. *Personality and Social Psychology Bulletin*, *23*(7), 693-706. DOI: 10.1177/0146167297237003

Williams, K. D., Nida, S. A., Baca, L. D., & Latané, B. (1989). Social loafing and swimming: Effects of identifiability on individual and relay performance of intercollegiate swimmers. *Basic and Applied Social Psychology*, *10*(1), 73-81. DOI: 10.1207/s15324834basp1001_7

Williams, L. J., Hartman, N., & Cavazotte, F. (2010). Method variance and marker variables: A review and comprehensive CFA marker technique. *Organizational Research Methods*, *13*(3), 477-514. DOI: 10.1177/1094428110366036

Wilpert, B. (1991). Property, ownership, and participation: On the growing contradictions between legal and psychological concepts. In Russell, R. & Rus, V. (Eds.), *International handbook of participation in organizations: For the study of organizational democracy, co-operation, and self-management* (pp. 149–164). New York: Oxford University Press.

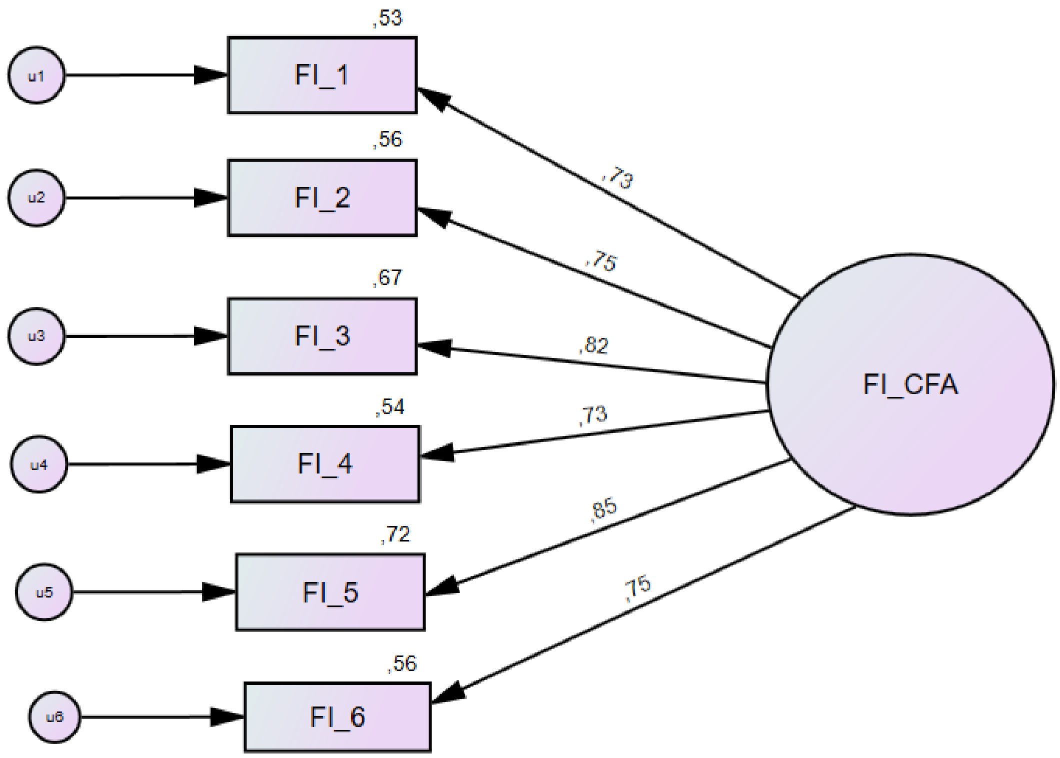
Wittchen, M., Schlereth, D., & Hertel, G. (2007). Social indispensability in spite of temporal and spatial separation: Motivation gains in a sequential task during anonymous cooperation on the internet. *International Journal of Internet Science*, *2*(1), 12-27.

Xiong, L., & King, C. (2015). Motivational drivers that fuel employees to champion the hospitality brand. *International Journal of Hospitality Management*, *44*, 58-69. DOI: 10.1016/j.ijhm.2014.10.009

Xiong, L., So, K. K. F., Wu, L., & King, C. (2019). Speaking up because it's my brand: Examining employee brand psychological ownership and voice behavior in hospitality organizations. *International Journal of Hospitality Management*, *83*, 274-282. DOI: 10.1016/j.ijhm.2018.11.006

# Appendices

**Appendix A** – Functional indispensability confirmatory factor analysis, model 1




**Appendix B** – Functional indispensability confirmatory factor analysis, model 2