Spurring Tensions at the Workplace and the Moderating Role of Psychological Resilience: A Paradox Theory Perspective

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SPURRING TENSIONS AT THE WORKPLACE AND THE MODERATING ROLE OF PSYCHOLOGICAL RESILIENCE: A PARADOX THEORY PERSPECTIVE

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Dedication

I dedicate my work and all my effort and sacrifices to my family.

To my parents, my spouse, my brother, my parents-in law, and my children. Thank you for all your sacrifices, for your endless support, and for being your best while I was at my worst.

To my treasures in life, my kids, I chase my dreams so that you can attain yours!
SPURRING TENSIONS AT THE WORKPLACE AND THE MODERATING ROLE OF PSYCHOLOGICAL RESILIENCE: A PARADOX THEORY PERSPECTIVE

by

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DISSERTATION

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*Feeling gratitude, and not expressing it, is like wrapping a present and not giving it.* – William Arthur Ward

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As a final word, I am grateful to every single person who helped me throughout this trip, and I am so thankful for the dream that has become a reality.
Abstract

Paradoxes are integral parts of our work lives. In this paper, I tested workplace triggers of four different categories of tensions: belonging, learning, organizing, and performing tensions, and I offered a theoretical framework on how these types of tensions affect employees’ well-being negatively by examining stress. Further, I presented psychological resilience as a contingency variable that reduces the experience of stress at the workplace. I also created the organizing tensions instrument. I validated the scale and tested the model with three different samples: Sample 1 (125 MBA students), sample 2 (time 1 520 Qualtrics Panel respondents), and sample 3 (time 2 136 Qualtrics Panel respondents). I found support for some triggers of tensions such that perception of organization to learning tensions, and plurality of stakeholders to performing tensions. Further, I found support for the mediating effect of learning tensions of the relationship between perception of change and job-related stress. I contributed theoretically to the paradox theory literature by creating the instrument of organizing tensions, by testing the theory at the individual level, and by unravelling triggers of tensions in organizations. Practically, I highlighted how tensions can affect employees’ wellbeing, and how organization size or complexity can trigger all types of tensions as revealed by the outcomes of alternative models.
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Chapter 1: Introduction

“The paradox of simplicity is that making things simpler is a hard work” Bill Jensen

Tensions or paradoxes, defined as persistent, interrelated contradictions that simultaneously exist, are inherent in our professional and personal lives. We are routinely and consistently challenged with mingled and conflicting demands that we need to attend to simultaneously (Lewis, 2000). At the individual level – for instance - examples are numerous: Employees are expected to conform to rules but also to be creative; working women and single parents are expected to look after their families but also to perform well at work; and academic professors are awaited to fulfill their roles not only as researchers but also as educators and responsible academic community members (Lewis, 2000). Yet, even more challenging are the increased plurality, changes and complexity of the workplaces as they necessitate organizational actors to explore and embrace paradoxes (Lewis, 2000). When plural stakeholders express their demands, when changes occur in our workplaces, and as organizations become more complex, numerous and diverse tensions arise at the workplace (Smith and Lewis, 2011).

Earlier management research discussed paradoxes and tensions in organizations primarily at the organizational level of analysis (Schad, Lewis, Raisch, and Smith, 2016) and significantly less at the individual level of analysis. This all started when management scholars started to realize that organizations and workplaces are far more complex to explore from a single theory perspective or from merely a simple choice of using either one theoretical approach or the other (Johansen, 2018). For example, it’s not either theory x or theory y that makes a manager effective but rather the use of both contradictory theories together is what drives a leader or a manager to his/her most
effective potential. Recent literature that discussed paradoxes at the relatively under-researched individual level focused on employees’ performance and innovation as a result of embracing encountered paradoxes (Miron-Spektor, Ingram, Keller, Smith, & Lewis, 2017). However, no discussions so far pertain to organizational actors’ well-being when challenged with paradoxes at work despite the importance of this phenomenon as I will elaborate in consequent paragraphs. Hence, I seek to join the discussions by attending to this gap in the literature. I therefore turn our focus to the under-researched individual level, and I examine how each type of paradox as defined and classified by Smith and Lewis (2011) affects the managers’ experience of stress at the workplace.

Extant literature classified paradoxes into four types: belonging, learning, organizing, and performing tensions (Smith and Lewis, 2011; Schad, Lewis, Raisch, & Smith, 2016). Belonging paradoxes are identity tensions that arise between individual and group or between conflicting roles, memberships, and values (Smith and Lewis, 2011; Schad et al, 2016). Learning paradoxes are tensions arising from the interest to maintain the past, but also to renew and adopt changes and get new knowledge. Organizing paradoxes are tensions between “collaboration and competition, empowerment and direction, and control and flexibility” (Smith and Lewis, 2011, p.383). Finally, performing tensions pertain to paradoxical goals that should be pursued and achieved simultaneously (Smith and Lewis, 2011).

Different types of tensions are triggered by factors within the organization; so, for example plurality of stakeholders or complexity of organizations intensify performing tensions that are conflicting goals that organizational actors are required to respond to (Smith and Lewis, 2011). Further, the necessity to adopt various roles in organizations could lead to clashing identities that prompt belonging tensions (Smith and Lewis, 2011). In this paper, I will unravel organizational
elements that provoke tensions, and I will decipher how tensions will intensify stress experienced by organizational actors, specifically managers. As the literature on stress is wide presenting multiple possible meanings of the construct, I choose to concentrate on job stress defined as “an unpleasant emotional experience associated with elements of fear, dread, anxiety, irritation, annoyance, anger, sadness, grief, and depression” (Motowidlo, Packard, & Manning (1986, p.618). Stress has been known to have many negative outcomes either in relation to the individual experiencing stress (García-Bueno, Caso & Leza, 2008), to his/her performance (Limm, Gundel, Heinmuller, Marten-Mittag, Nater, Siegrist, 2011), or to the organization as a whole (Michie & Williams, 2003). Therefore, a discussion of stress is salient for the seriousness of its outcomes at the workplace.

I will not, however, halt at this point, but I will also present the trait of psychological resilience, “the personal qualities that enables one to thrive in the face of adversity” (Connor and Davidson, 2003, p.76) as a moderator that lessens the negative impact of experiencing tensions at work, and thus moderates the relationship between each type of tension and stress experienced by managers. Precisely, I will present a theoretical framework that explains how the trait of psychological resilience lessens the stress that arises from the experience of paradoxes at work.

1.1 Purpose of statement

The purpose of this statement is multifold. I seek to test paradox theory at the individual level by proposing triggers of each type of the four paradoxes using primarily the paradox theory lens (Lewis, 2000; Smith and Lewis, 2011). To do so I a) test the triggers of each type of paradox at the individual level, b) use the four types of paradoxes as mediators between each trigger and job related stress, and c) examine how the trait of psychological resilience moderates the relationship between the tensions and stress by lessening the effect of paradoxes on the managers’
wellbeing when a manager scores high on this trait. In order to perform all of the above, it was necessary to also create the scale of “organizing tensions” at the individual level, and by doing so complement the three recently operationalized types of paradoxes by proposing the fourth scale to the literature and to other scholars.

1.2 Research Questions

The research questions I seek to answer in this study compromise to a great extent answers to calls in the literature as they pertain to paradox theory. For 25 years, paradox theory has been existent and helped scholars understand organizations at the macro level; however, an equivalent understanding is yet missing as the theory is not intensely tested at the individual level in organizations. Schad et al (2016) in their review explicitly called for testing the salient theory at the micro level. Amongst the questions they proposed to scholars to answer was “how individual emotions, cognitions, and behaviors interact to influence responses to paradox?”. The authors on a different occasion in the same review pointed out that stress and anxiety literature can inform us on paradox theory. Further, a recent study tested the theory at the individual level and explained how embracing paradoxes by adopting a paradox mindset is associated with innovation and in role performance (Miron-Spektor et al, 2017). I extend this discussion by focusing on the wellbeing of organizational actors who are exposed to the different types of paradoxes at work. I seek to answer three questions; namely: a) What elements in the workplace trigger specific types of tensions experienced by organizational actors (managers)?, b) How will these elements affect organizational actors’ wellbeing through tensions? (mechanism), and c) what individual differences can lessen the stress resulting from the experiencing of each type of tension? Hence, I focus on the dark side of encountering paradoxes by focusing primarily on job stress as an outcome.
1.3 Definition of Key Terms

To help readers grasp a clear understanding of this study, some key definitions are connotated below.

*Paradoxes* (tensions): persistent, interrelated contradictions that simultaneously exist (Smith and Lewis, 2011).

*Belonging paradoxes*: identity tensions that arise between individual and group or between conflicting roles, memberships, and values (Smith and Lewis, 2011; Schad et al, 2016).

*Learning paradoxes*: tensions arising from the interest to maintain the past, but also to renew and adopt changes and get new knowledge (Smith and Lewis, 2011; Schad et al, 2016).

*Organizing paradoxes*: tensions between “collaboration and competition, empowerment and direction, and control and flexibility” (Smith and Lewis, 2011, p.383).

*Performing tensions*: paradoxical goals that should be pursued and achieved (Smith and Lewis, 2011).


*Psychological Resilience (trait)*: “the personal qualities that enables one to thrive in the face of adversity” (Connor and Davidson, 2003, p.76).

*Perception of organizational change*: It encompasses four dimensions as follows: a) *Frequency of Change* “which captures individuals’ perceptions regarding how often change has occurred in their work environment” (Rafferty and Griffin, 2006, p.1154); b) *Impact of Change* or *Transformational Change* “which refers to an individual’s perception regarding the extent to which change has involved modifications to the core systems of an organization including
traditional ways of working, values, structure, and strategy” (p.1155); c) Planned change “defined as individuals’ perception that deliberation and preparation have occurred prior to the implementation of change” (p.1156); d) Appraisal defined as “the meaning that individuals give to a particular event” (p.1155).

Organizational complexity: typically used in the literature to refer to organization’s design features (Bricekly et al, 1997; Blau, 1977; Kimberly, 1976).

1.4 Organization of Study

Chapter 1 introduces the study and puts it into context. Further, it provides an overview of the research questions answered, and defines key terms used in this writing.

Chapter 2 is a review of the literature of a) paradox theory and the types of paradoxes, b) the theory driven triggers of the paradoxes at the workplace, c) Job related stress as an outcome and the theories used to explain it, and d) psychological resilience as a trait.

Chapter 3 discusses the hypothesized theoretical model in details and the reasoning behind the hypotheses.

Chapter 4 describes the methods of both the organizing paradox scale creation and the theoretical model testing. It also discusses relevant details such as research setting, study design, sample size, participants and measures used.

Chapter 5 discusses the statistical analyses in detail and its results as they pertain to the scale creation tests and the hypotheses or model tests. This includes assumption testing, exploratory factor analysis (EFA) analysis, confirmatory factor analysis (CFA), convergent and discriminant validity, model testing using both process and structural equation modeling, alternative model testing, and reverse causality checks.
Finally, chapter 6 presents theoretical and practical contributions of the study as well as the study’s limitations and suggestions for future research.
Chapter 2: Literature Review

This chapter will summarize the main literature on paradox theory including key terms, tensions as described in the paradox theory literature, and their triggers. I will then discuss job related stress that constitute the main outcome variable in my study, and the trait of psychological resilience as the main contingency variable that was used in my theoretical model.

2.1 Paradox Theory Overview

Paradox theory dates back to more than 25 years in the realm of organizational studies (Schad et al, 2016). The theory has its roots in ancient Eastern and Western cultures drawing primarily from philosophy and psychology (Schad et al, 2016). Philosophical views focused on paradoxes in human existence such as evil and good, or life and death (Lewis, 2011); while psychologists were mainly concerned with cognitive paradoxes or tensions that exist in human minds (Lewis, 2011), or cognitive and emotional approaches to paradoxes (Schad et al, 2016). For example, Rothenberg (1979) stated that famous geniuses similar to Einstein, Beethoven, and Picasso intentionally looked for contradictions in their environments for inspiration similar to light and dark in images sought by Picasso.

In the management literature, the theory evolved as a critique to oversimplified organizational theories (Johansen, 2018; Smith and Lewis, 2011) that did not succeed in explaining or predicting issues in organizations as they become more complex (Johansen, 2018). The management literature was thought as having oversimplified theories that might fail to help managers and scholars alike deal with complexities and contradictions in organizations (Poole & Van de Ven, 1989; Wright, Paroutis, & Blettner, 2013). Even contingency theories that emerged during the 1960s did not exactly address tensions, but rather the context under which one or the other tension
can function ideally (Smith and Lewis, 2011). To sum up the different perspectives, early organizational theories addressed the question of “is A or B more effective”, contingency theory answers the question of “under what conditions is A or B more effective?”, and paradox theory addresses the question of “How can organizations and their managers engage A and B simultaneously?” (Smith and Lewis, 2011, p.395). Hence, paradox theory was the best theory to date to address the complexity of organizational environments (Das & Teng, 2000).

Despite vast amounts of literature in the management realm that handle paradoxes, there seemed to be “conceptual unclarity” among scholars about paradoxes (Smith and Lewis, 2011, p. 385). Before the seminal paper about paradox theory (Smith and Lewis, 2011), scholars discussing paradoxes referred to them using words such as “paradox”, “dilemma”, “dichotomy”, “dialectic” (p.385) or even handled contradictions without using the word paradox. The word paradox has and remained to be considered a buzzword (Johansen, 2018).

Paradox theory surfaces as a meta theory with the capacity of spanning across several levels of analyses in organizations (Schad et al, 2016; Johansen, 2018). Tensions can arise at the individual level (Markus & Kitayama, 1991; Miron-Spektor et al, 2017), at the dyad level (Argyris, 1988), at the group level (Smith and Berg, 1987), and at the organizational level (Quinn and Cameron, 1988). The theory encompasses two main characteristics: “persistent contradictions” between “interdependent elements” (Schad et, 2016, p.10). In simple terms, when interdependent elements that are perceived as logical in isolation, seem conflicting when combined, a paradox exists (Lewis, 2000; Schad et al, 2016; Jarzabkowski, Lê, & Van de Ven, 2013). Contradictions are opposing elements that are logical to exist separately as mutually exclusive elements but unreasonable to exist together (Schad et al, 2016). The interdependence part of the definition refers to the fact that the opposing elements share links, or that they are “ontologically inseparable” (Schad et al, 2016,
Further, the opposition between the elements remains over time, and therefore is persistent. A simple example from the workplace at the individual level is the ingroup and outgroup paradox, or a common example at an organizational level of analysis is the exploration and exploitation tension.

2.1.1 Paradox Theory Key Terms

Mcguire & Atkinson (2006) defined and differentiated between some key terms that were drawn from paradox theory but were used differently by scholars who discussed paradox theory in extant literature as stated earlier. The terms explained were:

Organizational Paradox: “the experience of contradictory poles that are interdependent and follow each other over time” (Johansen, 2018, p.1639).

Paradoxical Tensions: Paradoxes felt by organizational actors either emotionally or cognitively (Johansen, 2018).

Contradictions: opposites that are embedded in organizations that are not experienced by organizational actors and that are not observant as paradoxes (Johansen, 2018).

Tactics: “responses to paradoxes” (Johansen, 2018, p.16340).

2.2 Types of Tensions Overview

There are many ways to discriminate among different types of tensions. Paradoxes are either latent or salient (Smith and Lewis, 2011). Latent paradoxes are “interrelated dualities embedded in the organizational processes” (p.388). The latent paradoxes become salient either through environmental factors or through an individual’s cognition (Lewis, 2011; Schad et al, 2016). The environmental factors that render salient paradoxes are plurality, change, and scarcity. The triggers of tensions will be explained in later sections of the literature review.
Once paradoxes become salient in organizations, they can be differentiated along several dimensions (Schad et al, 2016; Smith and Lewis, 2011). Paradoxes can be categorized based on their nature i.e. their types and categories (Schad et al, 2016), approaches or “how actors address paradoxical tensions” i.e. either collectively at the “interorganizational, organizational, and group level” (Schad et al, p. 17) or individually- encompassing cognitive, emotional, and behavioral individual reactions to paradoxes. Finally, paradoxes can be differentiated on the basis of their impact or outcomes of the approaches to paradoxes and the dynamics, representing the processes “that emerge as approaches address persistent tensions” (Schad et al, 2016, p.17). Schad et al (2016) referred to the three discriminating elements; namely, nature, approaches, and impact, as the building blocks of paradox as a meta theory (p.17).

Expanding on the above definitions, the nature of paradoxes refers to types of paradoxes (i.e. categories), and its relationships (i.e. the dynamics between types; Schad et al, 2016). By types I refer to belonging, learning, organizing, performing tensions, and by relationships I refer to whether the tensions are complementary or mutually defining (Smith & Lewis, 2011). In regards to the approaches, collective approaches involve addressing paradoxes through acceptance and working through temporal separation, through synthesis, through spatial separation, or through integrating several approaches (Poolen & Van de Ven, 1989; Schad et al., 2016). The individual level approaches, on the other hand, pertain to who is engaged in paradox management (i.e., whether it is managers or actors at different hierarchical levels). Another perspective of individual approaches pertains to how paradoxes are handled at the individual level; for example, whether it is through defensiveness, paradoxical thinking, reflexivity, behavioral complexity, humor, or rhetorical skills (Schad et al, 2016). Finally, the impact of paradoxes relates to the consequences of paradoxes, including but not limited to the consequences of the management of paradoxes. Few
of the undesired consequences in the literature are ambivalence and chaos resulting from paradoxes (Schad et al, 2016). An example that can clarify some of the definitions is Hart and Quinn (1993). In their work, they have pondered the effect of behavioral complexity of CEOs or “their ability to play competing roles” on firm performance (p.53). The authors have concluded that CEOs with behavioral complexity produce the best performance outcomes. This example illustrates a belonging tension in terms of the nature of the paradox, an individual approach as the CEO is involved in behavioral complexity to embrace the conflicting roles. Finally, the impact pertains to firm performance that is consequential to the CEO’s complex behavior when addressing paradoxical roles.

I will focus primarily on the types of tensions that pertain to my research study, and I will turn the discussion to elaborate on the different types of tensions that can be encountered by individuals at the workplace.

2.2.1 Types of Tensions at the workplace

Although the term “types” of paradoxes can encircle many differentiating factors of paradoxes, and commonly the levels at which paradoxes can exist, by types here I refer to categories of paradoxes that are of interest to us for this work (Schad et al, 2016). I am attentive here to drawing readers attention to how the categories of tensions have – so far – been represented in the management literature. Before commencing this review, it is noteworthy to present the fact that the four paradox categories have only recently been operationalized by Miron-Spektor at el (2017). To be more accurate, only three types were operationalized, and this study complements the recently operationalized categories by creating the scale of the fourth category; namely organizing tensions at the individual level. Hence, the research that has been interested in the types
from earlier time to date, has not empirically tested the specific categories of tensions as operationalized as such partly due to the lack of measures.

As noted earlier, four categories of tensions exist: Learning paradoxes are simply tensions between old and new or between efficiency and innovation and change. It is concerned with whether organizations should destroy the past or build upon it (Smith and Lewis, 2011). At the individual level, it occurs when leaders need to decide whether to shift their focus on today or tomorrow (Smith and Lewis, 2011). In the literature, learning tensions are seen to exist when the conversations pertain to exploitation and exploration (Andriopoulos and Lewis, 2009; Lavie et al., 2010), stability versus change (Farjoun, 2010; Graetz and Smith, 2008), or short term versus long term (Das and Teng, 2000). When I refer, in this work, to learning tensions at the individual level, a relatively under-researched scope (Schad et al, 2016), I refer to tensions experienced by employees such as the pressure to learn and apply new capabilities while retaining and using existent knowledge and capabilities (Miron – Spektor et al, 2017). A relatively specific understanding of learning paradoxes is presented by Jarzabkowski, Lê & Van de Ven (2013) as they defined it as tension between specific “modes of knowing and knowledge acquisition” (p.248) as manifested in projects that build on both incremental and radical innovations.

Organizing paradoxes occur when competing designs or processes exist to achieve desired outcomes (Smith and Lewis, 2011). The management literature has discussed organizing tensions while proposing concepts such as alignment versus flexibility (Adler et al, 1999; Bradach, 1997) and control versus empowerment (Gebert et al, 2010; Michaud, 2014; Schad et al, 2016). For example, Adler et al (1999) proposed several strategies to accommodate both paradoxes of organization that are flexibility and efficiency. Bradach (1997) – as an additional example – provided a solution to firms that try to adapt to the market while maintaining internal alignment
stemming from the firm’s need. On the other hand, authors similar to Gebert et al (2010) found that embracing paradoxes fosters team innovation. Michaud (2014) examined how boards functions when faced with conflicting goals but paradoxical organizing choices. The author concluded that numbers or the so called “calculative measurement practices” or quantification practices matter in deciding on the organization choice of control or of empowerment. By numbers, the author was referring to performance indicators or general statistics relevant to the organization. In this work, I transcend the organizing tensions typically discussed at the organizational level to the managerial individual level. As managers are the primary actors performing the organizing tasks (Augier, & Teece, 2009; Floyd, & Lane, 2000), the organizing tensions are typically experienced by them while they are performing their roles as managers (Hart and Quinn, 1993). Moreover, as earlier discussed, paradox theory is a meta theory that can span boundaries of organizational levels (Schad et al, 2016). Hence, tensions that can surface at organizational level, can similarly emerge at the individual level as in our case here. Managers will experience organizing tensions when they decide whether processes at their work units should be loosely or tightly coupled, centralized or decentralized, and whether flexibility or control should be fostered to name a few examples (Smith and Lewis, 2011).

Belonging paradoxes are identity tensions either between the individual and the group as an individual seeks distinction from but also harmony with the group, or between conflicting values, memberships, and roles (Smith and Lewis, 2011). Ashforth and Reingen (2014) found, for example, that discomfort between group members leads to the creation of ingroups and outgroups perceptions. Jarzabkowski et al. (2013) illustrated a tension that could possibly also happen in organizations when employees working for different departments reflect their departments’ identities and refuse to adhere to other departments’ suggestions in work related matters. In this
paper, I adopt a lens drawing from diversity literature by discussing how the racial and gender composition of the work unit in which managers operate influence belonging tensions experienced by managers. Our argument will revolve around how increased diversity in a work unit as reflected in racial and gender composition will affect belonging paradoxes experienced by organizational actors.

Lastly, performing tensions are paradoxes stemming from multiple goals especially with plurality of stakeholders (Smith and Lewis, 2011). Exemplary papers that discussed the notion of competing goals include Margolis and Walsh (2003), Scherer et al. (2013), and Smith et al. (2012). Performing paradoxes happen when multiple stakeholders demand divergent goals that organizational actors need to attend to. I will elaborate in subsequent parts of the paper on factors at the workplace that could trigger each kind of tension.

### 2.3. Environmental Triggers of Tensions

Before embarking on a discussion on environmental triggers of tensions, I would like to explain why I especially focused on the triggers of tensions. Smith and Lewis (2011) explained that paradoxes are embedded within organizations, and do not manifest until some factors trigger them. Once triggered, the latent contradictions become experienced by organizational actors. The authors discussed two broad categories of triggers: Individual factors such as one’s cognition and emotion, and environmental factors such as scarcity, plurality, and change. The individual triggers are beyond the scope of our study, but to give an example from recent literature, Miron-Spektor et al. (2017) found that a paradox mindset can turn the outcome of experiencing tensions into a favorable one as such a mindset that handles paradoxes well can make the outcome of experiencing tensions favorable in terms of innovation and heightened in role performance. In this study, I focus on the environmental triggers that render latent tensions into salient tensions in an organizational setting.
Although scarcity as one of the environmental factors is also beyond the scope of our study, I will briefly confer its literature in order to provide a comprehensive overview of all types of environmental triggers discussed by Smith and Lewis (2011) and related literature.

2.3.1 Scarcity

Scarcity of resources refers to any limitations pertaining to access to any type of resources such as time, labor, financial resources, and raw materials (Johansen, 2018). Although organizations’ survival depends on the balance between different types of resources, scarcity often forces organizations to prioritize financial considerations over other considerations (Johansen, 2018). When organizational decision makers choose among differing resources, tensions arise between interdependent alternatives (Smith and Lewis, 2011). Practically, this means that organizations get pressured to achieve more output with less resources, and thus they experience paradoxes due to limited resources they will need to prioritize between. Thus, scarcity is an environmental factor that triggers paradoxes in organizations.

2.3.2 Change

The second environmental factor that triggers latent tensions to be salient in organizations is change (Smith and Lewis, 2011). As Elving (2005) stated: “The only thing constant within organizations is the continual change of these organizations” (p.129). Many researchers similar to Andriopoulos (2003) and Balogun & Johnson (2004) agree that change in organizational environments is on the rise. Lavie et al (2010) differentiated between four different types of environmental change along two dimensions of predictability and of influence of change: a) Low predictability and high influence environmental changes constitute shocks to organizations and their relevant information are
typically inaccurate and incomplete. Their pertinent strategic opportunities similarly suddenly appear and also disappear quickly. B) the second type of environmental change is that of high predictability and of high influence. This type of change has significant impact on the organization, but since it is predictable, organizational actors are usually prepared for it. The third and fourth types of environmental change are of either high or low predictability but low impact on the organization. Since impact is not major, this kind of change does not constitute a major concern for organizations. Nevertheless, the challenge is that incremental gradual changes can accumulate to have significant effects on organizations. Amongst the four types of changes, the highly unpredictable change with high impact is the most crucial.

Change triggers tensions as organizational actors get pressured and encounter contradictory demands that arise from existing systems and new systems or are confronted with paradoxical short term and long terms needs (Smith and Lewis, 2011). Accordingly, organizational actors are incited to learn new ways of doing things, while still need to refine and retain their already acquired learning. Hence, organizational change triggers paradoxes that get felt by organizational actors.

2.3.3. Plurality

In the context of power dispersion, many views originate, and in turn they create goals that are inconsistent. Further, “stakeholders and customer expectations also bring plurality” (Johansen, 2018, p.849). The plurality of stakeholders as Smith and Lewis (2011) describe, generate performing tensions that result from competing goals and demands stemming from the variety of stakeholders that organizations deal with. Therefore, plurality of demands stemming from multiple stakeholders is an inevitable stimulator of paradoxes in organizations.
In turn, scarcity, change, and plurality taken together get sparked by “increased globalization, technological innovations, and hyper competition” (Smith and Lewis, 2011, p.390) to name some examples.

The three environmental factors taken together provoke organizational actors’ stress levels (Smith and Lewis, 2011). Therefore, I turn the discussion to highlight the main outcome variable in the study which is job related stress.

2.4 Job Related Stress

Stress is a phenomenon with multiple meanings and definitions in the literature (Bliese, Edwards & Sonnentag, 2017). The management literature primarily differentiates between three meanings of stress: conditions/events that are antecedents or the cause of stress (Hobfoll, 1989), individuals’ responses to situations (Jex, Beehr, & Roberts, 1992), and “the relationship between a person and situation” (Bliese, Edwards, and Sonnentag, 2017, p.390). Hence, stress is presented in the literature either in the form of stressors (conditions/events causing outcomes) (Bliese, Edwards, and Sonnentag, 2017), perceived stress (perception of stressors), or “strains i.e. psychological, physiological, and behavioral outcomes” (Bliese, Edwards, and Sonnentag, 2017, p.390). In this paper, I am interested in examining job related stress or work stress as this definition aligns with the propositions of paradox theory when applied in the workplace. As Smith and Lewis (2011) mentioned, paradoxes challenge our stress systems. Since this study’s focus is primarily on triggers of paradoxes at the workplace, it was necessary to examine work related stress for its relevancy to this study’s phenomenon of interest. I, therefore, use Motowidlo, Packard, & Manning’s (1986) definition of job related stress defined as “an unpleasant emotional experience associated with elements of fear, dread, anxiety, irritation, annoyance, anger, sadness, grief, and depression” (p.618).
Stress has been associated to several negative impacts on employees; on their wellbeing, on their performance and productivity, and consequentially on the organization’s performance (Woelver et al, 2012). For the individual, stress has been found to be linked to depression and anxiety (García-Bueno, Caso & Leza, 2008) and to fatigue (Van Houdenhove, Van Den Eede, & Luyten, 2009). In the workplace, experiencing stress was associated to many adverse attitudes that affects organizational performance such as poor morale, absenteeism, increased turnover, and reduced productivity (Limm et al., 2011; Michie & Williams, 2003; Noblet & LaMontagne, 2006). As such, stress is a salient construct that affects both employees, and organizations, and hence I focus in this paper on describing how the experience of tensions affects individuals by influencing their stress levels.

Theories of stress are numerous and can be differentiated in regards to whether they are generic or more in relevance to work contexts (Bliese et al, 2017). Among the most prominent theories addressing stress in general terms is the transaction theory of stress (Lazarus, 1996). Although the theory primarily is considered one that addresses the coping with stress process (Biggs, Brough, & Drummond, 2017), the theory explains antecedents of stress and coping in a manner that is of relevance to the encounter of paradoxes. The theory primarily discusses how a stressor stemming from one’s environment can or cannot result in one experiencing stress depending on one’s appraisal of a) the stressor as either positive, dangerous or irrelevant, and of b) one’s available resource if sufficient or not sufficient. So, if one perceives a potential stressor as a threat, and if one perceives current capacity of resources as insufficient to handle the stressor, the stressor results in stress that later stimulate coping responses. The transaction notion means that the environment interacts with a person, and thus can create pressure. If demands or pressure from transactions exceed one’s resources or one’s capabilities to cope, imbalance or stress happens. Therefore, the
interpretation of the stressful event by one is more relevant to their experience of stress than the event causing the stress itself.

This reasoning pertains to paradoxes. As explained earlier, the paradoxes are latent until triggered by some environmental stimuli. Once triggered, the paradoxes are felt by organizational actors (Smith and Lewis, 2011). By their definition, paradoxes are contradictions that happen simultaneously. This strain resulting from the opposing nature of the paradoxical elements is a stressor. Not only that, but these opposing elements as they happen together, they compete over the resources, capacities, or capabilities the employees possess. So, even if the felt contradictions are not perceived by employees as a threat at the first appraisal stage that Lazarus (1996) discussed, they will with no doubt be perceived as stressors in the second phase of the appraisal process that employees go through when they assess their resources are sufficient to respond to the stressor, here the paradoxes competing over employees’ resources. Only those employees who possess a paradoxical mindset (Miron-Spektor et al, 2017) or some other emotional or cognitive capacity to handle the paradoxes (Smith and Lewis, 2011) will be able to bypass the stress as their capacities to handle paradoxes will be appraised by them as sufficient resources to handle the paradoxes or this stress. Therefore, the transaction theory of stress provides one explanation on how paradoxes can cause stress to employees who come upon them.

In the work context, multiple theoretical frameworks concentrate on stress and its outcomes at the workplace. Among the most prominent ones is Karasek’s (1979) theory. Karasek’s (1979) theory mainly proposes that stress is a function of job demands and job latitude. The author proposed that jobs that have high demands and on which employees have low control are high strain jobs and are more likely to cause psychological and physical stress to employees. This inference came as an answer to mixed findings in earlier literature that examined both job demands
and job latitude in separation. On the other hand, jobs that offer high control and low demands are low strain jobs. In relation of this theory to the paradoxes, employees facing paradoxes at work who do not possess a paradoxical cognitive and emotional capacities, and thus lack the capacity and control over the handling of paradoxes, will experience stress. The encounter of paradoxes for which one is not prepared emotionally or cognitively reduces one’s control over its handling and bias the response towards a choice between them rather than handling them together (Miron-Spektor et al, 2017; Smith and Lewis, 2011). In the hypotheses development section, I will elaborate with examples on how these two theories relate to types of tensions, and thus to stress.

2.5 Psychological Resilience

Psychological Resilience has been extensively associated with the experience of stress or even more serious with disasters in life (Fletcher & Sarkar, 2013). Nevertheless, psychological resilience has been defined in multiple ways in the literature, as a trait, as a process, and as an outcome (Fletcher and Sarkar, 2013). A main antecedent of psychological resilience is adversity, while a main outcome of resilience is positive adaptation (Fletcher and Sarkar, 2013). Adversity is defined by some scholars as any hardship resulting from the experience of difficulty (Jackson, Firtko, & Edenborough, 2007). Positive adaptation is defined as “behaviorally manifested social competence, or success at meeting stage-salient developmental tasks” (Luthar & Cicchetti, 2000, p. 858). Psychological resilience has been defined in multiple ways in extant literature (Fletcher and Sarkar, 2013). Primarily, it has been conceptualized as either a trait (For example see Block and Block, 1980) or as a process that is subject to change over time (Luthar et al, 200). In our study, I adopt the definition of Connor and Davidson (2003, p.76) that psychological resilience is “the personal qualities that enables one to thrive in the face of adversity”. So, I use the conceptualization of psychological resilience as a trait.
Psychological resilience either as a trait or as a process, is typically associated with stress arising from the environment, and in particular with coping with stressors (Waller, 2001). The term was even typically used interchangeably with coping (Fletcher and Sarkar, 2013; Richardson, 2002). A growing amount of empirical scholarly work later suggested though that psychological resilience and coping are two distinct concepts and should be studied as such (Campbell-Sills, Cohan, & Stein, 2006; Major, Richards, Cozzarelli, Cooper, & Zubek, 1998; Van Vliet, 2008). A key distinction between the two concepts, psychological resilience and coping, is that psychological resilience foretells a positive response to stressful events, while coping can embody either a positive or negative response to a potential stressor (Fletcher and Sarkar, 2013). Positive emotion, for example, is one positive outcome of psychological resilience in response to a stressful event, while drug abuse is a negative coping response to a stressor (Fletcher and Sarkar, 2013).

Many theories deal with psychological resilience. However, these theories are not generic enough but rather specific to particular groups of people such as children, adolescents, medical students, and nurses (Fletcher and Sarkar, 2013). The same authors mentioned though that one specific theory is more generic in nature, and thus can be used to predict resiliency with different groups of populations. This is the meta theory of resilience and resiliency (Richardson et al, 2002). The theory lends itself not only to be applicable to differing populations, but also to various “stressors, adversities, and life events and at various levels of analysis” (Fletcher and Sarkar, 2013, p.15). As Fletcher and Sarkar (2013) described, the main contributions of Richardson et al (2002) rely on the theoretical model they have proposed. In this model, the authors primarily portray psychological resilience as a process that starts with a comfort zone state when one is in mental, physical and spiritual balance. Then, a disruption occurs when one lacks enough resources to face stressors or adversities happening in one’s life. With time, one gets back to the balance or
“homeostatic state” (Fletcher and Sarkar, 2013, p.16). Four possible outcomes result from this process: a) a resilient reintegration when more protective factors are attained and a new higher homeostatic state is achieved, b) homeostatic reintegration when one remains in his/her comfort zone trying to pass the disruption, c) reintegration with loss when one passes the stressor or adverse life event with less protective factors and a lower level of homeostatic attained, d) and finally dysfunctional reintegration when one is destined to destructive acts such as drug abuse.

Nevertheless, the above descriptions pertain to psychological resilience as a process. A stream of research that is adopted by some scholars. On the other hands, many other scholars adopt the definition of psychological resilience as a trait similar to this study (Hu, Zhang, & Wang, 2015). Individuals who are high on psychological resilience better cope with adversity (Hu, Zhang, and Wang, 2015), have less health problems, experience positive temperaments, have higher self-esteem, have good relationships with others, and were found to have higher than average levels of intelligence (Jacelon, 1997). Further, “the ability to respond flexibly to changing emotional circumstances” was considered a trait of individuals high on psychological resilience (Waugh, Thompson, & Gotlib, 2011).

In the hypotheses’ development section, I will elaborate on the connection between psychological resilience and the types of tensions in the theoretical model.
Chapter 3: Hypotheses Development

This chapter discusses the hypotheses development and the theoretical framework of this study.

3.1 Organization Change, Learning Tensions, and Job Related Stress

As stated earlier, change is an inevitable phenomenon that organizations must encounter. Repeating Elving’s (2005) statement, “The only thing constant within organizations is the continual change of these organizations” (p.129). This statement points out that organizational change is a noticeably common phenomenon that organizational actors will experience at their workplace. In another evidence, the Management Agenda survey taking place between 2001 – 2005 showed that almost all employees (in excess of 90% of employees) reported that their organizations have undergone organizational change (Holbeche, 2006). Organizations continuously adopt changes for many different reasons amongst which are organizational development and organizational learning, and for the purpose of sustaining their successes and for surviving (Elving, 2005; Holbeche, 2006). External factors and trends such as globalization, new technologies, and changes in business environment are also additional causal factor necessitating changes in organizations (Holbeche, 2006).

Despite the positive organizational effects that change can bring to organizations, the change constitutes one of the greatest causes of stress to employees not only at work, but also in their personal lives (Schliger & Denisi, 1991). Some authors attempted to explain the reason behind this amount of stress that individuals experience due to changes, and they found that employees stress as the change in organization implies a change needed in their technical skills or in their positions (Schabracq & Cooper, 1998). Moreover, change brings many uncertainties with it similar to risk of losing one’s job, becoming unemployed, and role pressures (Hui & Lee, 2000).
Therefore, I acknowledge that organizational change is associated to stress but indirectly by triggering learning paradoxes as will be explained later.

To gauge organization change, I found that the usage of perception of organizational change by Rafferty and Griffin (2006) is more adequate in assessing how organizational change can affect individuals’ wellbeing in organizations. The authors found that the perception of change by employees affected their stress level as they drew from Lazarus and Folkman’s (1984) cognitive model of stress and coping. By doing so, the authors identified four dimensions of relevance to the perception of organizational change that influenced employees’ stress and coping mechanisms: a) Frequency of Change “which captures individuals’ perceptions regarding how often change has occurred in their work environment” (Rafferty and Griffin, 2006, p.1154); b) impact of change or Transformational Change “which refers to an individual’s perception regarding the extent to which change has involved modifications to the core systems of an organization including traditional ways of working, values, structure, and strategy” (p.1155); c) planned change “defined as individuals’ perception that deliberation and preparation have occurred prior to the implementation of change” (p.1156); and d) appraisal defined as “the meaning that individuals give to a particular event” (p.1155).

I propose a mechanism of the link between perception of organizational change and stress through the trigger of learning tensions. As inferred from March (1991), Senge (1990), and Weick and Quinn (1999), “efforts to adjust, renew, change, and innovate foster tensions between building upon and destroying the past to create the future” (Smith and Lewis, 2011, p.383). Hence organizational change promotes learning tensions amongst employees. As stated, learning paradoxes are simply tensions between “old and new, stability and change, or exploration and exploitation” (Schad et al., 2016, p.23). Learning tensions additionally depict tensions between
“temporal orientations”, (i.e., between “short term and long term,” Schad et al (2016, p.23)). As changes in organizations create a necessity to modify, renew, and innovate and acquire new skills while letting go of past knowledge or adjusting it, change promotes learning tensions. Therefore,

**H 1a: Organization Change increases learning tensions.**

In relating learning tensions as a mediator to stress, I would like to draw from three different theories. The reasoning that I use applies to all types of tensions, and thus I generalize this reasoning to all types of tensions, and thus to all the hypotheses developed below proposing mediating roles of the four types of paradoxes between some organizational triggers and stress. First, paradox theory scholars pointed out in many instances that paradoxes challenge our stress systems (Smith and Lewis, 2011), that paradoxes lead to anxiety and discomfort (Miron-Spektor et al, 2017), and that stress and anxiety literature can inform us on paradox theory (Schad et al, 2016). The logic behind this link between stress and paradoxes is that if one does not have the capacity cognitively and emotionally to manage paradoxes, stress results. Second, Lazarus (1996) can inform us on why paradoxes cause stress as I explained earlier. As paradoxes are contradictions that occur concurrently, a person with insufficient capacities to handle them, similar to a paradox mindset for example (Miron-Spektor et al, 2017) will perceive the contradiction as a stressor. Thus, stress will be a natural consequence to running into a contradiction in that case i.e. when no resources are existent to handle paradoxes. Finally, and for the same reason of lack of resources to control the contradictions, one will experience stress. This is in alignment with Karask’s theory (1979) of job latitude and job demands. The lack of control over contradictions stimulates stress – according to this theory- and results in physiological and psychological stress.
Perception of change creates learning paradoxes as employees are strained between being efficient and refining existent knowledge while also learning new skills and gaining new knowledge resulting from change. As the two opposing elements happen concurrently, organizational actors feel stressed. Therefore,

\[ H_{1b}: \text{Learning tensions mediate the association between organization change and stress.} \]

### 3.2 Organizational Complexity, Organizing tensions, and Job related Stress

The term organizational complexity is typically used in the literature to refer to organization’s design features (Brickley et al, 1997; Blau, 1977; Kimberly, 1976). However, as the term is referable to many forms of organizational structures, it is also open to be operationalized in a variety of different ways (Brickely et al, 1997). Blau (1970) has set four bases upon which organizational structures can be differentiated: spatial, occupational, hierarchical, and functional. The higher the differentiation along those dimensions, the higher the complexity of the organization (Damanpour, 1996). I focus in this paper on organization size as an indication of organizational complexity as in extant literature, organizational complexity was mainly informed by organization size or organizational technology (Kimberly, 1976; Beyer & Trice, 1979). Furthermore, Blau (1970) and Blau and Schoenherr (1971) dealt with organizational size as the main factor determining organizational complexity.

Organizational complexity triggers organizing tensions in the workplace. Smith and Lewis (2011) explicitly stated that “complex systems create competing designs and processes to achieve a desired outcome” (p.384). Exemplars of organizing tensions that get fostered by complex organizations are tensions between “collaboration and competition, empowerment and directions” (Smith and Lewis, 2011, p.383), centralization and decentralization, and control and flexibility. I would like to point out though, that organizing tensions were viewed in the literature
typically as process and structural tensions, and therefore, they were not addressed at the
individual level. For instance, in the recent work of Miron-Spekter and colleagues (2017), only
belonging, learning, and performing tensions were measured at the individual level while
organizing tensions were not. However, I will operationalize organizing tensions at the
individual level focusing on organizing issues that could surface at the individual level such as
tensions of collaboration and competition or flexibility and stability. Consequentially, I propose a
similar argument to the other types of tensions as I hypothesize that organization size will be
associated with organizing tensions at the individual level while these organizing tensions
mediate the relationship between organization size and stress experienced by organizational
actors. The tension in turn will simulate anxiety and stress (Schad et al, 2016) since individuals
are supposed to fulfill competing demands or more precisely competing structures in order to
achieve a certain outcome. As I elaborated earlier when discussing stress, the competing designs
or structures through which an outcome can be achieved will challenge employees’ stress
systems (Smith and Lewis, 2011), and thus will lead to stress.

   \( H2a: \) Organizational complexity increases organizing tensions.

   \( H2b: \) Organizing tensions fully mediate the association between organizational
   complexity and stress.

3.3 Plurality of Stakeholders, performing tensions, and Job Related Stress

Extant literature addressed the concept of plurality considerably. Primarily the literature
addressed plurality either in reference to organizational form (Bradach, 1997; Lewis, &
Kelemen, 2002), or in reference to the nature of the organization in what is called “pluralistic
organizations” (Denis, Lamothe, Langley, 2001; Denis, Langley, & Sergi, 2012). Pluralistic
organizations are characterized by shared leadership roles, divergent objectives, and diffused
power (Denis, Langley, and Sergi, 2012). An example of pluralistic organization is the health care sector that deals with divergent goals such as patient care, community health, and cost control (Denis et al, 2001). I am interested in exploring the plurality of demands emergent from the presence of multiple stakeholders that employees need to conform to. Multiple stakeholders hold multiple perspectives, and thus their demands are divergent and competing (Schad et al., 2016). As organizational actors attempt to satisfy these perspectives, a feeling of being pulled in opposing directions is created. This kind of tension fosters performing paradoxes that by definition refer to differing and divergent goals (Smith and Lewis, 2011). Similar to earlier discussed paradoxes, these competing demands affects employees’ wellbeing, and thus affects their stress level. Being overwhelmed with conflicting demands in the surrounding environment that in turn compete over one’s resources such as time, attention, and effort, triggers stress and affect employee’s wellbeing. Therefore, I propose that the plurality of stakeholders is associated with performing tensions that in turn mediate the association between the multiplicity of stakeholders and stress experienced by employees.

\[ H3a: \text{The plurality of stakeholders increases performing tensions.} \]

\[ H3b: \text{Performing tensions partially mediate the association between plurality of stakeholders and stress.} \]

3.4 Diversity Composition, Belonging Tensions, and Job Related Stress

As diversity has always been an integral part of organizations especially in the Western world, and as this trend is actually on the rise especially for the upcoming years when the US demographics should manifest less proportion of whites compared to other races (Farley, 1997), it is expected that organizations will mirror these societal trends, and thus become even more diverse in the
future years. However, diversity increases the likelihood of categorization (Pelled, Eisenhardt, and Xin, 1999). Categorization is defined as our tendency to differentiate others on the basis of some dimensions that are typically demographically based (Tajfel, Billig, Bundy, & Flament, 1971). Thus, categorization stimulates the development of in-group and outgroup categories, the “me” versus “them” kind of perception. As demographic variables such as gender and race are not subject to be altered or changed, the conflict or clashes between ingroup and outgroup categories becomes even more enhanced (Pelled, Eisenhardt, and Xin, 1999).

Demographic diversity can trigger belonging tensions that were defined earlier as identity contradictions either between one’s identity and that of one’s group or between values, memberships, and roles one assumes. In addition to the categorization perspective (Tajfel, 1972), paradox theory (Lewis, 2000) provides an additional explanation of why diversity triggers belonging tensions. The theory postulates that tensions remain latent until triggered by either environmental factors of plurality, change, and scarcity or by individuals’ cognition through the engagement in paradoxical thinking or processes. Organizations perceived to have a diverse workforce spur latent tensions, as employees start to categorize themselves into one of the diverse workforce groups existent in the organization. For example, one would identify him or herself as belonging to one of the gender and racial groups existing in one’s organization. This process happens in one’s cognition, and thus transforms latent tensions into salient ones. Put differently, employees come to realize to which groups in the organization they belong. This is still in alignment with the “categorization” concept, that we typically use to simplify the world around us and give meaning to our environment (Pellen et al, 1999).

The experience of conflict of identity similar to all previously stated tensions, fosters stress (Smith and Lewis, 2011; Schad et al, 2016). As earlier discussed, any type of tension is a trigger
of stress and anxiety to be experienced by employees. The pressure, in the case of diversity composition, is created as employees struggle to look after their interests versus those of their work unit members or group members. A decision on whether one should attend or prioritize whose demands creates stress and anxiety and affects the wellbeing of employees (Schad et al, 2016). The reason is that the employee experiencing belonging tensions is hesitant on which interests he/she should prioritize. The higher these paradoxes are, the more stress is experienced by employees. The lower these prioritization decisions are, or the conflicting demands to which an individual wants to attend, the less the stress is as the employee is less likely to be torn between opposing demands. The diversity of a work unit can be assessed by examining the racial and gender composition of that work unit. The higher the diversity, the more belonging tensions are experienced by managers or organizational actors. Therefore, I propose that:

\[ H4a: \text{The diversity of a work unit increases belonging tensions.} \]

\[ H4b: \text{Belonging tensions partially mediates the relationship between the diversity of the work unit and job related stress of respondents.} \]

3.5 Psychological Resilience as a moderator

As stated earlier, I hold the concept of psychological resilience as a trait. Psychological resilience is considered a positive approach to dealing with stress and an internal capacity that enables one to do that (Fletcher and Sarkar, 2013). The need for psychological resilience as a moderator stems from both the literature on stress and from paradox theory. In stress literature, and as I mentioned briefly earlier, traits or dispositions have long been researched as a contributing factor to lessen or increase the link between stressor or perceived stress and stress or its outcomes (Bliese et al, 2017). Further, psychological resilience has numerously been looked at when stress is discussed (See for example Ong, Bergeman, Bisconti, & Wallace, 2006;
It is commonly believed in extant literature that psychological resilience can buffer stress or transform its negative outcomes into favorable ones. From the paradox theory literature, Lewis (2000) and Smith and Lewis (2011) explicitly theorized that cognitive, emotional, or in general some dispositions can alter the outcomes of experiencing paradoxes. As paradoxes or tensions can result in either positive or negative impacts, the occurrence of each type of outcome “depends” on some contingency factors. Those factors were referred to by Smith and Lewis (2011) as either cognitive or affective. Miron-Spekter et al (2017) discussed one cognitively based moderator, paradox mindset, and argued that this factor helps individuals get positive outcomes out of paradoxes such as innovation and enhanced in role performance. As an extension of this discussion, I focus here on a different contingency variable; namely, psychological resilience, and argue that this collection of traits helps individuals experience less stress as negative outcome stemming from the experience of paradoxes at work.

For this reason, I spot the light on psychological resilience in coping with stress resulting from tensions experienced by employees at work. Individuals or organizational actors who are high on psychological resilience trait, will both experience less of the stress resulting from the encounter of tensions and will recover quickly from possible job related stress if they happen to perceive it by encountering paradoxes. This argument holds for all types of tensions I discussed in this paper. Taking performing tensions as an example, when managers or organizational actors come upon conflicting job demands or job requests that they need to attend to, those managers who are high on psychological resilience will undergo less stress resulting from the experience of paradoxes relative to managers who are low on psychological resilience. On the other hand, managers or organizational actors who are low on psychological resilience will struggle with
higher levels of stress when they encounter any type of paradoxes at work. The rationale underlying this argument is that the trait of psychological resilience acts as a buffer from both experiencing stress and an element that facilitates coping with it (Ong et al, 2006). Therefore,

*H5a: Psychological resilience moderates the relationship between learning tensions and stress, such that the relationship is weakened when employees are high on psychological resilience, and the relationship is stronger when employees are low on psychological resilience.*

*H5b: Psychological resilience moderates the relationship between organizing tensions and stress, such that the relationship is weakened when employees are high on psychological resilience, and the relationship is stronger when employees are low on psychological resilience.*

*H5c: Psychological resilience moderates the relationship between performing tensions and stress, such that the relationship is weakened when employees are high on psychological resilience, and the relationship is stronger when employees are low on psychological resilience.*

*H5d: Psychological resilience moderates the relationship between belonging tensions and stress, such that the relationship is weakened when employees are high on psychological resilience, and the relationship is stronger when employees are low on psychological resilience.*

Figure (3.1) summarizes the theoretical framework of the study encompassing all hypotheses.
Chapter 4: Methods

Chapter 4 provides the readers with a detailed overview of the study in terms of the research setting, the participants, the sample size and the procedures used in both the scale validation (Study 1) and the model testing (Study 2). Study 1 and Study 2 are both discussed in the below sections.

4.1 Study setting and participants

4.1.1 Study setting

The study setting is primarily based on my understanding of what “organizing tensions” are from the literature. In earlier management research, the organizing tensions were developed and tested at the macro (organizational) level. Many studies similar to Adler, Goldofas, & Levine (1999), Augier & Teece (2009), Andriopoulos & Lewis (2009) and others handled the organizing tensions from the organization’s perspective. However, the construct lends itself to being examined at the individual level in general and with managers in particular, as managers encounter organizing as an integral part of their functions and of their roles in organizations. This information is considered an established matter of fact as it has been tested and validated over the years by prominent scholars such as Fayol (1949), Urwick (1952), Mintzberg (1989), and Tushman & Nadler (1986). All the eminent scholars discussed how “organizing” is an essential managerial function. Further, the act of organizing is embedded in many other managerial roles such as the monitor, disseminator, and resource allocator roles. Thus, informed from the literature, I designed the study so that I maximize the number of managers’ responses. Consequentially, in my first studies of scale validation (i.e. study 1), I sought the participation of MBA students. The participants were either managers’ in the executive MBA Program of a University in the Southwest Region of the United States, or other MBA students who get their masters education full time or
part time in the same university. For the model test (i.e. study 2), and in order to maximize the number of managers to respond to my survey, I used Qualtrics Panel data to target managers across the United States. The respondents taking the surveys were informed that their participation is voluntarily, and that their answers would be anonymous and would be reported in aggregate format. Moreover, the respondents were informed that the study was approved by the Human Subject Research (IRB) of the University of Texas at El Paso (UTEP). Online participants signed an informed consent and approved to proceed with the survey before they actually took it.

4.1.2 Sample size

In order to perform the analyses of both Study 1(Scale creation and validations) and Study 2 (model testing), I collected three different samples. Sample 1 included the responses of 125 MBA students who took the survey in paper and pencil format during their class time. Sample 2 comprised the responses of 520 managers across the United States who were invited by Qualtrics Panel Platform to respond to the survey at time 1. One week after closing the Time 1 surveys, I invited the same respondents to participate in a second survey. This comprised our third sample. The number of managers respondents at Time 2 was 205 managers with an attrition rate of 61% when compared to responses at time 1. After assumption testing and data cleaning, 136 responses were used to test the model in study 2 after merging Time 1 and Time 2 data using SPSS software. Based on a basic a priori power analysis (Faul, Erdfelder, Lang, & Buchner, 2007) with medium effect size of .15, alpha level of .05, and power of .85, a minimum sample size of 131 respondents was needed. This number was satisfied when I tested the model in Study 2 using the 136 valid responses.
4.1.3 Procedures

I collected the exploratory factor analysis data from MBA students. I visited the students during the class time upon a priori approval of their instructors, and asked them to voluntarily participate after sharing with them that the survey was approved by UTEP’s ethical review board. No extra credit was offered in return. Respondents’ took on average 20 minutes to complete the survey. The data were then transferred to a digital format on SPSS software for analysis. As elaborated above, these data were used to validate the organizing tensions scale (i.e. the only construct lacking a measurement tool) by conducting Exploratory Factor Analysis on SPSS software.

After this step, I contacted Qualtrics team in order to administer surveys with managers. In order to avoid common method bias (Podsakoff, MacKenzie, Lee & Podsakoff, 2003), time lagged surveys were created. In Time 1, managers were contacted by Qualtrics team and invited to respond to our predictor and control variables of our online survey. In the same survey, I added also the dependent variable. In time 2, a week after Time 1, the same respondents were contacted once again by Qualtrics team in order to respond to primarily the outcome variable and the demographic and control variables of the survey. Attrition rate was at 61% between Time 1 and Time 2. Qualtrics team presented the results to me in both SPSS and in Excel format. Appendix C has the detailed surveys in both Time 1 and in Time 2.

Due to the attrition commonly found in longitudinal or time lagged studies, and following the recommendations of Rogelberg and Stanton (2007), I conducted a wave analysis using several t-tests and chi square tests to check whether respondents and non-respondents differed significantly on several variables including the main outcome variable of the study – job related stress. Using the demographic variables: Age, salary, gender, and the outcome variable job-
related stress, I ran t-tests (chi square on the gender variable) and did not find any significant mean differences between respondents and non-respondents (i.e. those who participated in time 1 but who did not participate in time 2 survey when re-invited). Thus, these results eliminated the possibility of the existence of non-response bias in our survey.

Filter questions were put in both the paper and pencil surveys (MBA students) and the Qualtrics Panel Surveys (Time 1 and Time 2). The purpose of such questions was to help me recognize careless respondents and exclude their answers so that their answers do not bias the results and contaminate the surveys. This approach was in alignment with inferences proposed by Huang, Curran, Keeney, Poposki, and DeShon (2012). An example of these filter questions was “if you are reading this question, choose agree”. For the MBA students, I checked each filter question first before including the paper and pencil survey into SPSS software. Respondents were eliminated if any filter question was answered incorrectly. Similarly, the Qualtrics Panel survey followed the same approach as the survey closed when a respondent chose a wrong answer on any of the filter questions, and they were prevented from continuing the survey. This approach was repeated with both samples in time 1 and in time 2.

4.1.4 Measures

In this section, I will provide an overview of the measures used in the study. Cronbach’s alphas are given in the correlation table (Appendix A – Table 4.1).

**Perception of Organizational Change:** I used the scale of Rafferty and Griffin (2006). I ran a second order Confirmatory Factor Analysis to validate the next step of creating a composite variable of the four subdimensions of the scale. The CFA showed that the four dimensions loaded very highly and significantly on the second order factor (perception of organization change) with loadings of the subdimensions ranging from .86 to 1. Further, the model fit indices
showed good results as despite that the $\chi^2(61) = 312.72$ was significant, CFI was at .92, TLI was at .88, and RMSEA was at .09. The scale had 13 items, and a 7 point Likert Scale was used but with different anchor labels for each subdimension. For the transformational change and planned scales, the anchors ranged from 1 (not at all) to 7 (a great deal). For frequency of change and psychological uncertainty scales, the anchors ranged from 1 (strongly disagree) to 7 (strongly agree). Sample items included “To what extent have you experienced changes to the values of your work unit?” and “Change has been the result of a deliberate decision to change by my manager/unit”.

The scale showed several aspects of validity evidence (Rafferty and Griffin, 2006) as it performed well with outcome variables such as Job Satisfaction and Turnover Intentions at $p < .001$, and $p < .05$ (Rafferty and Griffin, 2006).

**Organization Size:** To measure organization size, respondents were asked to report on the number of employees working in their organizations (Corwin, 1975; Kim, 1980). The number of employees were then coded into (big, medium, small) organization size. Small organization size was coded as 1 for number of employees from 1 to 100, medium size organizations were coded as 2 from 101 to 1000, and big organizations were coded as 3 from 1001 and above. The categorizations of the organization size were based on data provided by Digium Content Marketing Team (2019) on the organization size classification averages across several industries in the United States.

**Plurality of Stakeholders:** Respondents were asked to report the number of stakeholders they need to attend to within the organization and outside of it during their typical workweek. The question wording was: “How many stakeholders in the form of
(individuals/agencies/governmental authorities/employees/customers/competitors) do you need to attend to and fulfill their requests/orders/demands in your work in a typical workweek?”

**Racial/Gender composition:** To measure diversity composition of work unit in relation to race and gender each separately, I followed the recommendations of Harrison and Klein (2007) in measuring the “variety” of diversity in the work units. Variety of diversity refers to the “composition of differences in kind, source, or category of relevant knowledge or experience among unit members” (p. 1203). Accordingly, I adopted the measures used by Brief et al (2005) and Ostroff and Atwater (2003) as I asked respondents to report the percentage of females in their work unit (gender diversity composition) and the percentage of minorities in the work unit (racial composition). The use of the “work unit” is reasoned by the evidence found in Williams & Meân (2004) who reported that employees adopt perceptions about their entire organizations’ diversity climate from the diversity composition of their work units. This measure showed evidence of validity in Brief et al (2005) by having significant correlations with quality of work relationships and organization’s attractiveness at $p < .05$.

**Learning Tensions:** For all types of tensions, I used the recently operationalized measures by Miron-Spektor et al (2017). Each scale included three items with 5 anchors from 1 (Strongly disagree) to 5 (Strongly Agree). Example item “In my work, I need to gain new skills while relying on my existing skills”. Miron-Spektor (2017) reported $\alpha = .72$.

**Performing Tensions:** Example item “In my work, I need to be flexible while also complying with the company’s tight rules”. Miron-Spektor (2017) reported $\alpha = .69$.

**Belonging Tensions:** Example item “In my work, I need to focus on my own needs while addressing the needs of others”. Miron-Spektor (2017) reported $\alpha = .75$. 
**Organizing Tensions:** An example item is “innovate and experiment new methods while also refining existing knowledge and be efficient”. Miron-Spektor (2017) reported $\alpha = .69$.

**Stress:** Job stress was measured with a four-item scale developed by Motowidlo et al. (1986). The four items are “My job is extremely stressful,” “Very few stressful things happen to me at work” (reverse scored), “I feel a great deal of stress because of my job,” and “I almost never feel stressed because of my work” (reverse-scored). The scale performed reliably when associated with scales measuring depression as well as cognitive and emotional dimensions of job performance (Motowidlo et al, 1986).

**Psychological Resilience:** I used the brief psychological resilience measure adopted from the work of Smith et al (2008). Psychological resilience was measured with a 6 items scale. Sample items include: “I tend to bounce back quickly after a hard time”, and “It does not take me long time to recover from a stressful event”. In the same work, the reliability and validity of the measure were tested in four different samples, and in all samples the scale performed consistently strongly. The measure was found to predict several aspects of personal characteristics (for example positively associated with optimism and negatively associated with pessimism), of social relationships (for example negatively related to negative interactions and positively related to social support), of coping, and of health-related outcomes such as depression and anxiety.

**Control Variables**

Because this study was observational (non experimental), it was necessary to account for and include control variables (Aguinis, & Vandenberg, 2014) in order to lessen the possibility of alternative explanations (Aguinis and Vandenberg, 2014), to account for potential meaningful variables that can affect the relationship between the predictor and the outcome variables.
(Carlson & Wu, 2012), and to improve the overall prediction of the model as reflected in the variance explained of the outcome variable ($R^2$). Hence, I included several demographic control variables drawing from Bolino and Turnley (2005) who also examined job related stress. In addition, I also added additional control variables used by Miron-Spektor et al (2017) and the Big Five Personality measure (Gosling, Rentfrow, & Swann, 2003).

I tested the causal and correlational relationship between each of the control variables and the outcome variable in this study. Following the recommendations for researchers offered by Atinc, Simmering & Kroll (2012), and to maintain the parsimony of the model, I accounted for the control variables that had both causal and correlational association with job-related stress. I tested the causal relationship using simple linear regression analysis, and I tested the correlational relationship using the correlation analysis both on SPSS software. The control variables that did not show evidence of causal or correlational relationship with the outcome variable were excluded. These excluded variables were age, salary, marital status, children living at home, and the three dimensions of the big five that are conscientiousness, openness to experience, and extraversion. Further, when deciding on the inclusion of control variables, theoretical considerations were also followed so that the inclusion of control variables was not solely decided by empirical considerations following the recommendations of Aguinis and Vandenberg (2014).

Consequently, the control variables that I used in the study were as follows: Experiencing tensions (Miron-Spektor et al, 2017), a 7 item measure with 7 anchors ranging from 1 (strongly disagree) to 7 (strongly agree). One item sample is “I often have competing demands that needs to be addressed at the same time”. Gender a time 1 demographic variable reflecting the gender of respondent. It was dummy coded as 0 for males, and 1 for females. Race
a time 1 demographic variable reflecting the race of respondent. The initial coding for race was as follows: 1 for White, 2 for Hispanic/Latino, 3 for Asian, 4 for Native American/Pacific Islander, and 5 for Black/African American. The coding that was used for analysis was changed to 1 for Whites, and 0 for others. Further, I used two personality dimensions that are agreeableness (Gosling, Rentfrow, & Swann, 2003), a two-item measure with 7 anchors ranging from 1 (Strongly Disagree) to 7 (Strongly Agree). The items were “I see myself as sympathetic and warm”, and “I see myself as critical and quarrelsome” (reverse coded). Finally, the second personality dimension used was emotional stability (Gosling, Rentfrow, & Swann, 2003), a two item measure with 7 anchors ranging from 1 (Strongly Disagree) to 7 (Strongly Agree). The items were “I see myself as anxious, easily upset” and “I see myself as calm, emotionally stable” (reverse coded).
CHAPTER 5: RESULTS

This chapter discusses the results of analyses for each of the studies: scale development and model testing.

5.1 Scale Development

To create and validate the scale of “organizing tensions”, I primarily followed the recommendations of Hinkin (1995; 1998), in addition to those of some other established scholars in the scale development area such as Netemeyer, Bearden, & Sharma (2003). Moreover, I also took into consideration the recent article by Miron-Spektor and colleagues (2017) who developed the three types of tensions that are complemented by the fourth type of tension that was created and validated in this study. It is worth mentioning that “organizing paradoxes” have so far been utilized in studies at the macro (organizational) level (See for example: Andriopoulos, & Lewis, 2009; Lavie, Stettner, & Tushman, 2010), and therefore, this study took the initiative in applying the construct at the micro (individual level) and test it with managers. The testing at the individual level especially with managers is needed due to the fact that paradox theory (Smith and Lewis, 2011) does not restrict the organizing tensions to the organizational level of analysis, but rather the construct domain is equally applicable to individuals engaged in an “organizing” role in organizations. Moreover, the “organizing role” is an extremely essential role that managers play and constitutes an integral part of their functions in organizations (Augier, & Teece, 2009; Floyd & Lane, 2000). In the following paragraphs, I describe the reasoning, procedures, and results of each step of the scale validation process.
5.1.1 Item Generation and Face Validity

Following Hinkin (1995; 1998), I generated the items using the deductive approach drawing closely from Smith and Lewis’ (2011), Lewis (2000), and Schad’s et al (2016) explanations on what the conceptual domain of the construct “organizing tension” entails. Furthermore, I matched the words of the items to the wordings used by Miron-Spektor et al (2017) so that “organizing tensions” as a scale matches the other scales (i.e. learning, performing, and belonging tensions) that it complements according to paradox theory (Smith and Lewis, 2011). This was intended to make the scale more usable when used in combination with its complementary scales in future studies. Based on that, ten (10) items were generated to represent the unidimensional nature and content domain of organizing tensions construct. In addition, I followed Hinkin’s (1995; 1998) recommendations in relevance with the wording of the items and the avoidance of double barrel questions. A sample item was “In my work, I need to compete while also cooperate with my coworkers” and “In my work, I need to centralize authority, while also delegate it”. Table 5.1 presents the 10 items that I generated.

The face validity of the scale was assessed using the help of PhD and MBA students in a South west University in the USA. 15 MBA and PhD students rated each one of the 10 items on a scale from 1 to 5 on the degree to which each item is representative of the intended meaning of “organizing tensions”. 1 indicated (not representative at all) and 5 indicated (extremely representative). Table 5.1 shows the respondent answers to the face validity instructions. To measure the degree of agreement between raters, I used Fleiss Kappa that is considered an extension of Cohen’s Kappa (Fleiss, 1971; Fleiss and Cohen, 1973). While Cohen’s Kappa is used to assess the agreement between two raters, Fleiss Kappa is used to assess the agreement of more than two raters (Fleiss, 1971; Fleiss and Cohen, 1973). An online Kappa calculator software by
Randolph (2008) was used for the calculation. I found that the agreement was 20 percent among raters and that it was not significant. As a general rule of thumb, Fleiss (1981) indicated that an agreement below .4 is poor, while values between .4 and .75 indicate intermediate to good agreement. Values above .75 indicate excellent agreement. Hence, I retained only the four items with the highest agreement among the respondents. As presented in Table 5.1, the gray shaded items are those that I retained. The free marginal kappa was significant using 95% Bootstrapped Confidence Intervals ($LLCI = 0.01$, and $ULCI = 0.08$).

5.1.2. Exploratory Factor Analysis

Exploratory Factor Analysis is conducted in research in order to determine the structure of a measure (Field, 2009). In this study, I primarily used EFA following Hinkin (1995; 1998) in order to validate the structure of the items generated for the construct “organizing tensions” at the individual level of analysis. For the purpose of this analysis, I used the first sample that was collected from MBA students. I first started by testing the assumptions of the EFA and followed by performing the EFA analysis using SPSS. In terms of sample size, and as mentioned earlier, I had a sample of 116 valid responses from MBA students from a total of 125. There is no rule of thumb in regards to how much sample size is adequate for such analysis; however, I followed the generic practice of having at least 10 responses for each variable (Tabachnick & Fidell, 2007). Next, I looked up any missing values for any of the 4 measures developed to gauge organizing tensions but found none in this sample. After, I checked for outliers – in this case multivariate outliers – using Mahalanobi’s distance (Mahalanobis, 1936) as outliers might bias the results (Tabachnick and Fidell, 2007). Only one case was detected and was filtered out of the sample. The remainder sample constituted of 115 responses. Next, I tested the normality assumption using the Normality Q-Q Plot, the Kolmogrov-Smirnov Test (Lilliefors, 1967), and
Shapiro-Wilk test (Razali & Wah, 2011). I found few normality issues with some of the items of the organizing tensions construct. However, this was not causing major concern in our judgement as the factor analysis process can remain to produce reliable results despite normality issues (Field, 2009). Further, the four retained items were composited into a latent variable, and this latent variable was tested for normality assumption in the model testing section. The composite score did not show any normality issues. Finally, and to take an extra step of caution, I ran the factor analysis once using the principal axis analysis method, and once again using the maximum likelihood extraction method to compare results and have more trust in their robustness. Maximum likelihood estimation is considered an estimate that is robust against non normality issues in factor analysis (Fuller & Hemmerle, 1966). I found that the results were almost exactly the same in both analyses (Cumulative Total Variance Explained = 49.87 using both principal axis extraction and using maximum likelihood extraction). Thus, I decided to keep the results of the principal component analysis.

The principal axis factoring was conducted over the 115 items with orthogonal (varimax) rotation indicating that the organizing tensions items are expected to correlate. The Kaiser – Meyer – Olkin (KMO) Test for sample adequacy was at .7 indicating sampling adequacy for the factor analysis test (Field, 2009). Bartlett’s sphericity test $\chi^2 (6) = 66.01, p < .001$, evidenced that the correlations between items were large enough for a principal axis factoring test. Eigenvalues were calculated, only one component had eigenvalue over 1. This is in alignment with the unidimensional nature of the organizing tension measure from the theory as explained by Smith and Lewis (2011). Table 5.2 shows the factor loading of the four items. All factor loading were above .4 indicating good factor loading values (Hair et al, 2006).
Cronbach’s alpha was calculated for the 4 remainder items, and it was \( \alpha = .66 \). The Cronbach’s alpha was also estimated if any other item was deleted, and I found that Cronbach’s alpha will be lower if any other items was deleted.

### 5.1.3 Confirmatory Factor Analysis

I conducted a confirmatory factor analysis (CFA) on a different sample of 520 managers who responded to our developed survey through Qualtrics Panel Platform in time 1 in order to assess the psychometric properties of the “organizing tension” construct. CFA was run using IBM SPSS AMOS 25 Graphics software (Arbuckle, 1997). Drawing from Smith and Lewis (2011) as well as Smith (200) and Schad et al (2016), the organizing tension construct should be empirically manifested as a single factor similar to our prior finding in the EFA test. However, I took a step further and tested a single factor structure model (proposed by the theory), as well as a two, three, and four factor model. The alternative models included the merging of organizing tensions with other types of tensions, and the fit indices of the four different models were compared and presented in Table 5.3. As shown in the table, the four-factor model measurement model presented the best fit indices relative to the other models \( (\chi^2 = 86.47, df = 59, TLI = .98, CFI = .99, RMSEA = .03) \), and thus supports our findings and aligns with the paradox theory (Smith and Lewis, 2011) that organizing tensions is a separate entity. According to Hair et al (2006), the two incremental fit indices (TLI and CFI) indicate a strong fit when they are at or exceed .95, and the absolute find index RMSEA typically indicates a good fit when it is below .05. The chi square was undesirably significant, but this was expected and can be overlooked especially when other fit indices show strong measures of fit similar to this case.

The outputs of the four-factor model of the CFA measurement model output was also used to calculate the composite reliabilities for the construct of interest (organizing tensions), and for
all other types of tensions (i.e. belonging, learning, and performing tensions). The composite reliabilities were tested using the composite reliability formula provided by Hair et al (2006) and using Excel Microsoft software. All types of tensions except for belonging tensions exceeded the threshold of .7 (Hair et al, 2006) indicating strong reliabilities as follows: Organizing tensions .76, Performing tensions .79, Learning Tensions .86. Belonging tensions’ composite reliability was at .66 indicating acceptable reliability (Hair et al, 2006). Table 5.4 summarizes the factor loadings and composite reliabilities for each of the latent variable.

Finally, convergent and discriminant validity were assessed for all four constructs. Convergent validity refers to the extent to which the items of the same construct converge or – put differently – are correlated and share in common a high percentage of variance of the construct they represent (Hinkin, 1998; Fornell & Larcker, 1981; Cable & DeRue, 2002). The first way this could be assessed was by looking at the values of the standardized factor loadings for each construct. Factor loadings of .7 or above indicate a strong convergent validity while factor loadings of .5 or above indicate acceptable convergent validity. As seen in Table 5.4, all items of each of the four constructs had at least acceptable convergent validity values. The other more reliable method of assessing convergent validity was by using Average Variance Extracted (AVE) (Fornell & Larcker, 1981). AVE values were as follows: .33 for organizing tension, .46 for performing tension, .55 for learning tension, and .35 for belonging tension. Typically, AVE is acceptable if it is higher than a threshold of .5; however, Fornell and Larcker (1981) suggested that AVE below can be accepted if the composite reliability of the constructs is above .7 which was the case for all the types of paradoxes except for the belonging tension construct.

Discriminant validity of the construct organizing tensions and the other types of tensions (learning, performing, and belonging tensions), “assess the degree to which two measures designed
to measure similar but conceptually different constructs are related” (Netemeyer, Bearden, Sharma, 2003, p.13). I examined discriminant validity by comparing the maximum shared variance (MSV) for each type of tensions with its AVE values. The MSV for each latent variable should be less than its AVE in order to provide sufficient evidence of discriminant validity. Discriminant validity analyses showed that the items are actually related. This finding is similar to Miron-Spektor et al (2017) findings who mentioned that the items could be used as distinct variables and that a three factor model had strong fit indices. On the other hand, the authors also pointed out that the three types of tension can load into a higher order factor, and thus could be accounted for by it. My findings support the same findings discussed by Miron-Spektor et al (2017).

5.2 Model Testing

I ran several analyses to test the proposed hypotheses. The analyses below include: a) assumption testing, b) running regressions on SPSS for time 1 and time 2 variables separately, c) running mediation analyses using process add on (Bolin, 2014; Hayes, 2013) for time 1 and time 2 variables separately, d) running mediated moderation analyses using process add on with time 1 and time 2 variables separately, e) testing path analyses using AMOS 25 software for time 1 variables, f) testing path analyses using AMOS 25 software with time 2 variables, g) testing alternative models using modification indices, h) testing theoretically alternative models, i) checking for reverse causality following common practices in the field of Social Sciences and Organizational behavior, y) testing mediated moderation at path a, and finally testing mediated moderation at both paths a and b. Before embarking on model assumption testing, I cleaned the data, and merged two SPSS files while also retaining time 1 and time 2 files for further statistical analyses. The first file was administered at time 1 and included the Independent Variables, the mediators, the moderators, the
controls, and the dependent variable (dv), and the second file comprised the dependent variables and the demographic and personality control variables.

5.2.1 Assumption Testing

5.2.1.1 Descriptive analyses

Composite scores were first created so that the assumptions can be tested on the actual measures that were used for the analyses. I created composite variables for all the “perception of change” indicators, for the mediators (i.e. organizing tensions, performing tensions, belonging tensions, and learning tensions). In addition, composite scores were created for psychological resilience (moderator), for job related stress the outcome, and for the control variables experiencing tensions, agreeableness and emotional stability.

Next, the assumptions were tested. Descriptive statistics tests were run to detect missing cases and to check the skewness and kurtosis values for the variables. During this process, some extreme values were detected for some of the independent variables such as race and gender composition of work units with values exceeding 100%, for number of stakeholders for values ranging from 500000 to 100000, and for organization size. Cases that had these extreme values were revisited for careless responding check. It was noted that 9 cases had careless responding, and thus were deleted. Values for kurtosis and skewness for these variables improved after the deletion of the careless respondent answers; however, they remained to be high. Hence, a categorical variable was created for both “organization size” and for “number of stakeholders” in order to avoid the major skewness and kurtosis issues for these variables. For the organization size, I followed a typical rule of thumb of considering a business that has 1-99 employees a small sized business, a 100-999 employees a medium sized business, and 1000 and above a big sized business (see for example
The number of stakeholders as a variable was even more challenging as this measure was developed for the purpose of this study to assess how the variation in number of stakeholders affects the mediation variables and the outcome variable. Hence, there was no clear basis upon which the number of stakeholders can be grouped into or recoded into as the variable was exploratory by nature in our study. In an attempt to overcome this issue, I explored the frequency of responses for each of the values, and then created cut off points based on the percentage of responses received. So, the number of respondents was 100%. I found that in the frequency table, the cut off of 50% (about 53%) was at 20 stakeholders, and that a cut off of 25% of responses was at 5 stakeholders. Moreover, 75% of respondents were at a cut off of 60 responses, and then the remainder 25% were spread over 60 stakeholders and above. Hence, I created an ordinal four categories stakeholder variable to represent the amount of stakeholders as follows: 0 to 5 stakeholders was coded as 1 and considered one category, 6 to 20 stakeholders was coded as 2 and was considered a second category, 20 to 60 was coded as 3 and considered a third category, and above 60 was coded as 4. This coding dramatically improved the skewness and kurtosis issues for this variable and set them to normal values (skewness -0.14, kurtosis -1.5). Next, I tested the remainder variable of interest i.e. the model variables (predictors, mediators, moderators, outcome, and controls) for kurtosis and skewness issues. The variables demonstrated good to acceptable levels of skewness and kurtosis, and thus I proceeded with the regression analyses as described below.

5.2.1.2 Regression Assumptions

To assess the regression assumptions, I evaluated linearity, independent errors, homoscedasticity, multicollinearity, and normally distributed residuals (Tabachnick and Fidell, 2012). I started with the linearity assumption, and I checked if the residuals of the dependent variable (i.e. Job stress)
were scattered randomly along all levels of the predicted variables. This assumption was met with no issues. Similarly, and using the same graph that showed the residuals of the outcome, no autocorrelations were detected as the residuals did not form a certain pattern. This evidenced that the data met the assumption of the independent errors. Finally, the plots of residuals against predictor variables showed no evidence of homoscedasticity as the dots were scattered meaning that the residuals were normally distributed. Hence, this assumption was also met in the data. Following, I checked for multicollinearity of the predictor variables. Multicollinearity exists when predictor variables are highly correlated (Tabachnick and Fidell, 2007). I found no evidence of multicollinearity as the predictor variables were not highly correlated. The types of tensions were relatively highly correlated but not to the extent of signaling that they were one construct (i.e. below .7). In addition, I also checked the Variance Inflation Factor (VIF) with no evidence of multicollinearity since the highest VIF value was 3.00 and lowest was 1.1 (Myers and Myers, 1990). The threshold for the VIF is debatable in the literature, but typically it should never exceed 10 (Netmeyer et al, 2003). Next, I reexamined the residuals again but on two different graphs: The Histogram of the residuals with imposed normal distribution curve, and the P-P Plot of standardized residuals. The plots and histograms did not reveal any problems. This test was especially essential to do for the outcome variable and relatively less significant for the predictor variables although the test was run for all variables in the model regardless.

After checking for all the assumptions, I had confidence to move to the hypotheses testing.

5.2.2 Test of hypotheses

I tested the hypotheses with time 2 sample. In addition, I tested the hypotheses using time 1 sample as a supplemental analysis. Further, I tested the entire model using path analysis and using time 1 variables. I repeated the analysis with time 2 variables. Then, I tested alternative
models using modification indices, and tested theoretical alternative models. Finally, I checked for reverse causality using time 2 variables. In the subsequent paragraphs, I detailed the analyses. Time 1 hypotheses analysis was added as supplemental analysis summarized in Table 5.11.

Hypothesis 1 was interested in testing the association between perceived organization change and learning tensions, and the role of learning tensions in mediating the association between perceived organizational change and job-related stress. To test the hypothesis, a two-step hierarchical linear regression was run on SPSS. In the first step, all control variables were entered. In the next block, the perception of organizational change was entered as the predictor. The outcome variable was the composite score of the learning tension measure. As briefed in Table 5.4, the hierarchical linear regression revealed that the control variables significantly contributed to the regression model $F(5) = 11.82, p<.001$ accounting for 31.2% of the variation in learning tensions. Adding Perception of Organization change also significantly contributed to the model, $F(6) = 11.04, p<.001$, explaining an additional 2.7% of variation in learning tension. Together, the predictor variables explained 33.9% of variation in learning tensions. Thus, Hypothesis 1a was supported. To evaluate the practical significance of the supported hypothesis, I followed Cohen (2013) recommendations as follows: I applied Cohen’s formula ($f^2 = r^2 / (1 - r^2)$), and got an effect size of 0.51. According to Cohen (2013), this is a large effect size indicating a high practical significance of the findings. Further, and taking the effect size into perspective, I followed Shaver (2008) in assessing the organizational significance of the finding. Given that the sample constitutes managers across the united states, and given that I found such a large effect size that in turn signals practical significance, in this size of a sample, that is not very big, I deduce that the finding indicates a salient organizational significance that should urge manager to carefully consider the findings. A
more elaborative recommendations for managers will follow in the managerial implication section of this study.

Hypothesis 1b stated that learning tensions mediate the association between organization change and stress. I ran a mediation model using Hayes (2018) bootstrapping method on SPSS. Process v3.3 was downloaded and used as an add on to SPSS for the purpose of this analysis. I specified the model based on the templates proposed by Hayes (2018). For the simple mediation model, I used model 4 and used the default bootstrapping of 5000. Additionally, I added the control variables as covariates. Figure 5.1 illustrates the result of the mediation analysis for Hypothesis 1b. The results indicated a significant path between the predictor variable – Perception of Change – and the mediator variable – learning tensions (i.e. path a). Thus, using Baron and Kenny’s (1986) terms, path a was statistically significant at $p<.001$, and the predictor variable explained 19.45% of the variation in learning tensions. In addition, path $c'$ was also statistically significant indicating a potential direct effect of Perception of organization change and Job related Stress. However, there was no evidence of an indirect effect i.e. no mediation effect was supported. Thus, Hypothesis 1b was not supported. Table 5.9 and Figure 5.1 show the results.

Next, I turned to the second hypothesis that stated that a) Organizational complexity (proxied by organizational size) is positively associated with organizing tensions, and b) that organizing tensions mediates the relationship between Organization complexity and Job related stress. Similar to hypothesis 1a, I entered the control variables first and then added the predictor variable Organizational Size. Both models were not significant. Thus, Hypothesis 2a was not supported. Hypothesis 2b stated that organizing tensions fully mediate the association between organizational complexity and stress. I followed the same methodology used in Hypothesis 1a but now with different predictor and mediator variables. Only path b was significant i.e. the path from organizing
tensions to job related stress. None of the other paths was significant as illustrated in Figure 5.2. Table 5.10 shows the result of the analysis. Hence, Hypothesis 2b was not supported as the data did not show a statistically significant mediation effect.

Hypothesis 3 proposed that a) plurality of stakeholders increases performing tensions, and that b) performing tensions mediate the relationship between plurality of stakeholders and job related stress. I started with controlling for the contributions of the control variables that were actually significant in the model at $F(5) = 6, p<.001$. The control variables explained 18.8% of the variation in performing tensions. However, after adding the predictor variable of interest – plurality of stakeholders – the predictor did not significantly contribute to the model by itself, but the model remained statistically significant explaining 18.8% variation in performing tensions. Thus, Hypothesis 3a was supported. The effect size (Cohen, 2013) was .23 indicating a medium effect size. Assessing the organizational significance (Shaver, 2008) was challenging especially given the fact that the predictor variable of interest did not contribute to the variance explained in performing tensions. However, given that statistical significance remained to exist in a relatively small sample that was taken from managers, I believe that an organizational significance remain to exist although not to the extent of importance that was given to hypothesis 1a. In that case, my recommendation to managers would be to consider the current results as a red flag for a potential importance especially if further research found similar results to those of this study.

In regards to Hypothesis 3b, it stated that performing tensions mediate the association between plurality of stakeholders and stress. I did not find support to any of the mediation paths, nor to the indirect effect according to Hayes (2018). Thus, Hypothesis 3b was not supported.

Proceeding to Hypothesis 4, it predicted that a) diversity of work unit will increase belonging tensions, and that b) belonging tensions will mediate the relationship between diversity of work
unit and job related stress. I had two variables that indicate diversity of work unit: One is racial diversity of work unit, and the other is gender diversity of work unit. I used both variables separately to test the support of Hypothesis 4a. I added the control variables into the model first, followed by both predictors in the second block. Neither the control variable model, nor the predictor variable model were statistically significant. And thus, Hypothesis 4a was not supported. Hypothesis 4b proposed that belonging tensions mediate the association between work unit diversity and stress. I found no support for this hypothesis neither with gender diversity of work unit and nor with racial diversity of work unit. Thus, Hypothesis 4b was not statistically supported.

I then turned then to test the moderated mediation hypotheses for all mediator variables. I used moderated mediation conditional analysis (Hayes, 2018), and I chose model 14 that matched the argument of the hypothesized moderated mediation. Model 14 sets the moderator at path b (i.e. from learning tensions to Job related stress). I started with Hypothesis 5a that stated that psychological resilience moderates the relationship between learning tensions and stress, such that the relationship is weakened when employees are high on psychological resilience, and the relationship is stronger when employees are low on psychological resilience. Since, I did not find support for the mediation between perception of organization change and stress, I wanted to find out if a mediation relationship exists at low levels of psychological resilience. I added perception of organization change as an independent variable, learning tensions as a mediator, Job related stress as dependent variable, and psychological resilience as the moderator. I also added covariates (controls) as I did in earlier analyses as follows: Gender, Race, Experiencing Tensions, Agreeableness, and Emotional Stability. The predictor and moderator variables were mean centered as recommended by Hair et al (2006). After running the analysis, I found support for Hypothesis 5a as the interaction variable (psychological resilience) was significant $p < .001$. Simple
slope analyses (+/- 1 SD) revealed that at lower levels of psychological resilience, learning tensions significantly mediate the association between perception of organizational change and job related stress. Thus, the mediation effect is conditional on the trait of psychological resilience. This mediation relationship is not significant when the trait of psychological resilience is high or is at its mean level. Further, the moderated mediation model was supported as the bootstrapped confidence intervals for the moderated mediation test did not include zero ($LLCI = -.1442$, $ULCI = -.0051$). The model explained 38.90% of variation in job related stress at $p<.001$. Figure 5.3 depicted the moderated mediation relationship between learning tensions and job-related stress. Therefore, Hypothesis 5a was supported. Further, effect size (Cohen, 2013) was large at 0.64. This in turn gives enough evidence of the organizational significance of the finding, especially given the relatively small sample size of managers across the states that responded to the survey. Thus, I highlight the organizational significance of this finding, and I urge managers to look into programs that can help their managers in buffering the stress resulting from the experience of learning tensions resulting from organizational change.

I then tested Hypothesis 5b that proposed that psychological resilience moderates the relationship between organizing tensions and stress, such that the relationship is weakened when employees are high on psychological resilience, and the relationship is stronger when employees are low on psychological resilience. Similar to Hypothesis 5a, the mediation relationship between organization size, organizing tensions, and job related stress was not supported, and thus, I was interested to see if a mediation relationship exists at low levels of psychological resilience similar to what I found in Hypothesis 5a. The hypothesis was not supported although the interaction variable was statistically significant at $p < .001$, the simple slope analysis revealed no significance of the mediation effect at any level of psychological resilience. Further, the moderated mediation
model was not supported, and thus the statistically significant interaction effect had no meaning. Psychological Resilience $\beta = 0.00$, [$LLCI = .02$, $ULCI = -.04$]. Therefore, Hypothesis 5b was not supported.

Similarly, Hypothesis 5c stated that psychological resilience moderates the relationship between performing tensions and stress, such that the relationship is weakened when employees are high on psychological resilience, and the relationship is stronger when employees are low on psychological resilience. The hypothesis was not supported as only the interaction was statistically significant at $p < .01$. Simple slope analysis as well as moderated mediation tests revealed no significance, and thus Hypothesis 5c was not supported.

Finally, Hypothesis 5d stated that psychological resilience moderates the relationship between belonging tensions and stress, such that the relationship is weakened when employees are high on psychological resilience, and the relationship is stronger when employees are low on psychological resilience. This hypothesis was tested with gender composition of work unit and with racial composition of work unit as predictors. For both gender and racial composition, neither the mediation model nor the moderated mediation models were supported. Therefore, Hypothesis 5d was not supported.

5.2.3 Reverse Causality

I tested for the potential presence of reverse causality on the hypotheses I found support for. Although paradox’ theory precludes to a great extent that learning tension can have a reverse causality or predictive effect on organizational change (Smith and Lewis, 2011; Sande & Ghosh, 2018), I wanted to test for a potential feedback loop or reverse causality effect of learning tensions on organization change. Similarly, the theory does not predict that job stress can be associated to organizational change through learning tensions and that this relationship will be moderated by the
trait of psychological resilience. Further, the time lagged design of the study, especially for the main outcome variable – Job related stress, was set so that a potential threat of endogeneity was minimized (Bamberger, Koopmann, Wang, Larimer, Nahum-Shani, Geisner & Bacharach, 2018; Hardy, Woods, & Wall, 2003). Similar to Miron-Spektor et al (2017), I found a potential feedback loop or reverse causality for Hypothesis 1a as I found a statistically significant effect of the association between learning tensions and perception of organization change $F (1) = 27.82, p < .001$. Learning tensions explained about 5% of the variation in the perception of organizational change variable. This indicated a potential feedback loop and can be interpreted such that employees who encounter learning tensions perceive their organizations as changing. Similar to Miron-Spektor et al (2017), I consider this finding as an opportunity for further investigation in future research.

Next, I checked Hypothesis 3a for reverse causality or a potential feedback loop. I found a significant relationship $p < .05$ for this direct relationship indicating that performing tensions explained 1% of the variation in the plurality of stakeholders. This finding is doubtful as it is also theoretically hard to interpret since a performing tension cannot cause number of the stakeholders to happen.

Finally, I tested reverse causality or a potential feedback loop using process (Hayes, 2018) model 14 for Hypothesis 5a. I did not find any support for a potential effect of Job stress on perception of organizational change through learning tensions as $p > .05$. Also, the interaction variable was not significant and the moderated mediation model was not supported $\beta = .0028, [LLCI = -.02, ULCI = .03]$. 59
5.3 Supplemental Analysis

5.3.1 Path Analysis

In addition to testing the hypotheses with process add on (Hayes, 2018), I also ran path analysis to assess the model fit indices of the model. I used AMOS Graphics for this purpose, and ran the analysis using Time 2 variables. Before running the path analysis, I mean centered all predictor and mediator variables so that I could create interaction variables as proposed by Hayes (2018) model. Figure 5.4 resembles the statistical model proposed by Hayes (2018) in order to test model 14. I mimicked this statistical model to include all variables of interest in my theoretical model. Further, I used the outcome variable (job related stress) from the time 2 survey.

I ran path analysis, and evaluated the outcomes. Due to the partially exploratory and pioneering nature of our study, the model fit indices were not strong. $\chi^2 (61) = 856.49$ was statistically significant at $p < .001$, $TLI = -.19$, $CFI = .66$, $RMSEA = .15$. These indices are below acceptable thresholds proposed by Hair et al (2006). Typically, researchers look for a non-significant chi square value, for values of TLI and CFI above .95 or at minimum above .90, and RMSEA below .05. (Byrne, 2012). Hence, I tested alternative models using time 2 variables, and their fit indices were compared to the hypothesized model as follows: Time 1 outcome variable was used to replace Time 2 outcome variable so that a bigger sample size is tested. In addition, model fit indices were checked in order to improve the model fit. The paragraphs below details the outcomes.
5.3.2 Alternative Models

As stated earlier, I ran an alternative model with Time 1 variables as they comprise a larger sample (N=554). Model fit indices were as follows: $\chi^2 (53) = 902.34$ was significant at $p < .001$, $TLI = .002$, $CFI = .65$ and $RMSEA = .17$.

As the model with time 1 variables remained to indicate poor fit, I turned to model fit indices to evaluate potential paths that could improve the model. The model fit indices suggested a path between error terms of the mediators performing and learning tensions (e1 and e2) so that chi square value is minimized by 210.22. This was the greatest improvement in chi square suggested by the model fit indices. I performed the path, and model fit indices improved as follows; $\chi^2 (52) = 613.252$ was significant at $p < .001$, $TLI = .33$, $CFI = .77$ and $RMSEA = .14$. After this step, model fit indices were revisited and the suggested path of associating e3 and e4, the error terms for belonging and organizing tensions, was performed. Based on this step, the fit indices changed to reflect the following: $\chi^2 (51) = 448.083$ was significant at $p < .001$, $TLI = .52$, $CFI = .84$ and $RMSEA = .12$. Then once more, a path between e1 and e4 was suggested to improve the model fit slightly more i.e. between performing and organizing tensions. The path was executed, and the fit indices were $\chi^2 (50) = 424.223$ was significant at $p < .001$, $TLI = .53$, $CFI = .85$ and $RMSEA = .12$. Then, e4 and e2, the error terms for organizing and learning tensions were associated. Model fit indices improved slightly once more to be $\chi^2 (49) = 340.798$ was significant at $p < .001$, $TLI = .63$, $CFI = .88$ and $RMSEA = .10$. The process was repeated again with e2 and e3, and model fit indices consistently improved. The modification indices then proposed that experiencing tensions as a control be associated with one error term (e3). After this modification, no major improvements were proposed by the modification indices without sacrificing some major paths in the model, and therefore I halted at this point. The fit indices were as follows: $\chi^2 (45) = 160.610$ was significant.
at $p < .001$, TLI = .84, CFI = .95, and RMSEA = .07. This represented the best model fit indices for the hypothesized model.

## 5.3.3 Theoretical Alternative Path of Tensions Triggers

In addition to above alternative models, I also tested several theoretically alternative models driven by theory in order to explore whether the different types of tensions can be predicted by predictors other than those specified in the theoretical model. For this purpose, I drew from Smith and Lewis (2011) who proposed either overtly or subtly that a) organization change can trigger performing tensions (model 1) b) that organization’s complexity (size in this study) can trigger other forms of tensions (model 2), and c) that plurality can invoke belonging paradoxes (model 3). I tested each model separately and compared it to the proposed theoretical model in AMOS. Table 5.13 summarizes the findings.

Table 5.13 showed that all the models showed adequate to excellent fit indices. Compared to the theoretical model tested in time 1 with model specifications, the theoretical alternative model 1 had slightly better fit indices. The reason is that the paradox theory is better represented in this model since organization change predicted performing tensions.

## 5.3.4 Moderated Mediation Analysis at Path a and Paths a & b

I finally tested the moderator, psychological resilience, at path a for hypotheses 5a through 5d using Hayes process macro (2013) model 7. In addition, I also tested the moderator at both paths a and b using Hayes process macro (2013) model 58.

Based on model 7, hypothesis 5a states that learning tensions mediate the association between perception of organizational change and job related stress and that psychological resilience moderates the association between perception of organizational change and learning
tensions. I found no support for this modified hypothesis as the moderated mediation was not found to be statistically significant $\beta = .00$, $[LLCI = -.03, ULCI = .02]$.

Hypothesis 5b states that organizing tensions mediate the association between organization size and stress and that psychological resilience moderates the association between organization size and organizing tensions. Thus, psychological resilience is a moderated mediation variable in the study. I found no statistical support for the moderated mediation in the study as follows $\beta = .02$, $[LLCI = -.03, ULCI = .08]$.

Hypothesis 5c states that performing tensions mediate the link between plurality of stakeholders and stress and that psychological resilience moderates the association between plurality of stakeholders and performing tensions. No statistical significance was found to support the moderated mediation on this path. $\beta = -.01$, $[LLCI = -.06, ULCI = .02]$.

Finally, hypothesis 5d stated that the diversity of work unit will be associated to job stress through belonging tensions that act as a mediator. Psychological resilience moderates this association at path a. No statistical significance was found to support the gender diversity of the work unit $\beta = -.00$, $[LLCI = -.00, ULCI = .00]$, nor the racial diversity of the work unit $\beta = -.00$, $[LLCI = -.00, ULCI = .00]$.

I then tested a moderated mediation of the psychological resilience variable on both path for each of the four hypotheses. Hypothesis 5a test revealed a statistically significant interaction effect on path a only (i.e. from organizational change to learning tensions) and did not show a significant interaction on path b, $\beta = .17$, $[LLCI = -.000, ULCI = .335]$. Further, the mediation hypothesis showed statistical significance at low levels of psychological resilience similar to what I found in the model testing phase stated earlier. For hypothesis 5b, the moderator did not reveal statistical significance on neither path a (i.e. from organization size to organizing tensions) nor on
path b (i.e. from learning tensions to job related stress). After testing hypothesis 5c, I found that
the moderator showed statistical significance when placed on path a (i.e. from plurality of
stakeholders to performing tensions), but not on path b (from performing tensions to job related
stress), $\beta = .18$, $[LLCI = -.008, ULCI = .356]$. Lastly, I tested the moderation for gender and racial
diversity of work unit, belonging tensions, and job related stress. The moderator showed statistical
significance for gender composition of work unit and belonging tensions (path a), but did not show
statistical significance on path b, $\beta = .36$, $[LLCI = .18, ULCI = .53]$. Similarly, when testing the
moderator with racial composition, I found that the moderator showed statistical significance in
path a, but not on path b, $\beta = .36$, $[LLCI = .18, ULCI = .554]$. 

In the next section, I will discuss the implications of these results and areas for future research.
Chapter 6: Discussion

Chapter 6 discusses the theoretical contributions and practical implications of the study as well as the limitations of the study and directions for future research.

6.1 Contributions and Practical Implications

This study’s contributions are multifold. First, I contribute to the paradox theory literature in several ways. I contribute empirically by creating the scale for the fourth type of individual level tensions (i.e. organizing tensions), and thus offer a measure for scholars to use to advance research in the paradox theory realm especially at the individual level. As presented, the measure showed evidence of reliability and validity. The second contribution to paradox theory embodied testing the theory at the individual level in response to prior calls in the literature (Schad et al, 2016). Not only that, but this was the first study to our knowledge to unravel potential triggers to tensions in organizations. Researching the triggers of the four types of tensions, I also found counterintuitive results such as that diversity is not a trigger to belonging tensions. These results are counterintuitive as diversity was associated in the literature not only to positive but also to negative outcomes such as conflict (Friedman & Davidson, 2001) and stereotypes (Macrae, Stangor, & Hewstone, 1996). Similarly, the increased diversity does not relate to job related stress as mediated by belonging tensions. This is another incremental contribution to diversity literature. Third, and by experimenting alternative models and paths, I found that organization size as a proxy to organizational complexity can trigger all types of tensions in organizations. This findings is highly relevant and informative to the research realm of organization size that was linked to several outcomes such as higher employees’ earnings (Kalleberg, & Van Buren, 1996) and to innovation to name few examples (Ettlie, Bridges, & O'keefe, 1984). In this paper, it was clear that
organization size or organization complexity is one of the major triggers of all types of paradoxes that can be experienced by organizational actors. This salient finding has practical implications as well as we will brief later.

Additionally, this study contributes to the wellbeing literature through the examination of both job related stress and psychological resilience. As I found support to the proposition that organization’s change can trigger job related stress through learning tensions, I drew future scholarly work to the fact that tensions are connected to the state of wellbeing of organizational actors. I did not hold at this point, but I offered a remedial together with the problem, as I proposed that the trait of psychological resilience is a buffer towards job related stress that was in turn simulated by the tensions encountered by organizational actors.

Practically, I have several recommendations to managers that stem from our current study. First, I draw managers’ attention to triggers of tensions at organizations as I found support that perception of organizational change cause learning tensions to happen. Organizational actors who perceive that their organizations are turbulent and experience high level of changes, are likely to experience learning tensions and feel squeezed between learning new knowledge and refining their existing one. This pressure leads to increased job related stress. Hence, organizations with consistent changes should offer job stress buffer programs that can help employees mitigate job related stress. On the other hand, I refuted a misunderstanding of a belief that managers can hold about gender and racial diversity by showing that increased diversity does not trigger belonging tensions or a confusion of prioritization of one’s own needs versus others’ needs. Further, I found that plurality of stakeholders trigger performing tensions. This findings has implications to organizations with diffused power or plural leadership (Denis et al, 2012). Organizations adopting characterized by these traits such as the health care sector (Denis et al, 2012) should find ways to align the
conflicting goals in order to help their employees experience less of contradictions when trying to achieve the conflicting goals concurrently. Finally, I emphasized a significant trait that managers can look for in the hiring process especially in the context of complex or big organizations in that psychological resilience as a trait can help organizational actors cope better with resulting stress. I recommend that especially complex organizations should look for this trait when hiring new personnel as their complexities trigger many types of tensions.

6.2 Limitations and Future Directions for Research

I followed the recommendations of Brutus, Aguinis, & Wassmer (2013) in developing the limitations and future research directions section. In regards to the limitations, and due to the pioneering and fairly exploratory nature of our study -especially at the individual level of analysis in the context of paradox theory, I did not find support to many of the hypotheses developed despite drawing closely from the theory. On the other hand, I view this as a research opportunity for future researchers as I invite them to explore triggers of tensions especially at the individual level amongst organizational actors. It remains to be an intriguing and interesting question to try to find out predictors of each type of tensions in organizations.

Another potential limitation of our current study is what I found in alignment with Miron-Spektor et al (2017) findings in that the four types of tensions relate to some higher order construct that was not discussed in the paradox theory literature. This opens a door to a potential refinement of the theory theoretically so that researchers can advance our present knowledge of paradox theory, and so better understand how the four types of tensions relate.

As pointed above, the discussion about the limitations calls attention to future research opportunities. In addition to the need for the discovery of potential triggers of tensions and to the need for theory refinement, I also propose that future scholarly work can examine how these
tensions affect our wellbeing or work attitudes in varying ways by measuring other constructs and relating tensions to them. Other constructs to look into could be to name some: burnout, job satisfaction, job engagement, and turnover intentions. This direction for future research is an under researched area that other scholars called upon (Schad et al, 2016; Smith and Lewis, 2011).

In addition, authors interested in researching paradox theory can find out some cognitive and emotional qualities that can moderate relationships involving the tensions. Similar to psychological resilience, other contingent cognitive and emotional moderators can be researched and found to be affecting salient connections in the realm of paradox theory.

6.3 Conclusion

In conclusion, paradoxes are inevitable and inherent encounters in our personal and work lives. Organizations are embedded with all different types of tensions that are subject to manifest and be experienced by organizational actors once triggered (Smith and Lewis, 2011). In our study, I unraveled some of the triggers of tensions and also precluded some of the misconceived triggers of tensions from being generators of tensions in organizations. Further, I also showed how the triggers of tensions and the tensions can relate to our wellbeing especially if we do not have the constellation of characteristics that can buffer their negative impacts. I consider this study one of the pioneering studies that tackle this interesting topic, and I prepared some recommendations that can help scholars and managers alike to advance the research of paradox theory further or to understand paradox theory in practical terms. Finally, I offered future scholars a tool; namely a measure, to forward this interesting realm of research.


Fornell, C., & Larcker, D. F. (1981). Structural equation models with unobservable variables and measurement error: Algebra and statistics. *Journal of marketing research*, 382-388.


group gender and age composition on managers' compensation. *Journal of applied
psychology*, 88(4), 725.

work group diversity, conflict and performance. *Administrative science quarterly*, 44(1),
1-28.

Psychological resilience and postdeployment social support protect against traumatic
stress and depressive symptoms in soldiers returning from Operations Enduring Freedom

biases in behavioral research: A critical review of the literature and recommended

Poole, M. S., & Van de Ven, A. H. (1989). Using paradox to build management and organization


http://justus.randolph.name/kappa


**Appendix (A) – Tables**

**Table 4.1 Correlation Table, Means, Standard Deviations**

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<th>Mean</th>
<th>SD</th>
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<td>.101*</td>
<td>.088*</td>
<td>.266**</td>
<td>0.07</td>
<td>0.01</td>
<td>.142**</td>
<td>.526**</td>
<td>.442**</td>
<td>.659**</td>
<td>0.72</td>
<td></td>
</tr>
<tr>
<td>Job Stress</td>
<td>3.04</td>
<td>0.99</td>
<td>-.250**</td>
<td>-.235**</td>
<td>.151*</td>
<td>.191*</td>
<td>.487**</td>
<td>0.07</td>
<td>-0.02</td>
<td>.408**</td>
<td>0.14</td>
<td>-0.15</td>
<td>-.204*</td>
<td>0.15</td>
<td>0.11</td>
<td>0.07</td>
<td>.176*</td>
<td>0.83</td>
</tr>
</tbody>
</table>

N=136. Cronbach’s alphas are on the diagonal and in bold script. *p<.05, **p<.001. Two tailed test.
Race is coded as 1 for whites and 0 for others. Gender is coded 0 for males and 1 for females.
Organization Size is coded 1 for small, 2 for medium, and 3 for large organizations.
Plurality of Stakeholders is ordinal and coded from 1 to 4 to representing ascending levels of Stakeholders.
Table 5.1 Face Validity Table

<table>
<thead>
<tr>
<th>Construct Items</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Organizing Paradox</strong></td>
<td></td>
</tr>
<tr>
<td><strong>In my work (department) I need to ....</strong></td>
<td></td>
</tr>
<tr>
<td>1. collaborate with my team members (subordinates/coworkers) while also control them</td>
<td>xxxx XXX x xxxx X</td>
</tr>
<tr>
<td>2. collaborate with my team members (subordinates/coworkers) while also compete with them</td>
<td>xxxx X x XXXXX xxx</td>
</tr>
<tr>
<td>3. work individually while also work collectively with others.</td>
<td>xxx XXXXX xx Xxxxx</td>
</tr>
<tr>
<td>4. be flexible while also be efficient</td>
<td>x Xx xxxx XxxxxX xx</td>
</tr>
<tr>
<td>Item</td>
<td>Column 1</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>----------</td>
</tr>
<tr>
<td>5. innovate and experiment new methods while also refine existing knowledge and be efficient</td>
<td>xx</td>
</tr>
<tr>
<td>6. be profit oriented while also be socially responsible</td>
<td>xxx</td>
</tr>
<tr>
<td>7. empower my subordinates/team while also direct them.</td>
<td>xxx</td>
</tr>
<tr>
<td>8. follow routine while also do change.</td>
<td>xxx</td>
</tr>
<tr>
<td>9. centralize authority while also decentralize (delegate) authority</td>
<td>xxx</td>
</tr>
<tr>
<td>10. Adopt new processes while also retain old ones.</td>
<td>xx</td>
</tr>
</tbody>
</table>

*Items highlighted in grey are the items that were retained for further analysis.*
Table 5.2. Summary of Exploratory Factor Analysis using SPSS for the construct organizing tensions (N=116)

<table>
<thead>
<tr>
<th>Items</th>
<th>Rotated Factor Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>work individually while also working collectively with others</td>
<td>.50</td>
</tr>
<tr>
<td>Be flexible while also being efficient</td>
<td>.58</td>
</tr>
<tr>
<td>centralize authority while also decentralizing (delegating) authority</td>
<td>.46</td>
</tr>
<tr>
<td>adopt new processes while also retaining old ones</td>
<td>.77</td>
</tr>
</tbody>
</table>

Principal Axis Factoring Extraction with Varimax Rotation for the measure organizing tensions.
Table 5.3 Confirmatory Factor Analysis with Alternative Models

<table>
<thead>
<tr>
<th>Model</th>
<th>$\chi^2$</th>
<th>$\Delta \chi$</th>
<th>df</th>
<th>TLI</th>
<th>CFI</th>
<th>RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Four Factor Model: Org-Learn-Perform-Belong*</td>
<td>86.47</td>
<td>-</td>
<td>59</td>
<td>.98</td>
<td>.99</td>
<td>.03</td>
</tr>
<tr>
<td>Three Factor Model: (Org-Learn)-Perform-Belong**</td>
<td>183.21</td>
<td>96.74*</td>
<td>62</td>
<td>.90</td>
<td>.93</td>
<td>.06</td>
</tr>
<tr>
<td>Two Factor Model: (Org-Learn)-(Perform-Belong)**</td>
<td>233.15</td>
<td>146.68*</td>
<td>64</td>
<td>.87</td>
<td>.91</td>
<td>.07</td>
</tr>
<tr>
<td>One Factor Model: (Org-Learn-Perform-Belong)**</td>
<td>238.93</td>
<td>152.46</td>
<td>65</td>
<td>.87</td>
<td>.91</td>
<td>.07</td>
</tr>
</tbody>
</table>

N=554. Org, Organizing Tensions; Belong, Belonging Tensions; Perform, Performing Tensions; Learn, Learning Tensions; “( )”, two or more factors merged into one; “-“, separates one factor from the other. $p<.05^*$, $p<.001^{**}$
Table 5.4 Summary of standardized regression weights and composite reliabilities for organizing tension, performing tension, learning tension, and belonging tension measures.

<table>
<thead>
<tr>
<th>Standardized Factor</th>
<th>Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Organizing Tension</strong></td>
<td></td>
</tr>
<tr>
<td><em>In my work, I need to ...</em></td>
<td></td>
</tr>
<tr>
<td>Work individually while also work collectively with others</td>
<td>0.51</td>
</tr>
<tr>
<td>be flexible while also being efficient</td>
<td>0.64</td>
</tr>
<tr>
<td>centralize authority while also delegating (decentralizing)</td>
<td>0.53</td>
</tr>
<tr>
<td>adopt new processes while retaining old ones</td>
<td>0.62</td>
</tr>
<tr>
<td><strong>Composite Reliability</strong></td>
<td><strong>0.76</strong></td>
</tr>
<tr>
<td><strong>Performing Tensions</strong></td>
<td></td>
</tr>
<tr>
<td>Be flexible, while also complying to company’s tight rules.</td>
<td>0.65</td>
</tr>
<tr>
<td>Generate new solutions to problems while avoiding mistakes</td>
<td>0.70</td>
</tr>
<tr>
<td>Be original while also conforming to existing rules</td>
<td>0.68</td>
</tr>
<tr>
<td><strong>Composite Reliability</strong></td>
<td><strong>0.79</strong></td>
</tr>
<tr>
<td><strong>Learning Tensions</strong></td>
<td></td>
</tr>
<tr>
<td>Gain new skills while relying on my existing skills.</td>
<td>0.77</td>
</tr>
<tr>
<td>Develop new capabilities while also demonstrate existing capabilities to others</td>
<td>0.76</td>
</tr>
</tbody>
</table>
Learn and explore new opportunities while exploring existing solutions

<table>
<thead>
<tr>
<th>Composite Reliability</th>
<th>0.86</th>
</tr>
</thead>
</table>

**Belonging Tensions**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Focus on my own needs while addressing the needs of others</td>
<td>0.53</td>
</tr>
<tr>
<td>Complete my own tasks while helping my colleagues complete their tasks</td>
<td>0.68</td>
</tr>
<tr>
<td>Compete and cooperate with others</td>
<td>0.54</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Composite Reliability</th>
<th>0.67</th>
</tr>
</thead>
</table>
Table 5.4 Summary of Hierarchical Regression Analysis for Variables Predicting Learning Tensions (N=136)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Model 1</th>
<th></th>
<th></th>
<th>Model 2</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>SE B</td>
<td>β</td>
<td>B</td>
<td>SE B</td>
<td>β</td>
</tr>
<tr>
<td>Gender</td>
<td>.089</td>
<td>.106</td>
<td>.067</td>
<td>.062</td>
<td>.105</td>
<td>.047</td>
</tr>
<tr>
<td>Race</td>
<td>-.235</td>
<td>.119</td>
<td>-.161*</td>
<td>-.213</td>
<td>.118</td>
<td>-.145*</td>
</tr>
<tr>
<td>Emotional</td>
<td>-.004</td>
<td>.052</td>
<td>-.007</td>
<td>.019</td>
<td>.053</td>
<td>.034</td>
</tr>
<tr>
<td>Stability</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agreeableness</td>
<td>.221</td>
<td>.060</td>
<td>.344**</td>
<td>.190</td>
<td>.061</td>
<td>.296*</td>
</tr>
<tr>
<td>Experiencing</td>
<td>.131</td>
<td>.039</td>
<td>.279**</td>
<td>.058</td>
<td>.051</td>
<td>.124*</td>
</tr>
<tr>
<td>Tensions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perception of</td>
<td></td>
<td></td>
<td></td>
<td>.125</td>
<td>.059</td>
<td>.233*</td>
</tr>
<tr>
<td>Organizational</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$R^2$</td>
<td>.31</td>
<td></td>
<td></td>
<td>.33</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$F$ for Change in</td>
<td>5.9**</td>
<td></td>
<td></td>
<td>5.8**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$R^2$</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p<.05. **p<.001.
Table 5.5 Summary of Hierarchical Regression Analysis for Variables Predicting Organizing Tensions (N=136)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Model 1</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>SE B</td>
<td>B</td>
<td>B</td>
<td>SE B</td>
<td>β</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>-.182</td>
<td>.106</td>
<td>-.145</td>
<td>-.177</td>
<td>.107</td>
<td>-.141</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Race</td>
<td>-.006</td>
<td>.004</td>
<td>-.119</td>
<td>-.005</td>
<td>.004</td>
<td>-.109</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotional Stability</td>
<td>-.022</td>
<td>.032</td>
<td>-.060</td>
<td>-.025</td>
<td>.032</td>
<td>-.067</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agreeableness</td>
<td>.089</td>
<td>.045</td>
<td>.160</td>
<td>.091</td>
<td>.046</td>
<td>.165*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experiencing Tensions</td>
<td>.089</td>
<td>.037</td>
<td>.201*</td>
<td>.089</td>
<td>.037</td>
<td>.200*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organization Size</td>
<td></td>
<td></td>
<td></td>
<td>-.040</td>
<td>.060</td>
<td>-.055</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R²</td>
<td>.075</td>
<td></td>
<td></td>
<td>.078</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F for Change in R²</td>
<td>2.38</td>
<td></td>
<td></td>
<td>.45</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p<.05. **p<.001. Organization Size was coded 1 for small organizations, 2 for medium organizations, and 3 for big organizations.
Table 5.6 Summary of Hierarchical Regression Analysis for Variables Predicting Performing Tensions (N=136)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Model 1</th>
<th></th>
<th>Model 2</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>SE B</td>
<td>β</td>
<td>B</td>
</tr>
<tr>
<td>Gender</td>
<td>-.009</td>
<td>.117</td>
<td>-.007</td>
<td>-.011</td>
</tr>
<tr>
<td>Race</td>
<td>-.003</td>
<td>.005</td>
<td>-.053</td>
<td>-.004</td>
</tr>
<tr>
<td>Emotional Stability</td>
<td>-.038</td>
<td>.035</td>
<td>-.090</td>
<td>-.037</td>
</tr>
<tr>
<td>Agreeableness</td>
<td>.257</td>
<td>.063</td>
<td>.380**</td>
<td>.256</td>
</tr>
<tr>
<td>Experiencing Tensions</td>
<td>.132</td>
<td>.041</td>
<td>.268**</td>
<td>.134</td>
</tr>
<tr>
<td>Plurality of Stakeholders</td>
<td>.033</td>
<td>.047</td>
<td>.058</td>
<td></td>
</tr>
<tr>
<td>$R^2$</td>
<td>.188</td>
<td></td>
<td>.188</td>
<td></td>
</tr>
<tr>
<td>$F$ for Change in $R^2$</td>
<td>6.00**</td>
<td></td>
<td>5.00**</td>
<td></td>
</tr>
</tbody>
</table>

*p<.05. **p<.001. Plurality of Stakeholders were empirically coded driven by the nature of the data from 1 to 4 with 4 indicating higher levels of plurality of stakeholders.
Table 5.7 Summary of Hierarchical Regression Analysis for Variables Predicting Belonging Tensions (N=128)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Model 1</th>
<th></th>
<th></th>
<th></th>
<th>Model 2</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>SE B</td>
<td>β</td>
<td>B</td>
<td>SE B</td>
<td>β</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>.042</td>
<td>.123</td>
<td>.030</td>
<td>.003</td>
<td>.135</td>
<td>.002</td>
<td></td>
</tr>
<tr>
<td>Race</td>
<td>-.003</td>
<td>.005</td>
<td>-.045</td>
<td>-.003</td>
<td>.005</td>
<td>-.054</td>
<td></td>
</tr>
<tr>
<td>Emotional Stability</td>
<td>.007</td>
<td>.037</td>
<td>.018</td>
<td>.006</td>
<td>.037</td>
<td>.014</td>
<td></td>
</tr>
<tr>
<td>Agreeableness</td>
<td>.144</td>
<td>.055</td>
<td>.224*</td>
<td>.146</td>
<td>.056</td>
<td>.227*</td>
<td></td>
</tr>
<tr>
<td>Experiencing Tensions</td>
<td>.085</td>
<td>.042</td>
<td>.171</td>
<td>.088</td>
<td>.043</td>
<td>.178</td>
<td></td>
</tr>
<tr>
<td>Gender Diversity of Work Unit</td>
<td>.002</td>
<td>.002</td>
<td>.066</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Racial Diversity of Work Unit</td>
<td>.000</td>
<td>.002</td>
<td>-.008</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$R^2$</td>
<td>.074</td>
<td></td>
<td></td>
<td>.077</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$F$ for Change in $R^2$</td>
<td>2.23</td>
<td></td>
<td></td>
<td>1.65</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p<.05. **p<.001. The gender and racial diversity was reported in percentage format.
<table>
<thead>
<tr>
<th><strong>Hypothesis</strong></th>
<th>Description</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1a</strong></td>
<td>Organization Change increases learning tensions.</td>
<td>Supported</td>
</tr>
<tr>
<td>1b</td>
<td>Learning tensions mediates the association between organization change and stress.</td>
<td>Not Supported</td>
</tr>
<tr>
<td><strong>2a</strong></td>
<td>Organizational complexity increases organizing tensions.</td>
<td>Not supported</td>
</tr>
<tr>
<td>2b</td>
<td>Organizing tensions fully mediate the association between organizational complexity and stress.</td>
<td>Not supported</td>
</tr>
<tr>
<td><strong>3a</strong></td>
<td>Plurality of Stakeholders increases performing tensions.</td>
<td>Supported</td>
</tr>
<tr>
<td>3b</td>
<td>Performing tensions partially mediate the association between plurality of stakeholders and stress.</td>
<td>Not supported</td>
</tr>
<tr>
<td><strong>4a</strong></td>
<td>The diversity of a work unit increases belonging tensions.</td>
<td>Not supported</td>
</tr>
<tr>
<td>4b</td>
<td>Belonging tensions mediate the relationship between the diversity of the work unit and job related stress of respondents.</td>
<td>Not supported</td>
</tr>
<tr>
<td><strong>5a</strong></td>
<td>Psychological resilience moderates the relationship between learning tensions and stress, such that the relationship is weakened when employees are high on psychological resilience, and the relationship is stronger when employees are low on psychological resilience.</td>
<td>Supported</td>
</tr>
<tr>
<td>Hypothesis</td>
<td>Psychological resilience moderates the relationship</td>
<td>Not supported</td>
</tr>
<tr>
<td>------------</td>
<td>---------------------------------------------------</td>
<td>---------------</td>
</tr>
<tr>
<td>5b</td>
<td>between organizing tensions and stress, such that the relationship is weakened when employees are high on psychological resilience, and the relationship is stronger when employees are low on psychological resilience.</td>
<td></td>
</tr>
<tr>
<td>5c</td>
<td>Psychological resilience moderates the relationship between performing tensions and stress, such that the relationship is weakened when employees are high on psychological resilience, and the relationship is stronger when employees are low on psychological resilience.</td>
<td>Not Supported</td>
</tr>
<tr>
<td>5d</td>
<td>Psychological resilience moderates the relationship between belonging tensions and stress, such that the relationship is weakened when employees are high on psychological resilience, and the relationship is stronger when employees are low on psychological resilience.</td>
<td>Not supported</td>
</tr>
</tbody>
</table>

Supported Hypotheses are highlighted in Bold.
Table 5.9 Results of Mediation Analysis of the association between Perception of Organizational change, learning tensions, and Job related stress (N=136)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1: Mediator Variable Model (Learning Tensions)</th>
<th>Model 2: Outcome Variable Model (Job related Stress)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>SE</td>
</tr>
<tr>
<td>Race</td>
<td>-.0055</td>
<td>.0043</td>
</tr>
<tr>
<td>Gender</td>
<td>-.0364</td>
<td>.1052</td>
</tr>
<tr>
<td>Experiencing Tensions</td>
<td>.0362</td>
<td>.0472</td>
</tr>
<tr>
<td>Emotional Stability</td>
<td>-.0262</td>
<td>.0318</td>
</tr>
<tr>
<td>Agreeableness</td>
<td>.19**</td>
<td>.0456</td>
</tr>
<tr>
<td>Perception of Organizational Change</td>
<td>.1255*</td>
<td>.0516</td>
</tr>
<tr>
<td>Learning Tensions</td>
<td>.0100</td>
<td>.1246</td>
</tr>
</tbody>
</table>

*p<.05, **p<.001
Table 5.10: Results of the Mediation Analysis of the association between organization size, organizing tensions, and job related stress

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE</th>
<th>Bootstrapped SE</th>
<th>95% CI</th>
<th>LL</th>
<th>UL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 1: Mediator Variable Model (Organizing Tensions)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Race</td>
<td>-.0055</td>
<td>.0044</td>
<td></td>
<td>-.0141</td>
<td>.0032</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>-.1767</td>
<td>.1069</td>
<td></td>
<td>-.3880</td>
<td>.0345</td>
<td></td>
</tr>
<tr>
<td>Experiencing Tensions</td>
<td>.0888</td>
<td>.0372</td>
<td></td>
<td>-.0196</td>
<td>.1233</td>
<td></td>
</tr>
<tr>
<td>Emotional Stability</td>
<td>-.0249</td>
<td>.0323</td>
<td></td>
<td>-.0887</td>
<td>.0390</td>
<td></td>
</tr>
<tr>
<td>Agreeableness</td>
<td>.0910</td>
<td>.0457*</td>
<td></td>
<td>-.0452</td>
<td>.1760</td>
<td></td>
</tr>
<tr>
<td>Organization Size</td>
<td>-.0399</td>
<td>.0597</td>
<td></td>
<td>-.1580</td>
<td>.0781</td>
<td></td>
</tr>
<tr>
<td>Model 2: Outcome Variable Model (Job related Stress)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Race</td>
<td>.41*</td>
<td>.007</td>
<td></td>
<td>.0550</td>
<td>.7550</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>.42</td>
<td>.170</td>
<td></td>
<td>.0862</td>
<td>.7609</td>
<td></td>
</tr>
<tr>
<td>Experiencing Tensions</td>
<td>.311***</td>
<td>.06</td>
<td></td>
<td>.1964</td>
<td>.4256</td>
<td></td>
</tr>
<tr>
<td>Emotional Stability</td>
<td>.0886</td>
<td>.0512</td>
<td></td>
<td>-.0126</td>
<td>.1898</td>
<td></td>
</tr>
<tr>
<td>Agreeableness</td>
<td>-.1881*</td>
<td>.0733</td>
<td></td>
<td>-.3330</td>
<td>-.0432</td>
<td></td>
</tr>
<tr>
<td>Organization Size</td>
<td>-.0445</td>
<td>.0947</td>
<td></td>
<td>-.2315</td>
<td>.1426</td>
<td></td>
</tr>
<tr>
<td>Organizing Tensions</td>
<td>.8753*</td>
<td>.1314</td>
<td></td>
<td>.0080</td>
<td>.5626</td>
<td></td>
</tr>
</tbody>
</table>

*p<.05, **p<.001, *** p<.0001
**Table 5.11 Supplemental Analysis Using T1 Data and T1 outcome variable (N= 504)**

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Description</th>
</tr>
</thead>
</table>
| **Hypothesis 1a** | Organization Change increases learning tensions (Supported)  
Model 1 and Model 2 remained to be significant. $R^2$ explained was less compared in both models at 3% and 6% respectively. Perception of Change ($\beta = .21, p < .01$). Effect size = 0.06 i.e. small effect size (Cohen, 2013). |
| Hypothesis 1b | Learning tensions mediates the association between organization change and stress (Not supported). The mediation was not supported using T1 outcome variable. Perception of Organization Change, $\beta=-.0151$, $[LLCI = -.0338, ULCI = .0009]$. |
| **Hypothesis 2a** | Organizational complexity increases organizing tensions (Supported)  
Model 1 and Model 2 were significant at $p < .05$. Model 1: $R^2$ explained was 3.6% and 3.8% respectively. Organization size ($\beta = .06, p < .05$). Effect size = .04 i.e. small effect size (Cohen, 2013). Given the small effect size, I do not place the organizational significance at its highest unless further evidence is derived from future research to support the organizational significance (Shaver, 2008) of this finding. |
| Hypothesis 2b | Organizing tensions fully mediate the association between organizational complexity and stress (Not supported). The mediation was not supported using T1 outcome variable.  
Organizing Tensions, $\beta=.0003$, $[LLCI=-.0067, ULCI=.0084]$. |
| **Hypothesis 3a** | Plurality of Stakeholders increases performing tensions (Supported).  
Model 1 and Model 2 were both significant at $p < .05$. Model 1: $R^2$ explained was 3%, Model 2: $R^2$ explained was 3.8%. Plurality of Stakeholders ($\beta = .09$ at $p < .05$). |
| Hypothesis 3b | Performing tensions partially mediate the association between plurality of stakeholders and stress (Not Supported). Performing Tensions ($\beta=.0006$, $[LLCI = -.0073, ULCI = .0089]$). |
| **Hypothesis 4a** | The diversity of a work unit increases belonging tensions (supported). |
Model 1 and Model 2 both were significant at \( p < .0001 \). Model 1: \( R^2 \) explained was 4.3% (small effect size= 0.04). Model 2: \( R^2 \) explained was 5% (small effect size = 0.05). Gender diversity \((\beta = .09, p < .05)\), Racial Diversity \((\beta = -.01, p < .05)\). Given the small effect sizes in a large sample, I do not currently place a high importance on organizational significance (Shaver, 2008) unless future research indicates provides more support to the current finding.

| Hypothesis 4b | Belonging tensions mediate the relationship between the diversity of the work unit and job related stress of respondents (Not supported). For racial diversity \( \beta = .0000 \), \([LLCI = -.0003, ULCI = .0003]\). For gender diversity \( \beta = .0001 \), \([LLCI = -.0002, ULCI = .0005]\). |
| Hypothesis 5a | Psychological resilience moderates the relationship between learning tensions and stress, such that the relationship is Weakened when employees are high on psychological resilience, and the relationship is stronger when employees are low on psychological resilience (Not Supported). Opposed to what I found in Time 1 and Time 2 data, Time 1 data did not show support to neither the mediation effect at low levels of psychological resilience and nor to the moderated mediation model. Psychological Resilience \( \beta = .0019 \), \([LLCI = -.0182, ULCI = .0217]\). |
| Hypothesis 5b | Psychological resilience moderates the relationship between organizing tensions and stress, such that the relationship is weakened when employees are high on psychological resilience, and the relationship is stronger when employees are low on psychological resilience (Supported). I found support to the mediation hypothesis at moderate and high levels of psychological resilience. Further, I found that the moderated mediation model was supported. Psychological Resilience \( \beta = .00 \), \([LLCI = .00, ULCI = .02]\). Beta’s value indicates a small effect size (Cohen, 2013). |
| Hypothesis 5c | Psychological resilience moderates the relationship between performing tensions and stress, such that the relationship is weakened when employees are high on psychological resilience, and the relationship is stronger when employees are low on psychological |
resilience (Partially supported). The simple slope analysis revealed significance at low and moderate level of psychological resilience indicating that a mediation effect exists at those levels when accounting for the moderator. Moderated mediation model was not supported. Psychological Resilience $\beta = .00, [LLCI = -.03, ULCI = .04]$. Beta’s value indicates a small effect size (Cohen, 2013).

| Hypothesis 5d | Psychological resilience moderates the relationship between belonging tensions and stress, such that the relationship is weakened when employees are high on psychological resilience, and the relationship is stronger when employees are low on psychological resilience (Not Supported). Psychological Resilience (racial composition) $\beta = .0000, [LLCI = -.0003, ULCI = .0003]$. Psychological Resilience (gender composition) $\beta = .0001, [LLCI = -.0003, ULCI = .0006]$. |

Hypotheses fully or partially supported are highlighted in Bold.
Table 5.12 Alternative Models with Path Analysis using modification indices (Time 1, N=520)

<table>
<thead>
<tr>
<th>Model</th>
<th>$\chi^2$</th>
<th>$\Delta\chi^2$</th>
<th>df</th>
<th>TLI</th>
<th>CFI</th>
<th>RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theoretical Model</td>
<td>902.34**</td>
<td>-</td>
<td>53</td>
<td>.002</td>
<td>.65</td>
<td>.17</td>
</tr>
<tr>
<td>Alternative Model 1</td>
<td>613.25**</td>
<td>289.09*</td>
<td>52</td>
<td>.33</td>
<td>.77</td>
<td>.14</td>
</tr>
<tr>
<td>Alternative Model 2</td>
<td>448.08**</td>
<td>165.17*</td>
<td>51</td>
<td>.52</td>
<td>.84</td>
<td>.12</td>
</tr>
<tr>
<td>Alternative Model 3</td>
<td>424.22**</td>
<td>478.12*</td>
<td>50</td>
<td>.53</td>
<td>.85</td>
<td>.12</td>
</tr>
<tr>
<td>Alternative Model 4</td>
<td>340.798**</td>
<td>561.54*</td>
<td>49</td>
<td>.63</td>
<td>.88</td>
<td>.10</td>
</tr>
<tr>
<td>Alternative Model 5</td>
<td>160.61**</td>
<td>741.73*</td>
<td>45</td>
<td>.84</td>
<td>.95</td>
<td>.07</td>
</tr>
</tbody>
</table>

N=520. $p<.05^*, \ p<.001^{**}$
Table 5.13 Theoretical Alternative Models with Time 1 Variables (N=520)

<table>
<thead>
<tr>
<th>Model</th>
<th>$\chi^2$</th>
<th>$\Delta \chi^2$</th>
<th>df</th>
<th>TLI</th>
<th>CFI</th>
<th>RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theoretical Model</td>
<td>160.61**</td>
<td>-</td>
<td>45</td>
<td>.84</td>
<td>.95</td>
<td>.07</td>
</tr>
<tr>
<td>Alternative Model 1</td>
<td>145.003**</td>
<td>15.67*</td>
<td>44</td>
<td>.87</td>
<td>.96</td>
<td>.06</td>
</tr>
<tr>
<td>Alternative Model 2</td>
<td>154.056**</td>
<td>6.55</td>
<td>42</td>
<td>.83</td>
<td>.95</td>
<td>.07</td>
</tr>
<tr>
<td>Alternative Model 3</td>
<td>160.287**</td>
<td>0.32</td>
<td>44</td>
<td>.84</td>
<td>.95</td>
<td>.07</td>
</tr>
</tbody>
</table>

N=520. $p<.05^*$, $p<.001^{**}$
Appendix (B) – Figures

Figure 3.1 – Theoretical Framework of the Study
Figure 5.1 Mediation Paths for Perception of Organization Change, Learning Tensions, and Job Related Stress

Indirect Effect (a*b) = 0.0013
Figure 5.2 Mediation Paths for Organization Size, Organizing Tensions, and Job Related Stress

Indirect Effect (a\*b) = .0029
Figure 5.3

Moderated Mediation of the Effect of Perception of Organizational Change on Job related stress through learning tensions at different levels of the Trait of Psychological Resilience (N=136)
Figure 5.4 Model 14 in statistical format as proposed by Hayes (2018)
Appendix (C)

The Data Collection Surveys

Questionnaire – Part 1

Please fill the following code so that researchers can match part 1 of the survey with part 2 for analysis purpose as follows (The first two letters of your Dad’s first name, the first two letters of your mom’s first name, the DAY of your birthday). Example: Dad’s name Smith, Mom’s name Mary, and Birthday is February 18th, 1983.

Code: SMMA18

- Your Code: ________________

Please respond to the following items:

<table>
<thead>
<tr>
<th>Items</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Somewhat Disagree</td>
<td>Neither agree or disagree</td>
<td>Somewhat agree</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>1. Change frequently occurs in my unit.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. It is difficult to identify when changes start and end.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. It feels like change is always happening.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. My work environment is changing in an unpredictable manner</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
5. I am often uncertain about how to respond to change

6. I am often unsure about the effect of change on my work unit

7. I am often unsure how severely a change will affect my work unit

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not at all</td>
<td>Slightly</td>
<td>Somewhat</td>
<td>Neutral</td>
<td>Moderately</td>
<td>Very much</td>
<td>a great deal</td>
</tr>
</tbody>
</table>

8. Large scale changes are significantly changing my unit’s goals

9. Changes affect my work unit’s structure

10. Changes to the values of my work unit

11. My work environment is
changing in an unpredictable manner

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all</td>
<td>Slightly</td>
<td>Somewhat</td>
<td>Neutral</td>
<td>Moderately</td>
<td>Very much</td>
<td>a great deal</td>
</tr>
</tbody>
</table>

1. Change has involved prior preparation and planning by my manager or unit.

2. Change has been the result of a deliberate decision to change by my manager/unit.

3. Change has occurred due to goals developed by my manager or unit.

If you are reading this question,
<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>select 4 Neither agree or disagree.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. I often have competing demands that need to be addressed at the same time.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. I sometimes hold two ideas in mind that seem contradictory when appearing together.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. I often have goals that contradict each other.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. I often have to meet contradictory requirements.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Usually when I examine a problem, the possible solutions seem contradictory.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. I often need to decide between</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
opposing alternatives.

10. My work is filled with tensions and contradictions.

11. All in all, I am satisfied with my job.

12. In general, I don’t like my job.

13. In general, I like working here.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Almost Never</td>
<td>Usually not</td>
<td>Sometimes</td>
<td>Occasionally</td>
<td>Often</td>
<td>Usually</td>
<td>Almost Always</td>
</tr>
</tbody>
</table>


15. I have difficulty concentrating.

16. I feel I am unable to be sensitive to the needs of co-workers.

- Please report the number of employees in your organization: ________
• How many stakeholders in the form of (individuals/agencies/governmental authorities/employees/customers/competitors) do you need to attend to and fulfill their requests/orders/demands in your work in a typical workweek? _______

• In your work unit, how much would you estimate the percentage of females? _______

• In your work unit, how much would you estimate the percentage of minority employees/non-white employees? _______

<table>
<thead>
<tr>
<th>Items</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I tend to bounce back quickly after hard times.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. I have a hard time making it through stressful events.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. It does not take me long to recover from a stressful event.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. It is hard for me to snap back when something bad happens.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. I usually come through difficult times with little trouble.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. I tend to take a long time to get over set-backs in my life.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In my work I need to …</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. … be flexible while also complying with the company’s tight rules.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. … generate new solutions to problems while avoiding mistakes.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
9. … be original while also conforming to existing norms.

10. … gain new skills while relying on my existing skills.

11. … develop new capabilities but also demonstrate my existing capabilities to others.

12. … learn and explore new opportunities while exploiting existing solutions.

13. … focus on my own needs while addressing the needs of others.

14. … complete my own tasks while helping my colleagues complete their tasks.

15. … compete and cooperate with others.

16. … collaborate with my team members/subordinates/co workers while also controlling them.

<table>
<thead>
<tr>
<th>Items</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Neutral</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>1. … collaborate with my team members/subordinates/co workers while also competing with them.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
2. Work individually while also work collectively with others.

3. Innovate and experiment new methods while also refining existing knowledge and be efficient.

4. Be flexible while also being efficient.

5. Be profit oriented while also be socially responsible.

6. Empower my subordinates/team members/coworkers while also directing them.

7. Follow routine while also doing change.

8. Centralize authority while also delegating (decentralizing) authority.

9. Adopting new processes while also retaining old ones.

If you are reading this question, mark strongly agree.

10. My job is extremely stressful.

11. Very few stressful things happen to me at work.

12. I feel a great deal of stress because of my job.

13. I almost never feel stressed because of my work.

15. I am planning to search for a new job during the next 12 months. 

If you are reading this question, mark (4). 

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Very satisfied</td>
<td>Satisfied</td>
<td>Neutral</td>
<td>Dissatisfied</td>
<td>Very dissatisfied</td>
</tr>
</tbody>
</table>

1. How satisfied are you with your job in general?

Demographic Variables

- Please report your age in numbers: ______
- Are you male (1) or female (2)? ______
- Are you married/engaged (1) single/or divorced (2)? ______
- How many children live with you at home? ______
- How many years have you worked for the organization? ______
- What is your race? (1=White, 2=Hispanic/Latino, 3=Asian, 4=Native American/Pacific Islander, 5=Black/African American)
- What is your organizational position (managerial = 1, non – managerial = 2) ? ______
- What is your salary per year in dollar value? ______
Questionnaire – Part 2

Please fill the following code so that researchers can match part 1 of the survey with part 2 for analysis

purpose as follows (The first two letters of your Dad’s first name, the first two letters of your mom’s first name, the DAY of your birthday). Example: Dad’s name Smith, Mom’s name Mary, and Birthday is February 18th, 1983.

Code: SMMA18

Your Code: ________________

<table>
<thead>
<tr>
<th>Items</th>
<th>1 Strongly Disagree</th>
<th>2 Disagree</th>
<th>3 Neutral</th>
<th>4 Agree</th>
<th>5 Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I tend to bounce back quickly after hard times.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. I have a hard time making it through stressful events.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. It does not take me long to recover from a stressful event.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. It is hard for me to snap back when something bad happens.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. I usually come through difficult times with little trouble.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. I tend to take a long time to get over set-backs in my life.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. My job is extremely stressful.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
8. Very few stressful things happen to me at work.

9. I feel a great deal of stress because of my job.

10. I almost never feel stressed because of my work.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very satisfied</td>
<td>Satisfied</td>
<td>Neutral</td>
<td>Dissatisfied</td>
<td>Very dissatisfied</td>
</tr>
</tbody>
</table>

1. I frequently think of quitting my job.

2. I am planning to search for a new job during the next 12 months.

If you are reading this question, mark (3).

3. How satisfied are you with your job in general?

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Somewhat Disagree</td>
<td>Neither agree or disagree</td>
<td>Somewhat agree</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
</tbody>
</table>

All in all, I am satisfied with my job.

In general, I don’t like my job.

In general, I like working here.

I see myself as …
...Extraverted, enthusiastic
...Critical, quarrelsome
...dependable, self disciplined
...anxious, easily upset
...open to new experiences, complex
...reserved, quiet
...sympathetic, warm
...disorganized, careless
...calm, emotionally stable
...conventional, uncreative

**Demographic Variables**

- Please report your age in numbers: ______
- Are you male (1) or female (2) ? ______
- Are you married/engaged/ (1) single/or divorced (2)? ______
- How many children live with you at home? ____
- How many years of organizational tenure? ______
- What is your race? (1=White, 2=Hispanic/Latino, 3=Asian, 4=Native American/Pacific Islander, 5=Black/African American)
- What is your organizational position in your department (managerial =1, non managerial = 2) ?
- What is your salary per year in dollar value? ______
Vita

Rawia Ahmed is originally from Egypt. She earned her Bachelor degree in Accounting from Alexandria University in Egypt. She was on the Dean’s list. Later, Rawia earned her MBA from the University of Saskatchewan in Saskatoon, Canada. In 2015, Rawia joined the PhD program in Business Administration at the University of Texas at El Paso where she specialized in Management. In addition to working as an Assistant Instructor at the University of Texas at El Paso, Rawia worked as a Graduate Student Researcher and Tutorial Leader in Edwards School of Business in Canada. Further, Rawia had various industry experiences in different sectors such as the banking, tourism, and health care sectors in different countries such as Egypt, Saudi Arabia, Germany, Canada, and finally in the United States.

Rawia had several paper acceptances in major conferences such as Society for Industry and Organizational Psychology, Midwest Academy of Management, Eastern Academy of Management, Western Academy of Management, and few other local conferences. In addition, Rawia published her paper in leading journals such as International Journal of Human Resource Management, and has a pipeline of papers that are at different stages of development.

Rawia Ahmed’s dissertation, Spurring Tensions at the Workplace and the Moderating Role of Psychological Resilience: A Paradox Theory Perspective, was under the supervision of Dr. Fernanda Wagstaff.

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