Gordon Institute of Business Science
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Managing conflicting demands: The contributing factors influencing middle managers' paradox mindsets

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Abstract

Middle managers face an increasingly complex, dynamic and, frankly, stressful business environment as they direct instructions down the organisation, while influencing strategy and synthesising information upwards to the top management teams of organisations. While juggling an array of competing demands, middle managers face the taxing complexity of code-switching numerous times a day, switching between high- and low-power roles, often numerous times a day. This study paradox theory research to explore the perceived cognitive abilities of middle managers to combine contradictory demands to fuel on-the-job and firm performance. Adopting a quantitative methodology this research report studies the influence of individual demographic characteristics, including age and job experience, on the perceived adoption of paradox mindsets to manage competing tensions. The results of the study challenge extant literature on the impact of age and experience, while supporting previous findings on the influence of education. The study concludes with future research opportunities.

Keywords

Paradox theory, paradox mindset, middle managers

Declaration

I declare that this research project is my own work. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other University. I further declare that I have obtained the necessary authorisation and consent to carry out this research.

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Table of Contents

List of Figures

List of Tables

Chapter 1: Introduction

This study of middle management through a paradox lens is aimed at broadening research on paradox theory beyond the top management level, while offering insights into the individual experiences or enabling factors of middle managers.

The experiences and challenges of middle management are widely documented in the press, with much focus on the extreme pressures of these workers (Anicich & Hirsh, 2017a; Beauchene & Cunningham, 2020; Elliot, 2021). Academia has, however, long presented a more nuanced understanding of middle managers in organisational and management studies.

Middle Managers

Middle managers play a vital role in organisations, often linking strategic formulation to execution of that strategy to achieve the company's stated goals. In addition, Schaefer & Guenther (2016) have found that when middle managers are involved in the strategic planning process, strategic planning effectiveness is positively associated with organisational performance. They argue for a broader understanding and definition of the role of middle managers play in an organisation, including their roles as strategic thinkers.

In 2012, Britain's Chartered Institute of Personnel and Development found that many middle managers in the United Kingdom were unhappy, faced excessive pressure regularly and were concerned about job security in a survey of 2000 middle managers (Woods, 2012). Anicich & Hirsh (2017a), who explored organisational power dynamics and the effects of power on the "cognitive, emotional and behavioral" (para. 3) of middle managers, highlight the complicated gauntlet middle managers have to run on a daily basis as they shift between low- and high-power bases while interacting with senior leaders on one hand and the employees they supervise on the other. Constantly shifting between conflicting roles of follower to leader and back, sometimes even in the same setting or meeting, places particular demand on middle managers, leading to stress and anxiety (Anicich & Hirsh, 2017a). This paper will argue that this is just one of many paradoxes middle managers face. A paradox, as it relates to organisational and management studies, is defined as a deep dilemma between two opposing yet inter-related demands which cannot

ultimately be resolved, only managed, and perpetuates through time (Smith & Lewis, 2011; Smith, 2014; Schad et al, 2017).

In a study conducted across five countries shortly before the on-set of the Covid-19 pandemic, the Boston Consulting Group (BCG) found that over 80% of managers thought their jobs were harder than several years before (Beauchene & Cunningham, 2020). Businesses and the environments they operate in have become increasingly complex (Waldman, Putnam, Miron-Spektor & Siegel, 2019), with business leaders often needing to respond to a variety of paradoxical demands (e.g. global versus local, social responsibility vs commercial growth, autonomy vs control, exploring innovations versus exploiting business models, products and service) by introducing ever-more complicated organisational structures (Beauchene & Cunningham, 2020).

The impact of Covid-19 on value chains, organisational structures and hybrid working systems has exacerbated the impact of organisational complexity on all levels of workers, particularly middle managers (Elliot, 2021). Closer to home, Magwegwe (2021) observes that middle managers in South Africa have experienced an increase in workplace stress since the onset of the Covid-19 pandemic and the subsequent fundamental changes to workplace organising such as work-from-home policies.

Middle managers play a vital role in organisations, often linking strategic formulation to execution of that strategy to achieve the company's stated goals. As Mallaby, Price & Hofmeyr (2019) note in their study focused on the transition from middle management to general management in South Africa, supervisors and middle managers "are stretched and often lack the experience of their counterparts in developed countries" (p. 13). Middle managers are key to the successful implementation of a strategy or strategies, while their involvement in strategy formulation and planning has been shown to have positive effects on the successful realisation of business goals (Schaefer & Guenther, 2016).

The need to understand the experiences of middle managers in leading strategy implementation and operational functions, specifically the management of competing demands, is important to driving superior performance and creating ecosystems which support improved well-being (Magwegwe, 2021). It is for this reason that the author selected this problem.

Approaching a study of middle management through a paradox lens offers the potential of broadening research on paradox theory beyond the top management level, while offering insights into the individual experiences or enabling factors of middle managers. Miron-Spektor et al (2018) note that while early paradox scholars theorised that people who were able to conceptualise tensions as paradoxes - and not isolated problems to be resolved with finality – were better able to formulate responses which harnessed the competing demands, subsequent empirical studies have tended to focus on tensions as viewed from a macro level. This observation supports the earlier findings of Schad et al (2017) in their comprehensive literature review of the leading paradox theory research over the last 30 years.

Business Need

The business press and websites of the world's leading consultancies and institutes are littered with articles, reports and surveys of the increasing complexity of the world, the environment of business and the world of work (Beauchene & Cunningham, 2020; Morgan, 2021; Williams, 2022). In addition, the Covid-19 pandemic has led to widespread social, economic, organisational and other changes, which have impacted the "traditional role" of the middle manager (Elliot, 2021). Elliot (2021) argues that the change sparked by the global pandemic (which is, in fact, still playing out) will necessitate middle managers evolving from "routers" of information, projects and directives to leaders who build connections, develop employees and foster diversity and inclusion. Concerningly, Beauchene & Cunningham (2020) note that BCG's 2020 survey found that only 9% of nonmanagers in the developed countries they surveyed aspired to become managers. The two authors label this an "existential crisis" for management.

That middle managers play a vital role in business is unquestionable - linking senior management to operational and support staff, ensuring strategy implementation, contributing to a bottom-up development of strategy (Li, 2018). This strategic importance, coupled with the undeniable challenges of middle management and the unfolding dynamics of a post-Covid-19 world, renders the study and understanding of how middle managers experience inescapable contradictory demands crucial needs for the development of business. It is only by understanding the experiences, stressors and challenges that middle managers face, that measures are formulated to ease the burden, burnout and anxiety of this group of workers, while supporting

them to elevate their performance. In addition, by helping current middle managers to gain a greater understanding of paradoxical demands and how to manage them, they are better prepared to handle the strategic paradoxes so often encountered by senior leaders (Smith, 2014).

Theoretical Need

There has been a marked growth over the last 30 years in management and organisational research which adopts a paradox theory lens to explore, explain, uncover and understand knowledge in the organisational studies field (Schad et al, 2017). Extant literature drawing on paradox theory have been published in an array of prestigious and highly rated journals, showing its value to organisational studies and the rigour of this research (Cunha & Putnam, 2019; Schad et al, 2017). However, despite this growing body of work there remain under-researched themes (Schad et al, 2017), while there is also a need to avoid what Cunha & Putnam (2019) call the "premature convergence of theoretical concepts" and an "overconfidence in dominant explanations" (p. 95). Exploring the experiences of different actors at all levels of organisational studies, as well as the factors contributing to their behaviour in particular contexts, adds to the body of knowledge and provides a richer theoretical and business understanding of the dynamics at play in organisations, among their stakeholders and in the ecosystems within which experiences are unfolding.

A paradox necessitates the long-term management of tensions that arise because of conflicting demands (Smith, 2014). While extensive research has been conducted into how and why senior leaders adopt competing strategic objectives for the organisations, two areas of strategic paradox management which offer opportunities for future research include how senior leaders can communicate a strategy characterised by paradox to subordinates (Smith, 2014), exploring the individual characteristics of professionals who manage paradoxical strategies (Smith, Binns & Tushman, 2010). In addition, Wooldridge, Schmidt & Floyd (2008) note the strategic influence middle managers often gain either directly or indirectly. Drawing on the research sited above, exploring the decision-making experiences of middle managers tasked with executing paradoxical objectives in the context of a South African organisations may further our understanding of how middle managers understand paradoxes.

Drawing on the research cited above, the study will examine the relationship between demographic characteristics of middle managers and their awareness and management of paradoxical demands.

The research problem, thus, has the potential to open avenues for future research at the individual level of organisational studies.

The purpose of the proposed research topic and research design is to learn more about the experiences of middle managers as they navigate a complex business environment in which they are required to manage tensions emerging from the existence of complex business models marked by paradoxical strategic objectives and demands. Closely linked to this goal, is the aim to explore the decision-making experiences and processes as middle managers decide how to allocate limited resources as they seek to execute on competing demands.

Conclusion

The research report seeks to determine whether four characteristics of middle managers, namely age, tenure, industry experience and education, influence their awareness of and ability to leverage paradoxical demands.

The report will take the following structure, with Chapter 2 presenting a literature review, built mainly around the most recent studies and research papers. However, where necessary, reference will be made to foundational work. Chapter 3 will build on the preceding section by laying out explicitly what the research question is, followed by the four hypotheses which will operationalise the research question allowing for statistical testing and inferences to be conducted to arrive at a sound and credible answer to the research question. Chapter 4 will lay out the study's methodology and associated choices, with defences of those choices. Moving to Chapter 5, the results of the study will be presented, with relevant detail brought to the fore. Chapter 6 will build on the results presented in Chapter 5, with a discussion of those results grounded in the literature review presented in Chapter 2. Finally, Chapter 7 will conclude with a high-level overview of the report, with implications, limitations and future research opportunities presented.

Chapter 2 – Literature Review

Introduction

This chapter will present an integrated review of the extant literature on paradox theory in organisational studies, particularly as it is a burgeoning field of research in management studies. The study adopts a paradox lens in its approach to middle managers, and, as such, the paradoxical elements of the role of middle managers will thus be made salient in this chapter. The third element this chapter will present, in laying the grounding for the development of hypotheses, is an discussion on demographic characteristics, with explicit reference to theories on upper echelons and human capital.

Paradox Theory

With the rapid development of technology in the last century, coupled with a world that growing increasingly connected through globalisation yet also characterised by a seemingly growing list of fractured interests, the environment and nature of management science has become more volatile, uncertain, complex and ambiguous with more demanded of leaders and managers (Audebrand, Camus & Michaud, 2017; Waldman, Putnam, Miron-Spektor & Siegel, 2019; Beauchene & Cunningham, 2020). It is understandable that many executives, managers and employees may feel as if they are being pulled in multiple directions as they seek to meet the demands placed on them by their peers, boards, shareholders and stakeholders. It is in this context that the study of paradoxes in organisational studies and management sciences has grown in prominence over the last 30 years, as researchers, scholars and practitioners have come to realise its significance and import in exposing and explaining the dynamics prevalent in contemporary organisations at the firm, team and individual levels (Cunha & Putnam, 2019; Schad et al, 2017; Smith, 2014).

Berti & Simpson (2021) noted that it is “now well accepted” that paradoxes - as contradictory, persistent and interdependent tensions – “are intrinsic to organising” (pg. 252), reinforcing the observation of Smith & Lewis (2011) that paradoxes emerged as a direct consequence of organising. However, the view expressed by Berti & Simpson, is not without challenge, as scholars who have applied a paradox lens to management studies have differed over the well from which paradoxes spring,

with some having argued that paradoxes are inherent in systems (a top-down approach), while others have posited that paradoxes emerge as a result of human relations and constructs (a bottom-up approach), while others still have postulated that it is a case of “a bit of both” (Smith, Lewis, Jarzebowski & Langley, 2017). These differing views have fostered diverse lines of enquiry, theory-building and proposed courses of action. It is important to hold in mind the employees who often find themselves sandwiched in the middle of this tectonic shifting of top-down and bottom-up plates of organising – middle managers.

As paradox studies have developed, some of the pre-eminent scholars leading research of the theory have explored its grounding through varied lenses, including drawing on Eastern and Western philosophy (e.g. the Eastern philosophy of yin and yang), psychology (Schad et al, 2017), as well as social cognitive theory (Shao, Nijstad & Tauber, 2019). Smith, Erez, Jarvenpaa, Lewis & Tracey (2017) have highlighted the influences of Eastern philosophers Lao Tzu and Confucius, to name just two, and Western scholars, including Aristotle and Hegel, in the development of paradox theory more broadly. These influences have become evident in contemporary research as scholars have attempted to explain, explore and deepen the understanding culture has played in the identification, framing and management of paradoxes across cultures and nations (see studies by Keller, Loewenstein & Yan, 2017; Leung, Liou, Miron-Spektor, Koh, Chan, Eisenberg & Schneider, 2018; & Liu, Xu & Zhang, 2020).

In approaching management studies from a paradox perspective academics and business scientists have strengthened and developed both theory and an understanding of organisational and management phenomena, furthering efforts to solve for and leverage these phenomena for positive and sustainable performance. Paradoxes in organisational studies have been defined as demands standing on three pillars – contradiction, interdependence and persistence (Smith & Lewis, 2011; Cunha & Putnam, 2019). Paradoxes have thus been classified as distinct demands which are contradictory and opposing, yet interdependent in nature as they define and inform each other in an interlocked persistent relationship (Smith & Lewis, 2011). Cunha & Putnam (2019) go even further, describing paradoxes as phenomena which are “surprising and wicked”, and cannot be “tamed” (pg. 100).

Paradox as tensions

A central critique of paradox theory has been the lack of distinctive definitions distinguishing paradoxes from tensions, dualities and contradictions, with scholars often using these terms interchangeably though differences exist (Cunha & Putnam, 2019). Hargrave & Van de Van (2017) attempted to address this shortcoming in their thesis in which they analysed the differences in approach paradox studies and dialectics studies took in exploring tensions. A key distinction between paradoxes on one hand and more general conflict and tensions on the other, is the persistent nature of paradoxes, with scholars having argued they (paradoxes) cannot be definitively resolved, unlike conflicts and tensions (Smith & Lewis, 2011; Hargrave & Van de Van, 2017). Traditional schools of thought in organisational studies have often framed tensions as trade-offs, problems which can be solved by taking an "either/or" decision, inspired by contingency theory (Schad, 2017). For the sake of clarity in the reader's mind, this study distinguishes between tensions - which can be resolved by choosing between two opposing demands in one moment - and paradoxes - as the multi-layered relationship between two opposing, persistent and interdependent demands. All paradoxes will involve tensions, but not all tensions will lead to paradoxes.

The complex relationship between two interwoven demands - created by the existence and most fundamental dynamics of an organisation – has been characterised by a constant shift between the alternative elements as the organisation evolves (Miron-Spektor, Ingram, Keller, Smith & Lewis, 2018). An example of one of the most pervasive paradox types experienced in organisations of all sizes is the paradox of autonomy and control. Autonomy and control are both fundamental elements of any organisation's design and systems (Waldman & Bowen, 2016). The continuous interplay between the two poles as individuals seek to manage and influence them, has highlighted the persistent nature of the paradox. It cannot be resolved through a definitive adoption of either pole, and, as such, the paradox cannot ever be definitively resolved. The associated paradox of flexibility (a type of autonomy) and control has become ever more acute as organisations the world over grapple with remote work arrangements - intentions to have workers return to the office (on the part of management) have been met by a desire for remote working (on the part of employees) (Yin, 2022). Adopting either pole in the extreme is unlikely (except in a minority of cases determined by the nature of the work underpinning the organisation). The prevailing deduction drawn from modern

paradox theory scholars has been that one cannot, in organisational studies at least, define autonomy and make it salient without considering the concept of control and its contradictory, yet interdependent relationship with autonomy. One cannot have one without the other over the course of time. In addition, Zhang, Waldman, Han & Li (2015) have highlighted the paradoxical demand to maintain control while allowing autonomy as one of five key dimensions of paradoxical leadership behaviour.

A second glaring shortcoming in organisational paradox theory has been the implicit assumption that alternate contradictory poles carry the same weight of important and thus receive equally-proportioned units of resources, effort, attention and consideration in the minds of executives, managers and employees. It is doubtful whether executives give the competing demands of profit maximisation and social responsibility equal weighting when considering how to maximise shareholder value on the one hand and make sustainable positive contributions to the environment in the territories they operate in. Examples abound of firm leaders picking the former over the latter in recent years. Cunha & Putnam (2019) believe this limitation in paradox theory is related to the lack of consideration of power and its accompanying dynamics in the study of tensions in organisations.

Paradox types

Paradox theory has been adopted to analyse, explore and research tensions and management studies at various levels of the organisation, including at the organisational, top management, teams/groups and individual levels. Due to the diverse nature of business and the wide scope of management science a range of paradox types have been defined as the theory's adoption in organisational studies has grown. Among the categories of paradoxes are paradox types which are applicable across a number of organisational levels, while others are specific only to one. Smith & Lewis (2011) have constructed one of the most comprehensive categorisations of organisational paradox types to create a ten-category framework built around four group types, namely belonging, learning, organising and performing paradoxes, which represent the foundational elements of an organisation. The exploration and definition of paradox types has been one of the leading themes of paradox-related research in management sciences in the last 20 to 30 years (Schad et al, 2018). This points to the relative infancy of the adoption of paradox theory in organisational studies, as categorising the phenomena and constructs in a field can

be considered a key step in defining a theory and a scientifically-grounded perspective.

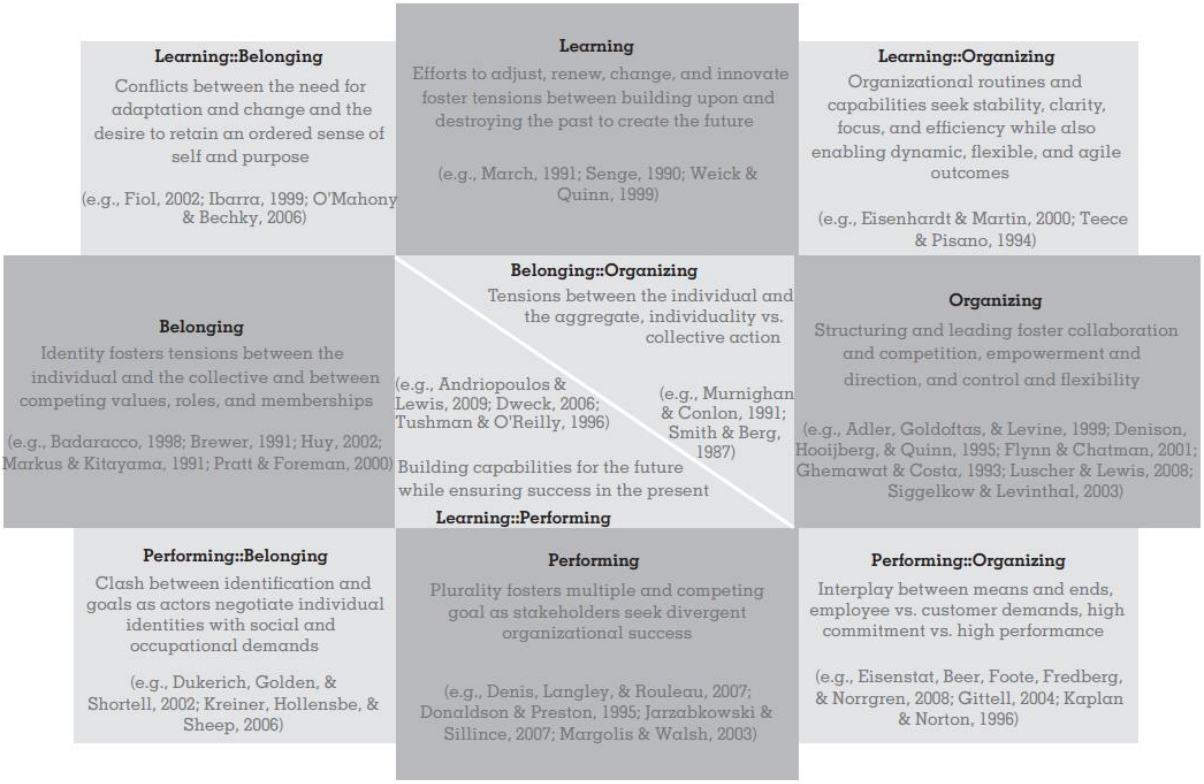

Figure 1: Categorization of organisational tensions. Smith & Lewis (2011)

Belonging tensions refer to those tensions which revolve around identity, focusing on individual identity, collective identity, the (multiple) roles people assume and values (Smith & Lewis, 2011). Berti & Simpson (2021) add an additional layer to the understanding of belonging tensions, exploring how individuals experience interpersonal tensions through the constructs of power and agency. The scholars make the point that extant literature on paradox theory in organisational studies fails to account for power dynamics in organisations, and the impact this often has on the agency of organisational actors, rendering many individuals paralysed in the face of paradoxical demands (Berti & Simpson, 2021). This theme – power as it relates to the paradox of identity - will be explored further as this study considers the complex identity tensions often unique to middle managers who oscillate between high power (when interacting with and directing subordinates) and relative lower power (when interacting with and taking direction from senior leaders and executives). The competing demands, which push and pull on middle managers, is a direct result of

the interwoven nature of belonging and organising tensions which arises as a result of organising (Smith & Lewis, 2011).

Organising paradoxes emerge as an outcome of designing an organisation and coordinating its roles, tasks and functions (Smith & Lewis, 2011). As business leaders are forced to adapt to changing stakeholder demands, increasing complexity and volatility, and heightened competition, the design of organisations is being reconsidered and, in some instances, reconfigured rapidly (Schad et al, 2017). Central to this reconsideration and reconfiguration are organising paradoxes such as cooperation versus competition, autonomy versus control, and empowerment versus direction (Smith & Lewis, 2011). These paradox types are of particular importance to owners, executives and managers, as they navigate the implementation and alignment of strategy to steer the organisation towards particular objectives, while empowering employees and successors to execute their tasks independently and in a flexible environment (Gilbert & Sutherland, 2013; Radu-Lefebvre & Randerson, 2020).

The design of an organisation often-times influences the learning environment and outcomes that develop, due, in part, to how organisational paradoxes such as empowerment-versus-direction and autonomy-versus-control are perceived and managed. Learning paradoxes compel practitioners to consider and manage efforts to renew their organisations (either through change or innovation) for growth and sustainability on one hand while on the other hand seeking to exploit existing capabilities, strengths, products and service to maximise profits (Schad et al, 2017; Koryak, Lockett, Hayton, Nicolaou & Mole, 2018; Zhang & Han, 2019). As such much extant literature is dedicated to the study and understanding of the paradoxes of exploration and exploitation (Smith & Lewis, 2011; Smith, 2014; Schad et al, 2017) in organisational studies.

Organisations exist to achieve an array of objectives, ranging from a profit imperative to improved social welfare and social utility. To achieve these strategic objectives – which are influenced by a range of stakeholders - tasks and jobs are designed to foster the realisation of these targets. As such performing paradoxes emerge from the plurality of stakeholders and demands that characterises both the internal and external environments of an organisation (Schad et al, 2017).

As executives, senior managers, middle managers and employees become increasingly aware of multiple overarching paradoxical tensions, the nested nature of the paradoxes – in that types of paradoxes are often intertwined – is made real (Pearce, Wassenaar, Berson & Tuval-Mashiach, 2019). Often organisational-level paradoxes shape or impact how tensions at team and individual levels are realised, experienced and managed (Pearce et al, 2019). For example, the management of and approach to the contradictory demands to maximise short-term profits (exploitation) on one hand, and long-term business growth and transformation (exploration) on the other, often sets the organisation on a path which determines how other paradoxes are managed (e.g. autonomy versus control in the management of staff or rigidity versus flexibility in organisational design to achieve both the exploitation and exploration goals).

Due to the nature of the webbed designs, systems and interconnections of organisations paradoxes are found at all levels of an organisation - from employees to supervisors to functional/operational/middle management to top management teams comprising general managers, senior managers and executives (Zhang & Han, 2019). Paradoxical leadership is needed at all levels due to the management of tensions, cascading of objectives and strategies, and the power of modelling in dealing with tensions (Livijin, 2019; Shao, et al, 2019). Employees need to have a paradox mindset (also known as an integrative mindset to be able to endorse a leader's paradoxical thinking and behaviour (Shao, et al, 2019). Leaders, managers and employees experience paradoxes differently (Calic et al, 2019). This is partly due to their mindsets (Shao, 2018), but also due to the varying events and contexts the actors face in the organisation (Calic et al, 2019).

Culture and Paradox

In addition to the application of paradox theory to explore intra-organisational tensions and dynamics, scholars have also drawn from psychological and social influences of paradox theory to study phenomena at the macro level, which includes researching inter-organisational dynamics, as well as the influence of national culture on how paradoxes are viewed and the development paradox mindsets (Schad et al, 2018; Keller et al, 2017). Keller et al (2017), in analysing the paradox of competition and cooperation within an organisation among American and Chinese participants, argue that culture and cultural inclinations play a role in how individuals come to

experience and think about paradoxes. This consideration of culture at a macro level appears to further the foundational construction of paradox theory, which has drawn heavily on psychosocial teachings, as previously mentioned.

Management of and responses to paradoxes

Extant literature has identified and described several types of managerial responses to paradoxes, grouped into defensive and active categories (Jarzabowski, Le & Van de Ven, 2013). Defensive responses – which include splitting the poles, suppressing one alternative and ambivalence – provide temporary relief from the paradox, but do not go much beyond that to harness the opportunities the contradictions may present (Jarzabowski et al, 2013). Active responses, however, were borne out of a recognition that both poles were equally important, informed each other and were persistent (Jarzabowski et al, 2013). Active responses include the "both/and" strategy, which sees individuals harnessing the contradictions to promote creativity and value accretive outcomes, in the process creating virtuous cycles (Smith & Lewis, 2011; Jarzabowski et al, 2013).

Gylfe, Franck & Vaara (2019) list a similar clustering of response in their research on how irony is used to live through paradoxes, with the "either/or" strategy resulting in a defensive splitting or suppressing of the poles, while the "both/and" response represents an active course of action. However, the scholars posit a second active response strategy – the "more/than" strategy – which sees multiple voices and interpretations are considered to form new understandings of paradoxes and how to approach them (Gylfe et al, 2019).

There has been a convergence in literature promoting the benefits of a "both/and" approach to managing paradoxes (Calic, et al, 2019; Smith, 2014; Smith & Lewis, 2011; Schad et al, 2017; Shao et al, 2019), driven by several quantitative and qualitative studies (most notably Smith's 2014 case study analysis on the paradox sub-set of exploration versus exploitation). The "both/and" approach sees managers accepting the demands as reality and actively seeking synergies and connections between the demands to drive performance and achievement of both (Schad et al, 2017).

Defensive tactics focus on deliberately or unwittingly avoiding the paradoxes either by doing nothing, choosing one over the other or pursuing conflicts between two opposing groups, each backing a different tension (Miron-Spektor et al, 2018). Defensive responses entrench siloed mindsets, with individual, teams, units and divisions working in isolation towards their own objectives, at the expense of broader corporate goals and objectives. This is fertile ground for the emergence of vicious cycles (Waldman et al, 2019). Extant literature has shown that paradoxes, even when addressed through a "both/and" strategy, continue to persistent into the future (Smith & Lewis, 2011; Jarzabowski et al, 2013).

Outcomes of understanding paradoxes

A range of scholars have argued and shown empirically that making paradoxes salient, confronting them and harnessing the opportunities they present by adopting paradoxical frames or mindsets correlate with greater levels of creativity, increase in profits and market share, and improved firm performance more generally (Miron-Spektor et al, 2018; Calic et al, 2019; Zhang & Han, 2019; Yin, 2022). Moreover, researchers have found that by adopting a paradox mindset and seeking out "both/and" contingencies in dealing with paradoxes, managers and leaders are able to lead more effectively, better cope with tensions and stresses, and positively impact their subordinates (Yin, 2022). Sleesman (2019) argues that by making paradoxes salient, accepting that they are a fundamental factor of organising and dealing with them individuals create opportunities to foster new paradigms, learning and breakthroughs.

Various studies have drawn positive links between organisational performance and creativity on one hand and adopting a paradox mindset on the other (Calic et al, 2019; Shao et al, 2019). In addition, the emergence of specific means to measure individuals' perception, experience, sensemaking and mindset in relation to paradoxes (e.g. Miron-Spektor et al's Paradox Mindset Inventory survey developed in 2018) has opened new avenues for research at the individual level.

It would be remiss of this author not to consider potential negative impact that paradoxes can elicit, either due to their nature or if left latent, either due to ignorance or inaction on the part of individual actors. Paradoxes have the potential to precipitate significant levels of pressure – mental, relational and emotional (Gaim, Clegg, Cunha

& Berti, 2022) – through the associated uncertainty and need to attend to both poles of contradictory demands. While empirical evidence shows that individuals with paradox mindsets or who utilise paradoxical mental frames are energised when confronting paradoxes, scholars have also found that actors who do not approach paradoxical demands with paradox mindsets experience anxiety, frustration and helplessness (Schad et al, 2017; Gaim et al, 2022). It is worth noting that Schad et al (2017) have found that there is a dearth of empirical studies which focus on individual responses to paradoxes. This suggests that a comprehensive understanding of the experiences of individual actors remains a shortcoming of organisational paradox theory and an area ripe for future research. While this research report adopts a quantitative methodology and focuses on understanding whether the paradox mindsets of middle managers are informed by their demographic characteristics, the data obtained does make reference to how the participants perceive contradictory demands. These will be presented in Chapter 5. The need to understand individual experiences of paradoxes points to future qualitative research more suited to eliciting richer experiential data.

Confusion has been shown to emerge due to seemingly contradictory instructions, especially if those instructions are not fully explained and the links between the two made salient (Berti & Simpson, 2021). As strategy is cascaded down through the organisation it becomes open to misinterpretation and confusion, with the potential for information leakage at every stage of communication between executives, managers and employees. Berti & Simpson (2021) note that while instructions may make sense to executives and managers (as they usually have more information and a greater understanding of the rationale behind the instructions), the contradictory nature of the directives may only be realised by the employee on the receiving end of the order. If employees are unable to question the instructions or communicate the observations of the contradictions embedded in the expectations, this is likely to exacerbate feelings of anxiety, fear, frustration, powerlessness and hopelessness (Berti & Simpson, 2021; Gaim et al, 2022). Leaders and managers at higher levels of the organisation enjoy higher levels of empowerment to act on contradictory demands compared to more junior colleagues as they occupy more powerful positions, have higher organisational and social status, have greater access to resources, and are able to influence organisational agendas and the allocation of resources (Berti & Simpson, 2021). While middle managers may enjoy more

authority and social currency than their subordinates, such that the managers can influence agendas, allocate (limited) resources and determine a course of action, this authority to act is limited [site]. At the same time, they are expected, by their subordinates, to play a critical sensemaking role, influence agenda, secure greater resources, give direction and to get things done on behalf of their subordinates [site]. It is a difficult task, often characterised by great levels of responsibility but low levels of authority. Actors who experience paradoxes more negatively could adopt a more defensive approach when confronted with the demands, threatening the progress of projects and organisational cohesion (Schad et al, 2017).

Cunha & Putnam (2019) caution scholars and practitioners not to discount the power of “either/or” strategies in the face of growing support for “both/and” approaches to manage tensions. Indeed, many scholars have noted that not all organisational tensions are paradoxical in nature and many can be efficiently resolved by adopting an “either/or” decision-making frame (e.g. trade-offs) or through simple problem-solving (e.g. dilemma) (Luscher & Lewis, 2008; Miron-Spektor et al, 2018; Gaim, Clegg, Cunha & Berti, 2022). Cunha & Putnam (2019) urge scholars to consider approaching responses to contradictory and rival demands as part of a repertoire of tools to deal with tensions, adopting the most suitable approach dependent on the context. Due to power dynamics individuals who face paradoxical demands can be left without a legitimate course of action (Berti & Simpson, 2021). Power imbalances and top-down management could limit the options available to an individual in deciding how to act when faced with contradictory demands, argued Berti & Simpson (2021).

Smith & Lewis (2011), in presenting their dynamic equilibrium model to work through paradoxes, made the case for an “inconsistently consistent” decision-making approach (p. 393), shifting resources, focus and decision-making between the two poles of a paradox, dependent on the current context. This approach could potentially result in confusion setting in within an organisation or group, as employees struggle to model the behaviour of their leaders and find consistency in their actions (Cunha & Putnam, 2019). Schad et al (2017) have highlighted the importance of consistency to individuals, drawing on psychology to underscore that individuals tend to avoid inconsistencies as they cause discomfort by disrupting the actors’ efforts to achieve consistency in their mental models and reasoning and thought patterns.

It is clear that while the acceptance and adoption of paradox theory and a paradox perspective to management in organising has continued to grow and find favour among scholars and practitioners alike due to its empirically-proven benefits, there remains the risk of unintended negative outcomes and organisational decline, with the causes taking root at a micro-level. In extolling its virtues researchers should not lose sight of what Berti & Simpson (2021) call "The dark side of organizational paradox". As individuals face the intersection of multiple paradoxes – learning, performing, organising and belonging – combined with the potential for cognitive confusion, anxiety, powerlessness and organisational paralysis, they increase the risk of burnout and becoming disengaged (Radu-Lefebvre & Randerson, 2020).

Paradox mindset – making paradoxes salient

The growth of paradox studies has, as mentioned above, intensified in recent decades as the realisation of its centrality to organising has broadened. However, while scholarship of paradoxes in organisational life has expanded, this has not overcome one of the central, yet hidden, aspects of paradoxical demands – the fact that individuals need to be aware that they, the paradoxes, exist and have the capacity to identify contradictory demands when confronted with these (Schad et al, 2017; Gaim et al, 2022). This requires two essential elements. Firstly, that the paradoxes become salient, and, secondly, that individuals are able to identify that the paradox exists (Calic, Helie, Bontis & Mosakowski, 2019). Paradoxes often become salient in times of complexity, change, upheaval, scarcity and rising plurality, as management is forced into considering a multitude of opportunities, threats and demands, many of which may be paradoxical in nature (Smith & Lewis, 2011). Luscher & Lewis's widely-cited action research study - conducted among middle managers in one of Lego's divisions in the early 2000s and published in 2008 - exemplifies both the hidden nature of paradoxes and the observation that they tend to emerge during times of extreme and widespread organisational change (Luscher & Lewis, 2008). Luscher & Lewis (2008) found that many of Lego's middle managers in the firm's manufacturing division in Denmark were not aware that what they faced were paradoxes, rather than tensions or problems which could be solved by adopting an "either/or" strategy (i.e. trade-offs). At the time, Lego was in the midst of a firm-wide restructuring process, which brought with it much uncertainty and anxiety, particularly for the organisation's middle managers who were tasked with communicating and implementing the change, while they themselves were uncertain,

fearful and anxious about what the transformation efforts meant for them (Luscher & Lewis, 2008).

Extending the understanding of how paradoxes are experienced further, Calic et al (2019) argue that individuals experience paradoxes "subjectively" (pg. 402). Paradoxes need to be experienced, but more importantly, the paradox needs to be made salient in the mind of the individual or group of individuals - the person needs to realise he or she is confronting or experiencing it (Schad et al, 2017; Calic, et al, 2019). A paradox mindset is not only key to managing contradictory demands over time, it is, foremost, essential in recognising the existence of the paradox.

Experiencing paradox

Paradox theory proposes people experience and deal with tensions in the workplace differently (Shao et al, 2019; Berti & Simpson, 2021). Extant literature suggests that the distinguishing factor between organisations and teams adopting a positive, proactive approach towards paradoxes versus more defensive strategies emerges at the micro-level based on whether individuals hold a paradox mindset or not (Schad et al, 2017; Miron-Spektor, et al, 2018; Liu et al, 2020).

Broadly, a paradox mindset indicates the capacity of an individual to conceptualise and embrace opposing demands and ideas, identifying not only differences between the conflicting demands, but similarities and their interconnected nature as the opposing poles inform and define each other (Keller et al, 2017; Liu et al, 2020). Additionally, it has been found that individuals who adopt paradoxical mental frames are energised by confronting competing demands as they seek to harness the mutually reinforcing nature and connections between paradoxical tensions through "both/and" thinking instead of the more conventional "either/or" approach (Smith & Lewis, 2011; Audebrand et al, 2017). Using four experiments Sleesman (2019) found that a paradox mindset was positively related to optimism and the capacity to persist in the face of failure.

Being aware of a paradox and making it salient in one's mind and the minds of others is an important first step in confronting it. The unknown has to become known first. However, several studies have found that tensions and paradoxes, once made salient, can trigger stress, strain, inaction, uncertainty, ambivalence, discomfort,

anxiety and even fear (Anicich & Hirsh, 2017; Gylfe, Franck & Vaara, 2019; Shao et al, 2019; Sleesman, 2019; Yin, 2022). Indeed, many theorists who adopt a paradox perspective caution that if paradoxes are conceived of and approached incorrectly, or with a defensive strategy such as an "either/or" perspective, individuals may resort to defensive tactics or, worse still, do nothing in the face of contradictions (Cunha & Putnam, 2019).

Schad et al, writing in their comprehensive 2017 review of paradox-inspired management science literature, suggested further research was necessary to explore whether the propensity for paradoxical thinking or the capacity to apply a paradox mindset were innate traits or whether they could be taught (Schad et al, 2017). And if they could be taught, there was a need to understand how this could be done (Schad et al, 2017). Current paradox studies are at risk of indirectly communicating that an individual either has a paradox mindset or does not, especially due to the general absence of the inclusion of contributing factors such as individual agency and relational power (Cunha & Putnam, 2019). While Yin's 2022 study found that paradoxical leaders promoted paradoxical thinking in their subordinates through their (the leaders') behaviour and facilitation of their employees' surroundings, the research did not explore and examine whether the paradoxical thinking among the subordinates was retained, needed repeated facilitation by the leaders or subsided with time (Yin, 2022). Keller et al (2017) found that culture, both inside and outside the organisation, plays an important role in the manifestation and adoption of paradoxical frames within the firm. This, arguably, suggests the strong influence of nature, begging the question "what role can and does nurture play in the cultivation of a paradox mindset?". Following the outcome of their study, Keller et al (2017) believe that both culture and conditions in and around the firm contribute to the forming of paradoxical frames. The consideration around the cultivation of a paradox mindset presents an interesting avenue for future research.

The impact of a paradox mindset

Another area of paradox theory that warrants further research is whether negative impacts or outcomes, unwittingly or otherwise, could emerge from adopting a paradox mindset and approaching tensions with paradoxical frames, and what these outcomes could be. Berti and Simpson (2021) highlight the risk of individuals,

especially those who adopt paradoxical thinking frames, feeling disempowered, withdrawing from action or following the letter of law as such when they realise they are confronted with paradoxical demands but are powerless to act in a meaningful way. This may be particularly true of employees in the middle levels of organisations, who are often tasked with guiding the implementation of processes and tasks, without the necessary authority to enact change to policies, processes, systems and roles. Berti & Simpson (2021) go further, arguing that tensions that may be viewed as understandably paradoxical by actors at higher levels of the organisation, could be perceived as perplexing by employees at lower levels of the firm. As with strategy, this view suggests that paradoxes are communicated clearly and often, while being aligned throughout the firm. Third, Berti & Simpson (2021) note that power dynamics may prevent employees from communicating questions or the irrational nature of the paradoxical demands they face to their managers and top management teams.

Smith et al (2017) posit that adopting a paradoxical frame leads to actors identifying and accepting contradictions, resulting in greater levels of comfort with ambiguous and the seemingly irrational nature of the demands when the alternatives are viewed as two parts of one whole. The scholars build on this argument, claiming that individuals with a paradox mindset are less likely to simplify concepts, as well as their beliefs and emotions, to overcome feelings of dissonance and anxiety brought on by confronting seemingly irrational and contradictory ideas (Smith et al, 2017). A paradox mindset is, thus, considered an essential tool to cope with and leverage tensions, helping individuals survive and thrive (Sleesman, 2019).

Scholars have come to define a paradox mindset rather loosely, influenced heavily by individuals' perception of their mindset through quantitative and qualitative studies (Smith & Lewis, 2011; Schad et al, 2017; Liu et al, 2020). Calic et al (2019) make a commendable attempt to break the concept of a paradoxical frame into its constituent parts by building an argument using existing empirical evidence to posit that a paradoxical mindset is "positively related to integrative complexity" (p. 400). The scholars then go onto identify two indicators of integrative complexity – differentiation and integration (Calic et al, 2019). Differentiation is defined as the capacity to recognise and acknowledge different perspectives, while holding opposing thoughts at the same time; integration, meanwhile, is defined as the capacity to identify interactions, ties and patterns between different viewpoints (Calic et al, 2019). The subsequent study by Calic et al (2019) found that a paradox mindset is positively

related to creativity when the paradoxical frames increase both “the degrees of integration and differentiation together” (p. 407). However, when higher degrees of integration were not accompanied by higher degrees of differentiation, a paradox mindset was not positively related to creativity (Calic et al, 2019). In fact, it resulted in increased levels of anxiety in individuals as they found it hard to choose a course of action after discovering alternative options through integration of ideas (Calic et al, 2019). Thus, Calic et al (2019) hypothesise that paradoxical frames may in fact have a negative impact on creativity in certain instances. Calic et al’s 2019 hypothesis supports a view held by Schad et al (2017) that applying differentiation and integration in separately could result in “intractable conflict between poles” and “organisational decline” through inaction (p. 28), respectively. This provides a more nuanced understand of the relationship between a paradox mindset and creativity.

Why paradox at the individual level matters

Miron-Spektor et al (2018) argue that individuals and their social interactions serve as the micro-foundations for higher level organisational paradoxes. So, while Smith (2014) rightly states that many paradoxes are embedded in organisations through the strategic decisions of executives and top management teams (top-down cascading of paradoxes), Miron-Spektor et al (2018) introduce the idea that paradoxes can originate from lower levels of the organisation, in a bottom-up approach. Due to the nature of organising and the dynamic interaction between management and employees it is likely that organisations experience both top-down and bottom-up paradox generation simultaneously. Understanding what drives individuals (in this case middle managers) will ultimately lead to a better understanding of paradoxes at an organisational level as well as through the organisation as a network.

The consensus that has emerged from the extant literature is that paradoxes are a fundamental feature of organisational design and life, albeit at times hidden or seemingly latent (Berti & Simpson, 2021). By recognising and understanding paradoxes, board members, executives and managers strengthen their ability to manage and even leverage the contradictory demands. In addition, these firm leaders are better able to make paradoxes salient to employees at all levels of the organisation, by explaining the dynamics of paradoxical demands and how they can be managed, as well as acting as role models for subordinates by being seen to be

embracing paradoxes (Waldman & Bowen, 2016; Zhang & Han, 2019). Scholars posit that by leveraging tensions leaders may be able to foster the development of virtuous cycles, which are characterised by increased creativity and long-term growth (Miron-Spektor et al, 2018), and ultimately sustainable competitive advantages over their rivals (Liu et al, 2020).

Extensive research, theory-building and theory-testing has been carried out in the fields of strategy on the existence of strategic paradoxes, the various types of paradoxes, the salience of paradoxes in business, and the management of two or more paradoxes within an organisation or business unit (Schad et al, 2017; Smith, 2014). Much of the available literature has focused on the management of strategic paradoxes from the perspective of senior managers, executives and top management teams (Smith, 2014), with a strong emphasis on the strategic management and related strategic decision-making connected to the adoption of paradoxical objectives, tasks, products or services (Schad et al, 2017; Glinska-Newes, Escher, Jozefowicz & Luka, 2019). However, as has already been highlighted, paradoxes have been identified across and outside of an organisation, impacting employees on all levels. In addition, scholars have come to identify a range of paradox clusters, extending beyond tensions and demands at a strategic level of the organisation (Smith & Lewis, 2011). An example of a paradox set which is experienced at lower levels of the organisation – where operations and execution are more the focus – is that of control versus autonomy/flexibility (Baber, 2020). Equally, identity paradoxes are often most salient among employees in the middle management levels of an organisation, as they navigate vertical code-switching moving between being managers (high-power position) and subordinates (low-power position) in the course of fulfilling different roles (Anicich & Hirsh, 2017). This identity paradox is a central pillar of this study, as it seeks to explore the experiences of middle managers in South Africa as they confront paradoxes in their work lives.

The study of paradoxes, the strategic management thereof, as well as its impact on innovation, leadership, top management teams, organisational performance and inter-organisational collaboration, has grown extensively over the course of the last three decades, in large part due to the growth in interest in the study of paradox theory during that time (Cunha & Putnam, 2019). However, Cunha & Putnam (2019), drawing on the analogy of a map, caution that while extensive theoretical research has built a solid foundation of paradox theory as it relates to organisational studies

scholarly mapping of the terrain remains incomplete. In conducting a quantitative study into the influence of demographic characteristics on the decision-making process of managers Glinska-Newes et al (2019) selected participants who were considered senior managers or executives - including chief executives, company presidents, board members and general directors - who were "responsible for making strategic decisions in the investigated companies" (p. 841). This is but one study which focuses on senior managers. The literature and extant research seemingly overlook the experiences and determinant factors of middle managers tasked with managing paradoxical demands (e.g. control vs flexibility) and supervising the operational implementation of paradoxical choices or objectives (e.g. meeting regulatory standards vs continual performance growth) (Schad et al, 2017). Indeed, Glinska-Newes et al (2019) argue that further research is required to understand how managers experience and making sense of the management of paradoxical products or services. Schad et al (2017) in their comprehensive analysis of paradox studies in management research over a period of 25 years found that less than a third of articles they sampled focused on individual experiences of and responses to paradoxical demands.

Middle managers

Middle managers, the subject population of this study, play a vital role in organisations, often linking strategic formulation to execution of that strategy to achieve the company's stated goals (Heyden, Sidhu & Volberda, 2018). In addition, Schaefer & Guenther (2016) have found that when middle managers are involved in the strategic planning process, strategic planning effectiveness is positively associated with organisational performance. They argue for a broader understanding and definition of the role of middle managers play in an organisation, including their roles as strategic thinkers (Schaefer & Gunther, 2016). Heyden et al (2018) further argued that extant literature has failed to explain how the characteristics of middle managers influenced their tendency to manage particular types of innovation, a phenomena that has been shown to be positively related to the adoption of a paradox mindset (Shao et al, 2019).

Middle managers are broadly considered to be employees found in the middle ranges of an organisation's structure (Anicich & Hirsh, 2017b). Though their titles and exact positioning an organisation's hierarchy may differ from entity to entity and from

industry to industry (Eaves, 2014), they are generally employees tasked with leading the implementation of a business's strategy through control and command measures, while monitoring and evaluating performance (Kempster & Gregory, 2017). However, the role of middle managers in organisations has since come to be recognised as far more impactful and strategic than merely leading operations and measuring implementation. Woolridge and Floyd, two of the foremost scholars o middle management in organisational studies, noted the rise in research which adopted a middle management perspective, bringing forth both broader and more nuanced understandings of the mediating role they play, linking the senior strategic level of an organisation to the lower operational layers of the firm (Wooldridge, Schmid & Floyd, 2008).

Much extant literature has focused on the ties between top management and firm performance, drawing on upper echelon theory to explain organisational outcomes (Koryak et al, 2018). Indeed, Glinska-Newes et al (2019) adopted upper echelon theory to investigate whether the demographic markers of senior leaders influenced their management of strategic paradoxes. In short, the Glinska-Newes et al study found statistical differences in the perceived ability to manage strategic paradoxes among several independent groups defined by age, tenure in position and tenure in the company (Glinsk-Newes et al, 2019). The study suggested that the older leaders were and the longer they had been in their positions and their company, the more likely they were to connect contradictory ideas. Connecting this outcome to the definition and conceptualisation of a paradox mindset, the ability to connect contradictory ideas is a strong indication of whether an individual could be considered to exhibit the markers of a paradox mindset.

The study of strategy in relation to executives and senior leaders in management studies is well established. However, it has since been found that middle managers have a direct impact on organisational performance through several strategic tasks, including sensemaking, strategy implementation, strategy formulation, training and development and succession planning (Hermkens, Romme & Dolmans, 2020; Li, 2018). They also play a strategic organisational role linking executives found in the top structural range of the entity's hierarchy to employees found in the bottom range, continually communicating information between the two (Anicich & Hirsh, 2017b).

Floyd and Wooldridge's middle management roles model provides a framework which theorises the four fundamental ways in which middle managers facilitate, support and influence organisational performance. The four roles are: championing; facilitating adaptability and performance; synthesising information; and implementing strategy (Floyd & Wooldridge, 1997). Despite evidence pointing to middle managers facing new and increased pressures in the last 30 years, Floyd and Wooldridge's model is still utilised to explore the role, impact and experiences of middle managers in organisational studies (Hermkens et al, 2020). The framework theorises middle managers' influence in two different directions – upward, through synthesising information and championing new ideas to senior leaders, and downward, through facilitating adaptability and implementing strategy (Floyd & Wooldridge, 1997).

In many instances influence can be seen as a proxy for or a factor of power. Anicich & Hirsh (2017b) note the constant vertical code-switching middle managers face as they seek to influence up (taking a low-power position relative to senior leaders) and influence down (adopting a high-power role relative to lower-level employees). Middle managers are expected to ensure continuity and stability in operations while simultaneously acting as change agents (Ou, Seo, Choi & Hom, 2017). It can thus be argued that not only do middle managers face paradoxical demands, but they fulfil a role which is strategically paradoxical in its very nature.

This study posits that the expanded and more nuanced understanding of middle managers presented above, specifically the role they play synthesising information (an important component of managing paradoxes) and influencing strategy, may allow for the extension of elements of upper echelon theory to middle managers in seeking to understand their experiences, and their impact on firm performance and organisational life.

The influence of demographics on performance

Upper echelon theory, which is centred around senior leaders (Wooldridge et al, 2008; Glinska-Newes et al, 2019), alone cannot be relied on to develop hypotheses focus on the characteristics of middle managers. Ng and Feldman, who have presented several studies on the intersection of individuals' characteristics and job performance, point to human capital theory as a framework to explore both concrete

outcomes and more abstract, so-called black box, constructs (Ng & Feldman, 2008; Ng & Feldman, 2009; Ng & Feldman, 2010; Ng & Feldman, 2013).

Human capital theory posits that age and education level are positively correlated to earnings as they imply and signal to employers that older and more educated individuals offer the potential of higher levels of job performance for two primary reasons – 1) they have likely acquired more skills, knowledge and experience as they have likely spent longer periods of tenure in their jobs, organisations and industries (by virtue of their age); and, 2) they have likely acquired more skills and knowledge due to obtaining higher education qualifications and training (Cooper & Davis, 2017). Human capital theory posits that older and more educated individuals earn more as they are more productive due to greater on-the-job experience (measured in years) and deeper pools of knowledge (measured by education levels or qualification) (Cooper & Davis, 2017). However, Ng & Feldman (2013) had previously found a "weak relationship between job tenure and job performance" (p. 312).

Turning to age, loosely associated to maturity, Gilbert and Sutherland, in their 2013 qualitative study on the management of the autonomy-control paradox, found that management and human resources experts believed that the maturity of a manager influenced their ability to manage the contradictory demands. However, it has to be noted that the study classified maturity in the emotional sense and not directly with age.

Sperber & Linder (2018) note that educational background has been found to be a predictor of innovation in a firm. It has been demonstrated that innovation, as previously stated, is a closely related to paradoxical thinking, as an outcome thereof (Calic et al, 2019). This suggests that education could be associated with paradoxical thinking, although this would need to be tested more directly.

Conclusion

Drawing on the findings of Glinksa-Newes et al's 2019 studies, coupled with the adoption of a human capital perspective and the extension of upper echelon theory – due to the stated impact of middle managers on strategy and firm performance – this study has presented the basis for an investigation of the influence of middle

managers' demographic characteristics on the perceived espousal of a paradox mindset and whether these characteristics form the basis for differences between groups of an independent sample.

Chapter 3 will expand on the argument presented above, operationalising the study through the formulation of a research question and four hypotheses formulated to answer this central question.

Chapter 3 – Research Question and Hypotheses

Introduction

This chapter will briefly present the research question and the four hypotheses which will operationalise the primary question.

Hypotheses Development

Organisational studies research adopting a paradox perspective has gained increasing popularity over the last three decades, as scholars have grappled with exploring and understanding ever-more dynamic phenomena such as wicked problems and an increasingly complex business environment (Schad et al, 2017). At the same time practitioners are continually faced with the need to deliver on a greater number of demands, often with fewer resources (Yin, 2021).

While paradox studies have broadened the scholarly understanding of the business environment, offering fresh perspectives on the types of opportunities “both/and” thinking has to offer versus the more widely-adopted “either/or” approach of contingency theory, there remain a myriad of questions centred on how individuals come to realise paradoxes, make sense of them and manage them over time (Schad et al, 2017; Miron-Spektor et al, 2018). Understanding the cognitive frames and general cognitions of individuals at the micro level, going inside the “black box” of decision-making and framing, remains a challenge, especially in such a relatively young school of organisational studies as paradox theory (Glinska-Newes et al, 2019)

Glinska-Newes et al (2019), in exploring whether the demographic characteristics of senior leaders in Poland’s furniture industry influenced their propensity to combine contradictions as an indicator on whether they exhibited paradox mindsets, found that the ability to manage paradoxes increased with age and organisational tenure in their sample managers. However, their hypothesis that business or economics degrees would increase the managers’ ability to manage paradoxes, compared to managers who held degrees in other fields, was not supported (Glinska-Newes et al, 2019). In concluding their study, Glinksa-Newes et al, (2019) noted the limitation of conducting their study in one industry and suggested quantitative research among a more general population of managers. This study answers the call by focusing on

managers across any industry. In addition, it seeks to further the understanding of paradox theory at the individual level, an area that Schad et al (2017) found was under-represented in the extant management science literature which adopted a paradox perspective.

Drawing on a review of relevant extant literature and heeding the call to contribute to attempts to understand paradox mindsets in individuals more deeply this study arrived at a research question seeks to identify whether individual demographic characteristics in middle managers point to varying levels of ability to paradoxical cognitions in the form of a paradox mindset.

Research Question

Is there a difference in perceived paradox mindset between groups of middle managers based on their age, industry experience, management tenure and highest level of education qualification obtained?

The research question will be operationalised by presenting four hypotheses. Through testing these hypotheses, listed below, the study will seek to answer the research question.

Hypotheses

$H1_0$ - Older middle managers are not more likely to adopt a paradox mindset in the workplace

$H2_0$ - Middle managers with greater industry experience, measured in years, are not more likely to adopt a paradox mindset in the workplace

$H3_0$ - Middle managers with longer tenure in middle management, measured in years, are not more likely to adopt a paradox mindset in the workplace

$H4_0$ - Middle managers with higher levels of education qualifications are not more likely to adopt a paradox mindset in the workplace

Conclusion

Having developed the research questions and the set of hypotheses which will operationalise the question, the focus now turns to a detailed presentation of the methodology that was followed to collect, process and analyse the data to test the questions.

Chapter Four – The research methodology and design

Introduction

Having presented the context of the study, the literature review and the development of the research question and hypotheses in chapters one, two and three, respectively, the report will now indicate how the study was conducted in a credible, intentional and valid manner to ensure credible results.

Choice of Methodology

Adopting a positivist philosophy, this study has opted to conduct a mono-method quantitative survey through the form of a questionnaire which will be distributed and conducted by digital media in the form of a website on a desktop computer/laptop or on mobile web accessed through a smartphone of tablet. This will ensure consistency with the aim of my study which is to test four hypotheses and determine whether causal relationships exist between pairs of variables, and whether differences between groups exist in relation to independent variables. The adoption of a positivist philosophy is based, in part, on the selected topic and the state of the extant literature as it relates to middle managers and paradox theory. The research design will be explanatory. Quantitative data allows the researcher to explain social phenomena, in an effort to reach a greater understanding of the phenomena (Watson, 2015). It is of great importance to determine, primarily through a literature review and previous, whether the phenomena one is studying can be measured (Watson, 2015). The choice of methodology plays a foundational role in determining the strength of the deductions and conclusions one is able to draw from analysis of the data. It would be unethical, unreliable and invalid to draw conclusions of a generalised nature from a qualitative study which only interviews a limited group of participants as the aim of the study and the research methodology would not be aligned.

Purpose of research design

The purpose of the research design is to support an explanatory study of South African-based middle managers and the possible factors which contribute to their individual perceptions of their 1) awareness of paradoxes and 2) their perceived adoption of paradox mindsets in the workplace. As the purpose of the research report is to test developed theory – stated in the form of hypotheses – and explain the

differences in awareness and behaviour among individuals of a stated group, it will be explanatory in nature as the researcher hopes to gain insights which explain the experiences and conduct of middle managers to inform future research. According to Saunders & Lewis (2018), explanatory studies assist researchers in unearthing possible "causal relationships" between variables of interest (p. 118). Questionnaires (also called surveys) are one of the common methods used to collect data for explanatory studies (Saunders & Lewis, 2018). Cresswell (2014) has noted that by testing theory through the use of surveys, the researcher considering the problem is able to focus on only a small set of variables, while controlling the design and statistical analysis to arrive at objective data with which to test the probability of the theory being true.

Philosophy

The author arrived at positivism philosophy partly by accident, as a review of the literature and continued honing of the problem being researched indicated the need to test existing theory in a manner which would unearth middle managers' awareness and management of paradoxical demands. Saunders & Lewis (2018) have noted that positivist philosophy drives the need to understand relationships between variables and within phenomena in order to draw inferences about a population. By conducting a quantitative study underpinned by a positivist philosophy, the research hope to determine whether relationships exist between the professional traits (including tenure and experience) of middle managers and their awareness and management of paradoxical demands. In accordance with Saunders & Lewis (2018), the study draws on existing theory to develop hypotheses for testing. The positivist philosophy, which is reductionist in nature, ties in with Cresswell's (2014) description of how researchers conducting surveys reduce the theory to limited, specific variables to test hypotheses drawn from the theory. Lastly, by applying established tests such as the one developed by Miron-Spektor et al (2018) to a group which the literature review shows are crucial to the performance of organisations, and who remain under-researched in organisational studies through a paradox lens, the study hopse to bring greater understanding of middle managers to the fore, while lighting a beacon for future research.

Approach

Cascading the research design from the purpose and the philosophy to the approach necessitates that the research adopted a deductive approach. Under the deductive approach, research questions and hypotheses were formulated from review of the extant literature, with a view to testing the hypotheses generated before analysing the data gathered to ascertain the validity of the hypotheses and gain a better understanding of theory in practice (Cresswell, 2014). As Saunders & Lewis (2018) note, it is important to use a "clearly structured methodology to facilitate replication" (p. 112). If it is difficult to replicate the methodology or study it calls into question the validity of the study and its findings, while preventing the study from being conducted in other contexts.

Methodological choices

Depending on the nature of the study and research design, the researcher can opt for a range of methodological choices across three categories – mono-method (either quantitative or qualitative), multi-method (but choosing only strategies from either quantitative or qualitative method) and mixed-method (using both quantitative and qualitative strategies) (Saunders & Lewis, 2018). Due to the nature of research undertaken, the relative inexperience of the author as a researcher and the limited time horizon available for completion it is unwise to select either a multi-method choice or a mixed-method option. Thus, a mono-method quantitative choice will be adopted as data will be gathered using a single technique (i.e. a questionnaire).

Strategy

A survey or questionnaire is considered one of the most common forms of data collection tools when conducting quantitative research which does not include an experiment (Edmonds & Kennedy, 2017). In order to ensure the research study's findings are credible, dependable and valid the study adopted the survey developed by Miron-Spektor et al in 2018 - Paradox Mindset Inventory. The test forms the foundation of Miron-Spektor et al's article "Microfoundations of organizational paradox: The problem is how we think about the problem". The survey (See Appendix 1 and Appendix 2) is split into four parts: demographics, how people experience tensions broadly, assessing the level to which they have a paradox mindset and finally an assessment of the four paradox types discussed above. The demographics would be edited to remove specific questions on the race, salary and location

information of the participants. In addition, the following adaptations would be made to collect the demographic information needed to test the hypotheses:

- Age would be offered as three range options (i.e. 20-29 years old, 30-39 years old and 40 plus)
- Years of industry expertise (i.e. 0-9 years, 10-19 years, 20 plus years)
- Tenure in middle management (i.e. 0-5 years, 5-10 years, 10 plus years)

Time horizon

The data the survey collected captured information at one point in time and was thus cross-sectional in nature. This was applicable to the intended research as the intention of the study is not to document change over time but rather to understand whether relationships exist at one present moment in time. Edmonds and Kennedy (2017) highlight that a survey conducted under a cross-sectional is optimal for collecting data related to attitudes and perceptions of one specific group. Data was collected over a period of just under than a month, with the survey going live on 13 September, 2022, before being closed on 12 October, 2022. A total sample size of 120 was secured.

Population

The broad population, the complete set of group members (Saunders & Lewis, 2018), for the research study was middle managers based in South Africa.

Unit of Analysis

The primary unit of analysis in this study was an individual middle manager, as they were the subject or object from whom data was be collected for the statistical testing of the stated hypothesis (Cresswell, 2014; Sedgwick, 2013). As the characteristic markers of individual middle managers were the factors being studied, this followed that the individual middle manager is the unit of analysis.

Sampling Method and Size

In most instances when research is conducted it is often difficult, though not impossible, to determine the true total size of the population targeted for research. What is often even more of a challenge is collecting data from all members of a

population, even if the true size can be determined (Saunders & Lewis, 2018). As it would be highly improbable to determine the true number of middle managers in all organisations in South Africa in a short space of time, non-probability sampling would be the obvious method to follow to reach a statistically significant number of respondents.

The most applicable non-probability sampling technique for this proposed research study is volunteer sampling, drawing on networks of organisations and personal and professional contacts to put into effect snowball sampling. This form of volunteer sampling sees the researcher asking initial contacts to share the survey with appropriate respondents who meet the study's criteria or to obtain, with permission, the details of other potential respondents (Saunders & Lewis, 2018).

The author reached respondents through professional networks, personal networks and peers at Gibs to leverage snowball sampling to reach a final total 120 participants, threshold set by Gibs.

The criteria for selection was as follows:

- Must be a middle manager
- Must not be a senior leader or executive
- Must manage a team of two or more people

Measurement Instrument

As mentioned, the research study made use of a survey, specifically drawing from Miron-Spektor et al's Paradox Mindset Inventory. This survey makes use of a 7-point Likert scale to capture the respondents' answers. The survey will form part of a guide which will include details on how long the survey should take [5-10 minutes (Miron-Spektor et al, 2018)], details of the selection criteria, how to access the survey online, an email address for the researcher and his supervisor, as well as when the survey will close. See Appendix 1 for survey questions.

Watson (2015) has noted that while errors cannot be avoided or eliminated completely, steps can be taken to limit them through the design of a good instrument which includes clear questions which are easy to understand and which only address the phenomena being studied, ensuring the instrument is reliable and valid, as well

as balanced between authenticity and directness. This latter consideration requires the researcher to balance the need to “measure as much as possible about the phenomenon” (authenticity) against the necessity to focus “only on the items directly concerned with the phenomenon” (directness) (Watson, 2015, p. 7). The instrument the study used met theses requirements of directness by focusing on gathering data on the individual’s perception of paradoxes and conflicting demands in organisational studies, seeking to understanding as many facets as possible of the individual’s experience to inform a credible study.

The Paradox Mindset Inventory was developed by respected professors Ella Miron-Spektor, Amy Ingram, Josh Keller, Marianne Lewis and Wendy Smith (all from recognised business schools from Australia [University of News South Wales], France [INSEAD] and United States of America [University of Delaware, University of Cincinnati and Clemson University]. It has been rigorously tested with participants across five countries covering the West, Asia and the Middle East (Paradox Mindset Inventory, 2017). As such, it can be considered a good instrument with which to measure individual perceptions of paradox mindsets the approach to conflicting demands.

The creators of the instrument note that it was available in the public domain for use in research (Paradox Mindset Inventory, 2017).

The communication that accompanied the measurement instrument, as well as the instruments headings and questions, made it clear to respondents what it sought to measure to ensure the research was conducted in an ethical manner which did not cause harm to or manipulates respondents by collecting data in a clandestine method.

Data gathering process

Before opening the survey to respondents, the author followed three key steps:

- Having the research supervisor check the validity of the survey;
- Running a pilot test with 10 respondents to test that the instructions were clear, that the digital technology was easy to navigate and records answers accurately to ensure statistical conclusion validity (Edmonds & Kennedy, 2017);

- The feedback received from the pilot test participants and the supervisor was used to strength the messages accompanying the survey.

Data analysis approach

The full, valid data captured from completed and valid questionnaires was saved both in the cloud and on separate devices before being loaded into Microsoft Excel where it was checked for completeness and then coded. Code books is attached in the appendix (See Appendix 3 and Appendix 4). The coded data was analysed using the SPSS software running tests for normality, validity and reliability to ensure the validity of the data. By establishing the normality of the distribution, the author established that a One-Way ANOVA would be an applicable test as the distribution was normal, meeting one of the assumptions of the test (Chiba, 2015). A One-Way ANOVA test tests for differences between the means three or more groups (Chiba, 2015). In order to determine which groups are statistically different from each other, the ANOVA test will need to be followed by a post-hoc analysis (Chiba, 2015).

Assumptions

There are six assumptions that need to be considered when conducting a One-Way ANOVA test (Chiba, 2015). See assumptions below in Table

Assumption	Description
Assumption 1	One dependent variable measured at the continuous level
Assumption 2	At least one independent variable that has three or more categorical, independent groups
Assumption 3	Independence of observations, which means there is no relationship between the observations in each group of the independent variable or the groups themselves
Assumption 4	No significant outliers in the two groups of your independent variable in terms of the dependent variable
Assumption 5	The dependent variable is normally distributed for each group of the independent variable
Assumption 6	There is homogeneity of variances, i.e. the variance is equal in each group

Table 1: Assumptions for ANOVA test. Compiled from information from Chiba (2015).

Quality controls – Validity & reliability

In order to ensure that the study was impactful, as its findings and conclusions were credible, it was key that steps were taken to prevent any shortcomings which may affect the validity and reliability of the study, its results and analysis. The results of the normality, validity and reliability tests are presented in Chapter 5.

Cresswell (2014) has noted that there are two types of threats to validity – internal and external threats.

Mortality, the threat of respondents leaving the survey or experiment before completion of the measurement (Cresswell, 2014), was an internal threat which posed a risk to the validity of the study proposed. To mitigate this risk the study was compiled in Google Forms, which allowed for each set of questions to be answered consequentially, eliminating the risk of an incomplete survey being submitted. However, to further mitigate the risk of mortality the survey was designed so that it would not take longer than 10 minutes to prevent respondents from dropping out due to the frustration associated with unknown time commitments.

Subject bias may negatively impact the reliability of the study, due to respondents answering with information that they believe will paint them in a positive light (Saunders & Lewis, 2018). As the respondents would remain anonymous, it was surmised they would be less inclined to answer the questions with a biased slant. However, the possibility still existed and was held in mind during the later stages of analysis and discussion.

Another potential risk which posed a risk to both the reliability and the validity was the change in meaning that could have been created once respondents encountered the term paradox and its meaning. The phrase is not commonly used in many businesses across the country. It was key to explain, where necessary, but not to the point of swaying respondents. Bartunek & Seo (2002) have cautioned against using academic labels which participants may not understand or generally use to label their experiences, attitudes and opinions. To address this potential risk to the reliability of the instrument, and consequently the findings of research report, the measurement instrument included brief descriptions and examples of paradoxes and conflicting demands, so as to guide respondents and ensure a more universal understanding of

the theoretical terms of the study. This enhanced the instrument's reliability and validity by ensuring 1) the results returned from the same respondents were the same each time (unless attitudes and experiences have changed), and 2) it was measuring the true experience of the phenomenon (Watson, 2015). The descriptions of academic terms and examples thereof were drawn from the literature reviewed to remain consistent with extant literature and to ensure the phenomena were explained, understood and measured in the same way as the literature the research was built on. However, while descriptions and examples were included before relevant questions no changes were made to any of the questions to maintain the integrity of the instrument.

By using an established instrument drawn from the literature reviewed, the study was aided as a first level of reliability and validity testing already occurred in the development of the instrument. However, further reliability and validity assessments were conducted to ensure the instrument was aligned to the aim of the research report, was applicable to the population of the study and was understood by all respondents.

Limitations

As the research methodology carried a number of limitations these would have to be factored into the inferences that are drawn. One of the limitations was brought about by the form of the measurement tool – the survey – which potentially could have reduced the contextual experiences of individuals in relation to the questions. In addition, there would be no way for the researcher to ask probing follow-up questions. However, this limitation could be addressed by embarking on a qualitative study informed by the results of the study. This will be noted in Chapter 7 when discussing future research opportunities.

Another limitation identified by the researcher related to how widely the findings could be generalised to middle managers more broadly. One reason for this was due to the different corporate, business and industry environments and structures that middle managers may find themselves in. This was factored into inferences which were drawn from the data analysis. Organisational settings, culture and structure are known to contribute to how individuals experience work and make sense of their experiences.

It is also not lost on the researcher that how the demographics of the survey were structured to inform the study and analysis could have unwittingly shaped the nature and outcome of the research. Zyphur & Pierides (2017) have made the point that researchers conducting quantitative studies should be aware of how they potentially "coproduce what they propose to merely represent" (p. 4).

In addition, Watson (2015) noted that a survey was not a reliable instrument to determine, and distinguish between, cause and effect. This was acutely important as the foundation of the survey data was based on individual perceptions, rather than irrefutable data based on ratio or interval measurements.

Furthermore, Bartunek and Seo (2002) surveys and questionnaires are not able to meaningfully capture the interactions individuals have with others in their sense-making, sense-giving and mean-making experiences. The research report would not attempt to draw conclusions outside the scope of the instrument.

Handling and storage – Data and Personal information

The ethics of research rests on honest and transparent communication with one's respondents, as well as how their data and personal information will be handled and utilised both during the study and after. Watson (2015) noted that data files from surveys and questionnaires should not contain information that could be used to identify specific individuals. In South Africa, the Protection of Personal Information Act places additional restrictions on researchers as it legislates the protection, handling and dissemination of individuals' personal information. For this reason, no individual contact details such as e-mail addresses or phone numbers were sought or collected on the measurement instrument or through any other means.

To accommodate all respondents the survey did not require them to sign into Google as not all participants may have been registered with the online service. As a result, the survey communication will make it clear that respondents needed to only complete one response.

The form made it clear that all questions were to be answered, unless otherwise stated.

The demographic markers were kept to a minimum and did not pose the risk of identifying any one individual as the categories were kept general and broad in range.

No respondents were manipulated or coerced into completing the survey, and it was entirely voluntary, with the option of opting out at any time along the process. No gratification was offered to ensure the respondents were partaking in the survey for the advancement of knowledge and no other purpose.

The original raw data was stored in the cloud, in a password-protected account. Additionally, two copies of the raw data were created – one of which was stored on a laptop linked to a different cloud storage service and another copy on a password-protected flash drive. This ensured the study met the requirement of keeping the data secure and in its raw, original form for a period of at least 10 years.

Conclusion

The methodology outlined above offers a comprehensive understanding of how the study's data was collected, transformed and processed in order to provide credible, reliable and valid results. Focus will now turn to the results of the statistical tests in Chapter 5.

Chapter 5 – The results

Introduction

The data reflecting the population sample, the data points captured through the measurement instrument (the questionnaire survey), as well as the results of both the integrity tests and inferential statistics tests will be presented in Chapter 5 before discussion and consideration of the results in the Chapter 6, drawing on the literature review presented in Chapter 2 and the hypotheses posed in Chapter 3 as the basis for the discussion and consideration of the results. Percentage figures are rounded up to one decimal place for convenience of presentation.

The survey questionnaire was first distributed on 13 September, 2022, with an embedded link to the form sent via email or posted on social networking and communication platforms, including LinkedIn, Facebook and to professional groups on WhatsApp and Telegram. The survey was compiled on Google Forms and included details about the study, as well as the contact details of the researcher and supervisor, Professor Gavin Price. The survey was closed to responses on 12 October, 2022, for the data to be processed. In total, 120 individuals responded to the call to participate in the study. All 120 participants completed the study, ensuring the data set did not include any incomplete responses which would need to be discarded. This was achieved by keeping the survey short, requiring no more than eight minutes of participants' time on average, and designing the questionnaire in such a way that it was clear to participants which questions needed to be answered. In addition, the survey design prevented participants from moving to the next category if any questions or statements were left unanswered. Thankfully, this did not result in any participants quitting the survey before reaching the end.

Descriptive Statistics

Sample

A total of 120 participants had responded to the researcher's call for appropriate respondents (middle managers currently employed in South Africa) when the questionnaire survey was closed on 12 October, 2022. The sample (N=120) was finalised once the survey data was assessed to identify and eliminate any incomplete responses. Participants were asked to input information on their gender, age, years

of experience in their industry, their tenure in middle management (in years) and their highest qualification. In each of these categories of demographical characteristics respondents were presented with between two to four distinct classifications ensuring each individual was allocated to only one group per category.

Gender

The majority of the respondents identified as female (N=67), with 53 respondents identifying as male.

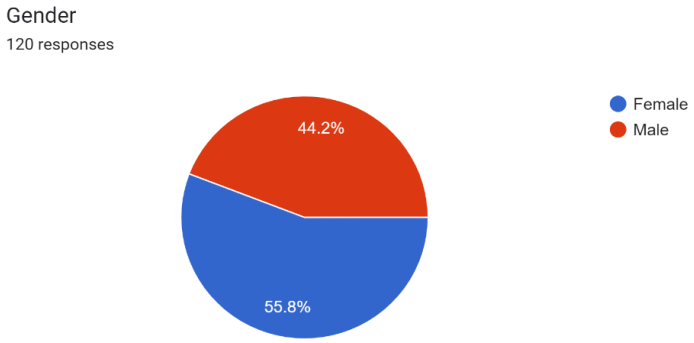

Figure 2: Gender of respondents. Source: Google Forms

Age

The respondents were presented with three distinct age groups for the purposes of the study. Age was identified as one of the independent variables, forming the independent variable of hypothesis 1. The majority of respondents were between the ages of 30 and 39 (N=59), inclusive. Fifty-seven participants were aged 40 years and older, while four respondents were between the ages of 20 and 29.

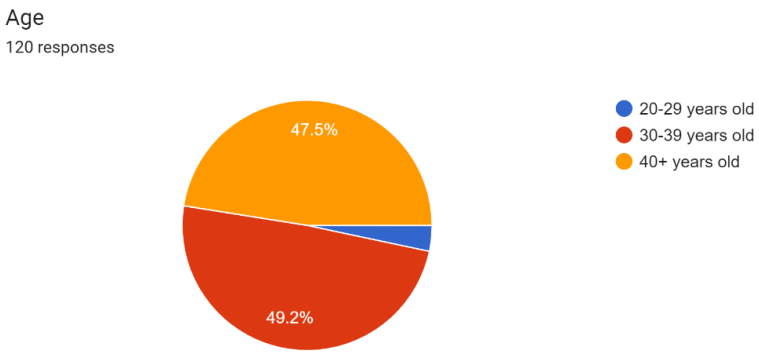

Figure 3: The age breakdown of respondents. Source: Google Forms

Industry experience

The number of years of industry experience the participants had registered as at the date of the survey (rounded to the last completed year) was the second independent variable of the study. Of the 120 respondents, 29.2% had up to nine years of industry experience, 48.3% had between 10- and 15-years' experience, and 22.5% had 20 or more years of experience.

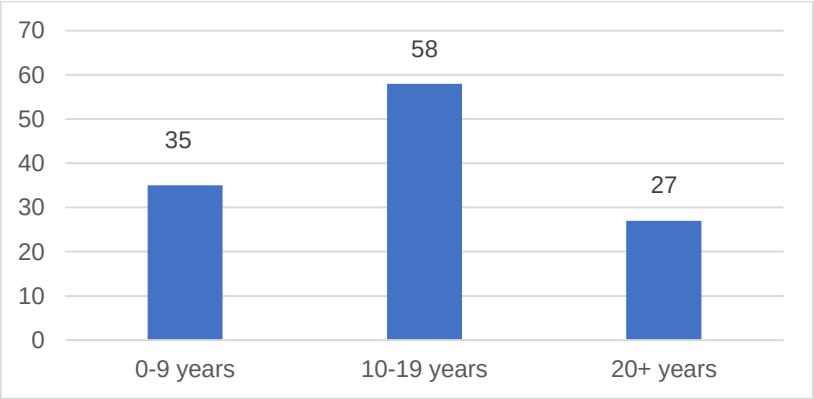

Figure 4: The breakdown of respondents' years of experience. Source: Compiled by author

Tenure in middle management

The majority of respondents had up to five years tenure experience in middle management (46.7%), while 34.2% of individuals had between six to ten years of middle management tenure experience and 19.2% of participants had 11 or more years of middle management tenure experience.

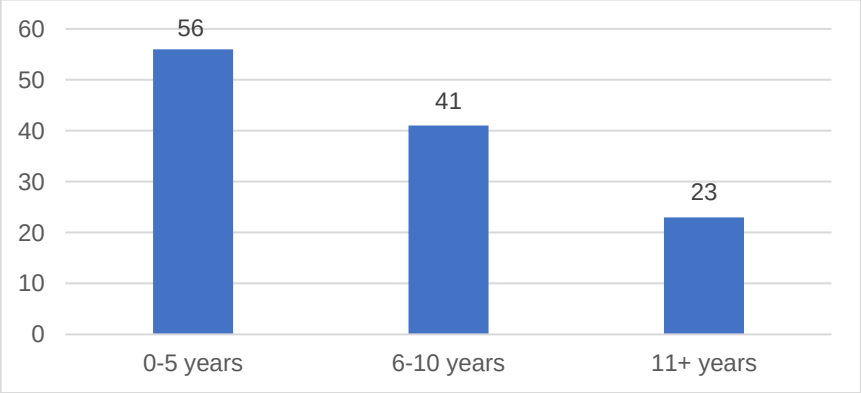

Figure 5: The breakdown of respondents' tenure in middle management. Source: Compiled by author

Highest educational qualification

Participants were presented with four distinct groups to represent the highest education qualification they had obtained. Nine respondents had a matric qualification, representing 7.5% of the of the total participants. Holders of a diploma or a B Degree represented 36.7% of the total respondents, while 55% of participants held a Post Graduate qualification. One respondent had obtained a PhD, representing 0.8% of the sample.

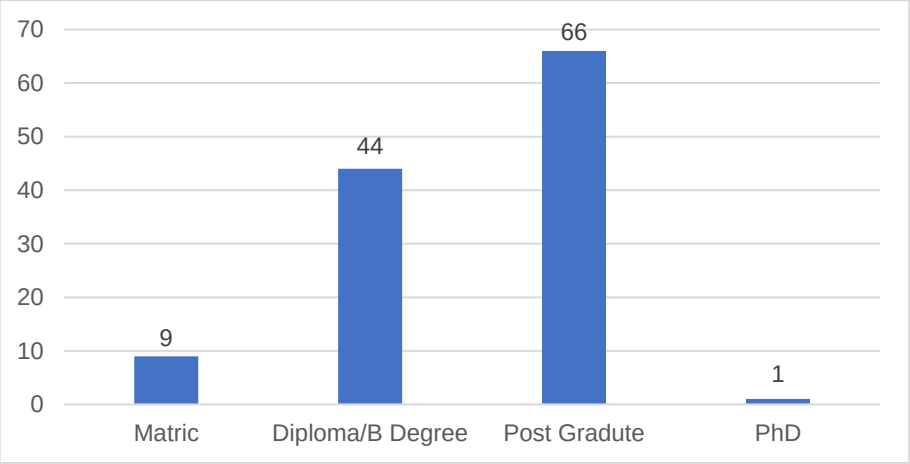

Figure 6: The breakdown of the respondents' highest education qualification obtained. Source: Compiled by author

After the data was extracted from the Google Forms platform, it was uploaded into Microsoft Excel where it was coded following the rules established by the researcher and presented in a code book (see Appendix 2). The purpose of transforming the raw data into numerical codes was to allow for processing in IBM SPSS, a statistical analysis programme. The first step in analysing and testing the data was to draw the descriptive statistics which depicts the sample size (N = 120) the number of groups in each category, the mean drawn from all the responses in each category, and the average standard deviation from the mean for each response per category (Wegner, 2020).

Demographic Characteristics	N	Minimum	Maximum	Mean	Std. Deviation
Gender	120	1	2	1.442	0.499
Age	120	1	3	2.442	0.562
Years of expertise in current industry	120	1	3	1.933	0.719
Tenure in middle management	120	1	3	1.725	0.767
Highest qualification	120	1	4	2.492	0.648

Table 2: Descriptive data. Source: Compiled by author through SPSS

Results on normality

Normality (or the lack thereof) was established to ascertain whether one of the fundamental assumptions of a One-Way Anova (also referred to as the F-test) was met (Hair et al, 2014). If the distribution is found to be non-normal running an Anova test to analyse data is not advised (Sainani, 2012). Having run a descriptive test to explore the distribution of values within the paradox mindset construct, the descriptive statistics were analysed using two factors – the Shapiro-Wilk test and the normal Q-Q plot. It is recommended that normality be ascertained both visually and through testing (Ghasemi and Zahediasl, 2012).

The null hypothesis of the Shapiro-Wilk test assumes that the variable adheres to a normal distribution of values (Sainani, 2012). Thus, if the *P* value is greater than 0.05 the null hypothesis is retained. The exploratory test for normality (shown in Table x bwlo) returned a *P* value of 0.17, greater than 0.05.

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
AveParadoxMindset	.071	120	.200*	.973	120	.017

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Table 3: Test for normality results. Source: SPSS

In addition, the normal Q-Q plot (shown below in Table 3) shows the distribution of the variable by and large follows the solid trend line, with one outlier value observed. Sainani (2012) notes that if the distribution of the variable values follow the trend, the distribution is considered normal. Thus, the construct is considered to be normally distributed, meeting the distribution assumption of a One-Way Anova.

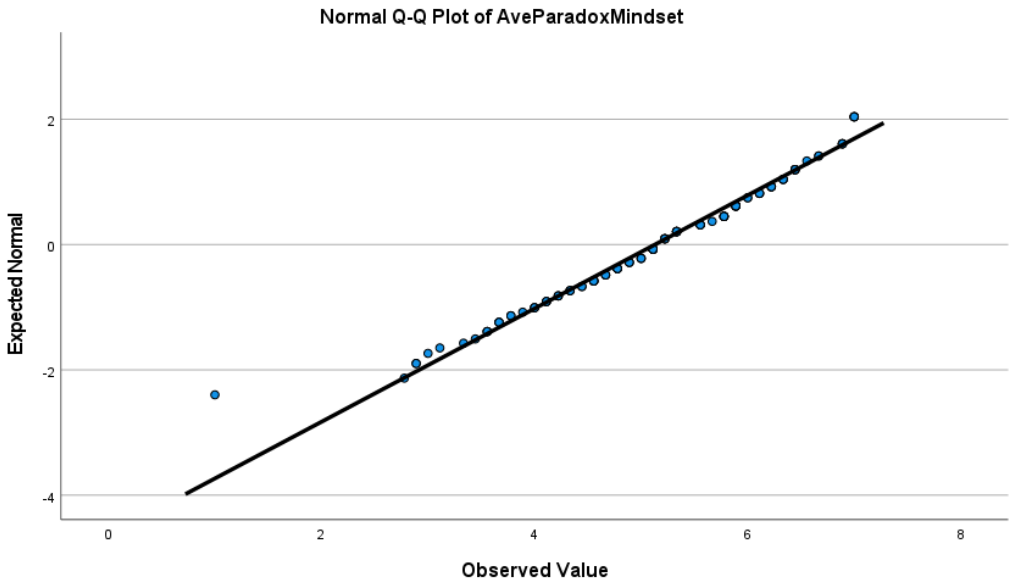

Figure 7: Normal Q-Q plot of Paradox Mindset. Source: SPSS

Hair et al (2014) highlight that outliers, defined as the "unique combination of characteristics identifiable as distinctly different from the other observations (p. 62), should not be viewed as either advantageous or problematic, but should be considered in the context of the evaluation of the data. An analysis of the data from the respondent the outlier value emerged from revealed his answers to all the items in the paradox mindset construct were either "Strongly Disagree" or "Disagree". These items on the seven-point Likert scale were coded 1 and 2, respectively, in the code book. While this set of responses may appear odd, the value was retained based on the assumption that the respondent completed the survey with honest intentions. However, inferential tests were run to both with and without the respondent's contribution to satisfy any uncertainty that the outlier value would have a significant impact on the outcome of the inferential tests and, subsequently, the credibility of the research.

Results on validity

The nine questions listed under “Paradox Mindset” on the Paradox Mindset Inventory (Miron-Spektor et al, 2018), which was utilised in this study, were tested for validity to ascertain whether the nine items, either in partly or their entirety, were valid representations of the paradox mindset construct. One method to determine the validity of a construct is through the use of a bivariate correlation combining the total score per respondent to arrive at a total item score (Swank & Mullen, 2017). Each of the nine items returned a *P* value (sig.) of less than 0.05 indicating they were each a valid representation of the construct per respondent.

Item	**Pearson Correlation**	**Sig. (2-tailed)**	**N**
When I consider conflicting perspectives, I gain a better understanding of an issue	0.611**	<.001	120
I am comfortable dealing with conflicting demands at the same time	0.693**	<.001	120
Accepting contradictions is essential for my success	0.657**	<.001	120
Tension between ideas energize me	0.787**	<.001	120
I enjoy it when I manage to pursue contradictory goals	0.783**	<.001	120
I often experience myself as simultaneously embracing conflicting demands	0.752**	<.001	120
I am comfortable working on tasks that contradict each other	0.752**	<.001	120
I feel uplifted when I realize that two opposites can be true	0.772**	<.001	120
I feel energized when I manage to address contradictory issues	0.751**	<.001	120

Table 5: Significance of nine items against total item score. Source: Adapted from SPSS Correlation matrix.

Results on reliability

A Reliability Analysis test was run on all nine items under the Paradox Mindset section in the Paradox Mindset Inventory measurement instrument. A Cronbach

Alpha of .890 was returned. A Cronbach Alpha score is deemed to be acceptable once it reaches a range of .700 to 0.900 on the higher end (Tavakol & Dennick, 2011). The nine items returned a Cronbach Alpha score of .890, thus no items needed to be deleted to reach minimum threshold of .700.

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.890	0.890	9

Table 6: Cronbach Alpha derived from Reliability Analysis test. Source: SPSS

In addition, Table x shows the Cronbach Alpha score should any item be deleted, highlighting the reliability of each item.

Item-Total Statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
When I consider conflicting perspectives, I gain a better understanding of an issue	40,04	88,410	0,545	0,387	0,887
I am comfortable dealing with conflicting demands at the same time	40,77	81,054	0,604	0,516	0,881
Accepting contradictions is essential for my succes	40,71	83,318	0,569	0,421	0,883
Tension between ideas energize me	41,61	75,064	0,705	0,592	0,872
I enjoy it when I manage to pursue contradictory goals	41,41	75,471	0,702	0,651	0,873

I often experience myself as simultaneously embracing conflicting demands	41,39	78,963	0,675	0,522	0,875
I am comfortable working on tasks that contradict each other	41,32	77,378	0,665	0,520	0,876
I feel uplifted when I realize that two opposites can be true	41,21	77,158	0,694	0,595	0,873
I feel energized when I manage to address contradictory issues	40,82	77,680	0,666	0,619	0,876

Table 7: The impact of each of the nine Paradox Mindset items on the total Cronbach Alpha score for the construct. Source: SPSS

Factor analysis

A Dimension Reduction test was run in SPSS to split the nine items which measured the paradox mindset into the component parts of the construct. The factor analysis test was the Dimension Reduction test chosen. The Correlation Matrix showed correlations of higher than 0.3 across all nine items, indicating strong correlation (Hutcheson, 1999).

The next step was to analyse the KMO and Bartlett's Test statistics. The KMO statistic is assessed against a table with six grading levels (Hutcheson, 1999). According to the KMO table, the returned KMO statistic of 0.831 is considered comfortably suitable. The Bartlett's Test of Sphericity *P* value was lower than .05 meets the criteria to continue to consider the items as constituents of a component of a construct, instead of individually.

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.831
Bartlett's Test of Sphericity	Approx. Chi-Square	526,577
	df	36
	Sig.	<0.001

Table 8: KMO and Bartlett's Test. Source: SPSS

The final step was to consider the Eigenvalue under the Total Variance Explained table (see Table 8). The results indicated that only one component (also known as a factor) needed to be extracted, indicating that all nine items would form part of one factor. The component items can be seen in Table 9 (on the next page).

Total Variance Explained						
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4,814	53,490	53,490	4,814	53,490	53,490
2	0,893	9,923	63,413			
3	0,871	9,682	73,095			
4	0,610	6,774	79,870			
5	0,516	5,730	85,600			
6	0,422	4,690	90,290			
7	0,411	4,566	94,855			
8	0,286	3,183	98,038			
9	0,177	1,962	100,000			

Table 9: An analysis of the Total Variance Explained results revealed one component needed to be extracted, with item 1 showing an Eigenvalue of 1 or more. Source: SPSS

Component Matrix[a]	
	Component
	1
When I consider conflicting perspectives, I gain a better understanding of an issue	0,635
I am comfortable dealing with conflicting demands at the same time	0,698
Accepting contradictions is essential for my success	0,660
Tension between ideas energize me	0,779
I enjoy it when I manage to pursue contradictory goals	0.774
I often experience myself as simultaneously embracing conflicting demands	0,750
I am comfortable working on tasks that contradict each other	0,748
I feel uplifted when I realize that two opposites can be true	0,774
I feel energized when I manage to address contradictory issues	0,748

Table 10: The Component Matrix confirmed the extraction of 1 component. Source: SPSS

Data transformation

Having processed, validated and prepared the relevant data obtained by the Paradox Mindset Inventory by establishing normality, validity and reliability, a consolidated composition of the paradox mindset was ascertained. As a result, the ordinal data captured by the seven-point Likert scale tool was transformed into scale data per respondent, reflecting their unique total and average paradox mindset scores based on their answers to each of the nine questions which were constituted as part of the paradox mindset factor through the exploratory factor analysis documented above.

This transformation enabled the stated hypotheses to be tested using inferential statistical methods, in the case of this study a One-Way Anova to test for differences among three or more groups by comparing their means (Chiba, 2015; Wegner, 2020).

Hypothesis 1 - Age

$H1_0$ – Older middle managers are not more likely to adopt a paradox mindset in the workplace

$H1_1$ – Older middle managers are not more likely to adopt a paradox mindset in the workplace

The descriptive statistics for the Anova test to establish whether there was a difference of means between the three classified age groups showed an increasing trend of perceived paradox mindset with an increase in age.

Paradox Mindset								
	N	**Mean**	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Min	Max
					Lower Bound	Upper Bound		
20-29 years	4	**4,194**	1,693	0,847	1,500	6,889	2,89	6,44
30-39 years	59	**5,102**	1,157	0,151	4,800	5,403	1,00	7,00
40+ years	57	**5,222**	0,994	0,132	4,959	5,486	2,78	7,00
Total	120	**5,129**	1,106	0,101	4,9288	5,329	1,00	7,00

Table 11: Descriptive statistics for Anova test with age as the independent variable. Source: SPSS

The mean plot graph (Figure 7) visualises this trend, showing an increase in perceived paradox mindset with an increase in age.

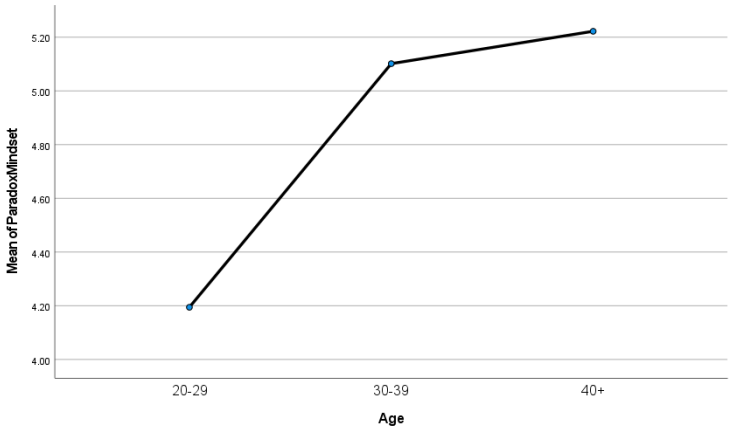

Figure 8: The means plot showing the trend over the three age groupings. Source: SPSS

The next step in analysing the ANOVA test statistics was to establish if homogeneity was violated or not, by analysing the Levene Statistic. A *P* value of 0.367 was returned, and thus homogeneity was not violated as the *P* value was greater than 0.05, indicating equal variances (Chiba, 2015). As such, the study would turn to the Tukey post-hoc analysis table to determine which groups showed significant differences if the ANOVA results indicated a rejection of the null hypothesis.

At this stage it was still unclear whether the null hypothesis had been rejected or not. Observing the trend through either the descriptive statistics or the means plot does not indicate whether the null hypothesis can be rejected or not. Further analysis is needed to confirm whether the differences in means have occurred by chance or due to the nature of the construct. In order to ascertain whether a significant difference exists between any of the groups the Anova results need to be analysed. The *P* value returned is 0.193. Thus, the study failed to reject the null hypothesis.

Paradox Mindset					
	Sum of Squares	df	Mean Square	F	**Sig.**
Between Groups	4,033	2	2,016	1,666	**0,193**
Within Groups	141,572	117	1,210		
Total	145,605	119			

Table 12: Anova results for the difference of means test between age groups. Source: SPSS

An analysis of the Tukey post-hoc analysis table confirmed that there was no significant difference between the means of any of the three groups, as all *P* values returned were greater than 0.05.

Hypothesis 2 – Industry experience in years

$H2_0$ – Middle managers with greater industry experience, measured in years, are not more likely to adopt a paradox mindset in the workplace

$H2_1$ – Middle managers with greater industry experience, measured in years, are more likely to adopt a paradox mindset in the workplace

The descriptive statistics for the Anova test to establish whether there was a difference of means between the three classified industry experience groups showed an increasing trend of perceived paradox mindset with an increase in years of experience.

Paradox Mindset								
	N	**Mean**	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Min	Max
					Lower Bound	Upper Bound		
0-9 years	35	**4,997**	1,313	0,222	4,546	5,448	1,00	7,00
10-19 years	58	**5,157**	0,999	0,131	4,894	5,420	2,78	6,89
20+ years	27	**5,239**	1,057	0,203	4,821	5,657	3,11	7,00
Total	120	**5,129**	1,106	0,101	4,929	5,327	1,00	7,00

Table 13: Descriptive statistics for Anova test with industry experience as the independent variable. Source: SPSS

The mean plot graph visualises the mean trend, showing an increase in perceived paradox mindset with an increase in years of experience.

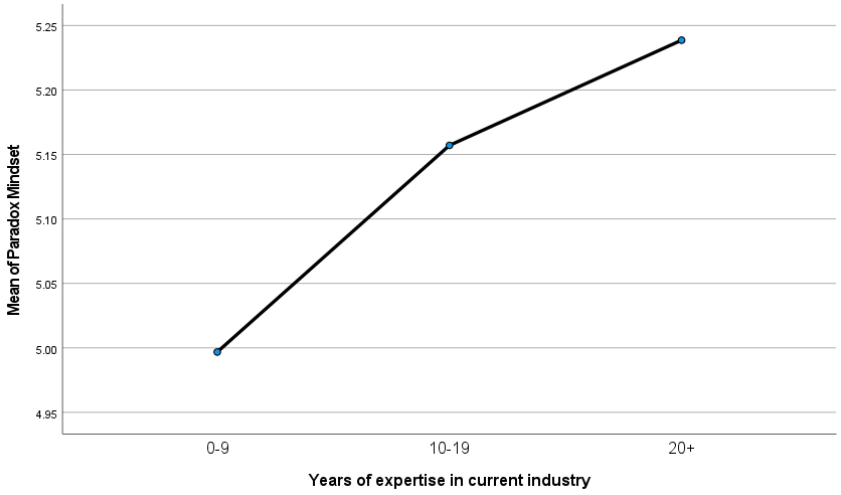

Figure 9: The means plot showing the trend over the three groups representing years of industry experience. Source: SPSS

The Levene statistic showed a *P* value of 0.650 was returned, indicating homogeneity was not violated. As such, the study would turn to the Tukey post-hoc analysis table to determine which groups showed significant differences if the Anova results indicated a rejection of the null hypothesis.

The Anova results showed a *P* value of 0.673 was returned. Thus, the study failed to reject the null hypothesis.

Paradox Mindset					
	Sum of Squares	df	Mean Square	F	**Sig.**
Between Groups	0,982	2	0,491	0,397	**0,673**
Within Groups	144,623	117	1,236		
Total	145,605	119			

Table 14: Anova results for the difference of means test between three groups representing years of industry experience. Source: SPSS

An analysis of the Tukey post-hoc analysis table confirmed that there was no significant difference between the means of any of the three groups, as all *P* values returned were greater than 0.05.

Hypothesis 3 – Tenure in middle management in years

$H3_0$ – Middle managers with longer tenure in middle management, measured in years, are not more likely to adopt a paradox mindset in the workplace

$H3_1$ – Middle managers with longer tenure in middle management, measured in years, are more likely to adopt a paradox mindset in the workplace

The descriptive statistics for the Anova test to establish whether there was a difference of means between the three classified tenure groups showed an increasing trend of perceived paradox mindset with an increase in years of tenure experience in middle management.

Paradox Mindset								
	N	**Mean**	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Min	Max
					Lower Bound	Upper Bound		
0-5 years	56	**4,974**	1,244	0,166	4,641	5,307	1,00	7,00
6-10 years	41	**5,209**	0,995	0,155	4,895	5,523	3,11	7,00
11+ years	23	**5,362**	0,905	0,189	4,971	5,754	3,78	7,00
Total	120	**5,129**	1,106	0,101	4,929	5,329	1,00	7,00

Table 15: Descriptive statistics for Anova test with tenure in middle management as the independent variable. Source: SPSS

The mean plot graph visualises the mean trend, showing an increase in perceived paradox mindset with an increase in years of experience.

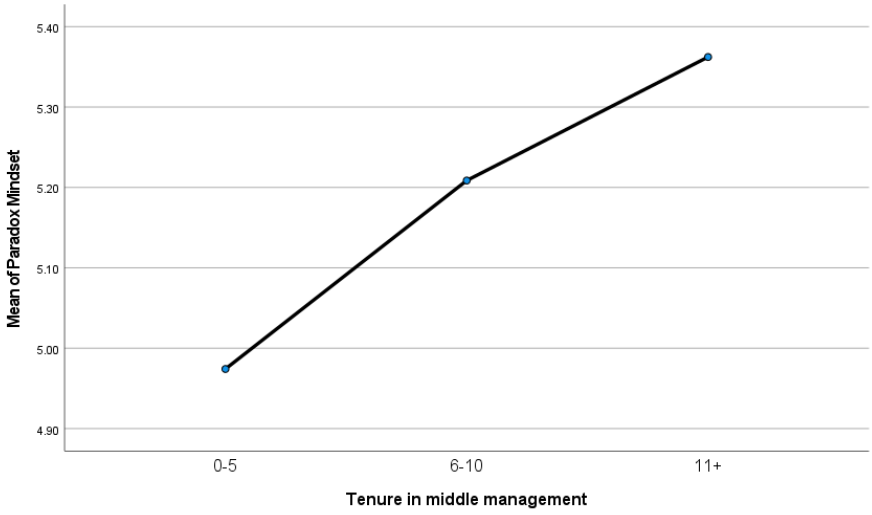

Figure 10: The means plot showing the trend over the three groups representing years of tenure in middle management. Source: SPSS

The Levene statistic showed a *P* value of 0.480 was returned, indicating homogeneity was not violated. As such, the study would turn to the Tukey post-hoc analysis table to determine which groups showed significant differences if the Anova results indicated a rejection of the null hypothesis.

The ANOVA results (shown in Table 15 on the next page) showed a *P* value of 0.314 was returned. Thus, the study failed to reject the null hypothesis.

Paradox Mindset					
	Sum of Squares	df	Mean Square	F	**Sig.**
Between Groups	2,854	2	1,427	1,170	**0,314**
Within Groups	142,751	117	1,220		
Total	145,605	119			

Table 16: Anova results for the difference of means test between three groups representing years of tenure in middle management. Source: SPSS

An analysis of the Tukey post-hoc analysis table confirmed that there was no significant difference between the means of any of the three groups, as all *P* values returned were greater than 0.05.

Hypothesis 4 – Education qualification level

$H4_0$ – Middle managers with higher levels of education qualifications are not more likely to adopt a paradox mindset in the workplace

$H4_1$ – Middle managers with higher levels of education qualifications are more likely to adopt a paradox mindset in the workplace

The descriptive statistics for the Anova test to establish whether there was a difference of means between the four classified education qualification groups did not show any discernible trend between the means returned. It is interesting to note that the nine holders of the lowest qualification (a matric certificate) returned the highest mean.

Paradox Mindset								
	N	**Mean**	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Min	Max
					Lower Bound	Upper Bound		
Matric	9	**5,494**	1,054	0,351	4,684	6,304	4,22	7,00
Diploma/B Degree	44	**4,939**	1,040	0,157	4,623	5,256	2,89	7,00
Post Graduate	66	**5,222**	1,148	0,141	4,940	5,504	1,00	7,00
PhD	1	**4,000**					4,00	4,00
Total	120	**5,129**	1,106	0,101	4,929	5,329	1,00	7,00

Table 17: Descriptive statistics for Anova test with highest qualification obtained as the independent variable. Source: SPSS

The mean plot graph confirms that no discernible trend was returned.

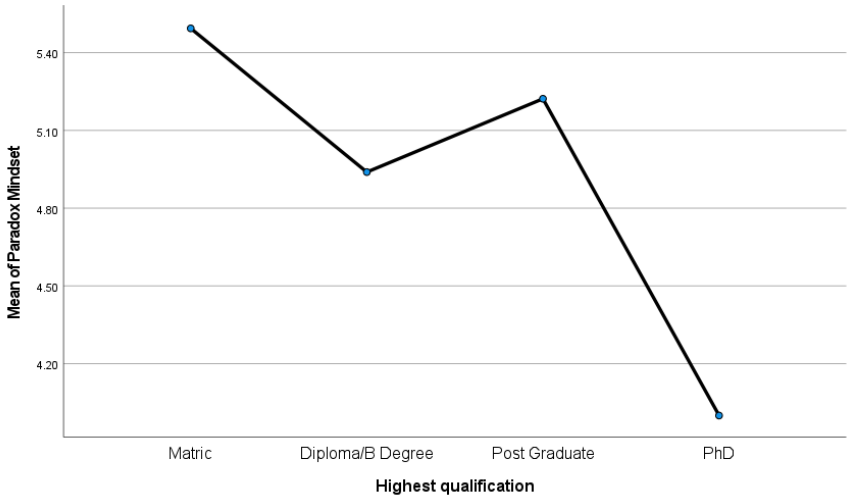

Figure 11: The means plot showing the trend over the four groups representing highest qualification. Source: SPSS

The Levene statistic showed a *P* value of 0.802 was returned, indicating homogeneity was not violated. As such, the study would turn to the Tukey post-hoc analysis table to determine which groups showed significant differences if the ANOVA results indicated a rejection of the null hypothesis.

The Anova results showed a *P* value of 0.288 was returned. Thus, the study failed to reject the null hypothesis.

Paradox Mindset					
	Sum of Squares	df	Mean Square	F	**Sig.**
Between Groups	4,628	3	1,543	1,269	**0,288**
Within Groups	140,977	116	1,215		
Total	145,605	119			

Table 18: Anova results for the difference of means test between three groups representing years of tenure in middle management. Source: SPSS

No post-hoc table was returned as one group (PhD) had few than two cases.

Before concluding this chapter, it is worth revisiting the hypotheses and the final results from the inferential statistical tests that were run, as they have a bearing on how the study will answer the research question.

Hypothesis	**Result**
$H1_0$ Older middle managers are not more likely to adopt a paradox mindset in the workplace	Failure to reject
$H2_0$ Middle managers with greater industry experience, measured in years, are not more likely to adopt a paradox mindset in the workplace	Failure to reject
$H3_0$ Middle managers with longer tenure in middle management, measured in years, are not more likely to adopt a paradox mindset in the workplace	Failure to reject
$H4_0$ Middle managers with higher levels of education qualifications are not more likely to adopt a paradox mindset in the workplace	Failure to reject

Table 19: Consolidated findings of hypothesis testing. Source: Compiled by author

The research question:

Is there a difference in perceived paradox mindset between groups of middle managers based on their age, industry experience, management tenure and highest level of education qualification obtained?

Conclusion

Having answered each of the four hypotheses the study has answered the research question, with the results indicating that there is no meaningful difference between the perceived paradox mindsets of groups of individuals based on the demographic characteristics of age, industry experience (measured in years), tenure in middle management (measured in years) and education qualification. While preliminary test data shows increasing trends in the demographics of age, industry experience and tenure, these did not translate into statistically meaningful differences between the different groups in each independent variable category.

The results presented have been shown to provide answers to the hypotheses and research question presented. The results will next be discussed in Chapter 6 in line with the perspectives, arguments and extant literature presented in the literature review in Chapter 2.

Chapter 6

Introduction

This chapter will consider and discuss the findings and results presented in Chapter 5. Those findings stem from the research question and hypotheses presented in Chapter 3, which were developed from the literature review discussed in Chapter 2. The data collected through the Paradox Mindset Inventory measurement instrument was processed, transformed, tested and analysed as per the methodology presented and defended in Chapter 4. The aim of this chapter is to present a holistic discussion of the study drawing on the literature review and the findings to consider whether the results confirm or contradict the literature and theories which underpin the research question. By testing these theories, the study aims to provide new insights and heed calls to explore new avenues of research in paradox studies. The four hypotheses which operationalised the research question will be discussed first as this will form the basis for a holistic discussion of the research question.

Summary of findings

A summary of the findings presented in Chapter 5 is presented to facilitate the discussion which proceeds.

Hypothesis	**Result**
$H1_0$ Older middle managers are not more likely to adopt a paradox mindset in the workplace	Failure to reject
$H2_0$ Middle managers with greater industry experience, measured in years, are not more likely to adopt a paradox mindset in the workplace	Failure to reject
$H3_0$ Middle managers with longer tenure in middle management, measured in years, are not more likely to adopt a paradox mindset in the workplace	Failure to reject
$H4_0$ Middle managers with higher levels of education qualifications are not more likely to adopt a paradox mindset in the workplace	Failure to reject

Table 19: Consolidated findings of hypothesis testing. Source: Compiled by author

While the final results of the inferential statistics tests resulted in a failure to reject the null hypotheses, the preliminary results of each of Hypothesis 1, Hypothesis 2 and Hypothesis 3 showed trends of increasing perceived paradox mindset in a positive direction between the various groups within each of the independent variables. For instance, when paradox mindset was measured against the age variable the results showed an increasing trend in perceived paradox mindset from the youngest age group (20-29 years old) to the oldest (40+ years old). Similar increasing trends were observed when paradox mindset was measured against the industry experience and tenure variables, respectively. While these differences between groupings in each variable were found not to be statistically significant they do suggest that demographic characteristics such as age or tenure should not be discarded in the exploration of paradox mindsets and paradox theory at a micro level. Indeed, studies of Glinksa-Newes et al (2019), Zhang & Han (2019) and Yin (2021) further understandings of the influence of individual characteristics and leadership traits on the development of paradox mindsets in leaders and those they work with.

Hypothesis 1

$H1_1$ Older middle managers are more likely to adopt a paradox mindset in the workplace

The findings of the One-way ANOVA test showed that there were no statistical differences between the means of the three age groups of the study. The *P* value returned was 0.193. Thus, the study failed to reject the null hypothesis as the *P* value was greater than 0.05. As such, the study cannot draw the inference that age influences differences in the perceived paradox mindsets among middle managers. The findings of this study contradict the findings of the study by Glinksa Newes et al as well as the theoretical framework developed by synthesising extant literature and conceptualising the research question and hypotheses. The framework extended upper echelon theory to recognise the expanded upward influence of middle managers through the synthesising of information, as was shown in Floyd and Wooldridge's middle management roles model (Floyd & Wooldridge, 1997). In addition, the framework drew on human capital theory hypothesises that characteristics such as education, age and, by implication, years of experience share positive associations with job performance (Cooper & Davis, 2017). However, as has been noted in Chapter 2, the empirical evidence of the influence of individual

characteristics on job performance and firm success remains contradictory, with many studies differing in their findings on whether an association exists between characteristics and job performance, as well as on the direction and strength of those associations where they have been found to be statistically significant (Ng & Feldman, 2013; Cooper & Davis, 2017). As with studies on the influence of culture on paradox mindsets, it is clear that context matters (Keller et al, 2017; Schad et al, 2017; Zhang & Han, 2019). A qualitative study exploring the factors which influence the management of the paradox of autonomy and control in South African organisations found that nine of the 16 human resources and management experts interviewed believed the maturity of a manager contributed to their ability to successfully manage the contradictory demands (Gilbert & Sutherland, 2013).

As mentioned above, the mean plot graph for this test result showed an increasing trend in the mean across the three age groups. This study argues that this may indicate that while age may not influence differences between younger and older middle managers in their perceived awareness of whether they hold paradox mindsets, it does show an association between age and a greater ability to identify paradoxes, if only at a superficial level.

Hypothesis 2

$H2_1$ – Middle managers with greater industry experience, measured in years, are more likely to adopt a paradox mindset in the workplace

The findings of the One-way ANOVA test showed that there were no statistical differences between the means of the three groups of the study, measured in years of experience. The *P* value returned was 0.673. Thus, the study failed to reject the null hypothesis as the *P* value was greater than 0.05. Therefore, one cannot draw the conclusion that industry experience is a source of differences in whether middle managers identify as having a paradox mindset.

This finding, in a way, contradicts the findings and implications of the study by Glinska-Newes et al (2019), which found that tenure in an organisation and position were associated with increased ability to manage paradoxes. The rationale followed in arriving at the conclusion that the findings of hypothesis 2 contradicts the theory developed by Glinska-Newes et al (2019) is that tenure in an organisation is closely

associated with industry experience, i.e. for every one spends in an organisation equates to one year of industry experience gained, broadly.

Yin's 2021 study, which explored the impact leaders who exhibited paradoxical leadership behaviours had on their subordinates, could provide the vector that leads to more impactful paradox studies centred on tenure and experience. Yin (2021) found that paradoxical leadership behaviours promoted paradox mindsets in subordinates. This suggests that the length of time individuals spend in a position or industry may be less important (although not of no importance entirely) than with who they spend that time and whether they have model paradoxical mentors to learn from.

As mentioned above, the mean plot graph for this test result showed an increasing trend in the mean across the three experience groups. This study argues that this may indicate that while industry may not influence differences between less and more experienced middle managers in their perceived awareness of whether they hold paradox mindsets, it does show an association between industry experience and a greater ability to identify paradoxes, if only at a superficial level.

Hypothesis 3

$H3_1$ – Middle managers with longer tenure in middle management, measured in years, are more likely to adopt a paradox mindset in the workplace

The findings of the One-way ANOVA test showed that there were no statistical differences between the means of the three groups of the study, measured in years of tenure in middle management. The *P* value returned was 0.314. Thus, the study failed to reject the null hypothesis as the *P* value was greater than 0.05. Therefore, one cannot draw the conclusion that tenure in middle management is a source of differences in whether middle managers identify as having a paradox mindset.

The finding of hypothesis 3 contradicts the findings of the study by Glinska-Newes et al (2019), which theorised that increased tenure in a position positively influences an individual's ability to manage paradoxes.

As mentioned above, the mean plot graph for this test result showed an increasing trend in the mean across the three tenure groups. This study argues that this may indicate that while tenure may not influence differences between less experienced

and more experienced middle managers in their perceived awareness of whether they hold paradox mindsets, it does show an association between tenure and a greater ability to identify paradoxes, if only at a superficial level.

Hypothesis 4

$H4_1$ – Middle managers with higher levels of education qualifications are more likely to adopt a paradox mindset in the workplace

The findings of the One-way ANOVA test showed that there were no statistical differences between the means of the four groups of the study, separated into distinct groups based on highest qualification obtained. The *P* value returned was 0.673. Thus, the study failed to reject the null hypothesis as the *P* value was greater than 0.05. Therefore, one cannot draw the conclusion that industry experience is a source of differences in whether middle managers identify as having a paradox mindset. The PhD group only included one case. The P value remained significantly high even when this one case was removed from the One-Way ANOVA test. Therefore, there was still no statistical differences noted between the three remain groups in the item (namely Matric, Diploma/B Degree and Post Graduate).

The mean plot graph returned proved to be the most interesting of the mean plots among the four hypotheses, if only because it did not follow the increasing trend in mean seen between the lowest groups (coded 1 in the code book to denote the lowest number range of years in either age or tenure) and the highest (coded either 3 or 4 to denote the highest number range of years.)

Figure x (which is replicated and repeated below) shows that there is now discernible pattern or trend in the means returned for each of the groups.

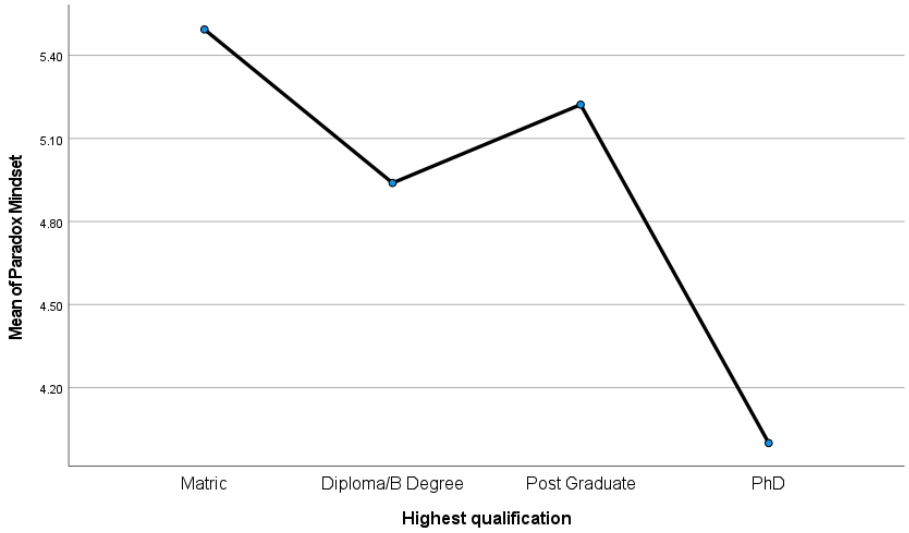

Figure 11: The means plot showing the trend over the four groups representing highest qualification. Source: SPSS

There are two observations which need to be noted, for either import or interest. First, the PhD mean, drawn from a case of one, is understandably only reflective of that case. It would require a larger PhD sample to be able to arrive at any consequential mean figure for this group. Had the respondent chose any other option from “Strongly Disagree” (represented by a value of 1 in the codebook) to “Strongly Agree” (represented by a value of 7) that would have represented the mean. Second, it is interesting to note that the Matric cases returned the highest mean at 5.494, which in fact was the highest mean returned across all four hypotheses. However, it is prudent to note that only nine cases formed part of the Matric group, far fewer than the 44 cases in the Diploma/B Degree group and the 66 cases in the Post Graduate group. One may not be able to draw any generalised conclusions about the Matric group as it may be statistically insignificant.

The result of this hypothesis test aligns with the findings of Glinska-Newes et al’s study in a complementary, if not direct, manner. To recap, Glinksa-Newes et al (2019) found that individuals who held a business science degree were “less disposed to connect contradictions than those educated in other fields” (p. 845). Glinksa-Newes et al (2019) hypothesised, in part, that because more highly educated managers have been shown to “use complex and diverse approaches to decision-making” (p. 840) they would be more inclined to exhibit paradox mindsets in their increased ability to combine contradictory ideas. Both their study and the present

one, although from different perspectives, have contradicted prior theorising on the association of between paradoxical thinking and education. Glinska-Newes et al (2019), in discussing their findings, offered up research that highlighted the drawbacks of the highly specialised nature of business education in particular. As with all the other demographic characteristics, the literature does not present a united conclusive association between education and job performance. Instead, Sperber and Linder (2018) offer what may be a more integrated approach, suggesting educational heterogeneity across a team or organisation may be a more effective approach to fostering team innovation. Innovation has been shown to be a key outcome of paradoxical thinking, along with creativity (Calic et al, 2019; Cunha & Putnam, 2019; Shao et al, 2019). This suggests that a varied range of skills, knowledge and perspectives – brought on by a mix of educational backgrounds, ages and cultures – could influence the adoption of paradox mindsets or at least the outcomes associated with paradox mindsets. This returns the focus of paradox studies to the meso-level with research focused on team dynamics.

Research question

Glinksa-Newes et al (2019), in building a theory base and argument for their hypotheses, draw on studies on experts, arguing that experts, more so than novices, are able to realise synergies between contradictory demands, leveraging these poles to build novel, effective and integrated responses. This suggestion has two implications for the present study. First, it may point the way to understanding why the middle managers who formed part of this study did not exhibit higher levels of perceived paradox mindset. The highest mean observed was in the hypothesis on education level, with the group of those respondents who had obtained a matric certificate as their highest qualification showing a response mean of 5.494. Looking to the seven-point Likert scale ranking utilised for this study, this mean sits almost halfway between “Slightly Agree” and “Agree”. While no conclusive finding or assumption can be inferred from this one data point it does somewhat present a challenge to the fourth hypothesis of this study as well as the conventional wisdom on the cognitive abilities of novices compared to experts in confronting problems (Glinska-Newes et al, 2019). Second, the distinction between experts and novices could explain the increasing trends observed in the means of the different independent variable groups for hypotheses one, two and three. The increasing trend in the mean from the first group (lowest in age or years of experience/tenure) to the

highest group (highest in age or years of experience/tenure) is shown in **Figure x** below.

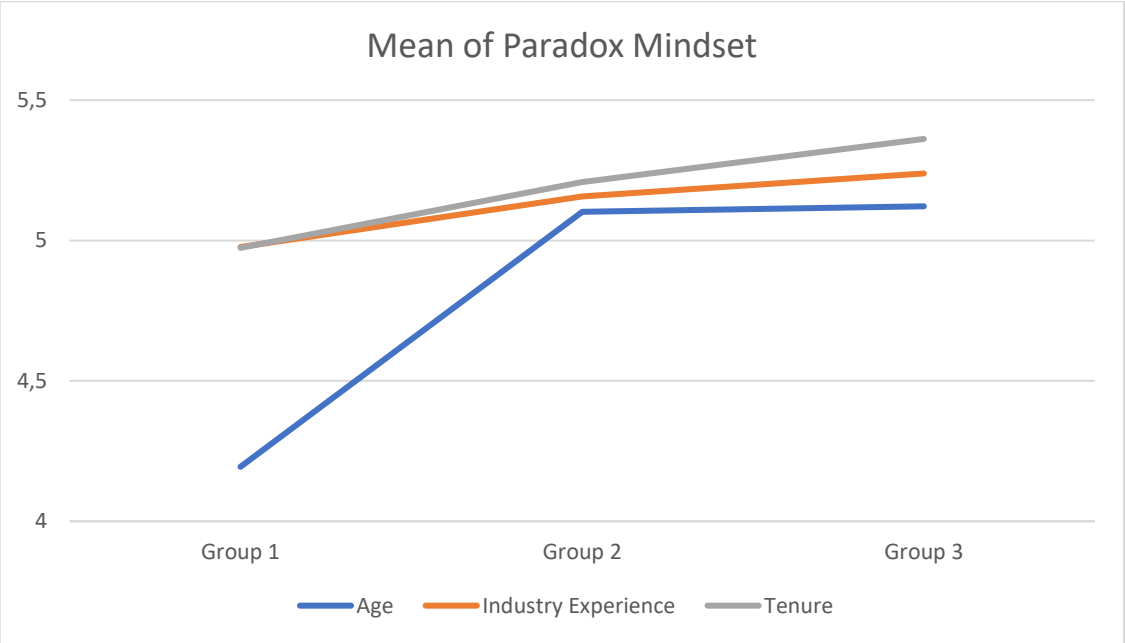

Figure 12: The trend of the means of perceived paradox mindset for each group of three independent variables age, industry experience and tenure. Source: Compiled by author

Conclusion

While the results presented in the study do not show conclusively the link, in middle managers, between the individual demographic characteristics of age, tenure and education on the one hand and perceived paradox mindset on the other, the need to explore the antecedents of managing paradoxes remains a necessary and worthy objective in furthering the understanding of paradox theory in organisational studies (Schad et al, 2017; Glinska-Newes et al, 2019). In addition, a deeper understanding of why certain demographic characteristics, such as education level, do not seemingly influence differences between individuals warrants further investigation which could further theoretical understanding of their true value to academia and practice. Indeed, both this study and that conducted by Glinksa-Newes et al indicate that levels of education qualification, as well as the distinction between business science degrees and non-business science degrees (Glinska-Newes et al, 2019), may not have the expected linear positive influence on individuals' ability to manage paradoxes by leveraging the combination of contradictions through the adoption of paradox mindsets. In fact, the opposite may be true, that higher levels of

qualifications and business science degrees (or the teaching associated with these) encourage narrow worldviews and the type of “either/or” decision-making associated with contingency theory.

Influence of time spent with a leader who shows paradoxical behaviour may be more important that time spent in a position.

Include Yin’s study with the team dynamics

While Yin’s 2022 study found that paradoxical leaders promoted paradoxical thinking in their subordinates through their (the leaders’) behaviour and facilitation of their employees’ surroundings, the research did not explore and examine whether the paradoxical thinking among the subordinates was retained, needed repeated facilitation by the leaders or subsided with time (Yin, 2022).

Yin: Lastly, future research is encouraged to investigate other possible factors apart from individual differences of paradoxical leadership that may influence the process of developing employees’ paradox mindset. For example, in a group setting, individuals may be influenced by team members who have a higher level of paradox mindset.

Chapter 7 – The Conclusion

Introduction

This research report has endeavoured to further the understanding of paradox theory at an individual level, responding to calls in the extant literature to widen and deepen research into the micro-foundations of paradox theory in management studies (Schad et al, 2017). The research report will now present its conclusion having accomplished the following milestones: the theoretical and business need for the research (Chapter 1); a comprehensive literature review unpacking the extant literature, theories and constructs (Chapter 2); developing and presenting the research question and the related hypotheses (Chapter 3); presenting the methodology through the hypotheses would be tested to arrive at an answer (Chapter 4); presenting the results (Chapter 5); and discussing said results in the context of the literature (Chapter 6).

Principal conclusions

Conducting this research study has provided the opportunity to understand one aspect of the middle management experience through a paradox perspective. The research set out to determine whether demographic characteristics – namely, age, industry experience and tenure in middle management (both measured in years), and level of education – influenced perceived paradox mindsets in middle managers. The study drew inspiration from the research of Glinska-Newes et al (2019), who studied the demographic characteristics of senior leaders in the Polish furniture industry, establishing that age and tenure in both an organisation and a position positively influenced the managers' ability to combine contradictory demands, paradoxes (Miron-Spektor et al, 2018). Surprisingly, Glinska-Newes et al (2019) found that a business science degree did not influence the ability to adopt paradoxical thinking in the same way as age and experience, discovering that those senior leaders who held business or economics degrees were "less disposed to connect contradictions than those educated in other fields" (p. 845).

The true value in the study lies, arguably, in what it highlighted rather than what it determined statistically. While the outcomes of the statistical tests showed no significant associations between individual demographic characteristics, the door is

not shut on trying to understand how individual characteristics and experiences come to influence the cognitive abilities of middle managers and their ability to adopt paradox mindsets. The trends of the means presented and discussed in both chapters five and six give hint that demographics are indeed with the differing abilities of middle managers. This is an exciting development, which could easily be overlooked in favour, and rightly so, of the more meaningful inferential statistics. The devil may well be in the detail of this study.

An initial reading of the study may elicit frustration that none of the statistical tests returned results of significant differences between groups, but it would be foolhardy to conclude that demographic characteristics have no bearing on the cognitive abilities of individuals. Again, this study draws inspiration from Glinska-Newes et al who conclude their study by acknowledging that it would be “misleading” to suggest that because of the outcome of their research organisations would be urged to all their decision-making to older, more experienced leaders who hold degrees in fields other than business science (Glinska-Newes et al, 2019). The thought would be preposterous. This study, as with that of Glinska-Newes et al (2019), does not arrive at a momentous breakthrough moment in research – studies taking a demographics perspective have long thrown up differing findings (Cooper & Davis, 2017) – rather, they add breadcrumbs on the way to developing theory and interesting research avenues for those scholars who follow.

Theoretical contribution

In answering the research question – whether demographic characteristics influenced the ability of middle managers to adopt a paradox mindset - this study was able to test the theory developed by Glinska-Newes et al (2019) in a different geographical context and among a broader cohort of individuals beyond just one industry. This furthered the knowledge base in three ways. First, the study found, in the manner it was conducted, found that there was not a statistically significant difference between middle managers and their ability to adopt a paradox mindset based on age, industry experience and tenure in middle management. This contradicted the findings of Glinksa-Newes et al (2019), while it also proved to be at odds with elements of both upper echelon and human capital theories (Ng & Feldman, 2013; Cooper & Davis, 2017). The findings seem to be more aligned with

previous studies which have questioned the basis of human capital theory (NG & Feldman, 2013).

A second significant contribution that can be derived from the study, is borne out of the finding on levels of education. While the hypothesis that middle managers with higher education levels would be more likely to adopt a paradox mindset was rejected, it lends credence to the finding of Glinska-Newes et al (2019) on the association between business degrees and a paradox mindset. The finding on the education hypothesis of this study bolsters the necessity to further study the link between education and the cognitive ability to combine contradictions. Innovation and creativity may be the north stars which lead researchers to a better understanding of the association between education and paradox mindsets. Innovation and creativity have been empirically shown to be outcomes of paradoxical thinking and leadership (Calic et al, 2019; Zhang & Han, 2019; Yin, 2022). At the same time, Sperber & Linder (2018) have shown that heterogeneity of educational backgrounds among members of a team was a stronger predictor of innovation in an organisation, over the individual educational demographics of those members. Thus, it may be that when education in organisational studies is studied through a paradox perspective that researchers explore the subject at a meso- rather than at a micro-level.

Third, the findings should elicit the attention and curiosity of paradox scholars about how paradox theory is operationalised in practice, how paradoxes are made salient to individuals and how studies can better capture the experiences of individuals. One of the persistent conundrums both in paradox studies and more broadly is how to explore the so-called “black box” of organisational studies – the minds and cognitive abilities of individuals (Glinska-Newes, et al, 2019). One of the criticisms of paradox theory and scholarship is the loose, yet highly technical at the same time, terminology (Cunha & Putnam, 2019). One of the key steps in collecting data for this study was to ensure the participants understood what was meant by paradoxes in an organisational sense. This hurdle is not purely of administrative nature – it extends to the very nature of paradoxes too. Paradoxes can only be confronted and managed once they are made salient (Schad et al, 2017).

Implications for management and other relevant stakeholders

The study has interesting implications for management, which include how they may understand paradox mindsets and the determining factors to consider. As mentioned above, the trends of mean hypotheses one, two and three should not be forgotten when considering the outcomes of this study. Management, trainers and educators would do well to consider how they can draw on the demographic markers of age and experience to draw on the wisdom of older and more experienced employees in driving their own on-the-job performance as well as the training of younger colleagues or students. Equally, management and trainers would do well to be aware of the contingent thinking fostered by employees with a more specialised background. The reason for this can be found on Figure 11, which shows the trend of the means across the groups of the independent variable representing the level od education. While the Matric group only contained nine cases, and cannot as such be considered statistically significant, the mean, of 5.494, is cause for further questioning, if only to understand it. Incidentally, it was the highest mean returned of any group across all the independent variables.

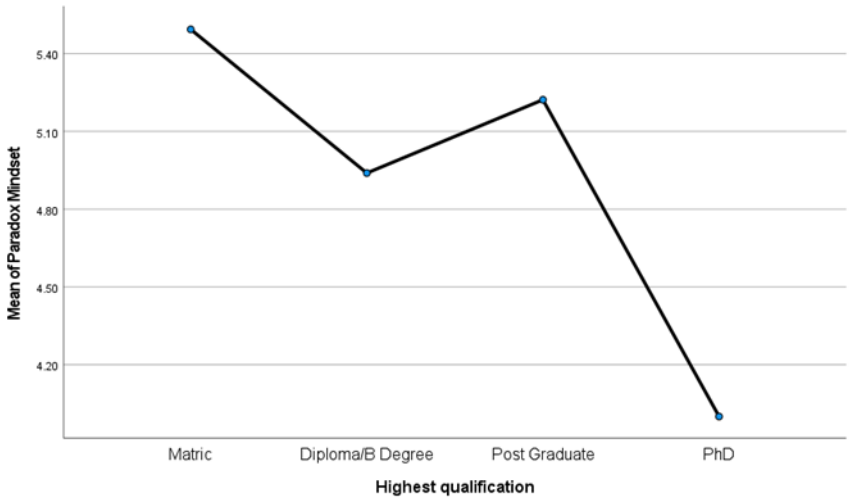

Figure 11: The means plot representing the paradox mindset scores of the survey respondents grouped according to their highest qualification obtained. Source: SPSS

Limitations of the research

As the study adopted a quantitative methodology, it was limited in its scope to understand the reasoning, rationale and experiences of the respondents (Saunders & Lewis, 2018). For instance, one respondent's choice on all the items was either

“Strongly Disagree” or “Disagree”, culminating in a low total score representing paradox mindset. It would be interesting to understand how this individual makes sense of tensions, what industry he works in and what he experiences in the workplace. His responses may well elicit a deeper, more nuanced understanding of tensions in certain industries or organisations or for specific individuals.

While the study met the threshold of 120 respondents, a larger sample size may have provided a richer dataset. As it stands the capacity to generalise the study remains limited.

A third limitation of the study rests on the pervasiveness (or lack thereof) of paradoxes among practitioners. This relatively young field of organisational studies suffers from a lack of wider awareness of its realisation in practice, partly due to ubiquity of contingency theory, especially in strategy, in the business environment. This drawback necessitates the strengths of a qualitative study to elicit the experiences of individuals who may not be aware that they face paradoxes on a regular basis. In addition, qualitative studies are more adequately equipped to tease out the negative outcomes of adopting paradoxical thinking in management sciences.

Suggestions for future research

This study has alluded to several areas and topics which could provide fertile ground for future research. The most pertinent future research opportunity would be to conduct a qualitative study to understand the operational and strategic realities of middle managers better, adopting a paradox lens in the process. While research abounds on the complexity, dynamism and contribution of middle management (Hermkens, Romme & Dolmans, 2020; Li, 2018), a crucial voice remains hidden, lost or overlooked – that of middle managers. Echoing the call of Cunha & Putnam (2019) and Berti & Simpson (2021), it is crucial to delve into the negative outcomes of adopting paradoxical thinking and the associated “both/and” approach to managing tensions – what Berti & Simpson (2021) call the “dark side of organizational paradoxes” (p.252).

The literature presented in this study has pointed to the centrality of culture in the development of paradox mindsets, highlighting the differences in the adoption of a

paradox perspective between Western and Eastern cultures (Keller, Loewenstein & Yan, 2017; & Liu, Xu & Zhang, 2020). This type of study could offer new and interesting insights if conducted in a country like South Africa which is a melting pot of cultures, marked by a both collectivist and individualist traditions. Extending the differences in perspective that Western and Eastern cultures bring to individualism and collectivism, these two schools have been shown to inspire beliefs and behaviours which influence the adoption of paradox mindsets (Keller et al, 2017).

Finally, Yin (2021) offers a compelling opportunity to advance the understanding of how paradox mindsets may be cultivated and developed in organisations by drawing attention to the role leaders play in influencing the development of paradox mindsets in their subordinates.

In conclusion, this study has hopefully advanced scholarship on paradoxes in organisational studies by unearthing a different perspective on tensions in the workplace, but more importantly shining a spotlight on paradox theory and championing its value in management sciences.

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Appendices

Appendix 1

Paradox Mindset Inventory survey questions (presented as a 7-point Likert scale)

Experiencing Tensions

- I often have competing demands that need to be addressed at the same time.
- I sometimes hold two ideas in mind that seem contradictory when appearing together.
- I often have goals that contradict each other.
- I often have to meet contradictory requirements.
- Usually when I examine a problem, the possible solutions seem contradictory.
- I often need to decide between opposing alternatives.
- My work is filled with tensions and contradictions.

Paradox Mindset

- When I consider conflicting perspectives, I gain a better understanding of an issue.
- I am comfortable dealing with conflicting demands at the same time.
- Accepting contradictions is essential for my success.
- Tension between ideas energize me.
- I enjoy it when I manage to pursue contradictory goals.
- I often experience myself as simultaneously embracing conflicting demands.
- I am comfortable working on tasks that contradict each other.
- I feel uplifted when I realize that two opposites can be true.
- I feel energized when I manage to address

Performing Tensions

- I need to be flexible while also complying with tight rules.
- I need to generate new solutions to problems while avoiding mistakes.
- I need to be original while also conforming to existing norms.

Learning Tensions

- I need to gain new skills while relying on my existing skills.
- I need to develop new capabilities but also demonstrate my existing capabilities to others.
- I need to learn and explore new opportunities while exploiting existing solutions.

Belonging Tensions

- I need to focus on my own needs while addressing the needs of others.
- I need to complete my own tasks while helping my colleagues complete their tasks.
- I need to compete and cooperate with others.

Organizing Tensions

- I need to plan activities in advance while remaining flexible in face of last-minute changes.
- I need to be organized but also able to operate in messy situations.
- I need to establish a steady routine yet be willing to deviate from it.

Demographics

Age

- 20-29 years old
- 30-39 years old
- 40 plus

Years of expertise in current industry

- 0-9 years
- 10-19 years
- 20 plus years

Tenure in middle management

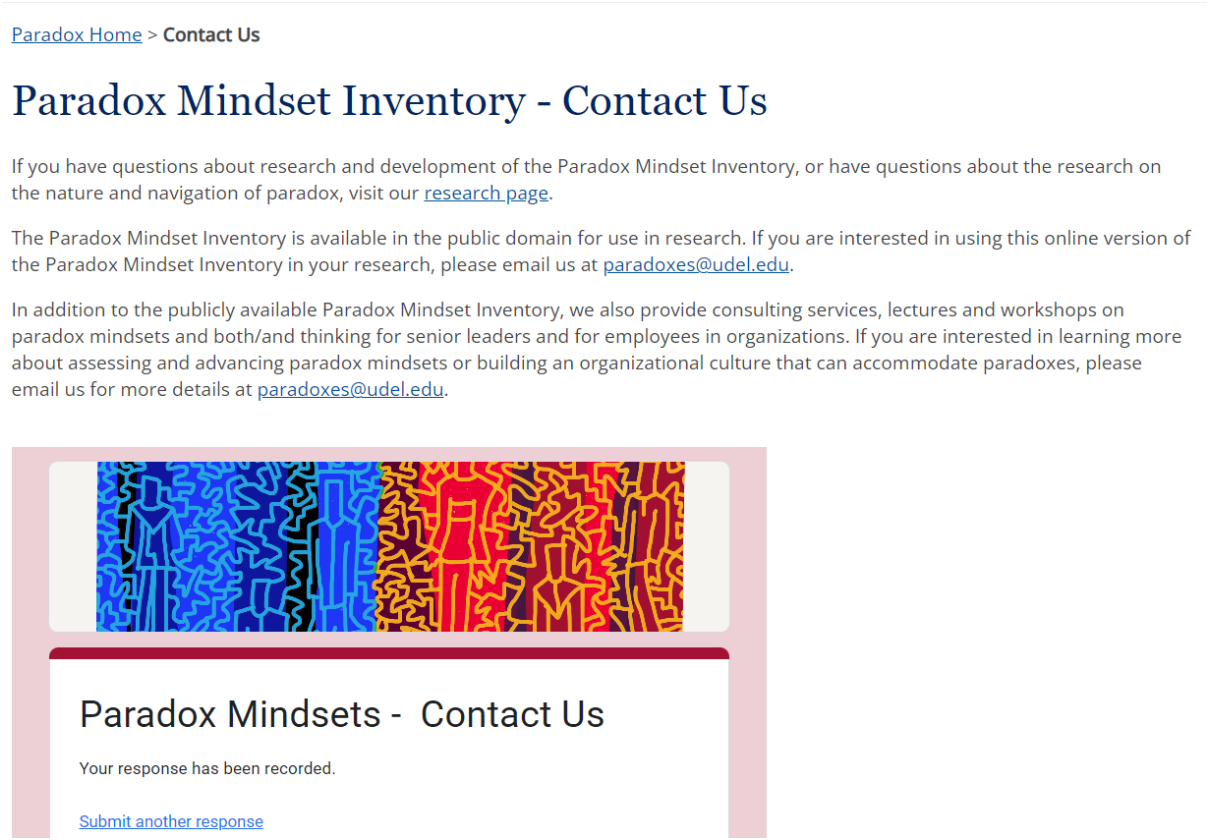
- 0-5 years
- 6-10 years
- 11 plus years

Survey adapted from Miron-Spektor, Ingram, Keller, Smith & Lewis (2018).

Appendix 2

The contact page, with consent, can be viewed here:

https://paradox.lerner.udel.edu/contactus.php



Appendix 3

Code book 1 **-** Demographics

Factor	Code
Gender	
Female	1
Male	2
Age	
20-29 years old	1
30-39 years old	2
40+ years old	3

Professional Demographics	Code
Years of expertise in current industry	
0-9 years	1
10-19 years	2
20+ years	3
Tenure in middle management	
0-5 years	1
6-10 years	2
11+ years	3
Highest qualification	
Matric	1
Diploma/B Degree	2
Post Gradute	3
PhD	4

Appendix 4

Code book 2 – Likert Scale

Likert Scale	Code
Strongly Disagree	1
Disagree	2
Slightly Disagree	3
Neither Disagree nor Agree	4
Slightly Agree	5
Agree	6
Strongly Agree	7

Appendix 5

Gordon Institute of Business Science
University of Pretoria

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

COPYRIGHT DECLARATION FORM

Student details			
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Qualification details			
Degree:	MBA	Year completed:	2022
Title of research:	GIBS		
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Access

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I give permission to display my email address on the UPSpace website

Yes	X	No	

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I hereby assign, transfer and make over to the University of Pretoria my rights of copyright in the submitted work to the extent that it has not already been affected in terms of the contract I entered into at registration. I understand that all rights with regard to the intellectual property of my research, vest in the University who has the right to reproduce, distribute and/or publish the work in any manner it may deem fit.

.

Signature: Gloria	Date: 31/10/2022
Supervisor signature:	Date: 31/10/2022

Appendix 6

Declaration

I declare that this research project is my own work. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other University. I further declare that I have obtained the necessary authorisation and consent to carry out this research.

Sheldon Morais

1 November 2022

Appendix 7

25. APPENDIX 6 CERTIFICATION OF ADDITIONAL SUPPORT

(Additional support retained or not - to be **completed by all students)**

Please note that failure to comply and report on this honestly will result in disciplinary action

I hereby certify that (please indicate which statement applies):

- ***I DID NOT RECEIVE*** *any additional/outside assistance (i.e. statistical, transcriptional, and/or editorial services) on my research report:*
  ✓ .....

- ***I RECEIVED*** *additional/outside assistance (i.e. statistical, transcriptional, and/or editorial services) on my research report*
  .....

If any additional services were retained– ***please indicate below which:***

☐ ***Statistician***

☐ ***Transcriber***

☐ ***Editor***

☐ ***Other (please specify:.....)***

Please provide the name(s) and contact details of all retained:

NAME: .....

EMAIL ADDRESS: .....

CONTACT NUMBER: .....

TYPE OF SERVICE: .....

NAME: .....

EMAIL ADDRESS: .....

CONTACT NUMBER: .....

TYPE OF SERVICE: .....

NAME: .....

EMAIL ADDRESS: .....

CONTACT NUMBER: .....

TYPE OF SERVICE: .....

I hereby declare that all *statistical write-ups and thematic interpretations of the results for* **my study were completed by myself without outside assistance**

NAME OF STUDENT: SHELDON MORAIS

SIGNATURE: .....

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