

Transition from Scientist to
Manager:
*Achieving Congruence Through Job
Crafting*

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DECLARATION

I hereby certify that this material, which I now submit for assessment on the programme of study leading to the award of Doctor of Philosophy (PhD) is entirely my own work, and that I have exercised reasonable care to ensure that the work is original, and does not to the best of my knowledge breach any law of copyright, and has not been taken from the work of others save and to the extent that such work has been cited and acknowledged within the text of my work.

Signed:



Olive Wachera Maitha

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Date: 24th August 2022

DEDICATION

I would like to dedicate this PhD thesis to my family: Mom, Grace Maitha, my brother, Maina Maitha and to the memory of my late Dad, James Maitha. Thank you for instilling in me the virtues of hard work and perseverance. Your love and support have seen me through many tough and challenging times during this long journey.

Asanteni sana.

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LIST OF ABBREVIATIONS AND KEY TERMS

BPN	Basic Psychological Needs
CEOs	Chief Executive Officers
Hybrid manager	An individual who performs a dual technical/scientific role and a managerial role simultaneously
Incidental hybrids	Hybrid managers who reluctantly take up the hybrid role
Jamovi	An open-source statistical software for analysing quantitative data
JCM	Job crafting model
JD-R	Job demands resources model
Macro-transitions	Formal and infrequent movement between roles
Managerial Congruence	A hybrid manager's perceived fit with the managerial role. This is the fit an individual perceives between their personal characteristics and a managerial position, that is, the hybrid manager's perception of their fit with the managerial role they transition into.
MBA	Master of Business Administration
Micro-transitions	Informal and recurring movements between roles
MTurk	Amazon Mechanical Turk is a crowdsourcing website used for collecting quantitative data
NVivo	A qualitative data analysis computer software
POS	Perceived Organizational Support
Qualtrics	A web-based survey software
SDT	Self-Determination Theory
SPSS	A statistical software for analysing quantitative data
STEMM	Science, Technology, Engineering, Mathematics and Medicine
Willing hybrids	Hybrid managers who proactively take up the hybrid role

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ABSTRACT

Author **Olive Wachera Maitha**

Thesis Title **Transition from Scientist to Manager: *Achieving Congruence Through Job Crafting***

Scientists who perform a scientific/technical role and a managerial role concurrently are called hybrid managers. These dual roles require different skill sets. However, it is unclear how hybrid managers combine these dual roles to achieve managerial congruence, that is, the perceived fit with the managerial role. This thesis aims to understand hybrid managers' proactive management of the micro-transitions required to perform these dual roles effectively. In doing so, it adopts self-determination theory and job crafting as the underpinning theoretical frameworks, exploring how need satisfaction or frustration may facilitate or hinder managerial job crafting during such transitions. In turn, it considers how approach and avoidance job crafting impact a hybrid manager's managerial congruence. Finally, this research considers the role of perceived organizational support (POS) in moderating this process. This mixed-method study included a quantitative survey (n=408) and one-to-one, post-hoc, qualitative interviews (n=15). The satisfaction of autonomy and relatedness needs facilitates approach crafting, which then can be expected to positively impact managerial congruence. POS was found to moderate the mediation effect of approach crafting on the relationship between competence and managerial congruence, and relatedness and managerial congruence. POS did not moderate any of the mediation effects for avoidance crafting. The qualitative findings suggest that while job crafting during transition is an intrinsic proactive process, hybrid managers benefit from organizational support when it is well structured. Implications of these findings for organizations are discussed, including the recommendation that future hybrid managers should undergo a pre-transition incubation period to prepare them for the transition; and during the transition, hybrid managers need structured training with a clear feedback loop embedded in the programme. It is recommended that hybrid managers in transition should take time to understand the managerial role before making changes to it and should receive coaching through the transition itself.

CHAPTER ONE: INTRODUCTION

1.1 Introduction

This chapter gives an overview of this thesis. It starts with a brief background of the area under consideration then discusses the significance of the research. This is followed by the research aims before the methodology is discussed. Before concluding with a layout of the dissertation, the research model and hypotheses are highlighted.

1.2 Overview of the Dissertation

“I wish I knew the diversity of the role I was getting into. My expectations of the role and what the company needed were different”

(Eoin, Engineering Manager)

In the recent past, there has been an increase in the number of applications to get into MBA programs, with business schools in America recording an average increase of 20% (Forbes, 2020). A closer look at these numbers shows that there is a particular interest in MBA programs by professionals in STEMM (Science, Technology, Engineering, Math and Medical) industries (Top MBA, 2021). This shows that there are a lot of people who have technical and scientific backgrounds that are finding value in learning how to manage people, a trend reflected within organizations. It is a very common occurrence to find roles within organizations whereby a technical expert holds a managerial role, which is performed concurrently with the technical one. Such an individual is known as a hybrid manager (McGivern *et al.*, 2015; Spehar, Frich and Kjekshus, 2015; Bresnen *et al.*, 2019). To perform these dual roles effectively, the hybrid manager must adjust both roles as required so that they can achieve managerial congruence, which is realized when the hybrid manager fits with the managerial part of the dual role (Edwards, 1994; Litzky and Greenhaus, 2007). Unfortunately, despite how popular these

hybrid roles are, it remains unclear how these hybrid managers achieve managerial congruence. Without this understanding, the transition into management may become very challenging, and organizations are at a loss about the kinds of supports that would be valuable to hybrid managers. This thesis aims to address this issue and to do so, a brief background on managerial roles is required.

Managerial Roles

Research on the role of management has been around for the better part of seventy years. The two most well-known theories of management are *the process theory* proposed by Henri Fayol in 1949 and *the role theory* proposed by Henry Mintzberg in 1975 (Fayol, 1949; Mintzberg, 1975; Snyder and Wheelen, 1981). Fayol assumed that management is a universal process that cuts across industries and organizational levels (Fayol, 1949). He suggests that managerial goals are realized through a set of fourteen principles which he then groups into four recurring and interdependent functions: planning, organizing, directing, and controlling (ibid). In the 1970's Mintzberg responded to Fayol's work by developing his own role theory. Mintzberg felt that the perspective and the functions proposed by the process theory of management did not accurately represent what a manager does but rather vaguely describes the objectives of managerial work (Mintzberg, 1971; Snyder and Wheelen, 1981).

Using 'structured observation', Mintzberg studied five CEOs in medium to large organizations (a consulting firm; a school system; a technology firm; a consumer goods manufacturer; and a hospital) over a period of five days each (Mintzberg, 1971, 1975). His methodology (criticized by Carroll and Gillen, 1984, 1987) involved observing, describing, codifying, and understanding the managerial behaviours he was observing (Kurke and Aldrich, 1983). Mintzberg came up with ten roles that he categorized into three groups: interpersonal,

informational, and decisional roles (Mintzberg, 1971, 1975; Kurke and Aldrich, 1983; Carroll and Gillen, 1984). He defined a role as a set of organized behaviours that were assigned to an identifiable position (Mintzberg, 1971, 1975; Snyder and Wheelen, 1981). According to Mintzberg, managerial work happens at an unrelenting pressurized pace with a variety of brief and discontinuous activities leaving little time to engage in reflexivity (Mintzberg, 1971; Snyder and Wheelen, 1981; Bouty and Drucker-Godard, 2019). In his response, Mintzberg challenges Fayol's work by suggesting that managers do not have time to reflect on how to plan, organize, direct and control. Mintzberg (1975) argues that Fayol's proposal presents the managerial role as being a straightforward process which may not be the case. However, Mintzberg's work is not without its own critics.

Carroll and Gillen (1984) propose that managerial work is mental thus it is not always directly observable. They criticize Mintzberg's quick dismissal of Fayol's four managerial functions suggesting that just because a managerial activity is not observed, it does not mean that it does not occur cognitively (Carroll and Gillen, 1984, 1987). The use of structured observation by Mintzberg potentially missed out on the 'why' behind the 'what' he was seeing. Mintzberg was not able to know why the CEOs he observed performed the roles he saw nor how these roles related to each other (Snyder and Wheelen, 1981; Carroll and Gillen, 1984). Ironically, Mintzberg's role theory is criticized for the same thing he criticized Fayol's process theory for, a lack of specificity. Additionally, both theories share another flaw. Fayol assumes that management is the same across industries and organizational levels while Mintzberg assumes that CEOs are representative of a typical manager (Fayol, 1949; Mintzberg, 1971) both of which are not the case. It seems that the main difference between Fayol's process theory and Mintzberg's role theory is that the former tends to group managerial activities broadly while the latter focuses on the specific activities performed by a manager (Snyder and Wheelen,

1981). Nonetheless, Fayol and Mintzberg started a conversation that has allowed other researchers to refine their work within the field of management.

Other significant contributors to this discussion are Drucker and Kotter (Drucker, 1950; Gabarro and Kotter, 1980; Kotter, 2008). Kotter suggests that a manager's task agenda should be discussed with other organizational members, which then directs the manager's work, while Drucker proposes that a manager's objectives need to be discussed prior to any planning or organizing (Drucker, 1950; Gabarro and Kotter, 1980; Zahra, 2003). According to Drucker, a manager works off a set of objectives therefore planning, and organizing is how a manager's 'real work' is implemented (Drucker, 1950; Greenwood, 1981; Zahra, 2003). Although the approaches considered by Drucker and Kotter foster a sense of empowerment through its inclusion of others, they tend to be slow and time consuming (Zahra, 2003). Regardless, classic managerial research remains useful in conceptualizing a manager's job (Carroll and Gillen, 1984). This general shift in managerial discourse (Tengblad, 2006) continues whereby there is a common perception of what a manager does but less so how they embrace the role and become congruent in it.

When discussing the transition process that an individual undergoes as they move from being an individual contributor to becoming a manager, it is important to understand how they see their fit with the managerial role, that is, their managerial congruence. When an individual feels congruent with their managerial role, they are likely to be motivated to engage in managerial behaviours, and their team is also likely to benefit from this fit (Gagné and Deci, 2005; Farrell, 2019; Al Sulwailem, 2021). Managerial congruence is critical as the hybrid manager continuously transitions between the technical role, that they are experts in, and the new managerial role. It is plausible that the more congruent the hybrid manager becomes in their

managerial role, the more they value it, and the easier the transition between the dual roles becomes. A congruent hybrid manager is able to give due attention to both the technical/scientific and the managerial aspects of their role. As mentioned previously, the benefits of managerial congruence are likely to extend beyond the individual, as both the team the hybrid manager is responsible for, and the wider organization may also benefit. When a hybrid manager has managerial congruence, there is a high probability that they embody the attributes of a manager and this will be reflected in how they train, support, and manage their team (O'Connor and Smallman, 1995; Spyridonidis, and Currie, 2016). In much the same way, these individuals would be aware of what organizational supports would be required which then guides the organization in providing the necessary resources, likely helping the hybrid manager to perform better (Burgess and Currie, 2013; Spyridonidis, and Currie, 2016). Conversely, a lack of managerial congruence is likely to impact the hybrid manager, their team, and the organization negatively. Therefore, managerial congruence is an appropriate dependent variable when considering effective transitions into dual roles and the micro-transitions that arise from this. This is discussed further in the sections below.

1.3 Research Aims and Objectives

This thesis aims to:

1. Understand hybrid managers' proactive management of the micro-transitions required to perform their dual roles effectively.
2. Explore how need satisfaction (or frustration) may facilitate (or hinder) managerial job crafting during such transitions.
3. Understand how approach and avoidance job crafting are involved in the development of a hybrid manager's managerial congruence.
4. Examine the role of perceived organizational support (POS) in shaping this process

1.4 Contribution to Literature

The nature of transitions within organizations has gradually evolved from major transitions, such as promotions and retirements (macro-transitions; Nicholson, 1984) into smaller, on-going transitions, such as dual role transitions (micro-transitions; (Ashforth, Kreiner and Fugate, 2000)). Micro-transitions have similarities with devolution theory (Dalziel and Strange, 2007; Perry and Kulik, 2008) where line managers take on roles that were previously performed by the human resource department. Interestingly, research on devolution has not considered micro-transitions despite the increase in such dual role positions. It is important to understand how these recurring transitions influence how the role holder navigates the role demands, especially at a managerial level. In doing so, it is possible to get an appreciation for the role that crafting has towards managerial congruence. This is not an area that has been explored previously despite the acknowledgement that managerial transitions can be challenging (Duchscher, 2009; Park and Faerman, 2019). Therefore, by focusing on micro-transitions in managerial roles, this research builds on work role transition theory (Nicholson, 1984).

Classic management research provides a framework for what a managerial role looks like and how it works (Fayol, 1949; Mintzberg, 1975; Snyder and Wheelen, 1981). However, this thesis finds that managerial roles, and how they are performed, differs even within the same sector or industry. Thus, the process of how one becomes a manager and how they achieve managerial congruence is contextually shaped and continuously evolving. Therefore, being a manager can mean different things at different times (Tengblad, 2006). This is a common yet understated phenomenon which is made more challenging when the manager must continuously transition between two different roles. Micro-transitions may provide the hybrid manager with an opportunity to adjust their roles so that they can easily fit with the managerial

aspects of their dual role thereby achieving managerial congruence. This thesis uses job crafting theory to empirically test how hybrid managers can either expand or reduce their roles so that they can become more congruent with the managerial role (Tims, Derks and Bakker, 2016; Bruning and Campion, 2018). As such, the findings from this thesis are the first to represent a crafting process using the concept of micro-transitions, where through continuous crafting, hybrid managers can perform their dual roles.

There are two main job crafting perspectives (Job crafting model, (Wrzesniewski and Dutton, 2001; and job demands and resources model, Tims and Bakker, 2010) which unfortunately measure different aspects of job crafting. To benefit from both perspectives, researchers have proposed different forms of synthesis, but only the ‘approach and avoidance crafting’ synthesis has received overwhelming support (Zhang and Parker, 2019; Hu *et al.*, 2020; Seppälä, Harju and Hakanen, 2020). The original proponents of approach crafting and avoidance crafting perspective (Bruning and Campion, 2018) suggest that approach crafting is more superior to avoidance crafting, as the latter tends to have negative implications such as turnover intentions. However, this thesis raises some conceptual questions pertinent to this assumption. It broadens the discussions around crafting. It goes beyond the argument that individuals craft to manage increasing role demands, to showing that for managerial roles, both approach and avoidance crafting can be beneficial. Therefore, unlike what was proposed (*ibid*), reducing role demands (avoidance crafting) may not always lead to a negative outcome. This is significant because it challenges a fundamental assumption within this perspective of job crafting research.

However, there is not much research on crafting in the context of a managerial role. It is possible that reducing the hard and time-consuming people management aspects of the hybrid role (such as conflict management), in an attempt to manage the workload, would inevitably

lead to negative consequences to the team and the organization (Rigotti, Korek and Otto, 2014; Park and Faerman, 2019). Therefore, there is a need for additional investigation as the current operationalization of crafting is not sensitive to this issue. Despite these challenges, the job crafting field is already designing interventions using this synthesized perspective and evaluating them for practice (Ebert and Bipp, 2021). There are concerns that without further testing of the proposed taxonomy, the interventions used in practice will not have comparable outcomes (ibid). This thesis provides evidence that these concerns may be valid.

This research adopts self-determination theory (SDT) as a lens through which to understand the role of crafting in achieving congruence. Previously, job crafting has been understood through the lens of seeking resources and reducing demands. Therefore, this research provides a new perspective. As such, this thesis proposes that satisfaction of core needs is fundamental to driving crafting behaviours. SDT proposes that there are three basic psychological needs (autonomy, competence and relatedness) (Deci and Ryan, 2000; Ryan and Deci, 2000), which when fulfilled, can inform which crafting behaviours the hybrid manager engages as they try to achieve managerial congruence. It was found that when a hybrid manager undergoes macro-transitions, they experience these needs differently from when they were independent contributors. For example, before an individual transitions into management, their need for competence is driven by a mastery in their technical skill but when they transition (macro-transition Nicholson, 1984) into a hybrid role, the need for competence is exhibited through their ability to manage other people's technical expertise. In this case, when the hybrid manager's need for competence is fulfilled, they can engage in either approach crafting, such as taking on a training responsibility to help improve their team's performance, or they can engage in avoidance crafting, where they pass on some of their tasks to their team so that their team can develop the required skills. This is significant because we learn more about how the

constant micro-transitions can vary the choice of crafting behaviour (Bruning and Campion, 2018; Ebert and Bipp, 2021). It indicates that hybrid managers may be motivated differently to adjust their task boundaries, and this may impact how they realize their managerial goals. It also highlights the kinds of training resources that are valuable to hybrid managers during these micro-transitions.

Research suggests that a high level of POS can encourage crafting behaviour because it increases need satisfaction (Deci and Ryan, 2000; Gagné *et al.*, 2010; Cheng and O-Yang, 2018). This thesis found that crafting, being a person-centric process, may yield the kinds of organizational supports needed by hybrid managers to differ among individual hybrid managers. Specifically, the stage of transition may mould this support requirement. For instance, structured support is more valuable in the early stages of the transition. With more experience, the hybrid manager may be less reliant on structured support as they know how to access the required resources.

1.5 Research Methodology

This research is a mixed-method cross-sectional study. Data is collected in two phases: quantitatively, through a self-administered survey (n=408); and qualitatively, through one-to-one interviews (n=15) (see Figure 1.1 below). The interviews were conducted on a post-hoc basis to add further insight into the quantitative findings. The quantitative data is analysed first using SPSS and Jamovi, then the findings are used to develop further interview questions for investigation. The qualitative interviews are analysed through Nvivo.

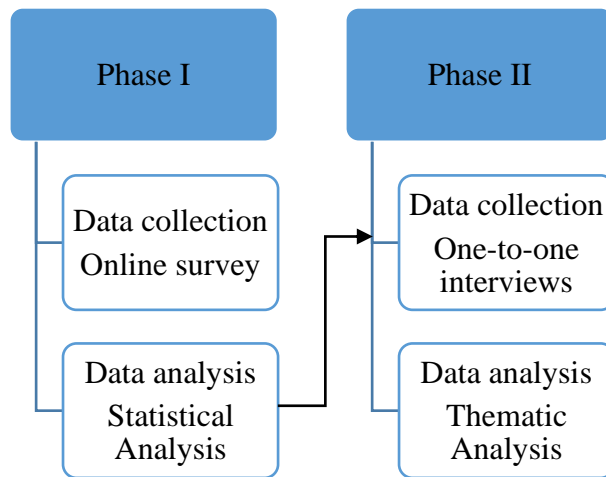


Figure 1.1 Research Approach

1.6 Research Model and Hypotheses

The model below in Figure 1.2 illustrates the research model.

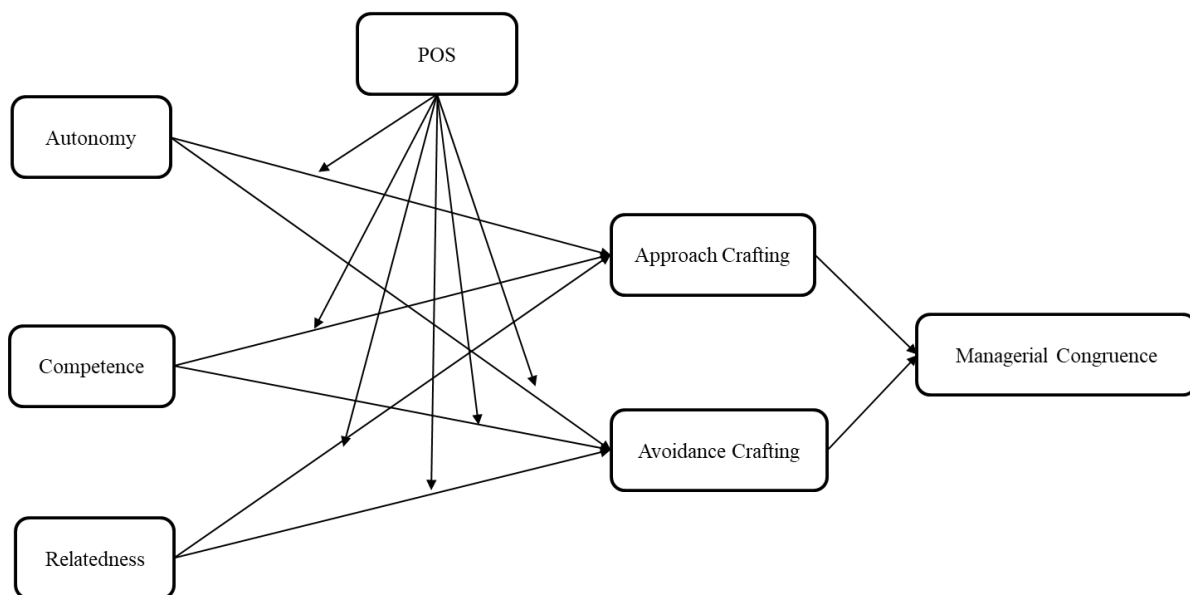


Figure 1.2 Research Model

This thesis aims to answer the research question below, and in doing so, it poses three sets of hypotheses: direct relationships; indirect relationships; and moderated mediated relationships (see Table 1.1 below):

How does the type of crafting engaged in, impact the relationship between need satisfaction and managerial congruence for hybrid managers?

Table 1.1 Research Hypotheses

Direct Relationships	
H ₁ :	There is a positive relationship between autonomy (1 _a), competence (1 _b) and relatedness (1 _c) and approach crafting
H ₂ :	There is a positive relationship between autonomy (2 _a), competence (2 _b) and relatedness (2 _c) and avoidance crafting
H ₃ :	There is a positive relationship between approach crafting and managerial congruence
H ₄ :	There is a positive relationship between avoidance crafting and managerial congruence
Mediation Relationships	
H ₅ :	Approach crafting mediates the relationship between autonomy (5 _a), competence (5 _b) and relatedness (5 _c) and managerial congruence
H ₆ :	Avoidance crafting mediates the relationship between autonomy (6 _a), competence (6 _b) and relatedness (6 _c) and managerial congruence
Moderated Mediation Relationships	
Approach Crafting	H7 _a : The mediating effect of approach crafting on the relationship between autonomy and managerial congruence is moderated by POS, such that, the higher the level of POS, the stronger the mediated relationship between autonomy and managerial congruence
	H7 _b : The mediating effect of approach crafting on the relationship between competence and managerial congruence is moderated by POS, such that, the higher the level of POS, the stronger the mediated relationship between competence and managerial congruence
	H7 _c : The mediating effect of approach crafting on the relationship between relatedness and managerial congruence is moderated by POS, such that, the higher the level of POS, the stronger the mediated relationship between relatedness and managerial congruence
Avoidance crafting	H8 _a : The mediating effect of avoidance crafting on the relationship between autonomy and managerial congruence is moderated by POS, such that, the higher the level of POS, the stronger the mediated relationship between autonomy and managerial congruence

H8_b: The mediating effect of avoidance crafting on the relationship between competence and managerial congruence is moderated by POS, such that, the higher the level of POS, the stronger the mediated relationship between competence and managerial congruence

H8_c: The mediating effect of avoidance crafting on the relationship between relatedness and managerial congruence is moderated by POS, such that, the higher the level of POS, the stronger the mediated relationship between relatedness and managerial congruence

1.7 Structure of Thesis

This thesis will be structured in five sections as outlined below.

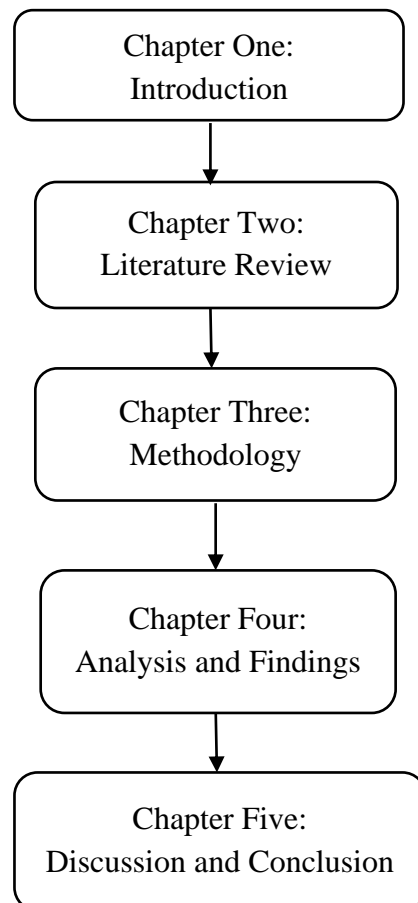


Figure 1.3 Thesis Structure and Outline

1.8 Conclusion

In this chapter, an overview of the thesis was provided with a brief background on managerial studies which provides context for the area of research. It also discussed the significance of this research and the theoretical, empirical and practice contributions it makes. Additionally, the aims and methodology, which were supported by highlighting the hypothesis and structure of the thesis, were discussed. The following chapter provides a review of the most recent literature guiding the research question.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter critically engages with existing literature in the key areas of role transitions, hybrid roles, need satisfaction, job crafting and managerial congruence. It begins by considering role transitions followed by hybrid roles. It then proceeds to discuss need satisfaction and how this facilitates the crafting process to achieve managerial congruence. Before concluding, it considers the impact of having a supportive environment in the transition process.

2.2 Role Transitions

The study of role transitions dates back to the 1980s and has its roots in occupational and social psychology (Nicholson, 1984; West, Nicholson and Rees, 1987). Louis (1980) defines transition as a period in which a change is happening. Role transitions are generalized, differentiable social processes which are central to organizational research (Bliese, Adler and Flynn, 2017; George, Wittman and Rockmann, 2021). (Nicholson, (1984) proposed a theory of work role transition which focuses on transitions as changes in employment status, or job content within and across organizations. This theory has been the foundation for most literature in managerial transition with different authors adapting it to fit different contexts.

Role transitions are complex experiences that involve interrelated adjustments that occur overtime (George, Wittman and Rockmann, 2021). According to work role transition theory (Nicholson, 1984), four types of transition can occur: replication; absorption; determination and exploration. Replication occurs when there is little change to either the role holder or the role; absorption occurs when the role changes to suit the role holder (also known as role development); determination occurs when the role holder changes to suit the role (also known as personal development); and exploration occurs when both the role holder and the role change

(Nicholson, 1984; West, Nicholson and Rees, 1987; Ashforth and Saks, 1995). Personal development involves a reactive change by the individual, ranging from slight adjustments such as attitude and behaviour to significant changes in how they identify themselves, their values, their frame of reference, their self-image, and their relationships within the role (Black, 1988; West and Rushton, 1989; Ashforth and Saks, 1995). On the other hand, role development involves proactively moulding the role to suit the incumbent and can range from minor changes to the work schedule to major changes central to role performance such as adjusting the task objectives and the main goal outputs (West and Rushton, 1989; Ashforth and Saks, 1995). However, the degree of adjustment may be determined by the type of transition that an individual experiences.

Role transitions depend on two main things: where they occur, within the role or outside it; and the frequency with which they occur (Louis, 1980). Transitions that occur within the role are known as intra-role transitions, where the orientation of an existing role changes, thereby changing how certain aspects of the job are performed (*ibid*). Here, the transition from one way of doing things to another will be for the benefit of the role the manager holds and is often a subtle change. For example, the manager may opt to read emails at the end of the day so as to plan their work for the next day as opposed to reading them in the morning. When transitions occur outside the role, they are known as inter-role transitions, which is where the expected role behaviours change within the same organization (Louis, 1980; Thompson and Henwood, 2016). For example, the organization can advise against sending work emails after the close of business to allow for a better work-life-balance. This change in how work is done occurs beyond an individual role and may include the entire organization.

The second type of role transition is based on frequency of occurrence which is proposed by boundary theory and includes either macro-transitions or micro-transitions (Stephens, 1994; Ashforth, Kreiner and Fugate, 2000; Tempelaar and Rosenkranz, 2019). Macro-transitions are formal and occur infrequently; they are typically permanent, easy to identify, objective and visible whereby the role holder is conscious of the transition (Stephens, 1994; Ashforth, Kreiner and Fugate, 2000; Tempelaar and Rosenkranz, 2019). Retirement is an example of a macro-transition. On the other hand, micro-transitions which are informal and recur frequently, are usually temporary, subjective, and harder to identify (Louis, 1980; Ashforth, Kreiner and Fugate, 2000; Tempelaar and Rosenkranz, 2019).

Micro-role transitions are “the psychological and (if relevant, physical) movement between simultaneously held roles” (Ashforth, 2000, p. 7). Interestingly, the transition literature does not consider micro-transitions but rather focuses on macro-transitions (Nicholson, 1984; West, Nicholson and Rees, 1987). Micro-transitions are considered within the boundary management literature with a focus on work-home boundaries (Ashforth, Kreiner and Fugate, 2000) even with research showing that an individual can perform concurrent roles within the organization (Noordegraaf, 2015; Spyridonidis, Hendy and Barlow, 2015; Bresnen *et al.*, 2019). An individual can be a manager and a direct report at the same time, but it is also possible for an individual to perform two different roles at the same time. For example, research on devolution considers how line managers take roles that align more broadly to the organization’s objectives and to improve the manager’s business awareness, thus moving them away from just a technical focus (Dalziel and Strange, 2007; Perry and Kulik, 2008). This duality of roles and how the individual transitions between them has not received much attention. This current research aims to contribute towards bridging that gap by spotlighting the micro-transitions experienced by these technical-managerial hybrids.

2.2.1 Hybrid Role Transitions

The phrase ‘hybrid manager’ was coined in 1989 by a team of researchers at Templeton College, Oxford, to mean a person with technical skills and adequate business knowledge (Palmer, 1990). This team was conducting research on how organizations implement information technology for competitive advantage, and they realized that at the heart of successful organizations was a person with a critical set of skills that combined technical expertise with an understanding of business requirements (ibid). A hybrid manager would thus be an individual with a technical/scientific background who then takes on a managerial role and performs both roles concurrently (McGivern et al., 2015; Spehar, Frich and Kjekshus, 2015; Bresnen et al., 2019). A hybrid manager is therefore responsible for managing a technical/scientific team while also performing their technical/scientific role at a more operational level.

There are two types of hybrid managers; incidental hybrids and willing hybrids. While this thesis will not distinguish between the two, they are important to consider. While this thesis will not distinguish between the two, Incidental hybrids are reluctant hybrids who react passively to taking on management responsibilities (McGivern *et al.*, 2015; Park and Faerman, 2019). These individuals consider this transition into management as a short-term necessary evil and will surrender the position if the opportunity to do so arises (McGivern *et al.*, 2015; Park and Faerman, 2019). As such, these individuals are not likely to engage themselves in learning about the managerial role and would be inclined more towards their technical or specialist role (Bresnen *et al.*, 2019). It is possible that since the ‘incidental hybrids’ consider the transition temporary, and that they have made a substantial investment in their technical education, they are unwilling to learn the skills required to perform well in a managerial position (Roberts and Biddle, 1994). Willing hybrids, on the other hand, take on the managerial role proactively by

embracing the changes it presents (McGivern *et al.*, 2015; Bresnen *et al.*, 2019; Park and Faerman, 2019). As such, willing hybrids may be more inclined toward their managerial role (McGivern *et al.*, 2015; Bresnen *et al.*, 2019; Park and Faerman, 2019) than their technical role. Such individuals may be open to adjusting their dual roles so that they fit better (role development) or they may be open to changing how they work so that they can participate in both roles better (personal development). However, if these are to align, then these changes would be considering the role requirements or the needs of the hybrid role (Nicholson, 1984).

According to research (Nicholson, 1984; Ashforth and Saks, 1995; Wrzesniewski and Dutton, 2001), individuals have needs associated with the roles they hold. It is plausible that these needs may change when there is a change in the roles as would be the case in a transition (Ibarra, 1999; George, Wittman and Rockmann, 2021). For example, in their technical role, individuals would be expected to perform and contribute as individuals but in the managerial role, their contribution and performance includes that of the team they manage. In the former case, the individual would have a need to promote their technical expertise while in the latter case, they would need to showcase their ability to lead others. This is not clearly understood in the case of hybrid managers where they hold both a technical and a managerial role. To address this, the current research will make use of self-determination theory, a well-established need-based theory, to investigate how the role needs of hybrid managers are fulfilled during micro-transitions.

2.3 Need Satisfaction

Self-determination theory (SDT) is an empirical based macro-theory of human motivation and psychological growth and development, which combines multiple sub-theories of motivation (Deci and Ryan, 2000; Ryan and Deci, 2000). “To be self-determining means to experience a

sense of choice in initiating and regulating one's own actions" (Deci, Connell and Ryan, 1989, p. 580). SDT has been applied to various areas of life domains such as in: education (Averill and Major, 2020); sports and gamification (Deci and Ryan, 2008); and management and work motivation (Gagné and Deci, 2005; Deci, Olafsen and Ryan, 2017; Parfyonova *et al.*, 2019). Self-determination refers to the 'self' as the causal agent or author and initiator of their own behaviours and as such, their behaviours are intentional and self-controlled (Ryan and Deci, 2000; Graves and Luciano, 2013; Pfister and Lukka, 2019). SDT, therefore, assumes that people have an intrinsic desire to grow and develop their full potential by engaging in certain behaviours (Deci and Ryan, 2000, 2008; Fernet, Guay and Senécal, 2004; Yakhlef and Nordin, 2021). For example, a hybrid manager can avail of self-directed management training, such as on LinkedIn Learning, to develop their managerial skills. It is therefore assumed that the behaviours individuals engage in are geared towards self-development.

Any activity undertaken by an individual is motivation-driven, these motivations can be intrinsic (from within the individual) or extrinsic (from outside the individual) (Deci and Ryan, 2000; Al sulwailem, 2021). Motivation is context based and it is shaped by the individual – situation interaction, rather than being a personal trait, (Hagger, Koch and Chatzisarantis, 2015; Al Sulwailem, 2021). In the current research, this interaction is between the individual and the role. For example, how an individual adjusts their role can change based on whether they are an individual contributor or a hybrid manager. In the former, the individual may choose to vary their work schedule to work when they feel they can optimize their performance. However, this might not apply so easily in the case of a hybrid manager because they may need to coordinate team members and their activities. Here, the activity is the same (adjusting working schedules) but the context, and thus the motivation is different. Motivation research, which

forms the foundation of SDT (Deci, Olafsen and Ryan, 2017), is broadly considered as either extrinsic or intrinsic.

Extrinsic Motivation: Extrinsic motivation is externally driven, and it is directed by the consequences of not doing the activity rather than the activity itself (Deci and Ryan, 2008; Gagné *et al.*, 2010; Tempelaar and Rosenkranz, 2019). Therefore, extrinsic motivation is driven by the incentive or the outcome, such as higher status or pay, thus is separate from the activity (Baard, Deci and Ryan, 2004; Al sulwailem, 2021; Yakhlef and Nordin, 2021). For example, a researcher-manager might prefer to work independently but might choose to work with others so that their performance is rated favourably. Team performance is often a measure for managerial ability (Rees, 1996) therefore working with and through others becomes an external motivator. Extrinsic motivation can vary in terms of the degree of autonomy or control experienced, extending over a continuum of relative autonomy between amotivation (most controlled) and intrinsic motivation (most autonomous) (Gagné *et al.*, 2010; Ryan and Deci, 2017; Abdulrazak and Quoquab, 2018).

Intrinsic Motivation: Intrinsic motivation is self-regulated, internal motivation which comes with a feeling of choice, curiosity, and enjoyment inherent in the activity, and its satisfaction comes from the process of doing the activity rather than the outcome of it. (Deci and Ryan, 2008; Howard *et al.*, 2016; Tempelaar and Rosenkranz, 2019). This internal driving force is known as self-determined or autonomous motivation (Roche and Haar, 2013). An intrinsically motivated individual is one who is fully interested and engaged in the experiences they get from the activities related to their work regardless of rewards or outcomes (Gagné and Deci, 2005; Farrell, 2019; Al Sulwailem, 2021). For example, a nurse might take on a managerial

role to become a nurse-manager because they enjoy the challenge of being a leader rather than seeking the prestige that comes with the role.

Role adjustments arising from micro-transitions are intentional, self-directed and self-controlled behaviours, as such, this person-centred approach (Howard *et al.*, 2016; An and Han, 2020) aligns better with intrinsic motivation than extrinsic motivation. Intrinsic motivation is thus ideal for understanding how need satisfaction inform the adjustments that hybrid managers make. In SDT, needs are described as “innate psychological nutriments that are essential for ongoing psychological growth, integrity, and well-being” (Deci and Ryan, 2000, p. 229). In their study on important life domains, Milyavskaya and Koestner (2011) found concrete evidence to support SDT’s proposition that need satisfaction is universally important. This is best understood through the basic psychological needs theory, one of the mini-theories within SDT (Deci and Ryan, 2000; Ryan and Deci, 2000).

2.3.1 Basic Psychological Needs Theory

Basic psychological needs (BPN) theory suggests that there are three universal needs that facilitate natural tendencies towards growth and human development (Deci and Ryan, 2000; Gagné and Deci, 2005; Burgueño *et al.*, 2020). These needs are: the *need for autonomy*, where an individual seeks to control their actions; *need for competence*, where the individual seeks to affect their surrounding through their skills and abilities; and finally *need for relatedness*, where an individual seeks a connection with others (Deci and Ryan, 2000; Greguras and Diefendorff, 2009; Ryan and Deci, 2017). In their research, (Gagné *et al.*, (2010) found that autonomy, competence and relatedness had a stronger relationship to autonomous versus controlled motivation. This further supports the choice of intrinsic motivation over extrinsic

motivation, when considering how need satisfaction motivates hybrid managers to make changes.

SDT proposes that BPN are required for optimal functioning and the assimilation of social values in the different contexts of life (Deci and Ryan, 2000). As such, these needs are akin to the biological needs for public health, that is, need for food, water, shelter, and clothing (Deci and Ryan, 2000; Jungert *et al.*, 2018). However, how these needs are expressed may vary between individuals and across age groups and cultures (Ryan and Deci, 2000; Van den Broeck *et al.*, 2010; Vandercammen, Hofmans and Theuns, 2014). Individuals might not always be aware of these needs or even report wanting to fulfil them but if they are not met, then psychological health may be negatively affected (Deci and Ryan, 2000; Cnossen, Loots and van Witteloostuijn, 2019).

In their research, Bryan *et al.* (2016) demonstrate that when general needs are not met, negative psychological outcomes occur. According to SDT, when BPN are thwarted, it damages motivation and impedes the growth potential of individuals (Ryan and Deci, 2000; Chong, 2020). However, BPN frustration is not conceptually equivalent to a lack of need satisfaction, because having low need satisfaction will not necessarily cause high need frustration (Rodríguez-Meirinhos *et al.*, 2020). For example, if an engineering manager blocks off time to catch up on their work, then at the same time, an emergency client meeting is called, the latter will take priority over the former. Therefore, it is important to consider the three BPN separately as each can have a unique effect on an individual's behaviour (Kovjanic, Schuh and Jonas, 2013). SDT is concerned with the level to which these needs are met within a social environment rather than the strength of the needs (Gagné and Deci, 2005).

2.3.2 Need for Autonomy

The need for autonomy or the freedom to control one's own behaviours, comes from an individual's value system and their personal interests (Deci and Ryan, 2000; Dierdorff and Jensen, 2018; Liu *et al.*, 2022). The individual needs to feel that they are responsible for how they behave so that they can endorse it as their own (Van den Broeck *et al.*, 2008; Gillet *et al.*, 2012; Graves and Luciano, 2013). However, being autonomous does not mean working independently but rather the willingness to act as a causal agent in accordance with one's values (Galletta *et al.*, 2016; Yakhlef and Nordin, 2021). The need for autonomy changes when there is a change in the role requirements. For example, individual contributors, such as lab-based researchers, may satisfy this need by working on their own, but they might not have the choice on what to work on. Conversely, a researcher-manager who is responsible for a team of lab-based researchers, may satisfy this need by choosing what research projects to work on, and when, but may not have the choice of who to work with on their team as they are responsible for all of them. Of the three basic needs, autonomy has received the most attention perhaps because its tangible benefits are easier to see in an organizational setting (Wang *et al.*, 2018). The need for autonomy is satisfied when an individual can self-organize their behaviours, and it is thwarted when the individual feels internally conflicted because of external pressures (Yu and Levesque-Bristol, 2020).

An autonomous individual is one who has objective control with greater latitudes to influence work and discretion over their own decisions (Brink, Emerson and Yang, 2016; Dierdorff and Jensen, 2018) but this is not always a given. Holding a management position does not necessarily mean that the individual will automatically meet their need for autonomy. In a study on career transitions, Rigotti and colleagues (2014) assumed that upward career transitions are associated with increased autonomy, but this hypothesis was not supported by

their findings (Rigotti, Korek and Otto, 2014). For instance, in an organization where digital transformation would improve efficiency across the board, it would be assumed that the IT manager would have the freedom to choose which software programs to implement and at what stage. However, this perceived autonomy can be frustrated by lengthy procurement processes, such as tendering. By frustrating the IT manager's need for autonomy, these organizational processes can potentially frustrate another need, competence. Here, the hybrid manager is the subject matter expert, but they do not have the freedom to demonstrate this competence.

2.3.3 Need for Competence

Competencies are an individual's abilities, skills, knowledge and talent, to efficiently and successfully accomplish their responsibilities (Gagné and Deci, 2005; Lumpkin and Achen, 2018; Hailemariam *et al.*, 2019). The need for competence is the desire to tap into one's experience of skill mastery, to feel confident, effective, and capable of facing work challenges that provide growth and efficacy (Van Quaquebeke *et al.*, 2014; Landon *et al.*, 2021; Toyama, Upadyaya and Salmela-Aro, 2021). Having self-efficacy is the belief that one can accomplish a task successfully, however, competence must be accompanied by autonomy otherwise it will not enhance or maintain intrinsic motivation (Deci and Ryan, 2000; Ryan and Deci, 2000; Jones, Alicea and Ortega, 2020). If an individual has a skill that they feel would help them achieve a task, but they are not allowed to use that skill to the best of their ability, then they will not feel motivated by that competence.

When this need for competence is satisfied, an individual feels like they are effective in engaging and interacting with the environment, but when it is thwarted, the individual feels like they have failed, they doubt their abilities and develop a sense of inferiority (Yu and Levesque-Bristol, 2020; Ferrand and Martinent, 2021). For example, when a technical manager

moves into a managerial role, they are experts in their technical area but novices in the managerial one. If they are not allowed to leverage their expertise, they may feel ill-equipped in their new role. When the need for competence is frustrated, the individual feels like their impact on the activity is diminished as it is ineffective in achieving their desired outcome (Lamm, Tosti-Kharas and King, 2015; Olafsen *et al.*, 2017; Jungert *et al.*, 2018). An individual experiences competence support when they have clear expectations of what is required of them or when they receive feedback on their performance (Parfyonova *et al.*, 2019). This feedback would usually come from those the hybrid manager works or relates with as they perform their role. Thus, in getting feedback about their performance from colleagues, a hybrid manager also meets another need, relatedness.

2.3.4 Need for Relatedness

Autonomy and competence are intra-psychic processes regarding intra-personal development and growth, whereas relatedness is concerned with social connection and feelings of appreciation (Ryan and Deci, 2000; Van den Berghe *et al.*, 2013; Yakhlef and Nordin, 2021). Psychologists agree that people are social creatures with a fundamental need for relatedness which involves genuine mutually caring, respectful, and supportive reciprocal interactions (Deci and Ryan, 2000; Crocker and Park, 2004; Tempelaar and Rosenkranz, 2019). The need for relatedness is an individual's desire to belong, to be accepted and be meaningfully connected which can be in the form of respect or, being a valued member of a team (Deci and Ryan, 2000; Gillet *et al.*, 2012; Rigby and Ryan, 2018). When satisfied, the need for relatedness leads to intrinsic motivation and triggers reciprocity towards other employees (Deci and Ryan, 2000; Gagné and Deci, 2005; Olafsen *et al.*, 2017). Being part of a team can provide a manager the kind of social support needed to fulfil their need for relatedness, and they can offer the same support to their colleagues (Carroll and Gillen, 1987; Zahra, 2003).

In their study on customer stewardship control, Schepers *et al.* (2012) found that having a social dimension makes employees more aware of their responsibilities, toward not only customers but also the organization. It is interesting to note that despite being primarily relational, managerial work does not necessarily fulfil the need for relatedness (Rees, 1996; Tengblad, 2006; Austin *et al.*, 2013; Plakhotnik, 2017). If the adage ‘it is lonely at the top’ is anything to go by, then it becomes much more important for managers to actively seek out opportunities to satisfy their need for relatedness. When this need is frustrated, the individual feels like they do not fit in, there is a loss of connection, loneliness, and they are in a sense rejected or excluded (Olafsen *et al.*, 2017; Yu and Levesque-Bristol, 2020; Ferrand and Martinet, 2021). Social relationships provide a sense of security which promotes better coping, mental and physical health (Crocker and Park, 2004).

Working with others can help satisfy the need for relatedness but it can also be difficult. A hybrid manager achieves their goals by working with and through others (Carroll and Gillen, 1987; Zahra, 2003), however, this reliance on others can cause a sense of loss of one’s independence and it is not always easy to control (Austin *et al.*, 2013; Plakhotnik, 2017; Ashley *et al.*, 2018; Park and Faerman, 2019). Therefore, in seeking to fulfil their need for relatedness, a hybrid manager can potentially frustrate their need for autonomy.

In attempting to satisfy these BPNs, hybrid managers engage in a transition strategy known as exploration, which according to work role transition theory, involves both personal and role development (Nicholson, 1984; West, Nicholson and Rees, 1987; Ashforth and Saks, 1995). Personal development occurs when the hybrid manager changes aspects of themselves to suit the role, while role development arises where the hybrid manager changes aspects of the role

to suit how they like to work (Nicholson, 1984). This thesis makes use of job crafting theory to examine the adjustments that hybrid managers make during micro-transitions.

2.4 Job Crafting

In 2001, the term ‘job crafting’ was introduced by Wrzesniewski and Dutton as a bottom-up form of job design where individuals can adjust certain aspects of their jobs (Hackman and Oldham, 1976; Wrzesniewski and Dutton, 2001; Van Wingerden, Bakker and Derks, 2017). The idea that individuals can change their roles on their own initiative is not a new one and goes back to the late 1980’s where a ‘participative job change approach’ to job design was suggested as a possibility (Wrzesniewski and Dutton, 2001; Tims and Bakker, 2010; Karatepe and Eslamlou, 2017). Despite this early start, the interest in this area is still growing (Hetland *et al.*, 2018; Lazazzara, Tims and De Gennaro, 2020) as evidenced by the growing number of both quantitative and qualitative empirical studies in areas such as: work engagement (Bakker, Tims and Derks, 2012; Petrou *et al.*, 2012; Tims, Bakker and Derks, 2013); job satisfaction (Cheng *et al.*, 2016); job performance (Bakker, Tims and Derks, 2012; Tims, Bakker and Derks, 2013; Cheng *et al.*, 2016) and improved well-being (Tims, Bakker and Derks, 2013).

Job crafting is an employee-centric perspective on job design that occurs at an individual level, while job design is at the organizational level (Wrzesniewski and Dutton, 2001; Tims and Bakker, 2010; Bruning and Campion, 2018). Job design, by contrast, is usually a top-down activity which ensures that job characteristics (task identity, task significance, task variety, autonomy, and feedback) are designed into jobs to promote motivation and performance (Clegg and Spencer, 2007; Oldham and Hackman, 2010; Tims and Bakker, 2010). It can also involve restructuring certain job features without necessarily paying regard to the differences each employee has (Berg, Wrzesniewski and Dutton, 2010; Hetland *et al.*, 2018; Rai, 2018). While

on the other hand, job crafting causes a continuous evolution of the role through proactive and adaptive processes (Berg, Wrzesniewski and Dutton, 2010).

The rigidity of the job design process has created the need for a personalized approach to job structuring, where specific role aspects are changed to suit the individual's preference and abilities (Berg, Dutton and Wrzesniewski, 2008; Tims, Bakker and Derks, 2015; Roczniowska and Bakker, 2016). Job crafting does not diminish the value of managerially assigned job designs, rather it recognizes the importance of the employee's agentic role (Lin, Law and Zhou, 2017; Wang, Demerouti and Le Blanc, 2017; Kim *et al.*, 2018). The employee will engage in activities that are self-prescribed to alter their job or role (Wrzesniewski and Dutton, 2001). As such, job crafting is an individualized activity focused on the individual's perception of their job or role and is aimed at aligning it to the individual's preferences, skills, and values; rather than improving the functioning of the organization as a whole (Petrou *et al.*, 2012; Peeters, Arts and Demerouti, 2016; Kooij, Tims and Akkermans, 2017).

Job crafting in itself is a neutral activity (Dierdorff and Jensen, 2018; Kim and Beehr, 2018). However, research has shown that, at lower levels of the organization, job crafting can have negative effects on the organization (Dierdorff and Jensen, 2018). For example, if a marketer crafts their role such that they work primarily on the creative part of their job while ignoring the other aspects, such as business development, their overall performance may suffer, and the organization will lose out on potential revenue. In the same way, managers may not be optimal crafters. For instance, a hybrid manager may craft their dual roles in such a way that one role is favoured over the other. If the technical role is favoured, then the team the hybrid manager is responsible for will suffer; and if they favour the managerial role, then they may fail to deliver on the technical requirements of the team.

While crafting has potentially negative effects, the focus of this research is to consider how hybrid managers effectively adopt crafting to manage micro-transitions and to improve their fit with the managerial role. This is a novel application of crafting because it considers a dual role, unlike previous research which mainly focus on single roles (Wrzesniewski and Dutton, 2001; Tims and Bakker, 2010). This is an important perspective because hybrid roles are increasingly becoming the norm as a career progression route for technical/scientific roles. Similarly, managerial roles are broadening to include more people management tasks than before (devolution; Dalziel and Strange, 2007; Perry and Kulik, 2008) thus increasing the demands on the manager. Without crafting, it might be challenging for a hybrid manager to move between and perform the dual roles effectively.

Crafting has been considered at two levels: individual, where individuals actively adjust role boundaries; and collaborative, where the individuals work together to change the work processes (Wrzesniewski and Dutton, 2001; Cheng *et al.*, 2016; Dash and Vohra, 2020). These crafting efforts have been observed through two dominant research perspectives: *the job crafting model* (JCM) by Wrzesniewski and Dutton (2001) and *the job demands resources model* (JD-R) by Tims and Bakker (2010). According to JCM, job crafting is “the physical and cognitive changes individuals make in the task or relational boundaries of their work” (Wrzesniewski and Dutton, 2001, p. 179). On the other hand, JD-R defines job crafting as “the changes that employees may make to balance their job demands and job resources with their personal abilities and needs” (Tims, Bakker and Derks, 2012, p. 174). JCM considers crafting through the change of task, relational and cognitive boundaries (Wrzesniewski and Dutton, 2001; Zhang and Parker, 2019) while JD-R considers crafting through the change of role

demands and resources (Tims and Bakker, 2010; Tims, Bakker and Derks, 2012; Zhang and Parker, 2019). These perspectives are discussed further below.

2.4.1 Job Crafting Model (JCM)

According to this model, an individual can craft in three ways: *task crafting*, where changes are made to the number and types of tasks; *relational crafting*, where the nature of the current relational aspects of the role are changed; and *cognitive crafting*, where the perception the individual holds about parts of the job or the whole, is changed (Wrzesniewski and Dutton, 2001; Zhang and Parker, 2019).

JCM has been criticized for not explaining the relationship between the three forms of crafting, which led Berg and colleagues (2010) to conduct research to explore these relationships. Their research found evidence of an association between task and relational crafting, and that cognitive crafting may lead to task or relational crafting (Berg, Wrzesniewski and Dutton, 2010). Additionally, Tims and associates challenged the JCM perspective on crafting, arguing that cognitive crafting is a perception rather than a proactive behaviour and, thus, should not be considered as a form of crafting (Tims, Bakker and Derks, 2012). Therefore, they did not consider cognitive crafting as being important in shaping roles. It is suggested that cognitive crafting is a passive way of coping with, or avoiding, aspects of the job that individuals feel do not fit with their abilities, needs and preferences (Bakker, Tims and Derks, 2012). Furthermore, these authors contested the validity of cognitive crafting because it did not meet the ‘daily change’ requirement of crafting (ibid). The critics of JCM propose the job demands-resources (JD-R) model as an alternative perspective on crafting.

2.4.2 Job Demands-Resources Model (JD-R)

Job demands are aspects of the job that require an investment of sustained mental, physical and emotional effort, while job resources are aspects of the job that encourage growth and development (Bakker and Demerouti, 2017). Tims, Bakker and Derks (2012) consider the link between resources and job crafting along four dimensions; *increasing structural job resources*, where resources are increased within the structure of the job such as additional training; *increasing social job resources*, where additional support is sought from the relationship network such as feedback from peers and managers; *increasing challenging job demands*, where role boundaries are adjusted to increase growth stimulating challenges; and finally, *decreasing hindering job demands* where additional demanding tasks are avoided. The first three dimensions represent expansive crafting, in that they increase demands and resources while the fourth reduces job demands thus it is termed as a restrictive form of crafting (Bakker, Tims and Derks, 2012).

It is noteworthy that Tims and colleagues did not specify which type of employees they studied. Research has shown that lower ranking employees have little autonomy to craft their jobs (Bakker, Tims and Derks, 2012; Alvarado, 2021). It might be the case that cognitive crafting is less significant in jobs where tasks are clearly defined, such as in an assembly line as would be present in a processing plant like the one studied by Tims, Bakker and Derks (2012). As argued by Carroll and Gillen (1984) and other classical management research, managers engage in activities that are not always visible to observers. Therefore, cognitive crafting is an important part of the ‘mental work’ that managers do.

The two perspectives share some similarities, such as the ability of roles to expand and contract, a bottom-up proactive adjustment by the role holder; and that crafting is person-centric.

However, their differences (see Table 2.1 below) have led to debate and research tensions within the crafting literature (Zhang and Parker, 2019; Kim and Beehr, 2021). According to JCM, cognitive crafting is a proactive behaviour, but JD-R considers cognitive crafting to be merely a passive coping response (Wrzesniewski and Dutton, 2001; Tims, Bakker and Derks, 2012). Since JD-R considers crafting as a short-term fix during high demand periods (Tims, Bakker and Derks, 2012), it makes sense that this form of crafting would focus on adjusting the task level by balancing out the resources and demands. Arguably, since JCM lacks a temporal dimension, there is no urgency to craft which would allow the role holder to redesign the role at both a task and a cognitive level (Wrzesniewski and Dutton, 2001).

The second significant difference between the two perspectives is the purpose of crafting. According to JCM, crafting allows individuals to align their beliefs or value systems with their work goals to draw meaning from what they do (Wrzesniewski and Dutton, 2001; Berg, Wrzesniewski and Dutton, 2010). For example, if a nurse-manager enjoys helping people, then they would ensure how they do their work and how their interaction with others at work matches this goal. In this way, the nurse-manager will find it easy to identify as a ‘helper’ or ‘healer’ and enjoy engaging with patients as well as colleagues on the nursing team. On the other hand, JD-R suggests that individuals craft to balance out their demands and resources (Tims and Bakker, 2010; Bakker, Tims and Derks, 2012). In the same example, the nurse-manager may avoid dealing with patients directly, unless necessary, as a way of reducing the demands on their time resource.

Table 2.1 Main Differences Between JCM and JD-R

Differences	JCM	JD-R
Content of crafting	Three dimensions: ● Task crafting	Four dimensions:

	<ul style="list-style-type: none"> ● Relational crafting ● Cognitive crafting 	<ul style="list-style-type: none"> ● Increasing structural job resources ● Increasing social job resources ● Increasing challenging job demands ● Decreasing hindering job demands
	Includes cognitive crafting	Excludes cognitive crafting
	Does not consider a temporal dimension	Crafting is a short-term solution for high demand periods
Purpose of crafting	To find identity or meaning in their work	To find a fit between the person and the job

(Wrzesniewski and Dutton, 2001; Tims and Bakker, 2010; Bakker, Tims and Derks, 2012; Ebert and Bipp, 2021; Kim and Beehr, 2021)

These tensions in research, between JCM and JD-R, threaten the informative significance of emerging research, making it difficult to compare the effects of crafting efforts in practice as measures and interventions differ (Ebert and Bipp, 2021). Ebert and Bipp (2021) found more differences than similarities in the empirical comparisons between the two perspectives, indicating that the two theoretical approaches of job crafting may be dealing with different constructs. Thus, they caution that JCM and JD-R should not be regarded as the same concept nor used interchangeably, either in theory or practice (ibid). It is problematic to use job crafting measures to develop, design and evaluate interventions in practice when the foundations of these constructs are yet to be fully secured, because the outcomes may not be comparable as they vary depending on the perspective used (Bruning and Campion, 2018; Zhang and Parker, 2019; Ebert and Bipp, 2021). There have been efforts to try and bridge these differences to build more cohesion in the area and bring about more theoretical clarity to ease the combination of findings (e.g., (Lichtenthaler and Fischbach, 2019; Zhang and Parker, 2019; Lazazzara, Tims and De Gennaro, 2020).

2.4.3 Synthesizing JCM and JD-R Perspectives

Bruning and Campion (2018) developed a role-resource-approach-avoidance taxonomy in which they define crafting as “the changes to a job that workers make with the intention of improving the job for themselves” (p. 500). They proposed six features of crafting: crafting is self-targeted; crafting is an intentional change; there must be a noticeable difference in the job before and after crafting; crafting changes cannot be temporary, only permanent, or semi-permanent; crafting is aimed at changing the work role, not the leisure role; and crafted jobs must have clear and specified tasks and not be self-created jobs (Bruning and Campion, 2018). They then grouped their findings into four theme-based categories: approach role crafting, approach resource crafting, avoidance role crafting and avoidance resource crafting. Zhang and Parker (2019) responded to the proposal by Bruning and Campion (2018) because they felt that the role-resource distinction was not new and has been discussed previously in literature (Wrzesniewski and Dutton, 2001; Tims and Bakker, 2010; Lichtenthaler and Fischbach, 2016). They did, however, support the approach-avoidance perspective which they found to be systematic and relevant (Zhang and Parker, 2019).

Zhang and Parker (2019) attempted to synthesize the two job crafting perspectives, JCM and JD-R, by using a three-level hierarchical structure. The first level is the job crafting orientation, that is, approach versus avoidance; the second level is the crafting from form where the discussions around cognitive crafting are discussed; and the third level is where the crafting content considers job demands and resources (Zhang and Parker; 2019). They agree with the crafting characteristics proposed by Bruning and Campion (2018) and they added two more, that: crafting does not require formal approval; and that crafting changed a role’s intrinsic rather than extrinsic characteristics. For example, pay and promotion are not influenced by crafting, thus, it is for the intrinsic benefit that the individual crafts rather than for the extrinsic

rewards. This also means that for a hybrid manager to craft their dual roles, they would need to be autonomously motivated. These two studies have progressed the issue of cohesion considerably, however, they are still primarily at the conceptual stage as they are yet to receive empirical attention (Hu *et al.*, 2020; Ebert and Bipp, 2021).

2.4.4 An Integrated Crafting Taxonomy

Crafting behaviour is categorized as either being approach-oriented or avoidance-oriented based on the underlying motivation for that behaviour (Chen, Yen and Tsai, 2014; Zhang and Parker, 2019; Toyama, Upadyaya and Salmela-Aro, 2021). Approach crafting is motivated by a problem directed pursuit of desirable goals while avoidance crafting aims to reduce limiting behaviours by restricting negative end states (Bruning and Campion, 2018; Zhang and Parker, 2019; Ebert and Bipp, 2021). As such, it is important to consider approach crafting and avoidance crafting separately, rather than using a composite score that combines both, as the two have different psychological outcomes (Rudolph *et al.*, 2017; Zhang and Parker, 2019; Jourdan, 2020). In their crafting taxonomy, Brunning and Campion (2018) viewed crafting behaviour, under both approach and avoidance orientations, as either role based, or resource based:

Role based crafting is motivated by personal needs and it explains how the need to improve intrinsic benefits motivates the shaping of task and relational boundaries (Wrzesniewski and Dutton, 2001; Bruning and Campion, 2018). Such benefits can vary among individuals but may include increased engagement, the need to connect with others, the need to demonstrate control over work or a need to have a better fit with the role (Wrzesniewski and Dutton, 2001; Lu *et al.*, 2014; Alvarado, 2021). These idiosyncratic modifications will improve the work experience by meeting the individual's needs for more control over their work and provide

social benefits such as feedback and support (Humphrey, Nahrgang and Morgeson, 2007; Bruning and Campion, 2018).

Resource based crafting aligns personal work goals with external demands (Tims, Bakker and Derks, 2012; Bruning and Campion, 2018). It explains crafting through the management and reduction of work demands and strain to increase work efficiency, engagement, and performance (Tims, Bakker and Derks, 2012; Bruning and Campion, 2018). It considers resources as either intrinsic, such as the need for growth and development, need for control and feedback; or resources can be extrinsic, where they are focused on solely achieving work goals such as increasing performance (Tims and Bakker, 2010; Tims, Bakker and Derks, 2012; Alvarado, 2021). Here, the individual seeks to reconfigure their current job resources (or acquire new ones) so as to reduce the negative effects of their work roles (Nielsen and Abildgaard, 2012; Bruning and Campion, 2018).

2.5 Approach Crafting

Approach crafting involves the use of problem focused, improvement-based activities aimed at improving work experience and providing a better fit (Bruning and Campion, 2018; Lichtenthaler and Fischbach, 2018; Lazazzara, Tims and De Gennaro, 2020). Bruning and Campion (2018) looked at approach crafting in two categories: approach role crafting and approach resource crafting.

2.5.1 Approach Role Crafting

Approach role crafting is where the boundaries are adjusted and it is measured by work role expansion and social expansion (Roczniowska and Puchalska-Kamińska, 2017; Bruning and Campion, 2018; Zhang and Parker, 2019). *Work expansion* is self-initiated and occurs when

the role holder extends the task and behavioural boundaries to include activities that were not part of the formal job description so as to make the role more challenging (Wrzesniewski and Dutton, 2001; Tims, Bakker and Derks, 2012; Bruning and Campion, 2018). This form of crafting aligns with predictions of the JCM model as it increases meaning of work while reducing perceptions of work strain (Wrzesniewski and Dutton, 2001; Bruning and Campion, 2018). For example, when a hybrid manager takes on additional roles such as mentoring junior employees, they extend the boundaries of their original tasks. This may make their work feel more meaningful because they are impacting the career path of someone else.

However, a different motive has been suggested for work expansion. In their research, Bruning and Campion (2018) found a positive relationship between turnover intentions and work role expansion, suggesting that this proactive response might be indicative of the intention to leave (Lichtenthaler and Fischbach, 2019; Zhang and Parker, 2019). Whilst it is plausible that employees would diversify or broaden their skills set to increase their employability, it is also possible that this extended skill set can be for use within the current organization for a different position, such as transitions into hybrid roles. For example, if a software development manager goes beyond the remit of their role to mentor their direct reports, they do so to improve their team performance within the current organization. As such, it is likely that the motivation behind approach role crafting is influenced by the level the employee is on. Since Bruning and Campion (2018) are not specific about which group of employees they studied, it would be difficult to generalize this positive relationship.

Social expansion is the proactive extension of relational role boundaries such as taking up self-adopted roles within the team, for instance, by crafting opportunities for collaborative work to experience higher levels of cognitive engagements (Berg, Wrzesniewski and Dutton, 2010;

Tims, Bakker and Derks, 2012; Bruning and Campion, 2018). Social expansion also allows the active management of the crafter's interaction with others and may involve aspects of social exchange or reciprocity such as through feedback (Bruning and Campion, 2018). In this way, social expansion can be very useful for a hybrid manager who is trying to find a fit between themselves and their managerial role. Additionally, social expansion allows hybrid managers to satisfy their need for relatedness as they broaden their social networks.

2.5.2 Approach Resource Crafting

Approach resource crafting is where the resources are adjusted to improve the work experience (Roczniewska and Puchalska-Kamińska, 2017; Bruning and Campion, 2018; Zhang and Parker, 2019). It is aimed at reducing role demands to increase efficiency and performance (Bruning and Campion, 2018; Seppälä, Harju and Hakanen, 2020). Thus, its aligned with the JD-R model assumptions (Tims, Bakker and Derks, 2012; Harju, Kaltainen and Hakanen, 2021). Approach resource crafting is measured by adoption, work organization and metacognition (Bruning and Campion, 2018). *Adoption* occurs when formal work processes are improved through the acquisition and use of external knowledge-based, environmental or technological resources (ibid). It is concerned with bringing in new resources or building tangible resources into the job in the form of implementing new technologies or new knowledge (Bruning and Campion, 2018). Thus, adoption increases structural resources for the role (Tims, Bakker and Derks, 2012). For example, if the hybrid manager automates certain aspects of the work so that their team works faster, then they use technical resources to improve work and to reduce the work demands, thereby becoming more efficient. Adoption is not meant to reduce relational boundaries such that technology replaces the in-person contact, but rather it is meant to complement the individual's work (Tims, Bakker and Derks, 2012; Bruning and Campion, 2018).

Work organization is similar to adoption in that resources are engaged to improve work processes. However, unlike adoption which requires the acquisition of new external resources, work organization utilizes structural resources that are already available within the role (Tims, Bakker and Derks, 2012; Bruning and Campion, 2018). In this way, the individual creates additional value by reconfiguring the resources currently available to them (Tims and Bakker, 2010; Tims, Bakker and Derks, 2012; Bruning and Campion, 2018). For example, a hybrid manager may organize their work in such a way that it increases efficiency while reducing demands. A hybrid manager may wait until the end of the day to approve administrative requests such as leave as opposed to doing so when each comes in. This provides a better structure, giving them a more organized work environment.

Metacognition is an autonomous task related, sense making activity that involves the organization and manipulation of an individual's own cognitive state (Bruning and Campion, 2018). This form of crafting increases cognitive resources, such as creating meaning and identity for the role behaviour - thus it requires that the individual is self-aware of their crafting (Wrzesniewski and Dutton, 2001; Berg, Wrzesniewski and Dutton, 2010; Hu *et al.*, 2020). Unlike other forms of crafting, metacognition is purely cognitive and experiential, with no visible behavioural task changes thereby lending itself more towards role crafting (Bruning and Campion, 2018). Interestingly, Bruning and Campion (2018) also found that metacognition is goal-directed in nature, meaning that it operates as a form of resource crafting (Tims, Bakker and Derks, 2012; Harju, Kaltainen and Hakanen, 2021). For example, when a hybrid manager experiences a lot of work demands, by engaging in metacognition, they can think through what is expected of them then plan and come up with an approach on how to tackle the work ahead.

Research suggests that crafting efforts can be facilitated (or frustrated) by the satisfaction (or hindering) of individual needs (Tims and Bakker, 2010; Bindl *et al.*, 2019; Alvarado, 2021). For example, when the need for autonomy is satisfied, a hybrid manager is able to direct their role resources towards problems they want to address so as to bring about improvements. A hybrid manager may use their autonomy, for example, to expand their work role (approach crafting) to include one-to-one coaching with a team member who is not performing well. Therefore, when a hybrid manager has a high level of autonomy, they have scope to craft and the capacity to spend time helping others to learn (Slemp and Vella-Brodrick, 2013; Bakker and Oerlemans, 2019; Toyama, Upadyaya and Salmela-Aro, 2021). Similarly, having a sense of competence gives the hybrid manager a chance to showcase their expertise or demonstrate how capable they are. This high level of competence would encourage approach crafting, in this case, the hybrid manager could engage in work role expansion by adding a training responsibility to their job then using their competence to develop their team member. Likewise, high levels of relatedness will allow the hybrid manager to proactively initiate positive interactions with the team member, thereby engaging in social expansion (approach crafting). Therefore, the following hypothesis is proposed for the relationship between need satisfaction and approach crafting:

H₁: There is a positive relationship between autonomy (1a), competence (1b) and relatedness (1c) and approach crafting

2.6 Avoidance Crafting

Avoidance crafting involves reducing parts of work (Bipp and Demerouti, 2015; Bruning and Campion, 2018). It aligns itself with both the JCM and the JD-R perspectives. Like JCM, avoidance crafting reduces social and task related boundaries (Wrzesniewski and Dutton, 2001;

Bruning and Campion, 2018); and seeks to reduce hindering job and social demands, which is similar to the JD-R perspective (Nielsen and Abildgaard, 2012; Tims, Bakker and Derks, 2012). (Bruning and Campion, 2018) looked at avoidance crafting in two categories: avoidance role crafting and avoidance resource crafting.

2.6.1 Avoidance Role Crafting

Avoidance role crafting is measured by *work role reduction*, the proactive, conscious and systematic permanent reduction of work roles and effort expenditures, whereby official duties are ‘given away’ so that the task can be avoided (Wrzesniewski and Dutton, 2001; Berg, Wrzesniewski and Dutton, 2010; Bruning and Campion, 2018). For example, a hybrid manager can opt to reassign their administrative tasks to a junior member of their team so as to free up their time to attend to more strategic matters. Work role reduction is thus not the traditional form of delegation which is usually informal and used to give the hybrid manager a chance to prioritize other tasks (Bruning and Campion, 2018). Work role reduction involves changing the role boundaries to exclude (craft out) tasks that are part of the hybrid manager’s own formal role (Wrzesniewski and Dutton, 2001). Although work role reduction has a positive relationship with withdrawal behaviour (Bruning and Campion, 2018), it is not necessarily evading responsibility or accountability. It can also be a proactive effort by hybrid managers, who have high demand jobs, to reduce the implications associated with these demands (Bruning and Campion, 2018; Lichtenthaler and Fischbach, 2019). Thus, it is a form of resource reallocation which can be further understood through avoidance resource crafting.

2.6.2 Avoidance Resource Crafting

Avoidance resource crafting reduces demands so as to increase efficiency and performance, it works hand in hand with approach resource crafting (Bruning and Campion, 2018; Harju,

Kalttinen and Hakanen, 2021). It is measured by *withdrawal* which is the intentional and systematic exclusion of oneself either physically or emotionally from a situation, person or event by changing the job (ibid). As such, it integrates the reduction of hindering social and cognitive demands (Tims, Bakker and Derks, 2012; Bruning and Campion, 2018; Zhang and Parker, 2019). This is an informal, volitional, sustained and fairly permanent process that changes tasks or roles (Nielsen and Abildgaard, 2012; Tims, Bakker and Derks, 2012). Though unlike work role reduction, withdrawal is not formal (Bruning and Campion, 2018). For instance, a hybrid manager can choose to reduce their participation in cross-departmental projects by slowly pulling back from attending meetings, so as to focus on their own work. In doing so, this individual excludes themselves in an intentional way, in an effort to direct their time resource elsewhere. Whilst they are still part of the team, their participation is greatly reduced.

Withdrawal has been associated with negative outcomes such as turnover intentions (van Hooff and van Hooft, 2014) but research has shown that withdrawal has a positive relationship with efficiency (Nielsen and Abildgaard, 2012; Tims, Bakker and Derks, 2012; Bruning and Campion, 2018). Thus, reducing demands can actually make an individual more productive. It is possible that withdrawal, as a form of avoidance resource crafting, can be effective if these resources are re-allocated internally, to more pressing tasks, as would be the case for a hybrid manager. In these instances, the individual is withdrawing, not to avoid certain aspects of the role but rather to reduce hindering demands and to improve performance (Bruning and Campion, 2018; Seppälä, Harju and Hakanen, 2020). Therefore, Bruning and Campion (2018) suggestion that approach oriented crafting is superior to avoidance-oriented crafting, is an oversimplification of the motivations behind crafting behaviours, especially since they do not distinguish between employee types. Managers are a neglected occupational group in the study

of crafting (Roczniewska and Puchalska-Kamińska, 2017) leaving that area both theoretically underdeveloped and empirically under-investigated. This is very relevant especially in hybrid roles where the constant micro-transitions increase competing demands, thereby necessitating the need to craft.

Recent research has shown that managers also actively craft because they enjoy more autonomy (Mäkikangas and Schaufeli, 2021). As such, need satisfaction can facilitate a hybrid manager's choice to engage in avoidance crafting. For instance, having high levels of autonomy allows the hybrid manager to engage in avoidance crafting behaviour, such as, reducing their task boundaries to reduce time consuming tasks like administration work. Similarly, high levels of competence can lead a hybrid manager to withdraw their cognitive resources from the administrative roles and allocate them to more strategic work where their expertise is better utilized. Conversely, when a hybrid manager experiences high levels of relatedness, they are likeable and easily get along with other people at work. As such, it is easy for them to withdraw from and evade bothersome tasks that they are not interested in performing by offloading them to others with whom they have strong and positive relationships. Therefore, the higher the level of need satisfaction, the more they can engage in avoidance crafting to reduce demands. Accordingly, I propose the hypothesis below:

H₂: There is a positive relationship between autonomy (2a), competence (2b) and relatedness (2c) and avoidance crafting

The main objective of crafting, be it approach crafting or avoidance crafting, is to improve the work experience and create a better fit. It is suggested that the level of managerial congruence that the hybrid manager perceives is influenced by how they craft (Litzky and Greenhaus,

2007). The hybrid manager makes intentional changes to either their role boundaries or the allocation of resources so that they can become more congruent in their managerial role.

2.7 Managerial Congruence

Congruence in organizational behaviour research refers to the fit between two conceptually distinct constructs (Edwards, 1994; Litzky and Greenhaus, 2007). When a hybrid role manager transitions into the dual role, they come with a distinct scientific/technical skill set, and then they take on a managerial role which has its own skill requirements. To perform the dual roles effectively, the hybrid manager will need to find a fit with the managerial role. When the hybrid manager feels congruent with the role, it's an indication that they value the role and are more likely to be motivated to perform well in it. Having this congruence is important in ensuring that the transition from individual contributor to manager is successful. If the fit is not good, the potential impact goes beyond the individual hybrid manager and may likely affect the team they manage. When the hybrid manager values the managerial aspects of the role, they are more likely to proactively give it due attention, even as they perform their technical/scientific role. Thus, managerial congruence is a suitable dependent variable within the context of transitioning effectively into the role and the micro-transitions that arise from it.

Managerial congruence starts as a cognitive self-assessment process which is weighed against the overall role requirements (Litzky, 2002; Greguras and Diefendorff, 2009; Afsar, Badir and Khan, 2015). For example, when a hybrid manager's need for relatedness is satisfied, they can reach out to colleagues in similar roles to find out what kind of crafting works best in achieving managerial congruence. Although crafting is a personalized process which involves personal and role development, leveraging internal relationships can be a valuable resource in developing the hybrid manager's perception of what the role of a manager entails. This

assessment then informs how they will adjust their roles to achieve managerial congruence. When a hybrid manager (macro) transitions into the role, it is important that they feel they embody the managerial role. The impact of this perception of fit may go beyond the individual manager, and it may affect the team this manager leads. It is also possible that when they hybrid manager perceives a poor fit with the managerial role, they are likely to avoid it. Therefore, understanding the choices hybrid managers make as they micro-transition between their dual roles is critical to both the hybrid manager and the organization.

When the degree of consistency between the individual and the role is high, then congruence is increased (Milliman, von Glinow and Nathan, 1991). As such, research has proposed a positive relationship between crafting and role congruence (Wrzesniewski and Dutton, 2001; Tims, Derks and Bakker, 2016; Sánchez-Cardona *et al.*, 2020). The type of crafting behaviour engaged in, relates differently resulting in different psychological outcomes (such as managerial congruence) thus it is vital to make a distinction between the crafting types when considering how effective crafting is (Toyama, Upadyaya and Salmela-Aro, 2021). For example, research has shown that task and relational crafting cause a sense of loss of control in the crafting outcomes while cognitive crafting was found to offer more control (Nielsen, Weseler and Kostova, 2016; Kim, Im and Qu, 2018). When crafting involves other people such as in the case of relational crafting, the individual is not able to fully determine how the changes will be received, but when these changes are cognitive in nature, the individual is able to establish how it affects their behaviour. However, while these diverging results justify a need to build on empirical evidence on the crafting-congruence relationship, these studies considered crafting outcomes through the lens of the JCM perspective. To achieve a more holistic understanding, the current research examines how crafting impacts managerial congruence by adapting an integrated approach-avoidance crafting perspective.

As seen in the previous section, when role needs are satisfied, the hybrid manager can craft their dual roles so that they can perform them efficiently. Approach crafting allows the hybrid manager to expand their task boundaries to take on more managerial tasks and to challenge themselves which will likely lead to better managerial congruence. Therefore, the following relationship is hypothesized:

H₃: There is a positive relationship between approach crafting and managerial congruence

Conversely, avoidance crafting aims to reduce hindering role demands and involves divesting resources from areas where the hybrid manager's competence resource is underutilized (Demerouti and Peeters, 2018; Dubbelt, Demerouti and Rispens, 2019). Avoidance crafting can be perceived to have a double edge sword effect. On the one hand, the hybrid manager can prioritize the important tasks and pass on the rest, but on the other, the tasks being passed on are still a part of the managerial role. It is plausible that a hybrid manager may avoid the people aspect of their managerial role and instead favour their technical/scientific role in which they have greater competence. In the traditional type of managerial role, the individual would be able to balance the daily operations/administration and the strategic aspects of their role, but in a hybrid role, the individual also has a scientific/technical deliverable. At first glance, it may seem that engaging in avoidance crafting behaviour would deny a hybrid manager the full managerial experience because they withdraw from certain tasks. However, as seen earlier, becoming a manager is a personalized experience which can be unique to the individual holding the role (Mallaby, Price and Hofmeyr, 2017; Bolander, Holmberg and Fellbom, 2019).

For example, the hybrid manager can choose to withdraw from the time-consuming administrative tasks so that they can focus their time on developing their team, technically. Here, the hybrid manager is engaging in avoidance crafting behaviour in one managerial task to engage in approach crafting behaviour in a different managerial task. In this case, avoidance crafting is used by the hybrid manager to balance the competing demands (administration versus developing the team's technical competence) that accompany the micro-transitions between their dual roles. The hybrid manager has a responsibility to ensure that their team performs well by delivering on their technical requirements. Engaging in such avoidance crafting behaviour strengthens the hybrid manager's fit with the long-term objectives of their managerial role, even though it may take away from the more operational aspects of the managerial role, such as preparing reports and approving leaves. Withdrawing resources from the less technical (non-training) aspects of the managerial role may make it a better perceived fit. The hybrid manager may delegate those less technical aspects to focus on managerial aspects that involve their area of expertise whilst still meeting their people management requirements. Hence, avoidance crafting may change the managerial experience, but it does not necessarily dilute it. Therefore, the following is hypothesized:

H4: There is a positive relationship between avoidance crafting and managerial congruence.

Managerial congruence is about the perceived fit that the hybrid manager has with the managerial role. As such, if the hybrid manager feels that broadening their role to take on more responsibilities will help them become more managerial, they are likely to engage in approach crafting behaviour (H3). On the other hand, micro-transitions increase a hybrid manager's role demands and these may make them feel like they are moving further away from their

managerial role. In this case, the hybrid manager may opt to engage in avoidance crafting so that they can achieve managerial congruence (H4).

Research has suggested a relationship between crafting and managerial congruence, with Tims, Derks and Bakker (2016) suggesting that crafting precedes a better role fit. For example, an IT manager has the autonomy to expand their work role to include training of junior system engineers. This hybrid manager can bring in new technology to help facilitate this process thereby engaging in adoption (as a form of approach role crafting). By improving their team's performance, this IT manager can deliver on a managerial objective. Similarly, as the need for relatedness is satisfied, this hybrid manager can engage in social expansion, and work more closely with their team. Finally, the IT manager's ability to train their team arises from their expertise, thus, a high level of competence may encourage them to engage in approach crafting behaviour. Through training, the engineering manager is free to choose how to utilize the resources available to them; they develop a social bond with their team; and they get an opportunity to showcase their scientific/technical expertise, all of which makes them a better fit for the managerial role. Therefore, the following hypothesis is suggested:

H5: Approach crafting mediates the relationship between autonomy (5_a), competence (5_b) and relatedness (5_c) and managerial congruence

In the same example, the IT manager may opt for a different form of crafting. As a way to develop their team, the hybrid manager can choose (high levels of autonomy) to coach (high levels of competence) one member of the team on how to train the rest then withdraw from the trainer role. A high level of relatedness will make it easy to engage in avoidance crafting behaviour, as the interaction with the hybrid manager may make the team member feel that

they are being empowered to grow, by taking up the training opportunity. The hybrid manager can then focus their competence resource on the strategic managerial objectives, such as, improving system efficiency across the organization. Therefore, I propose the following hypothesis:

H₆: Avoidance crafting mediates the relationship between autonomy (6_a), competence (6_b) and relatedness (6_c) and managerial congruence

In considering crafting for managerial congruence, it is important to remember that management does not occur in a vacuum (Rees, 1996). As such, the environment within which this transition is occurring, should be conducive for crafting behaviours.

2.8 Transition Environment

Need satisfaction and crafting behaviour require a supportive environment, and how the hybrid manager perceives this support is likely to impact their chosen behaviour. To better understand this concept, this thesis will use a well-established theory, perceived organization support (POS; Rhoades and Eisenberger, 2002). POS is based on organizational support theory, which states that an individual will develop an opinion about how much the organization values them, their efforts, their contributions and its interest in their well-being (Rhoades and Eisenberger, 2002; Tseng and Yu, 2016; Ullah *et al.*, 2020). This opinion is determined by the individual's perception of the care and concern (or indifference) demonstrated towards their well-being; and the appreciation and support they receive from the organization (Rhoades and Eisenberger, 2002; Cheng *et al.*, 2016; Tseng and Yu, 2016). Additionally, this perception of POS affects the quality of the relationship the individual has with the organization and their work outcomes

thus, POS is a good predictor of employee behaviour and attitude (Rhoades and Eisenberger, 2002; Ingusci *et al.*, 2016; Kim *et al.*, 2018).

POS is based on the exchange of work for appreciation and recompense; be it supervisory support, pay, autonomy or career development opportunities (Lynch, Eisenberger and Armeli, 1999; Cheng *et al.*, 2016; Hur, Moon and Choi, 2021). Social exchange involves voluntary actions or favours that are motivated by the expectation that they will be returned (Cheung and Law, 2008; Hu *et al.*, 2016). It works on an implied principle of reciprocity where the individual offers the organization their loyalty and work effort in exchange for acceptance, respect and concern about their welfare (Rhoades and Eisenberger, 2002; Kim, Im and Qu, 2018; Ullah *et al.*, 2020). Based on the social exchange theory, individuals value organizational efforts more if they are seen to be voluntary as opposed to being forced (or mandated) by external pressures (Armeli *et al.*, 1998; Kim, Eisenberger and Baik, 2016). When a hybrid manager gets the sense that this care is genuine, they feel empowered to pursue their managerial objectives (Loi, Lin and Tan, 2019).

POS is theorized as an individual level social construct, of a dyadic relationship between the organization and the individual (Shin and Kim, 2015; Tan *et al.*, 2020; Ullah *et al.*, 2020). Research has proposed two components of POS: relationship based, which is how much the organization is perceived to care about the individual's wellbeing; and job related, which is how much the individual feels the organization values their contribution (Baran, Shanock and Miller, 2012; Hofstetter and Cohen, 2014). Both components predict behaviours and attitudes with the first being directed at the organization and the second at the job (Baran, Shanock and Miller, 2012; Hofstetter and Cohen, 2014). A supportive environment not only facilitates a hybrid manager's need satisfaction, but it also helps to develop a relationship with their team

as its manager (Kanat-Maymon, Yaakobi and Roth, 2018). Graves and Luciano (2013) found that employee perception of the quality of leader-member exchange (LMX) has a positive relationship with the satisfaction of the needs for autonomy, competence and relatedness. Interestingly, Dose, Desrumaux and Bernaud (2019) found a positive relationship between POS and autonomy but a negative one between POS and competence, and POS and relatedness. Whilst Dose and colleagues considered a direct relationship between POS and role needs, and the current research considers the moderation effect of POS, their findings indicate that it would be prudent to investigate the three role needs separately (Sheldon and Hilpert, 2012).

A high POS has been shown to encourage crafting behaviours as it increases resources (Deci and Ryan, 2000; Gagné *et al.*, 2010; Cheng and O-Yang, 2018). For instance, a systems development manager who wants to enhance how they structure and perform their work, may seek organizational support in acquiring new technology (adoption; Bruning and Campion, 2018). Here, the organizational support helps to facilitate the approach crafting behaviour because the need for autonomy is satisfied. It is likely that, in this case, the hybrid manager will reciprocate this care by actively seeking out opportunities for growth and development that would be beneficial for the organization (as well as themselves) (Rhoades and Eisenberger, 2002). When an organization provides a supportive environment, it gives hybrid managers the confidence to use their needs satisfaction to engage in crafting behaviour, as such, the following hypotheses are suggested:

H_{7a}: The mediating effect of approach crafting on the relationship between autonomy and managerial congruence is moderated by POS, such that, the higher the level of POS, the stronger the mediated relationship between autonomy and managerial congruence.

H_{7b}: The mediating effect of approach crafting on the relationship between competence and managerial congruence is moderated by POS, such that, the higher the level of POS, the stronger the mediated relationship between competence and managerial congruence.

H_{7c}: The mediating effect of approach crafting on the relationship between relatedness and managerial congruence is moderated by POS, such that, the higher the level of POS, the stronger the mediated relationship between relatedness and managerial congruence.

In the same example, the systems development manager may opt to get the team trained by the technology providers instead of doing it themselves, thereby withdrawing from the task (as a form of avoidance crafting). A high POS provides an autonomous environment in which the hybrid manager can implement the new technology as they deem fit (Deci and Ryan, 2000, 2008; Sarich, 2020). They can then focus the broad range of their competencies on other tasks, as opposed to showcasing just a single competence, such as, developing metrics to audit the performance of the new technology vis-à-vis the organization's objectives. This is important to the hybrid manager because it demonstrates their ability to deliver on managerial objectives beyond their operational level, they may be seen as being more strategic and thus more managerially congruent. As such, a supportive environment, allows the hybrid manager to use their needs satisfaction to engage in avoidance crafting behaviour (by delegating training), to achieve their strategic managerial objectives (Gillet *et al.*, 2016, 2019; Dose, Desrumaux and Bernaud, 2019). Therefore, the following hypotheses are suggested:

H_{8a}: The mediating effect of avoidance crafting on the relationship between autonomy and managerial congruence is moderated by POS, such that, the higher the level of

POS, the stronger the mediated relationship between autonomy and managerial congruence.

H_{8b}: The mediating effect of avoidance crafting on the relationship between competence and managerial congruence is moderated by POS, such that, the higher the level of POS, the stronger the mediated relationship between competence and managerial congruence.

H_{8c}: The mediating effect of avoidance crafting on the relationship between relatedness and managerial congruence is moderated by POS, such that, the higher the level of POS, the stronger the mediated relationship between relatedness and managerial congruence.

2.9 Chapter Conclusion

“For meaning to be meaningful, it has to be made, not received or found” (Kekes, 1986, p. 75 as cited in Tims, Derks and Bakker, 2016, p. 52)

This chapter has critically engaged with existing literature to understand how hybrid managers proactively manage the micro-transitions between their scientific/technical role and their managerial role when performing both. It started by considering role transitions, with a specific focus on hybrid transitions, before moving into needs satisfaction. This chapter explored, through literature, how need satisfaction can facilitate crafting efforts by hybrid managers and how this impact a hybrid manager’s managerial congruence. In doing so, it aimed to answer the question:

How does the type of crafting engaged in, impact the relationship between need satisfaction and managerial congruence for hybrid managers?

To address the research question, three relationships were hypothesized: a set of direct relationships, a set of mediation relationships, and a set of moderated mediation relationships. The direct relationships suggested were between the three role needs and both forms of crafting, and between the two forms of crafting and managerial congruence. There were two mediation relationships hypothesized: approach crafting, on the relationship between the three role needs and managerial congruence; and avoidance crafting, on the relationship between the three role needs and managerial congruence. Finally, the moderated mediation relationships proposed were that: POS moderates the mediation effect of approach crafting on the relationship between the three role needs and managerial congruence; and POS moderates the mediation effect of avoidance crafting on the relationship between the three role needs and managerial congruence. Chapter 3 discusses how these hypotheses will be tested by considering the research strategy for collected data using a mixed methods approach. The model below summarizes the key areas and the relationships hypothesized.

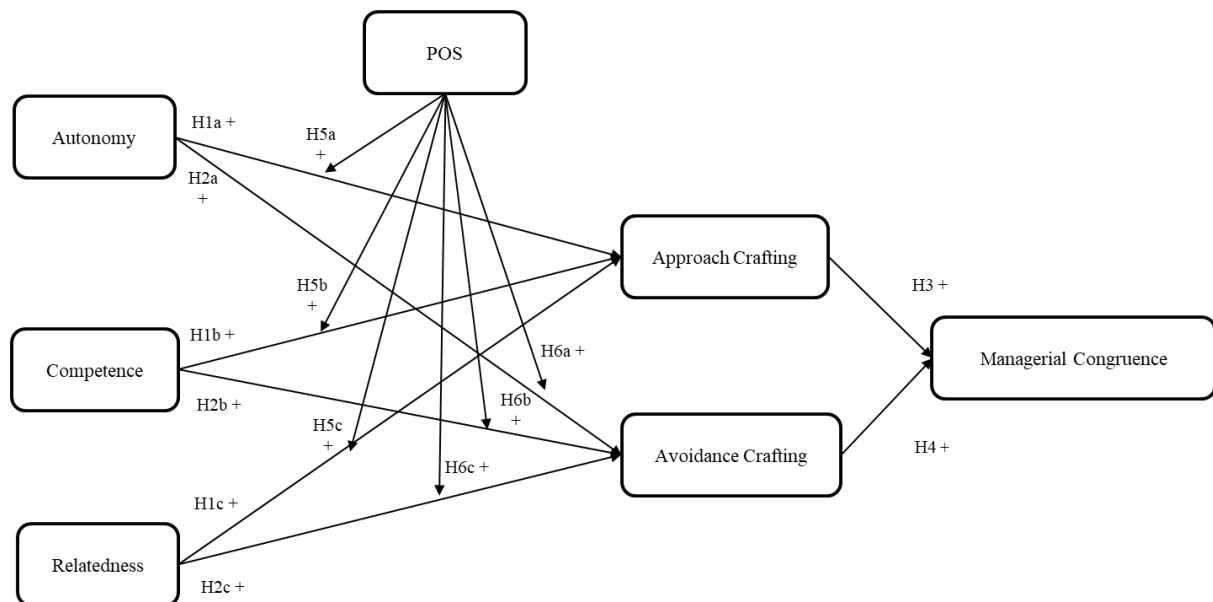


Figure 2.1 Hypothesized Research Model

CHAPTER THREE: METHODOLOGY

3.1 Introduction

This chapter discusses the research methodology utilised in this study. It begins by briefly discussing the philosophies of social science research. It then proceeds to discuss the research approach and design used; the sampling criteria; the data collection instruments and procedures; and finally, the data analysis strategy.

3.2 Philosophies of Social Science Research

The philosophical worldview or belief system guides the assumptions of ontology, epistemology, perspective on human nature, and methodology used. In turn, these shape the research questions posed and inform how data are collected, analysed, interpreted, and written up (Punch, 2003; Creswell, 2009; Clark *et al.*, 2015). Ontology is considered to be the researcher's view of what is being studied and how they make sense of this reality (Porta and Keating, 2008). It can either be objective, where the reality is independent from the researcher and beyond their reach and influence; or subjective, where the reality arises from the researcher's interaction with the social phenomena (Bryman and Bell, 2007; Saunders, Thornhill and Lewis, 2007). Epistemology is the assumption made about knowledge, how the researcher understands this knowledge and how they communicate it (Bryman and Bell, 2007). Thus, the study of reality is ontology, how the truth of this knowledge is obtained is the epistemology (Wicks and Freeman, 1998). The perspective on human nature is the assumption that humans relate to the environment, and this determines the role they play, as either participants or creators (Bryman and Bell, 2007). Finally, methodology is determined by the researcher's ontology, their epistemology, and their assumption of human nature (Saunders, Thornhill and Lewis, 2007).

The research methodology adopted is determined by the philosophical assumptions and research paradigms underpinning the research (Wicks and Freeman, 1998; Creswell, 2009). Social science research has three main research paradigms and research methodologies: the positivist paradigm; interpretivist paradigm; and pragmatist paradigm (see Appendix A). Positivism typically adopts quantitative techniques and lends itself more towards natural science where there is one reality, reality is also observed and objective, therefore, it is deductive in nature (Remenyi *et al.*, 1998; Saunders, Lewis and Thornhill, 2009). Interpretivism is mainly associated with qualitative techniques as it emphasizes the distinctiveness of human beings compared to phenomenon in the natural science. In the interpretivists view reality is subjective and results from social action, therefore, it is inductive in nature (Creswell, 2009; Heffernan, 2012). Finally, pragmatism tends to support mixed method research where both quantitative and qualitative techniques are used depending on research purpose, therefore, it can be either inductive or deductive (Bryman and Bell, 2007; Creswell, 2009). A deductive inquiry usually moves from theory to evidence or data, and it is tested quantitatively while an inductive inquiry usually moves from evidence or data to theory and it is tested qualitatively (Creswell, 2009; Creswell *et al.*, 2011).

3.3 Research Approaches

The overall objective of my research is to understand the transitional experiences of hybrid managers as they move from a technical/specialist role into a dual role. My ontological viewpoint is that the reality of transitional experiences is social and experiential - thus lending itself to pragmatist enquiry. I tested the hypotheses with data gathered from the research participants, then used the findings to generate further post-hoc interview questions. In seeking to understand the transitional experiences of hybrid managers, there is a practical need to go beyond the quantitative data to explore the 'why' behind the 'what' in these transitional

experiences. A post-hoc mixed methods approach is used to further investigate the results of the quantitative analysis. As such, the research approach adopted is a sequential mixed method approach with the first phase being quantitative, the dominant approach, then in the second phase it is supplemented by a qualitative approach (see Figure 1.1 above). This method of inquiry is in line with the overall research objective (Teddlie and Tashakkori, 2003; Creswell and Creswell, 2017).

Quantitative research is used to test theories or examine hypothesized relationships among variables through statistically analysed numerical data (Creswell, 2009; Creswell and Creswell, 2017). This type of data can show cause and effect in certain situations and allow for generalization of the findings to a population or replication of the research in a different context using the same instrument (Bryan *et al.*, 2016; Creswell and Creswell, 2017). Quantitative research is assumed to be objective because the researcher and participants do not interact and it is considered as one of its strengths, however, using standardized measures restricts the participants' view of reality which is the main weakness of quantitative research (Bryman, 2016; Creswell and Creswell, 2017). On the other hand, qualitative research tries to capture the lived experiences through a detailed narrative and the meaning that individuals bring to the phenomena under study which increases the depth of knowledge and understanding about the issue (Bryman, 2016). However, given how closely the researcher and participant engage, qualitative research has been criticised for being more subjective than quantitative methods, but this can be countered by having clear criteria for data collection and analysis (*ibid*).

Mixed methods combines both quantitative and qualitative research approaches where the findings from one method are explained further using the other method (Bryman, 2016). Its main advantage is that it capitalizes on the strengths of both quantitative and qualitative

approaches, but its main challenge is that it takes more time to collect and analyse data than just using either method (ibid). Another challenge faced by mixed methods is on which philosophical assumptions to suppose, as often quantitative and qualitative methods take on different research paradigms which may not always be compatible (Teddlie and Tashakkori, 2003; Heffernan, 2012). To address this challenge, researchers have proposed three paradigms for mixed method research: pragmatism, realism and transformative-emancipatory (Bryman, 2016; Creswell and Creswell, 2017). Of the three, pragmatism is considered as the foundational philosophy for mixed methods (Creswell, 2009; Bryman, 2016). Pragmatism is directed by the research question and allows the researcher to use the most practical approach for data collection and analysis and thus freeing up how the research problem is understood (Bryman, 2016; Creswell and Creswell, 2017). This flexibility of not necessarily being tied to one philosophy is a major strength as it offers practical value for this pragmatic approach (Bryman and Bell, 2010).

The design of a mixed methods study is determined by timing, weighting, and mixing (Creswell, 2009; Creswell *et al.*, 2011; Clark *et al.*, 2015). **Timing** means the order in which the quantitative and qualitative data will be collected and this can be either concurrently, where both the quantitative and qualitative approaches are carried out simultaneously; or sequentially, where one method is used to elaborate on the findings and the order is determined by the intent (Creswell, 2009; Creswell *et al.*, 2011; Clark *et al.*, 2015). When the qualitative method comes first, then the intent is exploration, and when the quantitative method comes first then the intent is generalization to a population, or a quantitative survey testing theory can precede a qualitative exploration of a few selected key issues (Teddlie and Tashakkori, 2003; Creswell, 2009). **Weighting** is the priority given to the quantitative and qualitative methods usually based on the theorizing, when the research is deductive then more emphasis will be on the quantitative

method and where the research is inductive then more emphasis will be on the qualitative method (Creswell, 2009; Creswell *et al.*, 2011; Clark *et al.*, 2015). Where one approach is dominant, the dominant approach will determine the strategy of inquiry, that is either deductive or inductive but where both approaches are weighted equally then either strategy can be used (Creswell, 2009). As the dominant component of this research is quantitative, it is a deductive inquiry. The collection of data from different sources allows for triangulation, or the verification of data, which strengthens reliability and internal validity (Creswell, 2009). Once data from the two methods is collected, it can be *mixed* in one of three ways: *merging*, where the data from both methods is collected concurrently then integrated; *connected*, where the data analysis phase of one method is linked to the data collection of the second method; or *separated*, where one form of data provides supportive information for the other form of data but they do not merge or connect, rather the less dominant method is embedded or nested in the primary form of data to support it (Creswell, 2009; Creswell *et al.*, 2011; Clark *et al.*, 2015).

The research question, *how does the type of crafting engaged in, impact the relationship between need satisfaction and managerial congruence for hybrid managers*, is central to this thesis and the hypotheses are driven by theory on transition, self-determination theory and crafting theory (Bryman and Bell, 2007; Saunders, Thornhill and Lewis, 2007; H eritier, 2008). The quantitative research approach is dominant and precedes the qualitative approach in a sequential manner making future replication of this research possible (Saunders, Thornhill and Lewis, 2007). This approach allows the researcher to further explore some of the findings to better understand how hybrid managers interpret the world around them (Lancaster, 2005; Creswell, 2009; Ruane, 2015; Bryman, 2016). As such, a mix of quantitative and qualitative data works best to answer the research question (Creswell, 2009). Qualitative research, albeit post hoc, is important in providing a contextual understanding of the situations under which

the hybrid managers make their crafting choices. This sequential explanatory design also offers an opportunity to further explore questions that might arise from the quantitative findings or to address assumptions that are not supported by the quantitative data (Ivankova, Creswell and Stick, 2006). Thereby strengthening the research approach.

The data collection was done in two phases; with the first phase being the collection and analysis of quantitative cross-sectional survey data, then followed by the collection and analysis of qualitative data through interviews in the second phase, so as to build on the findings from the quantitative phase (Creswell, 2009; Bryman, 2016). As such, the research design is a sequential explanatory strategy which uses follow-up qualitative data to explain and interpret quantitative findings, which interpret the relationships between the variables (Ivankova, Creswell and Stick, 2006; Creswell, 2009). Although this design may take a longer time to collect and analyse data using two phases, it has the advantage of being easy to implement with clear stages thus making it easy to report (Creswell, 2009).

3.4 Ethical Consideration

Prior to commencing the data collection process, ethical approval for conducting the research was sought from the Dublin City University research ethics committee. Initially, I intended to have a two-wave quantitative research design where data would be collected at two time points, three months apart. Unfortunately, during the second wave of data collection, there was only a 10% response rate which made it difficult to compare the findings at the two time points. Therefore, the research evolved¹ into a mixed methods design. I analysed the quantitative data,

¹ At that point, I requested the ethical committee to review the ethical approval (see Appendix E). Once this was received, I started the interview participant recruitment process. This explains the difference in the ethical approval received for the survey data collection and the mention of a second wave of data collection in the plain language statement (see Appendix F) used for the quantitative data collection.

then used the findings to develop interview questions (see Appendix B). These post-hoc interviews allowed me to address key questions that emerged from the quantitative data (Creswell, 2009). Cross-sectional data provide reliable data that can be used to generate robust findings and create opportunities for further investigations for new future research (Zangirolami-Raimundo, Echeimberg and Leone, 2018).

3.5 Quantitative Data Collection

The first phase of data collection was quantitative where numerical data were collected, using a self-administered online survey, from a sample group, then these data were analysed statistically to allow for replication of the research (Creswell, 2009; Bryman and Bell, 2010; Creswell *et al.*, 2011; Stritch, 2017). Surveys are commonly used to collect data on unobservable phenomena such as transitional experiences and crafting preferences (Bryman, 2016). Self-report surveys are commonly used when gathering data from a big sample and are considered valid when the data collected are on individual perceptions (Spector, 1994; Saunders, Thornhill and Lewis, 2007) though less so for objective aspects. However, the constructs under investigation are personal and so can only be self-reported. This current research considered variables, such as managerial congruence and crafting which can only be described by the individual as they may not be observable when using non-self-report measures (Tims, Bakker and Derks, 2012; Gagné *et al.*, 2015; Tims, Derks and Bakker, 2016). Nonetheless, such surveys may suffer from common method variance (CMV) which can artificially increase the relationship between variables (Lindell and Whitney, 2001; Podsakoff *et al.*, 2003). To mitigate CMV, certain survey design measures were put in place (Podsakoff *et al.*, 2003) These are further discussed in the following chapter.

A cover page was included to introduce the researcher and the research. It also explained to the respondents why they should participate and how the data collected was going to be used. Respondents were also informed that no personal or identifying data would be collected to ensure that confidentiality was maintained. To make the survey user friendly, it was separated into different sections with clear instructions on how to respond to the questions in each section. The measures, except for the demographic and control variables, were randomized and separated into three sections. The measurement scales used were validated in previous research and they had 5-point Likert scales, with a clear mid-point, to accurately reflect the responses. To ensure the quality of data collected was high, and that the respondents were paying attention to the questions, two attention check questions were added. An example of an attention check item was, “It is important that you pay attention to your responses carefully. Please select ‘Strongly Disagree’”. Those who fail to answer the attention check questions correctly were excluded from the final sample. Pilot testing was carried out on 10 hybrid managers to ensure that the measures used were clear and easily understood.

3.5.1 Survey Design

The survey (see Appendix C) was hosted by Qualtrics, which is also where the responses were recorded while the respondents were recruited through Amazon Turk (MTurk). MTurk was a suitable online platform for recruiting respondents for this survey as it offered a heterogeneous pool of respondents, from various organizations and sectors, which would allow for generalizability of the findings (Yu, 2016; Badger and Behrend, 2017). A heterogeneous group is useful when there is no team or organization level data required. MTurk is popular in research and has been found to provide high quality responses (Hauser and Schwarz, 2016; Cheung *et al.*, 2017; Duffy *et al.*, 2019) despite the monetary compensation that respondents get. There were two attention check items included (e.g., if you are not a robot, please select ‘Never’).

Participants who failed to answer both items correctly were excluded. The respondents on this research were paid US \$1.18 (1€) for completing the survey. Buhrmester, Kwang and Gosling (2016) suggests that increasing compensation for survey participation is likely to keep the participants engaged.

Each survey started with instructions on what the survey was about, how long it would take, how confidentiality was ensured, and that participation was voluntary. This was followed by two questions which asked the respondent if they had a technical/specialist role (examples were given) and if they managed a team of employees. If either was answered 'No,' then the survey ended, and the respondent was thanked for their time. These participants were not included in the final sample. Those who answered 'Yes' to both questions moved on to the demographic section which asked open ended questions such as their gender, technical role, and education level. This formed part of the control variables which keep other aspects constant so that changes in the outcome variable, managerial congruence, are easier to observe and the direct effect between variables is more visible (Ruane, 2015). Research has previously shown that these control variables correlate with crafting and role fit (Rigotti, Korek and Otto, 2014; Rudolph et al., 2017).

3.5.2 Survey Measures

This research seeks to understand how crafting, when motivated by need satisfaction, impacts on managerial congruence among hybrid role managers and the role perceived organizational support plays in this process. Thus, need satisfaction is the independent variable with managerial congruence being the dependent variable. Crafting plays a mediation role between the independent and the dependent variables while perceived organizational support moderates

the relationship between the independent variable (need satisfaction) and the mediator (crafting).

It was important to ensure that the measures used had validity, that is, that they measure what they were meant to (Creswell, 2009; Creswell *et al.*, 2011). Validity was enhanced by using validated scales (see Appendix D), with clear instructions to participants on how to respond, (Barkaoui, 2014) and I shared the survey with experienced academics who are knowledgeable in the areas under investigation. Additionally, the measures used were tested on a small convenience sample of 10 hybrid managers who work in various organizations. Following the testing, feedback from the pilot studies was incorporated into the final revision of a survey which included some rewording, such as replacing the word “job” with “role” to suit the context of the present study. Making these changes improved the content validity of the measure used (Creswell, 2009; Bryman and Bell, 2010). Those involved in the pilot tests are excluded from the final sample. Similarly, it was important to ensure that the research has reliability, that is, that the measures used are stable, free from random error and possible to replicate (Saunders, Thornhill and Lewis, 2007; Maruyama and Ryan, 2014; Stritch, 2017). As such, it is important to document the procedures used to help with both replication and give confidence in the results (Remenyi *et al.*, 1998). The section below discusses the measures used.

Control variables: Several control variables were used in this research. Gender was measured using four options; ‘male’ (=1), ‘female’ (=2), ‘other’ (=3), and ‘prefer not to say (=4)’. To capture the stage at which level of their career the transition into management occurred, respondents were asked about their age (in years), their work experience (in months and years) and the duration in the hybrid role (in months and years). To understand the industries and regions that tend to have these types of roles, respondents were asked about; their sector, their

technical/specialist role, their team size, and their countries of birth and work. Finally, the respondents were asked about their level of education, which was measured by categorical variables; 'high school' (=1), 'associates degree' (=2), 'bachelor's degree' (=3), 'master's degree' (=4), and 'doctorate degree' (=5).

Need satisfaction is measured using the basic need satisfaction at work scale which has three subscales: autonomy; competence; and relatedness. *Autonomy* was measured with a five-item scale with items such as "I am free to express my ideas and opinions on the job"; *Competency* was measured by a seven-item scale with items such as "Most days I feel a sense of accomplishment from working". *Relatedness* was measured using a six-item scale with items such as "I really like the people I work with". These subscales have an internal consistency of $\alpha=0.73$; $\alpha=0.70$; and $\alpha=0.84$ respectively (Deci *et al.*, 2001). The five-point scale used for all three subscales ranged from *definitely false* to *definitely true* (=1 to =5).

Research has cautioned against combining approach and avoidance crafting into an overall score (Bruning and Campion, 2018; Zhang and Parker, 2019), as such, **crafting** is considered under two categories: approach crafting and avoidance crafting. **Approach crafting** has five subscales: work role expansion; social expansion; adoption; work organization; and metacognition. *Work role expansion* was measured by a three-item scale with items such as "I expand my work activities to acquire resources that will help me do my job". *Social expansion* was measured using a four-item scale with items such as "I actively develop my professional network". *Adoption* was measured with a five-item scale with items such as "I use new knowledge or technology to automate tasks within my managerial role". Work organization is measured using a three-item scale with items such as "I create structure in my managerial work processes". Finally, *metacognition* was measured by a four-item scale with items such as "I use

my thoughts to help me focus and be engaged at work”. These subscales have an internal consistency of $\alpha=0.83$; $\alpha=0.85$; $\alpha=0.88$; $\alpha=0.79$; and $\alpha=0.84$ respectively (Bruning and Campion, 2018). **Avoidance crafting** has two subscales: work role reduction and withdrawal. *Work role reduction* was measured using a four-item scale with items such as “I usually find ways to get others to take my place in meetings”. *Withdrawal* was measured with a three-item scale with items such as “Within my managerial role, I work in a way that allows me to avoid others at work”. These subscales have an internal consistency of $\alpha=0.83$ and $\alpha=0.72$ respectively (ibid). The five-point scale for all three subscales ranged from *never* to *always* (=1 to =5).

Managerial congruence was measured using a six-item scale by Litzky and Greenhaus (2007) with an internal consistency of $\alpha=0.95$ and items such as “I have what it takes to be an effective manager” (Litzky and Greenhaus, 2007). Respondents indicated their level of agreement on a five-point Likert scale ranging from *strongly disagree* to *strongly agree* (=1 to =5).

Perceived organizational support was measured using an eight-item scale by Rhoades and Eisenberger (2002) with an internal consistency of $\alpha=0.89$ with items such as “My organization values my contribution to its well-being” (Rhoades and Eisenberger, 2002). Respondents indicated their level of agreement on a five-point Likert scale ranging from *strongly disagree* to *strongly agree* (=1 to =5).

3.5.3 Sample Selection and Quantitative Data Collection

A sample is a selection representing a wider group that is of interest to a research inquiry (Saunders, Thornhill and Lewis, 2007). The research outcomes are then inferred about the wider group from which the sample was drawn (Saunders, Thornhill and Lewis, 2007;

Creswell, 2009). The predications made by this present research will be based on statistical tests and analyses which will indicate the probability with which the results from the sample would apply to the wider population. Therefore, a probabilistic random sample was selected (Creswell, 2009).

In calculating the sample size, this research will embrace the widely accepted rule of thumb within social sciences for level of significance, power, and effect size (Cohen, 1977; Bryman and Bell, 2011; Little, 2013). Research shows that at a correlation level of $r=.2$ and a threshold of power of $.80$, a minimum effect size (deviation from the null hypothesis or the magnitude of the expected outcome) can be reasonably detected ($\alpha = .05$) (Cohen, 1992; Wänström, 2009). Further research shows that to detect effect sizes of 0.2 where reliability of measures is greater than 0.7 , samples greater than 300 are required (Wänström, 2009). This research had a sample size of 410 hybrid managers of which 408 were usable.

Statistical power is the probability of identifying an event or outcome when it occurs (Cohen, 1977; Little, 2013). The higher the power, the higher the probability of detecting an effect where there is one, such as, the probability of identifying managerial congruence as a result of crafting (Cohen, 1977). Missing data can negatively impact power. To safeguard against this potential impact, the survey questions were set to force respondents to answer. The respondents were recruited through MTurk. I defined the selection criteria for the respondents on a cover page of the survey. Those who opted to participate then answered two questions about their hybrid role and if they managed a team of employees. If either was answered 'No,' then the survey ended, and the respondent was thanked for their time. These participants were not included in the final sample. Those who answered 'Yes' to both questions moved on to the survey. The following section discusses the data collection procedure followed.

Changes were made to the survey to suit the context of the research, such as replacing the word “job” with “role”, then the final survey was submitted to the Dublin City University Ethics Committee for approval (see Appendix E). Once approval was received, I then proceeded to launch the survey on MTurk. At the beginning of the survey, the respondents were presented with a plain language statement or cover letter that informed them of the purpose of the research, that participation was voluntary, and that the data would be kept confidential. This statement also included my contact details, and those of the supervisory team and for the Dublin City University’s research ethics committee.

The analysis strategy for the quantitative data tests the relationships between the study hypotheses. To do so, Structural Equation Modelling (SEM) was used because it models latent variables while checking for measurement errors (Lacobucci, Saldanha and Deng, 2007). This analysis strategy is elaborated further in Chapter 4, and it is especially important, as the research model (see Figure 1.2) involves testing both moderation and mediation relationships. Chapter 4 presents the analysis of the survey data.

3.6 Qualitative Post-Hoc Research

The second phase of the research was the qualitative research designed to further understand the themes and puzzles which emerged from the quantitative survey. After the quantitative data were analysed, questions (and themes) emerged, and these were developed into interview questions. The qualitative data were collected through semi-structured online one-to-one interviews with hybrid managers. Interviews can be *structured*, where the questions are pre-defined and asked in a rigid manner; *unstructured*, where questions evolve based on issues discussed and is conversational in nature; and *semi-structured*, which combine aspects of both

structured and unstructured in that they have a framework but are flexible in terms of how the questions are asked (Bryman and Bell, 2003; Kumar, 2005). The objective of this second phase was to explore the findings from the survey data and to further validate the findings from the quantitative data. By exploring the retrospective lived experiences during managerial transitions, it would be easier to understand the reasoning behind the hybrid managers' crafting choices, and how this helped them achieve managerial congruence, as these phenomenon cannot be directly observed (Taylor and Bogdan, 1998). As such a semi-structured approach was chosen as the most suitable method as it is flexible enough to allow the interviewees to discuss their experiences in a conversational manner whilst still maintaining some framework. A total of 15 interviews were conducted.

I approached colleagues to recommend potential participants, that is, individuals who had a technical/specialist role as well as a managerial role and then I emailed them directly, introducing the research and why it was being done. The participants also recommended other potential participants and the process was repeated. As such, the approach was similar to that used in snowball sampling, whereby participants helped with the recruitment of other participants (Creswell, 2009). The email also included a plain language statement and an informed consent so that the interviewees understood what participation included, and how the data were to be used (see Appendices F and G). By ensuring that interviewees understand the research objective, the structure of the interview and how the data would be used, reliability of the data is enhanced (Bryman and Bell, 2003).

3.6.1 Interview Design

An interview guide was used during the interview to ensure that the questions addressed the intended research interests and that the questions were not leading to avoid interviewer bias

(see Appendix B). This interview guide was informed by the quantitative data, research question and objectives. It was pilot tested on 3 hybrid managers to have consistency across the interviews and that key terms were addressed. Based on the feedback, some changes were made to the question phrasing, and these were incorporated to ensure that the questions were clear (Kumar, 2005). Those who participated in the pilot study were not included in the final interviews. The final interview guide was submitted for ethical approval by Dublin City University's research ethics committee. Once approval was received, the interviews were scheduled and conducted.

3.6.2 Sample Selection and Qualitative Data Collection

The sample was selected using a purposive non-probability sampling strategy whereby I selected hybrid managers as they were relevant to the research topic under investigation (Snell, Briscoe and Dickson, 2011). In qualitative research, sample size is determined by the number at which data saturation is achieved, that is, where collecting additional data does not generate new information (Guest, Bunce and Johnson, 2006; Kvale, 2006; Mason, 2010). This, according to research, is achieved after about 12 interviews, especially with a relatively homogenous sample and data driven themes (Guest, Bunce and Johnson, 2006).

All the interviews were audio-recorded with a live transcript generated on Zoom as they were conducted online. To mitigate against loss of data caused by technical difficulties, the interviewee also recorded on a back-up device. Interviewees were notified of the back-up recorder and their consent was received before continuing. Recording interviews is strongly recommended so that the researcher does not have to rely on memory and is also able to listen and probe as they do not need to take notes (Bryman and Bell, 2003). I took field notes at the end of each interview, and these were captured as interview summaries, to be reviewed for

additional context during the interpretation stage. Participants were asked about their managerial transition experiences and how organizational support aided this transition process. In doing so, I was able to ask probing questions through the different aspects of the theoretical model, to further explore the survey data findings. On average, the interviews took about 45 minutes. Although there was an interview guide, not all interviews followed the same layout, as the questions asked were dictated by the flow of the conversation, though all interviews addressed the same general questions. I was still able to address the questions as planned and in similar wording for the different participants (Bryman and Bell, 2003).

Once the qualitative data were collected, the transcripts were uploaded and analysed on NVivo. I assigned pseudonyms for each of the interview participants to keep them anonymous (see Appendix H). Once this was done, I listened to the interview recordings while reading and coding the transcripts on NVivo. Coding simplified data to ease the analysis process (Teddlie and Tashakkori, 2003; Creswell and Creswell, 2005). I started off by coding the transcripts based on the study variables, such as, crafting, perceived organization support and managerial congruence. The second phase of data analysis focused on the research hypotheses and findings from the survey data. To better understand the meaning behind the themes, and to minimize researcher bias, I reviewed and examined the interview data critically. Chapter 5 discusses the findings from the analysis of the qualitative data. The quantitative and qualitative data were analysed separately, then the findings were integrated in the discussion. The qualitative data was used to supplement the quantitative data especially in addressing some key questions that emerged from the quantitative findings.

3.7 Chapter Conclusion

This chapter covered the research methodology used in this research. It began by discussing the philosophical foundations adopted for the research where the research approach, mixed methods, its fit for the research and its application, was justified. Following this, the research design was described in detail including sampling and the data collection methods used, online survey and one-to-one interviews. Finally, this chapter discussed the data analysis strategy, how reliability and validity are addressed, and research ethics. The next chapter discusses the data findings and analysis as the hypotheses are tested.

CHAPTER FOUR: QUANTITATIVE DATA ANALYSIS AND FINDINGS

4.1 Introduction

This chapter discusses the analysis and findings from the data collected quantitatively. It begins by considering the descriptive statistics, then looks at the confirmatory factor analysis before concluding. In testing the hypothesis, the results of the path analyses are presented.

4.2 Data Screening and Descriptive Statistics

Once the survey was closed, the survey data were exported from Qualtrics into Jamovi and SPSS. The data were then screened by reviewing the raw data and checking for variance in the responses to the control variables (Gaskin, 2019). There were no missing data as all the questions required a response, as such, the next step was to run descriptive statistics.

Descriptive statistics explored the characteristics of the data and the distribution of responses by considering the frequencies, standard deviations and means of each variable (Tabachnick, Fidell and Ullman, 2007), as shown in Table 4.1 below. To establish the normality of the data distribution, I conducted a visual examination of the histogram, which indicated no significant deviations from normality (see Appendix I). This was also confirmed through the skewness and kurtosis scores where variables with scores below -3 and +3 for skewness and for kurtosis are acceptable (Kline, 2005).

Table 4.1 Descriptive Statistics

	Mean	Median	SD	Skewness		Kurtosis		Shapiro-Wilk	
				Skewness	SE	Kurtosis	SE	W	p
Age	36.74	35.00	10.57	0.85	0.12	-0.07	0.24	0.92	< .001
Education	3.30	3.00	0.61	0.07	0.12	2.02	0.24	0.72	< .001
Role Duration	3.60	3.00	3.31	1.60	0.12	5.05	0.24	0.86	< .001
Team Size	44.83	12.00	100.47	5.48	0.12	38.28	0.24	0.42	< .001

Table 4.1 Descriptive Statistics

	Mean	Median	SD	Skewness		Kurtosis		Shapiro-Wilk	
				Skewness	SE	Kurtosis	SE	W	p
Work Exp	6.04	5.00	6.57	2.38	0.12	9.29	0.24	0.78	< .001
Auto	3.92	4.00	0.62	-0.69	0.12	0.96	0.24	0.92	< .001
Comp	3.44	3.75	0.91	-0.86	0.12	0.18	0.24	0.93	< .001
Related	3.58	3.67	0.90	-0.82	0.12	0.34	0.24	0.94	< .001
App Craft	3.87	3.95	0.53	-0.47	0.12	0.16	0.24	0.98	< .001
Avo Craft	3.69	3.86	0.69	-0.92	0.12	1.01	0.24	0.96	< .001
Man Cong	4.00	4.00	0.57	-0.83	0.12	1.92	0.24	0.96	< .001
POS	3.50	3.75	1.00	-0.95	0.12	0.26	0.24	0.91	< .001

Key: Auto (Autonomy); Comp (Competence); Related (Relatedness); POS (Perceived Organizational Support) AppCraft (Approach Crafting); AvoCraft (Avoidance Crafting); ManCong (Managerial Congruence)

A total of 408 (34.8% female) respondents participated in the survey, with a mean age of 36.74 years (37.18 years for women and 36.51 years for men). The respondents are nationals of 6 countries (China, India, Nigeria, UK, USA, and Vietnam) and all but one, who works in the UK, work in the USA. Of the participants, 66.91% had at least one primary degree. The mean work experience is 6 years with a mean of 3.5 years as hybrid managers. A total of 13 sectors were identified and these were grouped into 6 sectors as shown in Table 4.2 below. For example, hospital and medical lab employees were collapsed under ‘Health and Medical Research’. The respondents had 44 different types of hybrid roles, but they broadly fell into three categories as shown in Table 4.3 below. For example, software development manager, IT systems engineer and IT support manager were collapsed under ‘Systems Development and Mechanics’.

Table 4.2 Industry Sector of Sample

Levels	Counts	% of Total	Cumulative %
Finance and Financial Securities	74	18.1 %	18.1 %
Food Research and Production	30	7.4 %	25.5 %
Health and Medical Research	41	10.0 %	35.5 %
Tech and Telecommunications	177	43.4 %	78.9 %
Construction and Manufacturing	86	21.1 %	100.0 %

Table 4.3 Hybrid Role Frequencies

Levels	Counts	% of Total	Cumulative %
Systems Development and Mechanics	218	53.4 %	53.4 %
Manufacturing and Engineering	67	16.4 %	69.9 %
Health and Infrastructure	123	30.1 %	100.0 %

4.3 Confirmatory Factor Analysis

Confirmatory factor analysis (CFA) is used to confirm a theoretical model that has pre-specified measurements (Brown, 2006). A CFA has three main stages: determining model fit; testing for validity and reliability; and common method variance (Gaskin, 2019).

4.3.1 Model Fit

All the variables in this study are latent, meaning that they are unobservable, thus the variables were measured using items or factors (Muthén, Muthén and Asparouhov, 2017). For example, autonomy was captured using six items (factors). Of the seven latent variables in this study, two are second (higher) order factors and five are first order factors. For example, avoidance crafting is a second order factor as it is measured by work role reduction and withdrawal, which are also latent variables, subsequently measured by four and three items (factors) respectively. I included these items or factors in the latent variables to test the overall model fit. There are

several types of fit indices used such as: absolute (such as χ^2 , SRMR, RMSEA), comparative (such as CFI, TLI) and parsimonious (such as AIC and BIC) (Hayes, 2018). This study made use of five model fit indices, absolute and comparative, to determine model fit. Parsimonious fit indices were not included as these are primarily used to compare competing models (Cohen, 1992). From the results, the model was a good fit because the indices were within the required margins (Kline, 2005) (see Section 4.3.2 below).

4.3.2 Validity and Reliability

Validity tests whether a scale measures the variable it sets out to measure (Hair *et al.*, 2010). To test the relationship between the variables, I run a correlation matrix (Norušis, 2005). The correlation analysis has two objectives: to show significance in, and direction of the relationships between the variables as hypothesized; and to test for multicollinearity, that is, whether there is a high correlation between the independent variables (*ibid*) Significance was considered at 95% confidence intervals and four relationships were found to be insignificant (see Table 4.4 below). Also, all the variables except for competence and managerial congruence, have a positive association as indicated by the Pearson's correlation coefficient r . Multicollinearity was not an issue as all the correlations were either below or at the VIF threshold of 3 (Saunders, Lewis and Thornhill, 2009) as seen in Table 4.5 below. Generally, the results show that the assumptions of multivariate analysis are satisfied.

Reliability tests whether the measures used are stable, free from random error and possible to replicate (Saunders, Thornhill and Lewis, 2007; Maruyama and Ryan, 2014; Stritch, 2017). This was determined through the Cronbach alpha (α), a reliability coefficient (Santos, 1999), which was determined prior to and after the CFA. Reliability is achieved when the Cronbach alpha is above 0.70 (*ibid*). Items that lowered the reliability scores were removed (see

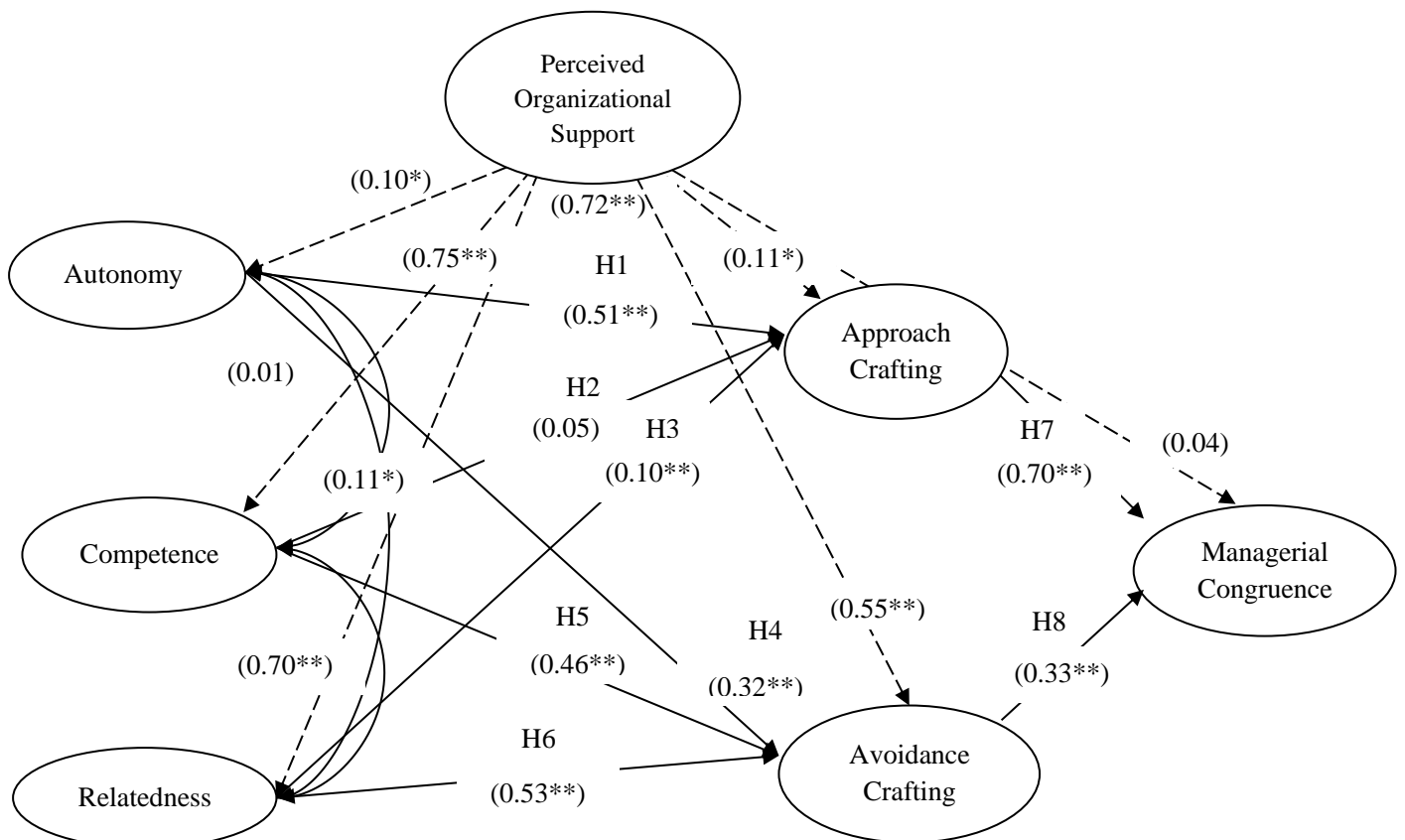
Appendix D), to bring reliability above the threshold of 0.7, before the common method variance was tested. The reliability scores are indicated diagonally on Table 4.4 below.

Table 4.4 Correlation Matrix of the Study Variables

	M	SD	1	2	3	4	5	6	7
1. Autonomy	3.92	0.62	(0.69)						
2. Competence	3.44	0.91	0.01	(0.75)					
3. Related	3.58	0.90	0.11*	0.70**	(0.68)				
4. Approach Crafting	3.87	0.52	0.508**	0.05	0.20**	(0.89)			
5. Avoidance Crafting	3.69	0.69	0.32**	0.46**	0.53**	0.52**	(0.79)		
6. Managerial Congruence	4.00	0.57	0.51**	-0.07	0.11*	0.70**	0.33**	(0.75)	
7. Perceived Organizational Support	3.50	0.99	0.10*	0.75**	0.72**	0.11*	0.55**	0.04	(0.83)

**Correlation is significant at the 0.01 level (2-tailed)

*. Correlation is significant at the 0.05 level (2-tailed)



Note. * $p < .05$, ** $p < .001$

Figure 4.1 Hypothesized Research Model Showing Correlation Coefficients

4.3.3 Common Method Variance

Common method variance (CMV) can artificially increase the relationship between variables (Lindell and Whitney, 2001; Podsakoff *et al.*, 2003). As the quantitative data were collected through self-administered surveys, it was important to investigate CMV. To ensure this was minimized, several procedures were applied. To begin with, some survey design measures were put in place (Podsakoff *et al.*, 2003). To test for CMV, CFA was run twice. First, all items across all variables were loaded in a single factor. Then I separated the items into their respective variables, and CFA was checked again. The CFI and TLI values from both CFAs were then compared. The CFI and TLI values (0.51, 0.49) were lower when the items were put together in a single factor than when the variables were separated (0.88, 0.87). This shows that the items do not converge on a single factor thus each variable measures a separate concept (Podsakoff *et al.*, 2003; Kurt *et al.*, 2020). The CFI and TLI scores are slightly lower than the recommended cut-off of 0.9, however, some researchers have taken the value of 0.80 as a more flexible limit, as such, the construct validity is still considered as being good as: $\chi^2/df = 1.84$, CFI = 0.88, TLI = 0.87, SRMR = 0.06, RMSEA = 0.05 (Büyüköztürk *et al.*, 2004; Yucel *et al.*, 2020). Additionally, the VIF threshold of 3 was maintained (see Table 4.5 below) further confirming that common method bias was not an issue in this research.

Table 4.5 Collinearity Statistics

	VIF	Tolerance
Autonomy	1.37	0.73
Competence	2.67	0.38
Relatedness	2.55	0.39
Approach Crafting	1.81	0.55
Avoidance Crafting	2.17	0.46
Perceived Organizational Support	3.00	0.33

4.4 Path Analysis

The model under investigation involves the testing of both mediation and moderated mediation effects. A mediation effect is the mechanism through which an input or independent variable influences an outcome or dependent variable (Hayes, 2018). For example, approach crafting, as a mediator, would explain the relationship between autonomy and managerial congruence. On the other hand, a moderated mediation is a variable which impacts the mediation relationship (Preacher and Hayes, 2004; Mathieu and Taylor, 2007). For example, as a moderator, perceived organizational support (POS) is hypothesized to strengthen the mediation of approach crafting on the relationship between autonomy and managerial congruence. These effects are discussed below.

4.4.1 Direct Relationships

Table 4.6 Direct Relationships

Dep	Pred	Estimate	SE	95% Confidence Intervals		β	z	p
				Lower	Upper			
AppCraft	Auto	0.42	0.04	0.35	0.49	0.51	11.62	< .001
AppCraft	Comp	0.03	0.03	-0.03	0.09	0.05	0.81	0.42
AppCraft	Related	0.11	0.03	0.05	0.18	0.20	3.36	< .001
AvoCraft	Auto	0.35	0.05	0.24	0.46	0.32	6.46	< .001
AvoCraft	Comp	0.35	0.04	0.27	0.44	0.46	7.80	< .001
AvoCraft	Related	0.41	0.04	0.33	0.49	0.53	10.23	< .001
ManCong	AppCraft	0.80	0.06	0.69	0.91	0.73	13.89	< .001
ManCong	AvoCraft	-0.04	0.04	-0.12	0.04	-0.05	-1.05	0.29

Key: Auto (Autonomy); Comp (Competence); Related (Relatedness); AppCraft (Approach Crafting); AvoCraft (Avoidance Crafting); ManCong (Managerial Congruence)

4.4.1.1 Approach Crafting

Autonomy has a positive and significant effect on approach crafting ($\beta = 0.51, p < 0.001$), meaning that an increase in the levels of autonomy is associated with an increase in approach crafting behaviours. As such, H_{1a} , which predicted a positive relationship between autonomy and approach crafting, is supported.

No significant relationship was found between competence and approach crafting ($\beta = 0.05, p = 0.42$) meaning that an increase in the levels of competence would not lead to an increase in approach crafting. Therefore, H_{1b} , which predicted a positive relationship between competence and approach crafting, is not supported.

A significant, positive relationship was found between relatedness and approach crafting ($\beta = 0.20, p < 0.001$) meaning that increase in the levels of relatedness leads to increase in approach crafting behaviours. As such, H_{1c} , which predicted a positive relationship between relatedness and approach crafting, is supported.

4.4.1.2 Avoidance Crafting

A significant, positive relationship was found between autonomy and avoidance crafting ($\beta = 0.32, p < 0.001$), meaning that increase in the levels of autonomy is associated with an increase in avoidance crafting behaviours. As such, H_{2a} , which predicted a positive relationship between autonomy and avoidance crafting, is supported.

A significant, positive relationship was found between competence and avoidance crafting ($\beta = 0.46, p < 0.001$), meaning that an increase in the levels of competence would lead to an

increase in avoidance crafting. Therefore, H_{2b}, which predicted a positive relationship between competence and avoidance crafting, is supported.

A significant, positive relationship was found between relatedness and avoidance crafting ($\beta = 0.53$, $p < 0.001$), meaning that increase in the levels of relatedness leads to increase in avoidance crafting behaviours. As such, H_{2c}, which predicted a positive relationship between relatedness and avoidance crafting, is supported.

4.4.1.3 Managerial Congruence

A significant, positive relationship was found between approach crafting and managerial congruence ($\beta = 0.73$, $p < 0.001$) meaning that increase in the levels of approach crafting is likely to increase in managerial congruence. As such, H₃, which predicted a positive relationship between approach crafting and managerial congruence, is supported.

No relationship was found between avoidance crafting and managerial congruence ($\beta = -0.05$, $p = 0.29$) meaning that increase in the levels of avoidance crafting would not lead to increase in managerial congruence. As such, H₄, which predicted a positive relationship between avoidance crafting and managerial congruence, is not supported.

4.4.2 Indirect (Mediation) Relationships

The mediation hypotheses were tested using Path Analysis in Jamovi, and bootstrapping analysis (generating 10,000 bootstrap samples) with 95% confidence intervals and model estimation of Maximum Likelihood. In this study, the mediation variables are approach crafting and avoidance crafting. Their mediation effects will be considered in the relationships between autonomy, competence and relatedness, and managerial congruence.

Table 4.7 Indirect Relationships

Description	Parameter	Estimate	SE	Lower	95% Confidence Intervals		z	p
					Upper	β		
Auto \Rightarrow AppCraft \Rightarrow ManCong	p1*p3	0.34	0.04	0.26	0.42	0.37	8.23	< .001
Comp \Rightarrow AppCraft \Rightarrow ManCong	p1*p3	0.02	0.03	-0.03	0.07	0.03	0.81	0.42
Related \Rightarrow AppCraft \Rightarrow ManCong	p1*p3	0.09	0.03	0.04	0.15	0.14	3.31	< .001
Auto \Rightarrow AvoCraft \Rightarrow ManCong	p2*p4	-0.02	0.01	-0.04	0.02	-0.02	-1.05	0.29
Comp \Rightarrow AvoCraft \Rightarrow ManCong	p2*p4	-0.02	0.02	-0.05	0.01	-0.02	-1.02	0.31
Related \Rightarrow AvoCraft \Rightarrow ManCong	p2*p4	-0.02	0.02	-0.05	0.02	-0.03	-1.03	0.31

Key: Auto (Autonomy); Comp (Competence); Related (Relatedness); AppCraft (Approach Crafting); AvoCraft (Avoidance Crafting); ManCong (Managerial Congruence)

4.4.2.1 Approach Crafting

The relationship between autonomy and managerial congruence is significantly mediated by approach crafting ($\beta = 0.37$, $p < 0.001$). As such, H_{5a}, which predicted that approach crafting would mediate the relationship between autonomy and managerial congruence, is supported.

The relationship between competence and managerial congruence is not mediated by approach crafting ($\beta = 0.03$, $p = 0.42$). As such, H_{5b}, which predicted that approach crafting would mediate the relationship between competence and managerial congruence, is not supported.

The relationship between relatedness and managerial congruence is significantly mediated by approach crafting ($\beta = 0.14$, $p < 0.001$). As such, H_{5c}, which predicted that approach crafting would mediate the relationship between relatedness and managerial congruence, is supported.

4.4.2.2 Avoidance Crafting

The relationship between autonomy and managerial congruence is not mediated by avoidance crafting ($\beta = -0.02$, $p = 0.29$). As such, H_{6a}, which predicted that avoidance crafting would mediate the relationship between autonomy and managerial congruence, is not supported.

The relationship between competence and managerial congruence is not significantly mediated by avoidance crafting ($\beta = -0.02$, $p = 0.31$). As such, H_{6b}, which predicted that avoidance crafting would mediate the relationship between competence and managerial congruence, is not supported.

The relationship between relatedness and managerial congruence is not mediated by avoidance crafting ($\beta = -0.03$, $p = 0.31$). As such, H_{6c}, which predicted that avoidance crafting would mediate the relationship between relatedness and managerial congruence, is not supported.

4.4.3 Moderated Mediation Relationships

The moderation mediation effect of POS was tested using SPSS PROCESS macro. The model showed a significant variation in managerial congruence, $R^2 = .5400$; $F(5, 402) = 94.38$, $p < .000$. The moderated mediated paths were tested using bootstrapping analysis with 10,000 bootstrap samples and with a confirmed significance interval of 95%.

Table 4.8 Conditional Indirect Effect

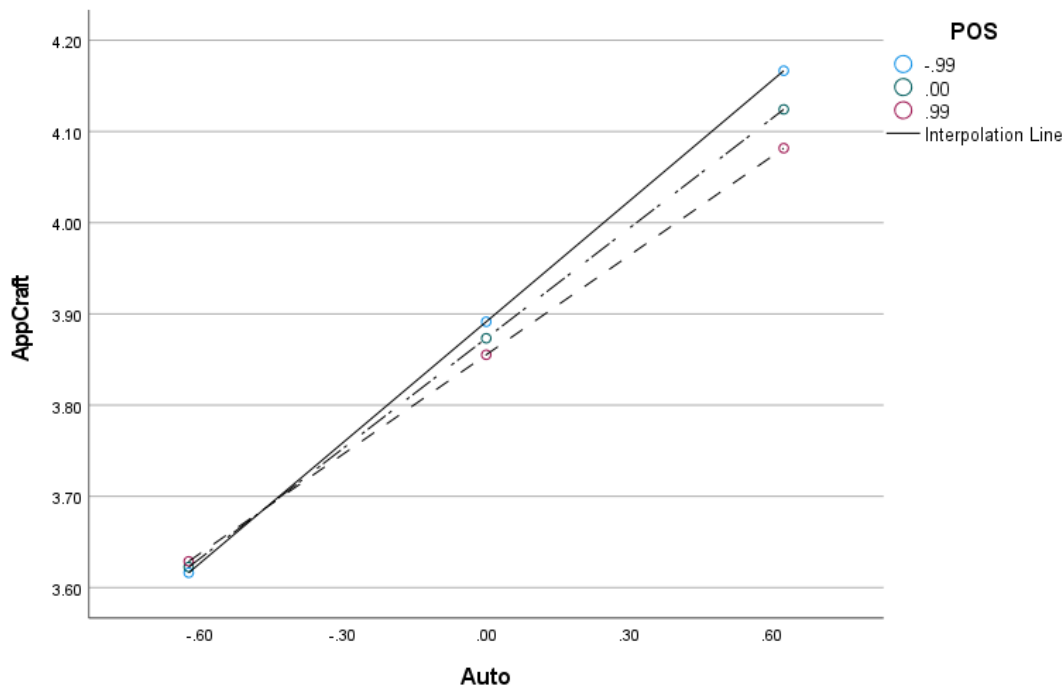
	-1sd (bootstrap 95% CI)	At the mean (bootstrap 95% CI)	+1sd (bootstrap 95% CI)
Approach Crafting			
Autonomy	0.29* (0.20, 0.39)	0.27* (0.20, 0.34)	0.24* (0.16, 0.34)
Competence	-0.14* (-0.20, -0.08)	-0.01* (-0.06, 0.04)	0.11* (0.05, 0.18)
Relatedness	0.02* (-0.05, 0.08)	0.14* (0.08, 0.20)	0.26* (0.18, 0.34)
Avoidance Crafting			
Autonomy	-0.01* (-0.03, 0.02)	-0.01* (-0.03, 0.02)	-0.01* (-0.04, 0.02)
Competence	-0.00* (-0.01, 0.00)	-0.00* (-0.01, 0.00)	-0.00* (-0.01, 0.01)
Relatedness	-0.01* (-0.02, 0.01)	-0.00* (-0.02, 0.01)	-0.00* (-0.02, 0.01)

4.4.3.1 Approach Crafting

4.4.3.1.1 Autonomy

Autonomy has a significant association with approach crafting at mean levels of POS (0.41, $p < 0.00$). POS has an insignificant effect on approach crafting at mean levels of autonomy (-0.02, $p = 0.62$). The interaction effect of autonomy and POS has an insignificant effect on approach crafting (-0.04, $p = 0.32$). Therefore, the relationship between autonomy and approach crafting is not moderated by POS.

At all levels of POS, the conditional indirect effect of autonomy on managerial congruence through the mediator approach crafting, is significant. The Index of Moderated Mediation (IMM), which is the standard measure, is insignificant (-0.03; bootstrap 95% CI = (-0.08, 0.04)), therefore, there is no evidence of moderated mediation. As such, H_{7a} is not supported. Thus, the mediating effect of approach crafting on the relationship between autonomy and managerial congruence is not moderated by POS, such that, higher levels of POS do not strengthen the mediated relationship between autonomy and managerial congruence.



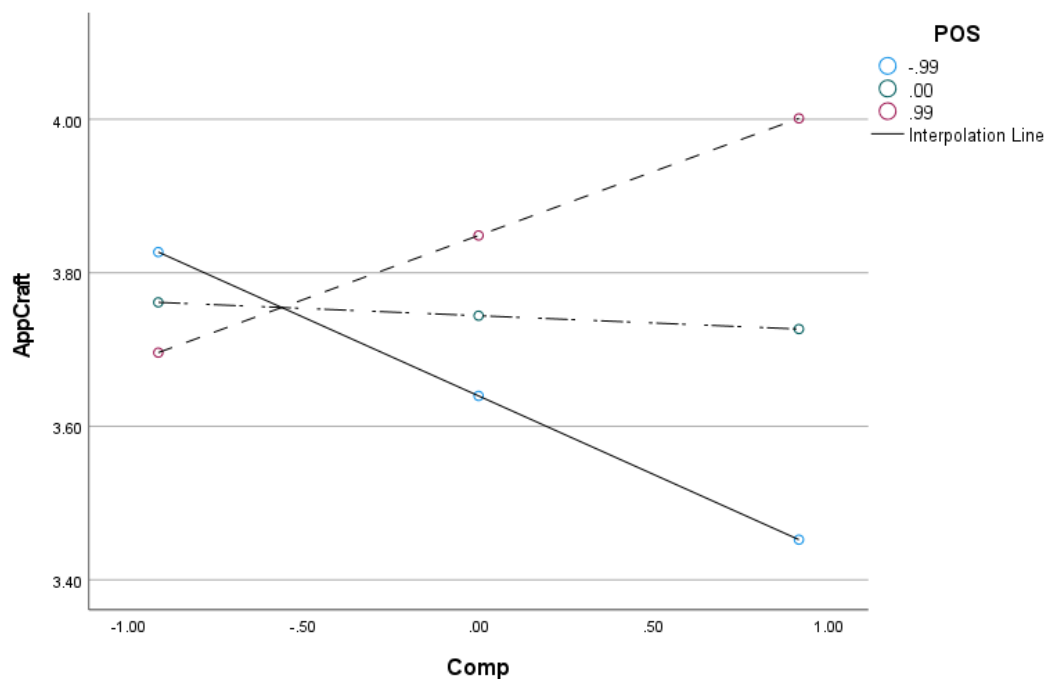
Key: Auto (Autonomy); AppCraft (Approach Crafting)

Figure 4.2 Moderated Mediation – Autonomy and Approach Crafting

4.4.3.1.2 Competence

Competence is not related to approach crafting at mean levels of POS ($-0.02, p = 0.59$). POS has a significant effect on approach crafting at mean levels of competence ($0.11, p=0.00$). The interaction effect of competence and POS has a significant effect on approach crafting ($0.19, p<0.00$). Therefore, the relationship between competence and approach crafting is moderated by POS. At low levels ($-1sd$) of the conditional effects of POS, competence has a significant influence on approach crafting ($-0.21, p<0.00$). At mean levels of POS, the relationship between competence and approach crafting is insignificant ($-0.02, p = 0.59$). At high levels ($+1sd$) of POS, the relationship between competence and approach crafting is significant ($0.17, p<0.00$). Therefore, POS strengthens the mediated relationship between competence, approach crafting and congruence, such that under higher levels of POS, the effect is strengthened.

The Index of Moderated Mediation (IMM) is positive and significant (0.12; the bootstrap 95% CI = (0.09, 0.17)), therefore, there is evidence of moderated mediation and H_{7b} is supported. As such, the mediating effect of approach crafting on the relationship between competence and managerial congruence is moderated by POS, such that, the higher the level of POS, the stronger the mediated relationship between competence and managerial congruence.



Key: Comp (Competence); AppCraft (Approach Crafting)

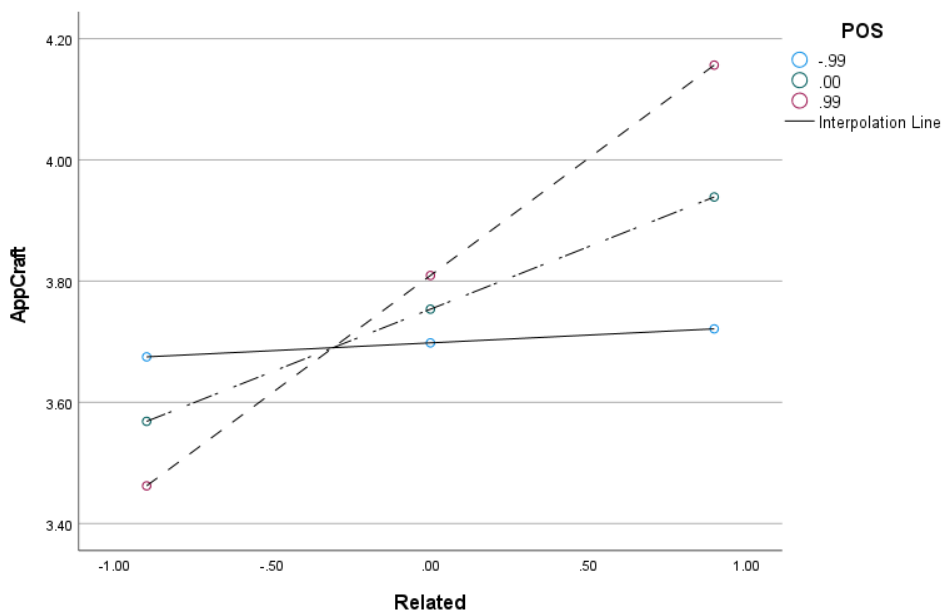
Figure 4.3 Moderated Mediation – Competence and Approach Crafting

4.4.3.1.3 Relatedness

Relatedness has a significant relationship with approach crafting at mean levels of POS (0.21, $p < 0.00$). POS does not have an effect on approach crafting at mean levels of relatedness (0.06, $p = 0.11$). The interaction effect of relatedness and POS has a significant effect on approach crafting (0.18, $p < 0.00$). Therefore, the relationship between relatedness and approach crafting is moderated by POS. At low levels (-1sd) the conditional effects of POS, the relationship

between relatedness and approach crafting is insignificant (0.03, $p = 0.49$). At mean and high levels (+1sd) levels of POS, the relationship between relatedness and approach crafting is positive and significant (0.21, $p < 0.00$). The effect of relatedness on approach crafting increases with an increase in POS (0.39, $p < 0.00$).

Index of Moderated Mediation (IMM) is significant (0.1202; the bootstrap 95% CI = (0.08, 0.17)), therefore, there is evidence of moderated mediation. Thus, H_{7c} is supported.



Key: Related (Relatedness); AppCraft (Approach Crafting)

Figure 4.4 Moderated Mediation – Relatedness and Approach Crafting

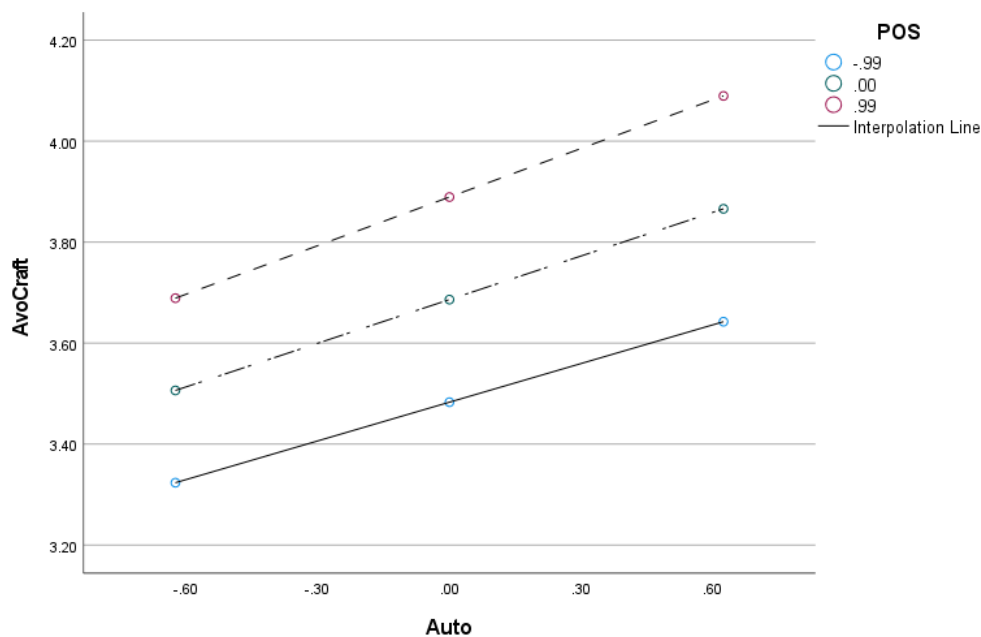
4.4.3.2 Avoidance Crafting

4.4.3.2.1 Autonomy

Autonomy is significantly and positively associated with avoidance crafting at mean levels of POS (0.29, $p < 0.00$). POS has a significant effect on avoidance at mean levels of autonomy (0.20, $p < 0.00$). The interaction effect of autonomy and POS has an insignificant effect on

avoidance crafting (0.04, $p = 0.49$). As such, the relationship between autonomy and avoidance crafting is not moderated by POS.

At all levels of POS, the conditional indirect effect of autonomy on managerial congruence through the mediator avoidance crafting is insignificant. The Index of Moderated Mediation (IMM) is insignificant (-0.00 ; bootstrap 95% CI = $(-0.01, 0.01)$), therefore, there is no evidence of moderated mediation and H_{8a} is not supported. Thus, the mediating effect of avoidance crafting on the relationship between autonomy and managerial congruence is not moderated by POS, such that, higher levels of POS do not strengthen the mediated relationship between autonomy and managerial congruence.



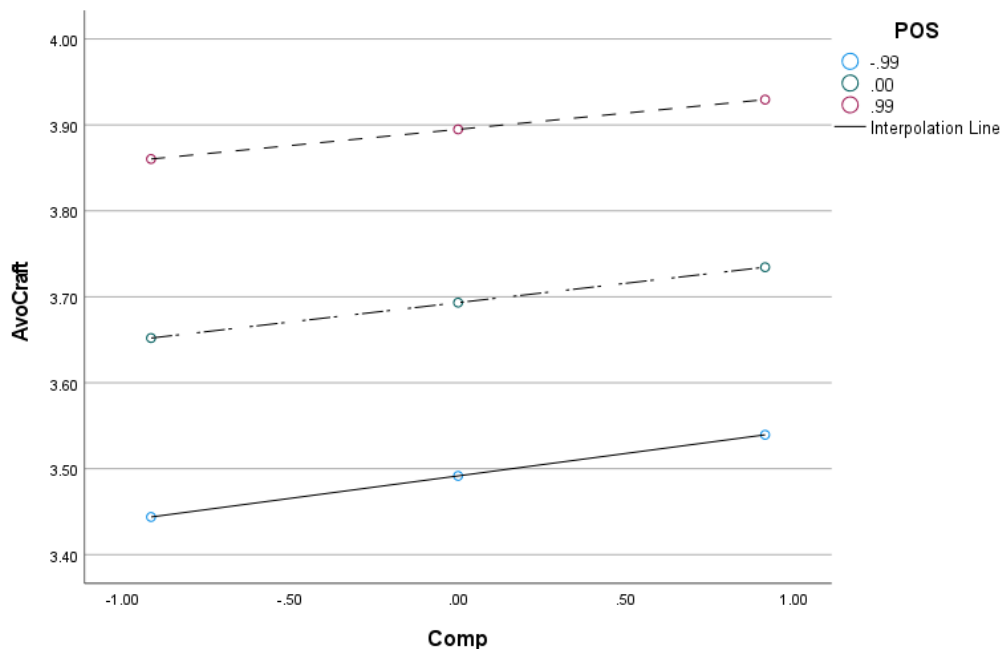
Key: Auto (Autonomy); AvoCraft (Avoidance Crafting)

Figure 4.5 Moderated Mediation – Autonomy and Avoidance Crafting

4.4.3.2.2 Competence

There is no significant relationship between competence and avoidance crafting at mean levels of POS (0.05, $p = 0.34$). POS has a significant effect on avoidance crafting at mean levels of competence (0.20, $p < 0.00$). The interaction effect of competence and POS on avoidance crafting is insignificant (-0.01, 0.79). Therefore, the relationship between competence and avoidance crafting is not moderated by POS.

At all levels of POS, the conditional indirect effect of competence on managerial congruence through the mediator avoidance crafting is insignificant. The Index of Moderated Mediation (IMM) is 0.00; the bootstrap 95% CI = (-0.00, 0.01), therefore, there is no evidence of moderated mediation and H_{8b} is not supported. As such, the mediating effect of avoidance crafting on the relationship between competence and managerial congruence is not moderated by POS, such that, higher levels of POS do not strengthen the mediated relationship between competence and managerial congruence.



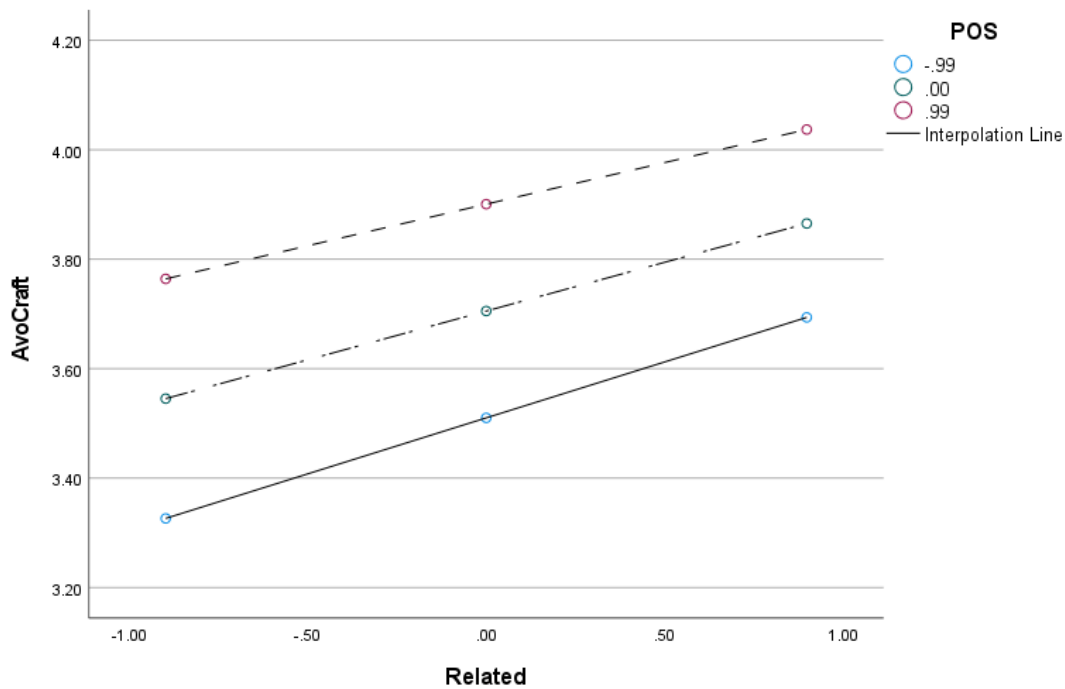
Key: Comp (Competence); AvoCraft (Avoidance Crafting)

Figure 4.6 Moderated Mediation – Competence and Avoidance Crafting

4.4.3.2.3 Relatedness

Relatedness is significantly associated with avoidance crafting at mean levels of POS (0.18, $p < 0.00$). POS has a significant effect on avoidance crafting at mean levels of relatedness (0.20, $p < 0.00$). The interaction effect of relatedness and POS has an insignificant effect on avoidance crafting (-0.03, $p = 0.35$). Therefore, the relationship between relatedness and avoidance crafting is not moderated by POS.

At all levels of POS, the conditional indirect effect of relatedness on managerial congruence through the mediator avoidance crafting, is insignificant. Index of Moderated Mediation (IMM) is insignificant (0.00 the bootstrap 95% CI = (-0.00, 0.01), therefore, there is no evidence of moderated mediation and H_{8c} is not supported. Thus, the mediating effect of avoidance crafting on the relationship between relatedness and managerial congruence is not moderated by POS, such that, higher levels of POS do not strengthen the mediated relationship between relatedness and managerial congruence.



Key: Related (Relatedness); AvoCraft (Avoidance Crafting)

Figure 4.7 Moderated Mediation – Relatedness and Avoidance Crafting

4.5 Chapter Conclusion

This chapter discussed the analysis process for the quantitative data collected. It starts off by considering the quantitative data characteristics (descriptives) then moves into the confirmatory factor analyses where the common method variance and model fit tests are run, followed by tests for validity and reliability. After this, the path analyses are run where the hypotheses are tested, and these are summarized in Table 4.9 below. The following chapter discusses these findings, and it begins by describing the qualitative data analysis strategy which are used to support the quantitative data findings.

Table 4.9 Summary of Hypotheses Testing Results

Path	Hypothesis	Outcome
Auto → AppCraft	H _{1a}	Supported
Comp → AppCraft	H _{1b}	Not Supported
Related → AppCraft	H _{1c}	Supported
Auto → AvoCraft	H _{2a}	Supported
Comp → AvoCraft	H _{2b}	Supported
Related → AvoCraft	H _{2c}	Supported
AppCraft → ManCong	H ₃	Supported
AvoCraft → ManCong	H ₄	Not Supported
Auto → AppCraft → ManCong	H _{5a}	Supported
Comp → AppCraft → ManCong	H _{5b}	Not Supported
Related → AppCraft → ManCong	H _{5c}	Supported
Auto → AvoCraft → ManCong	H _{6a}	Not Supported
Comp → AvoCraft → ManCong	H _{6b}	Not Supported
Related → AvoCraft → ManCong	H _{6c}	Not Supported
POS moderates Auto → AppCraft → ManCong	H _{7a}	Not Supported
POS moderates Comp → AppCraft → ManCong	H _{7b}	Supported
POS moderates Related → AppCraft → ManCong	H _{7c}	Supported
POS moderates Auto → AvoCraft → ManCong	H _{8a}	Not Supported
POS moderates Comp → AvoCraft → ManCong	H _{8b}	Not Supported
POS moderates Related → AvoCraft → ManCong	H _{8c}	Not Supported

Key: Auto (Autonomy); Comp (Competence); Related (Relatedness); POS (Perceived Organizational Support) AppCraft (Approach Crafting); AvoCraft (Avoidance Crafting); ManCong (Managerial Congruence)

CHAPTER FIVE: DISCUSSION AND CONCLUSION

5.1 Introduction

The quantitative findings presented in Chapter Four will be discussed in this chapter. This chapter aims to gain a better understanding of how need satisfaction may facilitate managerial job crafting during micro-transitions. It considers how approach and avoidance job crafting impact a hybrid manager's managerial congruence and the role that perceived organizational support (POS) plays in this process. The chapter also explores hypothesis that were not fully supported. Thus, a series of interviews with well-placed, hybrid managers were conducted post-hoc to investigate and supplement these quantitative findings, to tease out the relationships between the study variables and to explore the unexpected findings further. This chapter will start off with a summary of the quantitative findings, then move to the key outstanding questions, before discussing the quantitative findings with additional insights from the qualitative findings. Before concluding, the contributions to theory and practice will be discussed as well as limitations to the current research as well as recommendations for future research.

5.2 Summary of Quantitative Findings

The quantitative results presented in Chapter Four above, are summarized below:

Table 5.1 Summary of Quantitative Findings

Direct Relationships	<p>Approach crafting has a positive relationship with autonomy (H1_a), relatedness (H1_c) and managerial congruence (H3) but there was no significant relationship between approach crafting and competence (H1_b).</p> <p>Avoidance crafting has a positive relationship with autonomy (H2_a), competence (H2_b), and relatedness (H2_c) but there was no significant relationship between avoidance crafting and managerial congruence (H4).</p>
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Mediated Relationships	<p>Approach crafting mediates the relationship between autonomy and managerial congruence (H5_a), and relatedness and managerial congruence (H5_c). However, approach crafting does not mediate the relationship between competence and managerial congruence (H5_b).</p> <p>Avoidance crafting does not mediate the relationships between autonomy and managerial congruence (H6_a); competence and managerial congruence (H6_b); and relatedness and managerial congruence (H6_c).</p>
Moderated Mediation Relationships	<p>Perceived organizational support (POS) does not moderate the mediating effect of approach crafting on the relationship between autonomy and managerial congruence (H7_a). However, POS moderates the mediating effect of approach crafting on the relationship between competence and managerial congruence (H7_b), and it moderates the mediating effect of approach crafting on the relationship between relatedness and managerial congruence (H7_c). As such high levels of POS strengthen the mediated relationship between competence and managerial congruence, and the relationship between relatedness and managerial congruence.</p> <p>Perceived organizational support (POS) does not moderate the mediating effect of avoidance crafting on the relationship between autonomy and managerial congruence (H8_a); competence and managerial congruence (H8_b); and relatedness and managerial congruence (H8_c).</p>

5.3 Key Outstanding Questions

From these quantitative findings, there are some key outstanding questions that the qualitative data aimed to explore. Firstly, why is it that approach crafting only mediates the relationship between competence and managerial congruence in the presence of POS? This was an unexpected finding as research shows that high levels of competence would likely encourage approach crafting behaviour which would then lead to managerial congruence (Bakker and Oerlemans, 2019; Toyama, Upadyaya and Salmela-Aro, 2021).

Secondly, why is it that avoidance crafting does not mediate any of the relationships between need satisfaction and managerial congruence? Previous research shows that hybrid managers can engage in avoidance crafting to effectively manage their demands and resources, which would then help them realize their managerial objectives (Tims, Bakker and Derks, 2012; Bruning and Campion, 2018; Lichtenthaler and Fischbach, 2019). As such, it was expected that

satisfying the needs would encourage avoidance crafting behaviour which would then likely lead to managerial congruence.

Finally, why is it that in the presence of POS, approach crafting does not mediate the relationship between autonomy and managerial congruence? Research proposes that a high level of POS can encourage crafting behaviours because it increases resources (Deci and Ryan, 2000; Gagné *et al.*, 2010; Cheng and O-Yang, 2018), yet this was not supported in this relationship. The quantitative findings will be interpreted further in the following sections and insights from the post-hoc qualitative analysis will be used to explore these key outstanding questions more. This multi-method approach enables greater understanding of the role crafting plays in achieving managerial congruence and how POS facilitates this process. To begin with, both forms of crafting will be considered.

5.3.1 Summary of Qualitative Findings

The qualitative data collected was aimed at addressing the three key questions in section 5.3 above, that arose from the quantitative research.

5.3.1.1 Autonomy, Approach Crafting and Managerial Congruence (Moderated Mediation Effect)

From the quantitative findings, the assumption that approach crafting mediates the relationship between autonomy and managerial congruence, in the presence of POS, was not supported. From the qualitative data, it is clear to see that autonomy has a person centric perspective while POS takes on an organizational perspective, as such the two dimensions are separate from each other. Competence and relatedness require interaction between the hybrid manager and their team; therefore, POS can impact this relationship. but this does not seem to be so in the case

of autonomy. At the beginning of the transition into the hybrid role, POS can aid in the hybrid manager's learning but, overtime the need for the external support becomes less important and the hybrid manager has more freedom to choose how best to craft.

5.3.1.2 Competence, Approach Crafting and Managerial Congruence

The quantitative data did not support the hypothesis that approach crafting mediates the relationship between competence and managerial congruence. However, according to the qualitative data, the transition from individual contributor to hybrid manager changes the nature of our understanding of the term competence. For an individual contributor, competence is expressed through subject matter expertise, while for a hybrid manager, competence is expressed through their managerial ability of other subject matter experts. This distinction in definition between the technical/scientific competence and the managerial competence was not captured by the quantitative findings but was evidenced in the qualitative findings.

5.3.1.3 Autonomy, Competence and Relatedness; Avoidance Crafting and Managerial Congruence

The findings from the quantitative data did not support the assumption that satisfying role needs may engage avoidance crafting behaviour which would then likely lead to managerial congruence. However, the qualitative data supported this relationship. It was evident that the hybrid managers used their autonomy to decide which tasks to avoid based on where their time resource would be best utilized. For instance, they would hand over routine administrative work so that they could focus on more people management roles. Similarly, when the need for competence is high, the hybrid manager may withdraw from tasks that call for their technical skills, as subject matter experts, to allow their team the opportunity to develop these skills for themselves, which also fosters a learning organization. However, neither the qualitative data

nor the quantitative data supported the assumption that a high level of relatedness would likely lead to avoidance crafting which would then lead to managerial congruence. The form of interactions changes when an individual contributor transitions into a hybrid manager role, moving from being a peer to a lead. A hybrid manager is unlikely to reduce their tasks but rather they would perform them differently with routine tasks being replaced by coaching and development tasks. This training process is facilitated by a high level of connectedness in the team.

The following section considers relationships between the research variables, in depth, through both the quantitative and the qualitative findings.

5.4 Approach Crafting

Approach crafting is oriented towards problem solving with a specific focus on improving the role fit by either expanding role boundaries or increasing the resources available to the role, thus countering the role demands (Bruning and Campion, 2018; Lichtenthaler and Fischbach, 2018; Lazazzara, Tims and De Gennaro, 2020). Research supports a positive relationship between need satisfaction and job crafting efforts (Slemp and Vella-Brodrick, 2013; Bakker and Oerlemans, 2019; Toyama, Upadyaya and Salmela-Aro, 2021). Additionally, job crafting efforts lead to more congruence (Tims, Derks and Bakker, 2016). As such, it was hypothesized that the needs for autonomy, competence and relatedness would have a positive relationship with approach crafting, and that approach crafting would have a positive relationship with managerial congruence. It was then hypothesized that approach crafting may lead to managerial congruence for hybrid managers. However, not all the hypotheses were confirmed by the quantitative findings. Approach crafting was found to have a positive relationship with autonomy, relatedness, and managerial congruence but there was no significant relationship

between approach crafting and competence. This also carried through to the mediation hypotheses whereby approach crafting was found to mediate the relationship between autonomy and managerial congruence, and relatedness and managerial congruence but not the relationship between competence and managerial congruence. In the next section, I interpret these findings in light of the supplemental qualitative data collected.

5.4.1 Autonomy, Approach Crafting and Managerial Congruence

A hybrid manager with a high level of autonomy is likely to engage in approach crafting behaviour which is associated with a greater sense of managerial congruence. Autonomy allows the hybrid managers the freedom to engage in different types of approach crafting, as demonstrated by Liam below, who makes use of new technology (adoption as a form of approach crafting) to manage their team.

“Doing things my own way, within the team’s metrics, gives me the latitude to fail as long as I have put a plan in place on how to avoid such failure in future, I am free to take the risks, especially with technology, so that we can train and innovate.”

(Liam, Senior Engineering Manager)

This supports research proposing that when managers have a sense of autonomy, they proactively shape their jobs by increasing job challenges (Roczniewska and Puchalska-Kamińska, 2017).

“I encourage my team to try different things and to challenge themselves so that we can innovate, so I try to get them the materials and time they need to bring this to life. However, working in a heavily regulated industry like this, we need to ensure we do not stray too far from certain protocols or parameters because it can impact what the business is trying to achieve.”

(Charlie, Bio-Tech Engineering Manager)

Here, Charlie uses his autonomy to expand his role boundary to not only develop his team but also to ensure that this is done with the organizational strategic objectives in mind. Therefore, a high level of autonomy would likely encourage approach crafting behaviour which may then allow the hybrid manager to achieve managerial congruence (H5_a).

5.4.2 Competence, Approach Crafting and Managerial Congruence

Contrary to expectations, a high level of competence is not likely to encourage a hybrid manager to engage in approach crafting behaviour to achieve congruence with the managerial aspects of their role (H5_b). Competence, the need to showcase capability, may encourage approach crafting behaviours such as work role expansion, where the hybrid manager contributes their knowledge and opinions to further develop and expand their role (Bakker and Oerlemans, 2019; Toyama, Upadyaya and Salmela-Aro, 2021). This would then increase their sense of belonging to the role. This unexpected finding was one of the key questions that the qualitative data explored.

From the qualitative data, it was found that competence was expressed differently when one was an individual contributor versus when one became a hybrid manager. As a subject matter expert, an individual contributor is expected to showcase their technical expertise directly, through their own work, but as a hybrid manager, this expertise is used to develop the team. This is evidenced by the quotes below:

“As the engineering manager, I have already proven my technical expertise, now I have to prove that my expertise goes beyond the day job to looking long term and bringing people with me.”

(Eoin, Engineering Manager)

“Part of my role involves knowing which technologies my team of engineers will need to learn to work with then facilitate the training they will need. I’m here to develop my team and ensure they are supported in their goals. This forms part of my performance evaluation.”

(Liam, Senior Engineering Manager)

High levels of competence, as measured by self-determination theory, indicates the ability to showcase mastery of one's own skill. This may apply more to an independent contributor, as a technical subject matter expert, than to a hybrid manager whose competence is demonstrated through leading others. Though a hybrid manager is expected to perform both the technical role and the managerial role simultaneously, the nature of their technical role changes as they empower others to perform, whilst they take on a longer-term strategic view of their technical role. If the hybrid manager were to demonstrate how technically good they were, they would easily undermine their team which would likely stunt their growth as demonstrated by the quote below:

“If I always jump in to solve problems because I am the domain expert, I will be seen to be pushing people out of the way and this not only stunt career progression for the team, but it also causes issues of psychological safety.”

(Frances, IT Business Consultant Lead).

“My technical background gives me a tech understanding and appreciation and you can jump in to help where necessary, but there is no need to step on toes. You bring with you the experience to ask the questions that people do not think of, and this helps to ensure that the bases are covered. Mine is to critique the thought process to ensure there is no group think rather than to critique the design itself.”

(Niall, Software Development Lead)

This means that the hybrid manager can comfortably manage a team with a different type of technical skill and even at a higher skill level than their own (Dave, Engineering Manager). Here, the competence is considered as the hybrid manager's ability to manage their team's competencies, rather than their own mastery of skills. Therefore, according to the quantitative findings, high levels of competence are not likely to steer a hybrid manager towards approach crafting behaviour. However, it is important to note that competence was an overall measure rather than considering managerial competence specifically. According to Roczniowska and Puchalska-Kamińska (2017), the longer a manager's organizational tenure, the higher their level of competence in that role therefore the easier it is to take on their own initiative to increase their fit with the role. These managers appear to choose approach-oriented strategies of job crafting rather than the withdrawal strategy (ibid). It is plausible that had the measure been for managerial competence rather than just competence, the relationship between competence and approach crafting would have been positive.

5.4.3 Relatedness, Approach Crafting and Managerial Congruence

When the level of social connection is high, the hybrid manager is likely to engage in approach crafting behaviour which may lead to managerial congruence (H5_c). When the individual moves into the hybrid role, their need for relatedness evolves from just being a part of the team, as was the case when they were individual contributors in their technical role, to now managing the team. This ties in well with the evolution of a hybrid manager's competence, where they use their technical expertise to perform through others (Carroll and Gillen, 1987; Zahra, 2003). By virtue of their position, a hybrid manager will interact with people at different levels thus they will engage in social expansion (a form of approach crafting) as they perform their roles, but this is not always easy, especially when the hybrid manager needs others outside their team to help them perform their roles.

“I have mastered the art of networking, who is influential in what space and how I can align with them. I ally with influential people now and they mentor me in my development, influence things for me, they give me access to information I would not have otherwise, and this creates opportunities for me. I have also developed my brand in that I am known for doing a particular thing really well, and that reputation helps to build my relationship network, and this is a link I can tap into when I need their assistance.”

(Henry, Operations Engineer)

5.5 Avoidance Crafting

Avoidance crafting is oriented towards reducing role demands to improve efficiency (Nielsen and Abildgaard, 2012; Tims, Bakker and Derks, 2012). Additionally, in seeking to be more efficient, avoidance crafting allows the hybrid manager to delegate the more mundane managerial tasks to focus on the more strategic tasks of the managerial role. As such, it was hypothesized that there would be a positive relationship between need satisfaction and avoidance crafting, and avoidance crafting and managerial congruence. Given this, it was then hypothesized that avoidance crafting may lead to managerial congruence for hybrid managers.

The quantitative analysis shows a significant relationship between avoidance crafting and: autonomy, competence, and relatedness. However, the relationship between avoidance crafting and managerial congruence was not significant. Consequently, the mediation hypotheses for avoidance crafting were not supported. This was an interesting finding because it is argued that hybrid managers engage in avoidance crafting so that they can balance the competing demands that arise from their micro-transitions between their dual roles (Bruning and Campion, 2018; Lichtenthaler and Fischbach, 2019). This unexpected finding was explored through the qualitative interviews.

5.5.1 Autonomy, Avoidance Crafting and Managerial Congruence

Based on the findings from the quantitative data, avoidance crafting does not mediate the relationship between autonomy and managerial congruence (H6_a). This means that high levels of autonomy are not associated with a hybrid manager adopting avoidance crafting behaviours, and this is unlikely to lead to managerial congruence. When a hybrid manager's need for autonomy is satisfied, they are unlikely to withdraw from certain managerial tasks or to reduce their work role to exclude roles that have a high demand for their time resource in favour of more strategic tasks. However, the qualitative data paints a different picture.

According to Marc (Senior Scientist Manager), the choice to withdraw and delegate is informed by the increasing demands on their time. This sentiment is echoed by Frances (IT Business Consultant Lead), who uses their autonomy to choose which projects to pull out of and assign to her team. This proactive behaviour of bypassing time consuming, 'soul destroying' tasks (Eoin, Engineering Manager) is a form of avoidance crafting termed as work role reduction. These hybrid managers use their high level of autonomy to intentionally avoid certain tasks that have hindering demands to allocate their time resources to other managerial tasks.

"I use Google calendar analytics at the beginning of each month to see how much of my time would be spent in meetings and with whom, then decide which ones to delegate. The meeting loads are not sustainable because of the meeting tax; the preparation and outputs, plus emails and other communications."

(Eoin, Engineering Manager)

"My biggest challenge now is prioritization. Where do I spend my time that will have the biggest impact? At this level I am responsible for the impact and value that is being created. Certain activities might not have an impact but need to be done so I need to spend less time on them and empower others to do it. I will be available to support them, but I am not bogged down in the details of it all. I must decide how to divide my time and effort."

(Charlie, Bio-Tech Engineer)

This sentiment is shared by Dave (Engineering Manager) who says that being able to pass on the more mundane detail-oriented aspects of his role to his team enables him to focus on the big picture tasks. According to Charlie (Bio-Tech Engineer), a hybrid manager is responsible for setting up their team by charting a path/roadmap that will help them in developing or building on skills. Here, the intention behind delegation is twofold; to help the hybrid manager manage their increasing (hindering) demands better, and to offer developmental opportunities for the team by giving them more responsibilities (Tims, Bakker and Derks, 2012; Bruning and Campion, 2018; Zhang and Parker, 2019). Delegation is an extension of trust to the team, that they can do the tasks assigned (Eoin, Engineering Manager).

“It is important to balance between operations and strategy otherwise you can be operationally absorbed. I delegate and sometimes completely pass the role to them (the team) then I check in to see if the autonomy I give them works or if they would need any form of support.”

(Henry, Operations Engineer)

As hypothesized, avoidance crafting can be used to help the hybrid manager structure their work better so that they can achieve their managerial objectives. There is evidence, from the qualitative data, that avoidance crafting can be used to circumvent bothersome time-consuming tasks to focus on more managerial tasks that have a greater impact, but this is not reflected in the quantitative data. According to some of the interview respondents, having protocols around standard work, makes it easier to withdraw from the routine work to focus on the more strategic future-oriented tasks without impacting business continuity (Charlie, Bio-Tech Engineer; Kieran, Security Systems Manager; Liam, Senior Engineer). This contradiction raises questions about how avoidance crafting is understood (Bruning and Campion, 2018).

Avoidance crafting is considered as the reduction of hindering job demands to increase efficiency (Tims, Bakker and Derks, 2012; Bipp and Demerouti, 2015; Bruning and Campion, 2018). However, the qualitative findings indicate that while hybrid managers engage in avoidance crafting behaviour to be more efficient, it is not because the tasks are bothersome but rather that there are structures in place that allow them to pass them on to their team. As seen from the qualitative data, avoidance crafting is aimed at benefiting both the hybrid manager and their team rather than to avoid interaction with specific individuals. This means that by engaging in avoidance crafting, the hybrid manager has more time to focus on the ‘bigger picture’ and their team have an opportunity to develop a new set of skills.

It is evident that the choice to engage in avoidance crafting behaviour can be triggered by positive intentions that have implications beyond the hybrid manager’s role and extending to their team’s performance. Therefore, it is possible that the lack of support for the mediation effect of avoidance crafting on the relationship between autonomy and managerial congruence, in the quantitative data, is influenced by the items that ask about withdrawing from tasks to avoid interacting with people. In this case, choosing to engage in avoidance crafting behaviour is not a negative trait and may prove beneficial to achieving managerial congruence. This supports research that proposes that avoidance crafting can have a positive relationship with efficiency and that reducing demands can make an individual more productive (Nielsen and Abildgaard, 2012; Tims, Bakker and Derks, 2012; Bruning and Campion, 2018). However, it is important to keep the context in mind. Withdrawal and passing on roles to others is a form of delegation which is a vital part of management (Fayol, 1949; Mintzberg, 1975; Snyder and Wheelen, 1981). Perhaps when considering avoidance crafting among managers, it might be worth considering avoidance of managerial aspects such as giving feedback, supporting staff,

and managing conflict. These difficult conversations that require soft skills are often the tasks that hybrid managers may struggle with and thus are likely to avoid. “Hardware and software are easy; people-ware is difficult” (Eoin, Engineering Manager).

5.5.2 Competence, Avoidance Crafting and Managerial Congruence

The quantitative data did not support a mediation effect by avoidance crafting on the relationship between competence and managerial congruence (H6_b). This means that high levels of competence may not lead to avoidance crafting behaviours and thus may not lead to managerial congruence. When a hybrid manager’s need for competence is satisfied, they are unlikely to reduce their work role or to withdraw from certain managerial tasks. However, as previously discussed, the hybrid manager’s competence is partly measured by how they manage the performance of their team and partly by how they meet their strategic objectives.

“This role is about the people and coordination of efforts as relates to people, ensuring they are empowered and engaged to make sure they have the necessary skills and expertise to get their jobs done (...) now you are managing the delivery of the technical requirement rather than the technical work itself.”

(Charlie, Bio-Tech Engineer)

Therefore, a hybrid manager’s need for competence is different from that of an individual contributor. Eoin (Engineering Manager) chooses to withdraw from meetings so that his team can have an opportunity to grow, also, stepping back and letting others stand out as experts speaks to one’s capability as a manager, someone who can support the growth and promotion of others. In this case, Eoin intentionally engages in avoidance crafting, specifically, work role reduction, that allows him to achieve his managerial objectives.

“I had to narrow my technical focus a bit and that made it easier to balance the engineering role with the managerial role.”

(Dave, Engineering Manager)

These hybrid managers intentionally and systematically exclude themselves from their technical role, where their skills and abilities have already been proven, so that they can develop their managerial competence. This form of work role reduction is not only for the growth benefit of the team but also of the hybrid manager (Bruning and Campion, 2018; Harju, Kaltiainen and Hakanen, 2021) as it allows hybrid managers to develop themselves professionally as managers and leaders.

Having the technical skill in a managerial role is not for me to move people over to do the actual design or coding. It is a delicate balance between delegation and abdication, so you learn when which one works.”

(Niall, Software Development Lead)

“You need a growth mind-set; you cannot be in transaction mode only; you need to look to develop yourself, so time management is key. Also getting feedback is critical in helping you know if you are set up correctly and steering in the correct direction.”

(Charlie, Bio-Tech Engineer)

As a hybrid manager, there is a need for a different set of competencies whereby the soft skills are more critical than the technical skills in achieving managerial congruence. According to Charlie (Bio-Tech Engineer), the role is 70% soft skills and 30% technical skills. By delegating the routine parts of the technical role, Dave (Engineering Manager) is able to coach their team technically whilst developing themselves managerially. Therefore, there is a misalignment between the quantitative and qualitative findings. It is plausible that this might be because the scale used was not adapted to managerial crafting, although there is one item that measures

learning of new skills on the job. Implications for future research, specifically on the measurement of managerial crafting, are discussed in Section 5.10.3.2. Hybrid managers need to be aware that they will engage their technical skills in a less direct manner when they transition into these dual roles. They will also be required to simultaneously develop themselves and their team if they are to achieve managerial congruence.

5.5.3 Relatedness, Avoidance Crafting and Managerial Congruence

The hypothesis that avoidance crafting mediates the relationship between relatedness and managerial congruence was not supported by the quantitative data (H6c). This suggests that high levels of relatedness may not lead the hybrid manager to engage in avoidance crafting behaviours which in turn may not lead to managerial congruence. When a hybrid manager's need for relatedness is satisfied, they are unlikely to remove themselves from certain managerial tasks or to reduce the boundary of their work role to exclude other activities.

This also seems to be supported by the qualitative findings. When a hybrid manager transitions into their dual role, the nature of their interactions with others changes from being a team member to being a team lead. Hybrid managers seem to delegate their operational tasks such as administration, then take on an additional coaching role to help train up and develop their team.

“Managing people can be hard, especially when they are dealing with significant personal challenges because I am not a psychologist or psychiatrist.”

(Bianca, Aviation Software Developer)

As such, higher perceived relatedness is unlikely to lead to a reduction of the work role for hybrid managers because it is the nature of the interactions that change rather than the role boundaries or the number of tasks. This is also an opportunity for the hybrid manager to help improve the experiences of their team on how they relate to their manager.

“In my role now, I have the opportunity to help my colleagues have a better opinion of leadership and management. My predecessor was a bit of a dictator, but my leadership style is more inclusive and allows more team participation, which has made the organization more psychologically safe, and it’s a different atmosphere and work is more enjoyable.”

(Ian, Operations Engineer)

Additionally, a change in the type of interactions means that the hybrid managers can develop their social networks at work, and these can be very important as they help them access and negotiate for scant resources.

“I have been able to extend my social network across different roles and this helps me get things done more easily. We have a shared admin resource, so you need to activate your people skills and your negotiation skills to get your requests to the top of the pile.”

(Aaron, Airline Captain)

A high level of relatedness is unlikely to lead a hybrid manager to engage in avoidance crafting behaviour so as to achieve managerial congruence. This is because becoming a manager strengthens relatedness which is likely to evolve when an independent contributor transitions into a hybrid role, and the roles they handover to their team are replaced with coaching and developmental roles for the same team. Having stronger relationships influences crafting because the hybrid manager can easily hand over tasks and just as easily engage with the team

on other tasks. Therefore, though the quantitative data does not support a mediation relationship for avoidance crafting, the qualitative data sheds more light on the issue.

Although avoidance crafting is aimed at reducing the demands of the hybrid role and at improving efficiency (Nielsen and Abildgaard, 2012; Tims, Bakker and Derks, 2012), when relatedness is high, hybrid managers seem to embrace the challenge of increased demands rather than avoid it. It is possible that the changing nature of interactions shift the need to improve efficiency from the hybrid manager to the team. Spending time with the team to coach them and tapping into networks to access resources, which are then used to improve the performance of the collective, may lead to managerial congruence, thus offering a possible explanation for why hybrid managers would not engage in avoidance crafting in this instance. Hybrid managers should be aware of how the dynamics of their relationships change when they take up managerial roles so that they can direct their interactions with their teams accordingly. This is especially important when the hybrid manager is promoted from within the team they will be managing.

“I went from reporting into a team lead into managing that team lead. I just took up the opportunity because it was there and I actually by-passed a lot of those who were in lead positions, so that shifted the dynamic a bit.”

(Dave, Engineering Manager)

When an individual contributor becomes a manager, it may strain relatedness, particularly if the manager comes from within the team they will now be managing, even when the individual is a willing hybrid, like in Dave’s case. It is possible that this transition process to manager can be eased when the individual has positive relationships within the team thereby strengthening a sense of relatedness. However, there was no support for the contention, either quantitatively

or qualitatively, that having higher relatedness due to positive relationships within the team, and perhaps with other managers, would enable the hybrid manager to engage in avoidance crafting. Nonetheless, here avoidance crafting may be seen as an effort to move the team forward as a whole as opposed to just shifting work from the hybrid manager to the team.

5.6 Perceived Organizational Support

The environment within which crafting occurs is important for ensuring that managerial congruence is achieved. This thesis makes use of perceived organization support (POS) which is a good predictor of employee behaviour and attitude (Rhoades and Eisenberger, 2002; Ingusci *et al.*, 2016; Kim, Im and Qu, 2018). A high POS has also been shown to encourage crafting behaviours because it increases resources (Deci and Ryan, 2000; Gagné *et al.*, 2010; Cheng and O-Yang, 2018). As such, it was hypothesized that POS would moderate the mediating effects of both approach and avoidance crafting. However, the data confirmed only two of these relationships for approach crafting but none for avoidance crafting.

The quantitative data showed that POS moderates the mediating effect of approach crafting on the relationships between competence and managerial congruence, and relatedness and managerial congruence. However, the findings did not support the moderating effect of POS on the mediated relationships between autonomy, approach crafting and managerial congruence. This unexpected finding was further explored through the qualitative interviews, as presented below.

5.6.1 Autonomy, Approach Crafting and Managerial Congruence

The lack of support for POS, as a moderator, on the mediating effect of approach crafting on the relationship between autonomy and managerial congruence (H7_a), indicates that high levels

of POS do not result in a stronger mediated relationship between autonomy and managerial congruence. This was surprising, especially as a supportive environment is autonomous and conducive for the hybrid manager to pursue their managerial objectives (Loi, Lin and Tan, 2019). Based on the qualitative data, it seems that organizational support is important at the beginning of the transition into the hybrid role. Knowing what the role entailed enabled the hybrid manager to choose how best to work.

“The support was amazing, I got 9 months to learn the business which was important because it is a very heavily regulated industry. I also got time to understand the role and also time to understand how to perform at such a senior position.”

(Henry, Operations Engineer)

“My interview (for the hybrid role) was in the UK and when I came back to Ireland, my predecessor had left and she left me with a lot of information in a written handover, but it was a lot to unpack, even with 30 years in the industry behind me. My experience gave them (my managers) confidence that I could do the job but there was no one to guide me.”

(Ian, Operations Engineer)

However, there was no clear indication from the qualitative data that POS was important for autonomy-facilitated crafting. This is further supported by an earlier finding. Approach crafting was found to mediate the relationship between autonomy and managerial congruence, but the presence of POS did not seem to have any effect on this. This means that a hybrid manager can choose how best to plan their managerial tasks without requiring much external support. Nonetheless, given the ongoing micro-transitions between the dual roles, it would be assumed that an environment that supported hybrid managers to try out different approaches as they take on the managerial role, would be valuable. “The social environment can play an important role in stimulating job-crafting behaviours, which implies that job crafting does not take place in a

vacuum” (Tims, Twemlow and Fong, 2021, p. 68). That said, however, autonomy means having the freedom to do things your own way. Having autonomy is not perceived as support but neither is it perceived as being unsupportive. Therefore, whilst it would be good to have, POS does not seem to be necessary in this process.

5.6.2 Competence, Approach Crafting and Managerial Congruence

The hypothesis (H7_b) that POS moderates the mediating effect of approach crafting on the relationship between competence and managerial congruence, was supported. Therefore, the higher the POS, the stronger the mediated relationship between competence and managerial congruence. While the hypothesis was supported by literature, this finding was unexpected mainly because the hypothesis that approach crafting mediates the relationship between competence and managerial congruence was not supported and the relationship was insignificant, yet when the moderator POS is added, this relationship became significant, and the mediation is moderated.

The hybrid managers need for competence is more on the managerial end of the dual roles and when organizations provided structures that support this need, the hybrid managers were more likely to engage in approach crafting behaviour. In hybrid roles, competence centres around how the manager leads their team as this is a measure of their managerial ability (Carroll and Gillen, 1987; Rees, 1996; Zahra, 2003). Therefore, it is important for the hybrid manager to know how to manage a team. If this support is not provided by the organization, the hybrid manager will need to direct their own learning. From the qualitative data, it was found that the absence of such support by the organization can frustrate the transition processes and delay managerial congruence. When this skill development process is not guided, the hybrid manager

learns by doing which can be challenging when leading a team. “Knowing about performing through others is very different from actually doing it” (James, Operations Systems Engineer).

“We have a people team with a specialist role in employee relationships, these are in addition to a dedicated wiki resource I can query for frequent concerns which is very handy.”

(Eoin, Engineering Manager)

“There is very little upskill support, but we get recurring training on the tech side. I haven’t received any management training, so I learn as I go. It would have been nice to have a wider corporate understanding of the wider business like where to get help on performance reviews and how to motivate underperforming employees. I’ve had to self-learn.”

(Aaron, Airline Captain)

5.6.3 Relatedness, Approach Crafting and Managerial Congruence

The quantitative data showed that POS moderates the mediating effect of approach crafting on the relationship between relatedness and managerial congruence (H7_c). Therefore, the higher the POS, the stronger the mediated relationship between relatedness and managerial congruence. One form of approach crafting that seemed to be adopted most in a supportive environment is social expansion, where the organization provides structured opportunities for interactions with mentors and peers who help the hybrid manager with their transition and to ‘learn the ropes’ (Gerry, IT Manager; Charlie, Bio-Tech Engineer). “This support is vital during transitions” (Charlie, Bio-Tech Engineer). There was also evidence of work role expansion whereby the hybrid managers ensured that they prepared current team members to take on future roles, a task that is beyond their primary role but that would ensure a successful achievement of their deliverables.

“I was assigned a buddy at my level and my manager was also very supportive and helped me identify areas of competence development and then help me fill those gaps.”

(Oisín, Software Engineer)

“HR has an introduction to manager training, and you learn what competencies were required and this includes the importance of emotional intelligence. I was fortunate enough to be a manager designate as the guy who was outgoing was with me for a year.”

(Dave, Engineering Manager)

A structured environment is supportive if there is a good level of interaction between the hybrid manager and their mentor, otherwise, the experience can make the transition process quite difficult and the team experience unpleasant.

“My transition was very challenging. I had two managers during my transition and the first one made it unnecessarily hard for me (..) the second manager took people management seriously and (...) this helped especially since he started coaching me shortly after he arrived. The second manager really helped me navigate the transition and now I enjoy being a manager.”

(Bianca, Aviation Software Developer)

5.6.4 Autonomy, Avoidance Crafting and Managerial Congruence

The quantitative data did not support the hypothesis that POS moderates the mediating effect of avoidance crafting on the relationship between autonomy and managerial congruence (H8_a). This was unexpected as research suggest that when autonomy is satisfied, a supportive environment is expected to support avoidance crafting behaviour which are geared towards achieving managerial congruence (Deci and Ryan, 2000, 2008; Dose, Desrumaux and Bernaud, 2019; Sarich, 2020). However, high levels of POS do not strengthen the mediated relationship between autonomy and managerial congruence. The mediation effect of avoidance crafting on

the relationship between autonomy and managerial congruence was also not supported, indicating that the presence of POS did not have an effect on this. This means that when the need for autonomy is high, the hybrid manager is unlikely to engage in avoidance crafting behaviours to try and achieve managerial congruence, and the environment is unlikely to influence this.

However, as discussed previously, the qualitative data showed that the hybrid manager uses their high level of autonomy to withdraw from hindering role demands to focus on other managerial tasks. As such, avoidance crafting helps a hybrid manager to plan out their work effectively which may then lead to achieving managerial congruence because they are able to optimize their resources (Nielsen and Abildgaard, 2012; Tims, Bakker and Derks, 2012; Bruning and Campion, 2018). It is plausible that since autonomy is a person centric drive, POS may not have a huge impact on it. Autonomy reflects more freedom from the organization while POS implies more active involvement by or with the organization, so it is likely that the two are not related as they possibly represent different dimensions of organisational life. Therefore, organizations need to consider that creating a supportive environment may have little effect on the hybrid manager's freedom to engage in avoidance crafting behaviour.

5.6.5 Competence, Avoidance Crafting and Managerial Congruence

POS was not found to moderate the mediating effect of avoidance crafting on the relationships between competence and managerial congruence (H8_b). Therefore, high levels of POS do not strengthen the mediated relationship between competence and managerial congruence. Similarly, a mediation effect by approach crafting on the relationship between competence and managerial congruence was not supported. Indicating that high levels of competence would not encourage the hybrid manager to engage in avoidance crafting behaviour which may then not

lead to managerial congruence. However, competence in a hybrid role has been shown to be an indication of how well the hybrid manager performs through others. Thus, there is a need for the organization to support this process, whereby the hybrid manager withdraws from less impactful tasks allowing them the opportunity to develop these people management skills. This will likely enhance managerial congruence as both the hybrid manager and their team grow and perform better (Bruning and Campion, 2018; Harju, Kaltiainen and Hakanen, 2021).

5.6.6 Relatedness, Avoidance Crafting and Managerial Congruence

POS was not found to moderate the mediating effect of avoidance crafting on the relationships between relatedness and managerial congruence (H8_c). Therefore, high levels of POS, do not strengthen the mediated relationship between relatedness and managerial congruence. As such, a supportive environment is unlikely to encourage a hybrid manager to engage in avoidance crafting behaviour to achieve managerial congruence. Similarly, the mediation effect of avoidance crafting on the relationship between relatedness and managerial congruence was not supported. This indicates that a high level of relatedness may not cause a hybrid manager to engage in avoidance crafting behaviour, to achieve managerial congruence. From the qualitative data, it was found that the nature of the interactions changes when an individual transitions from being an individual contributor into a hybrid role. Hybrid managers seem to take up the challenging demands that arise from these changes (Tims, Bakker and Derks, 2012) as opposed to avoiding them. However, this does not occur in a vacuum and the hybrid manager is likely to need organizational support to help navigate these shifting interactions and social networks. Mentors and the hybrid manager's network are valuable resources in helping guide the hybrid manager through this change process.

I had a lot of mentors and a broad peer network who were in similar positions across different organizations, and that has helped me in this (transition)

process. They are a valuable sounding board and also very helpful in getting me access to resources that I would otherwise not have.”

(Niall, Software Development Lead)

5.7 Summary of Findings

“Being a hybrid manager is a very frustrating position to be in, the design needs to be a better fit. I am a resource to the organization in the plane and I am a resource in the office and sometimes these two resources compete, and the plane always wins because it makes money for the organization. If I was designing it, there would not be that struggle between the commercial side of the business and the managerial side of the business. It’s frustrating but makes business sense.”

(Aaron, Airline Captain)

This research set out to understand how need satisfaction can motivate crafting efforts by hybrid managers, as they undergo micro-transitions between their dual roles, in the pursuit of managerial congruence. In doing so, the role of perceived organizational support (POS) was also considered. Three sets of hypotheses were proposed and tested quantitatively: direct relationships, mediation relationships and moderated mediation relationships. Not all hypotheses were supported and those that were not, were further explored qualitatively, as key outstanding questions.

Approach crafting has a significant and direct relationship with autonomy, relatedness, and managerial congruence. Additionally, approach crafting mediated the relationship between autonomy and managerial congruence, and relatedness and managerial congruence. This means that when a hybrid manager’s needs for autonomy and relatedness are fulfilled, they are likely to engage in approach crafting behaviour such as adoption, social expansion, metacognition, work role expansion and work organization (Roczniewska and Puchalska-Kamińska, 2017). These may then lead the hybrid manager to achieve managerial congruence.

Interestingly, the presence of POS, was only significant when the need for relatedness was fulfilled but not when the need for autonomy was fulfilled. Additionally, approach crafting did not have a significant direct relationship with competence, and it was not supported as a mediator for the relationship between competence and managerial congruence. This means that satisfying a hybrid manager's need for competence is unlikely to cause them to engage in approach crafting behaviour and may not lead them to managerial congruence. The qualitative data, however, showed that the need for competence for a hybrid manager is determined by how they perform through and lead others, as opposed to showcasing their own level of expertise (Zahra, 2003). As such, fulfilling this need is likely to lead to managerial congruence when the hybrid manager engages in approach crafting behaviour, what is different is how this competence is defined. This is further supported by the findings that the presence of POS, when competence was high and approach crafting behaviour was engaged, was likely to lead to managerial congruence (Gagné *et al.*, 2010; Cheng and O-Yang, 2018). Therefore, POS was perceptible in the context of enabling competence and relatedness.

Although avoidance crafting was found to have a positive and significant direct relationship with all the three role needs, it did not have a significant direct relationship with managerial congruence. Similarly, avoidance crafting was not supported as a mediator for any of the relationships between need satisfaction and managerial congruence. Therefore, engaging in avoidance crafting behaviour such as work role reduction and withdrawal, is unlikely to lead to managerial congruence. However, the qualitative data showed that hybrid managers engage in avoidance crafting behaviour so that they can manage increasing demands and that high levels of autonomy allow them to do so (Tims, Bakker and Derks, 2012). Similarly, the qualitative interviews showed that having high levels of competence meant that the hybrid manager could delegate their technical roles to focus and develop their managerial skills

indicating that such avoidance crafting behaviour was geared toward becoming more managerially congruent (Nielsen and Abildgaard, 2012; Bruning and Campion, 2018). However, the qualitative data supported the quantitative findings when it came to the need for relatedness. A hybrid manager's need for relatedness evolves when they transition into a hybrid role, as such, engaging in avoidance crafting behaviour may not cause them to achieve managerial congruence because either work role reduction or withdrawal has no benefit to their managerial role. Therefore, engaging in avoidance crafting behaviour would likely lead the hybrid manager to achieve managerial congruence only when the needs for autonomy and competence are satisfied but not when the need for relatedness is fulfilled. Additionally, the presence of POS did not seem to make a difference to the relationship between need satisfaction and managerial congruence when avoidance crafting behaviour was engaged.

5.8 Research Contributions

“Nothing is so practical as a good theory”
(Kurt Lewin, 1951)

This research makes several contributions to the literature as well as having important implications for practice (see Appendix J). Theoretically, it builds on current knowledge on crafting and managerial transitions. Empirically, its findings confirm certain propositions while challenging others, and in doing so, it raises some important conceptual questions. For practice, it sheds light on the motivations behind a hybrid manager's choice, to engage either approach crafting or avoidance crafting behaviours, when attempting to manage micro-transitions between their dual roles. It also provides a fine-grained perspective on the transition process itself. These contributions are discussed further in the following sections.

5.8.1 Work Role Transition Theory

This research is set within the context of work role transition theory. The study of managerial transitions goes back to the 1980's (Nicholson, 1984; Nicholson and West, 1988; West and Rushton, 1989) and a lot of research has gone into progressing the theory (Isopahkala-Bouret, 2008). However, the research in this area has mainly focused on permanent transitions between roles, such as promotions, transfers, and retirements (West, Nicholson and Rees, 1987; Ashforth and Saks, 1995). Such transitions are known as macro-transitions (Ashforth, Kreiner and Fugate, 2000). Work transition theory has also considered recurring transitions, known as micro-transitions, such as employees who are also parents or spouses (Ashforth, Kreiner and Fugate, 2000; Ammons, 2013; Cruz and Meisenbach, 2018). However, these micro-transitions have not been considered for multiple roles within organizations. The closest research that touches on such transitions, though not explicitly, is research on employees who serve in multiple roles such as a manager who is also a colleague and has a manager they report into (Valcour, 2002; Kira and Balkin, 2014). That research has mainly been focused on how the individual identity changes as they transition between the different roles (Ibarra and Barbulescu, 2010; McGivern *et al.*, 2015; Bresnen *et al.*, 2019). This thesis builds on that gap in the work role transition theory by considering micro-transitions within formal organizational roles. Specifically, it does so by progressing the view of hybrid roles.

The term hybrid manager was introduced in the early 1990's (Palmer, 1990; O'Connor and Smallman, 1995) and this was considered as an individual who was a manager but whose understanding of how the organization works extended beyond their role. This idea was further developed when research considered how different professionals, such as scientists and engineers, transitioned into managerial roles and how they leveraged their previous experiences in their new role (Roberts and Biddle, 1994; Rifkin, 2000; Bolander, Holmberg and Fellbom,

2019). This thesis considers hybrids as individuals who come into managerial roles, from non-managerial backgrounds, and perform both roles simultaneously. Therefore, it contributes to this discussion, and more broadly the work role transition theory, by spotlighting micro-transitions that occur within these (dual) hybrid roles. These findings are the first to depict a crafting process through such transitions, where hybrid managers can perform dual roles by continuously adjusting or crafting different aspects of the roles as they micro-transition between them. This brings us to the second area of theoretical contribution, job crafting.

5.8.2 Job Crafting Theory

This thesis used job crafting theory as one of its theoretical lenses through which to understand how hybrid managers switch hats during micro-transitions (Wrzesniewski and Dutton, 2001; Park and Faerman, 2019; Tempelaar and Rosenkranz, 2019). Job crafting theory has predominantly been focused on lower-level employees, with little research attention being given to managers as an occupational group (Roczniewska and Puchalska-Kamińska, 2017), a gap that this research has addressed. In doing so, it considers the challenges of crafting at different levels (Berg, Wrzesniewski and Dutton, 2010). Additionally, by considering crafting of dual roles, this thesis broadens the scope and application of job crafting research which previously focused on single roles (Wrzesniewski and Dutton, 2001; Tims and Bakker, 2010). Although previous attempts have been made to study dual roles, it has been in the context of roles at work and at home and how to achieve work-life balance (Ashforth, Kreiner and Fugate, 2000), however, research on how crafting is engaged in dual formal work roles, is scant.

There have also been research tensions within the job crafting theory research with researchers either supporting the job crafting model perspective (Wrzesniewski and Dutton, 2001) or the job demands resources perspective (Tims and Bakker, 2010). To address this, recent research

has attempted to reorient job crafting by proposing a new taxonomy, approach-avoidance crafting, that caters to both perspectives (Bruning and Campion, 2018; Zhang and Parker, 2019; Seppälä, Harju and Hakanen, 2020). Researchers have tried to address this new proposed taxonomy, but the work remains incomplete as it is yet to receive substantial empirical attention (Hu *et al.*, 2020; Ebert and Bipp, 2021). This was supported by a “state-of-the-art overview of recent trends in job-crafting research” conducted by (Tims, Twemlow and Fong, 2021, p. 54) that looks at the last twenty years. They found that there is a need to further investigate how specific job-crafting strategies relate to specific outcomes “and when these strategies are successful in achieving a better person–job fit” (p. 67).

To contribute towards filling this gap, this thesis empirically tested the proposed approach-avoidance crafting taxonomy. It aimed to understand how hybrid managers use crafting to navigate the increasing demands that arise from their micro-transitions and how this leads to managerial congruence. In doing so, it supports previous suggestions that job crafting behaviour is neither good nor bad (Dierdorff and Jensen, 2018; Kim and Beehr, 2018). However, it contradicts the proposition by the taxonomy’s proponents’, that approach crafting is superior to avoidance crafting and that the latter is used with the intention of turnover (Bruning and Campion, 2018). It was found that hybrid managers engage in avoidance crafting behaviour to manage their increasing demands and to provide opportunities for their teams to grow and develop. This improves our understanding that avoidance crafting may be beneficial to the individual and their team rather than just benefitting the individual by reducing their role demands. It is possible that the use of either approach crafting or avoidance crafting as a role management strategy (Carton and Ungureanu, 2018), is determined by the employee’s level in the organization and in this case, it is driven by the desire to achieve managerial congruence.

The role of crafting towards managerial congruence has not been explored previously and as such, it is an important theoretical contribution.

The findings also have implications for job crafting measures aimed at managers. Avoidance crafting is currently measured as withdrawing from bothersome time-consuming tasks, but it does not take into account the presence of structures that support avoidance crafting as a developmental tool for the team. This thesis found that with proper protocols, it is possible to engage in avoidance crafting and have it benefit both the hybrid manager and their team. Therefore, the items measuring avoidance crafting may not be suited for measuring job crafting for managers. However, it is also possible that there are other types of avoidance crafting that may be detrimental that current measures are not capturing. Engaging in avoidance crafting whereby the manager withdraws from managerial aspects of people development such as conflict management, feedback and performance management or team support can have negative implications for the hybrid manager, their team, and the organization more broadly (Rigotti, Korek and Otto, 2014; Park and Faerman, 2019). It is evident that current measures are not sensitive enough to detecting avoidance of people management aspects of the role.

Research on devolution considers how line managers take roles that align more broadly to the organization's objectives and to improve the manager's business awareness, thus moving them away from just a technical focus (Dalziel and Strange, 2007; Perry and Kulik, 2008). Despite this change in managerial roles, managerial congruence has not received much attention, a gap this thesis addresses. In the context of the present research, managerial congruence is the fit a hybrid manager perceives between their characteristics and the managerial role. "Congruence represents the degree of fit between an individual and a work environment in which the person currently resides" (Holland, 1985 as cited in Litzky and Greenhaus, 2007, p. 639). This is

supported by further research which proposes that the fit between actual and preferred working time arrangements determines employee work-life balance (Brauner, Wöhrmann and Michel, 2020; Treviño *et al.*, 2020; Chu, Creed and Conlon, 2021). That research has its original application in person-environment fit research which focuses on the congruence between roles the individual holds at work and at home (Ashforth, Kreiner and Fugate, 2000). However, congruence is also relevant in person-job fit research. It considers how, through crafting, a hybrid manager can achieve managerial congruence. Findings show that in a hybrid role, the manager can adjust their role as needed to achieve managerial congruence. This perception of fit with the managerial role, and the crafting adapted to realize it, may be driven by the hybrid manager's need satisfaction. The qualitative findings also indicated that the desire to achieve operational objectives or strategic objectives can be a factor. As such, it is important to consider the practical implications this research has.

5.9 Implications for Practice

“It’s a fallacy to think that you can spend 50% of your time on one thing and 50% on another especially for a technical role, the context switching alone will mean that you are likely to lose 33% of your output.”

(Eoin, Engineering Manager)

Hybrid transitions are not a journey where one size fits all, even when organizations are in the same sector. Such roles might suit some organizations more than others, so before engaging in them, it is important for the organization to consider if combining a technical/scientific role with a managerial role is the best use of their managerial resources.

“Hybrid roles do not work for the manager’s career and that of their team because there is very little overlap in the competency frameworks of individual contributors and managers. You need time to focus on one or the other and to develop these skills.”

(Eoin, Engineering Manager)

Research has shown that independent contributors opt for hybrid roles because they feel their careers are truncated (Roberts and Biddle, 1994). In such organizations, there may not be the possibility for lateral movements that would open up opportunities for parallel career growth. The challenge here is that ‘rock star’ independent contributors can be promoted into roles where they become mediocre managers. Sometimes the best players do not make the best captains (Rees, 1996). This would reinforce the Peter Principle, where individuals are promoted to the next level but are just not competent at it (Lazear, 2004). Here, the potential hybrid manager would be more valuable in a position where they found their equilibrium, where they are happy and passionate about the role and their contribution to it.

This research found that the need for competence changes when an individual transitions into a managerial role. As such, it is important that hybrid managers are aware of this shift. Organizations can consider a (macro) transition incubation period which will allow the role incumbent to identify their competence gaps and develop them early on. This thesis found that when hybrid managers perceive organizational support, they are likely to engage in certain crafting behaviours which may then aid them in achieving managerial congruence. This incubation period would be a structured process, guided by a training plan and a clear feedback channel (Isopahkala-Bouret, 2008; Plakhotnik, 2017). Driven learning can prove beneficial in helping the hybrid manager grow into the role, especially when they are empowered to actively seek out opportunities for growth (Dweck, 1986; Elliott and Dweck, 1988). Therefore, whilst the transition is an intrinsic process, the hybrid manager is likely to benefit from such support (Deci and Ryan, 2000; Gagné *et al.*, 2010; Cheng and O-Yang, 2018).

In line with the quantitative findings, a high level of autonomy will likely lead a hybrid manager to engage in approach crafting behaviour, such as adoption, where they seek out training to improve their managerial work and this may lead to managerial congruence. This incubation period would provide an opportunity for the hybrid manager to invest in management training with the same intensity they would for a technical/scientific training. Familiarity with the managerial tasks will likely increase the hybrid manager's sense of managerial congruence because they have a good understanding of demands the dual roles hold, and how performing through others can ease this process. An additional benefit of such immersed learning is that it might be adapted by the hybrid manager for developing their own team. Such growth mindset is critical for transition success (Dweck, 1999, 2015; Burgueño *et al.*, 2020).

Another change that comes with managerial transitions is the need for relatedness. As part of the feedback process, a hybrid manager may benefit from being paired with a buddy or a mentor, who has held or holds a similar role. This individual would advise the hybrid manager on how to navigate the transition and how to address challenges when they arise. Having such a sounding board would be important especially when the hybrid manager is considering engaging in avoidance crafting behaviour. Learning through the experiences of others might help to inform the hybrid manager's micro-transitions. As seen from the research findings, mentors are valuable not only in settling into the role but also in accessing resources that may be required. Therefore, the hybrid manager can leverage their social and professional networks by reaching out to those in similar positions for advice. The quantitative findings indicated that a supportive environment facilitates high level of relatedness and approach crafting behaviours, this is then likely to lead to managerial congruence.

5.10 Research Limitations and Suggestions for Future Research

“A reflective practitioner is the ideal manager”

(Oisín, Software Engineer)

5.10.1 Theoretical Parameters

This research had some limitations. From the qualitative findings it was clear that for hybrid managers, there is a distinction between the technical/scientific competence and managerial competence. This distinction was not catered for in the current research and that impacted the support for the hypotheses quantitatively. Additionally, this lack of clarity was evident in the approach crafting mediation where the relationships were not significant in the relationship between competence and managerial congruence. Future researchers can distinguish between the two competencies. For example, managerial competencies may include the ability to manage conflict, give feedback and manage team performance while technical competencies could include an understanding of the technology applications, staying updated on changes in the trends and the ability to manage other people’s expertise outside those of the hybrid manager. It might be valuable to see how these two competencies evolve at different stages post the macro-transition. Such research would be able to explore how the hybrid manager’s competencies evolve from being operational to strategic focused. Finally, it might be valuable to consider how need satisfactions (for autonomy, competence, and relatedness) interact and if there are any trade-offs between them, if so, how that impacts managerial congruence. This will lend support to research that is considering similar interactions (Liu *et al.*, 2022). For instance, higher levels of autonomy support approach crafting but greater freedom may result in reduced relatedness. In some cases, too much autonomy may result in a manager turning their back on the people management aspects of their role, something that warrants future exploration

5.10.2 Methodological Limitations

There were also some methodological limitations in this current research. Quantitative data were collected through self-administered online questionnaires. Whilst crafting and managerial congruence are person centric concepts, there was no objective measure to compare or integrate with, something that recent crafting research has recommended (Bakker and Demerouti, 2017). The second methodological limitation is that this is a cross-sectional study therefore, it was not possible to show causation. While cross-sectional studies can be sufficient (Tims, Twemlow and Fong, 2021), a more rigorous, longitudinal study may better explain some inconsistent findings and clarify causal relationships thereby advancing the theory even further. The final methodological limitation was the sample. The quantitative data were collected from several sectors. This makes it challenging to generalize the findings across different sectors. From the qualitative data, it was evident that the nature of hybrid roles differs even in the same sector, such as, in the IT sector. Despite these limitations, this current research progresses research in the different theoretical areas and in practice.

5.10.3 Suggestions for Future Research

5.10.3.1 Managerial Transition Research

Future research can also compare how micro-transitions impact managerial congruence for incidental hybrid role transitions and willing hybrid role transitions. Incidental hybrids are individuals reluctant to transition into these dual roles and would give them up if an opportunity to do so arose (McGivern *et al.*, 2015; Park and Faerman, 2019). On the other hand, willing hybrids are individuals who proactively transition into the dual roles, and they tend to be more inclined toward their managerial role (McGivern *et al.*, 2015; Bresnen *et al.*, 2019; Park and Faerman, 2019) than their technical role. Given the different levels of motivation to take on the

role, it is possible that the micro-transition strategies and the impact on managerial congruence could be different.

When considering transitions, it is important to consider the ‘whole person’ in transition, that is, their psychological, physical, behavioural, and relational movements (George, Wittman and Rockmann, 2021). It is also important to consider how the social network is impacted by the individual’s transition as they engage in co-construction to form part of the lived experiences of those involved in the transition (ibid). This means considering transitions as dynamic cycles which involve social networks as opposed to a linear process (which does not go beyond the level of the individual who is transitioning) because transitions rarely occur in a vacuum (Rees, 1996; George, Wittman and Rockmann, 2021). Rather, transitions impact those around the individual transitioning and the reciprocal cycle of social support and adaption continues. Others play a key role in the success of the transition because they provide validation or endorsement of the new role (identity granting) and contribute resources (such as information for feedback and mentoring/coaching) (Ibarra, 1999; George, Wittman and Rockmann, 2021). This thesis did not consider physical movements (Ashforth, 2000) or the impact on the social network which may be valuable for future research to consider. Another area that future managerial transition research can consider is boundary management. It is important for the hybrid managers to manage the boundaries of their dual role during micro-transitions, as this is likely to influence the crafting strategy adopted, thereby affecting their managerial congruence.

The findings also show that need satisfaction can present differently for an individual contributor than it would for a hybrid manager especially since, in a managerial role, the individual performs through others. Future research can consider how basic psychological

needs differ across levels in the organization and how this impact their micro-transitions as they work towards managerial congruence.

5.10.3.2 Job Crafting Research

Our understanding of avoidance crafting in the context of manager work is still in its infancy. Based on the findings of this thesis, there are some critical issues that plague how avoidance crafting is currently conceptualized and operationalized, including how it is defined and measured especially for managers. Managerial avoidance crafting may be a different form of crafting from what is currently understood and there is a question of whether it is negative or not. If managerial crafting also includes withdrawing from people management tasks and not just avoidance through delegation, there could be problems for the teams they supervise. Given that this is the first time the role of crafting in achieving managerial congruence has been explored, it is a clear indication that there is a lot more that can be done to build on this area. Current measures of avoidance crafting are not sensitive enough to identify avoidance of people management tasks, as they focus on generic tasks that could be either technical or people focussed. Hybrid roles are a staple for organizations within the STEMM industry, so much so, that universities are structuring degree courses which produce hybrid graduates (Top MBA, 2021). Therefore, it would be important to consider the implications for job crafting measures aimed at managers. However, it is very important to keep the context in mind when researchers are developing measures as these impact the empirical outcomes.

Future research can consider how the presence of structures such as work protocols can support avoidance crafting behaviour, and the extent to which avoidance crafting can be used as a developmental tool for the team. Future research can also build on current assumptions of avoidance crafting, that it leads to negative implications (Bruning and Campion, 2018), to

explore the extent to which this behaviour impacts managerial congruence. Presumably, withdrawing from the managerial aspects of the role would affect the perceived fit with the managerial role and possibly affect the team and the organization. As such, the field may benefit from further investigation of the ‘dark side’ of avoidance crafting. It might also be of interest to future research to consider how avoidance crafting behaviour differs between willing hybrids and incidental hybrids during micro-transitions.

5.11 Research Conclusion

“I wish I knew the diversity of the role I was getting into (...) I used to have deep skills in a certain area and in a managerial role you trade in those deep skills for skills across a broad area. These are skills you are capable of developing but they may not necessarily be skills you were passionate about while in the individual contributor role, you had the depth because you had the passion. If I had known that before, I would have found a way to repurpose those skills so that I do not lose them. My expectations of the role and what the company needed were different.”

(Eoin, Engineering Manager)

This thesis set out to understand how hybrid managers proactively manage their dual roles through crafting, during micro-transitions, so as to achieve managerial congruence. In doing so, it considered how the satisfaction of role needs impact the type of crafting behaviour adopted. The data showed that the fulfilment of the needs for autonomy and relatedness is likely to encourage the hybrid manager to engage approach crafting behaviours. However, perceived organizational support was found to be significant only when needs for competence and relatedness were fulfilled and when these led to approach crafting behaviour. When considering avoidance crafting behaviours, there was a difference in the quantitative and qualitative data findings. The former showed that when role needs were satisfied, the hybrid manager was unlikely to exhibit avoidance crafting behaviours, but the latter showed that when the need for autonomy was satisfied, the hybrid managers actively pursued avoidance crafting behaviours

in an effort to find managerial congruence. This shows that managerial congruence may not look the same to all hybrid managers. The empirical model based on the findings is shown below.

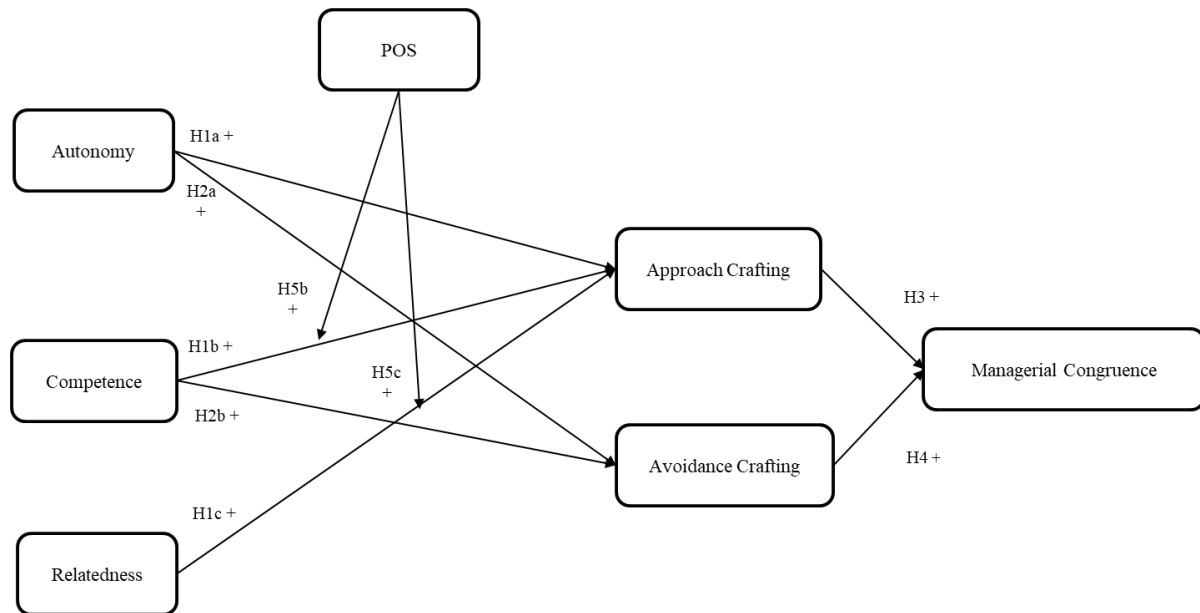


Figure 5.1 Empirical Model Based on Findings

Being a manager is a self-directed, dynamic, challenging and lonely role to hold (Howard et al., 2016; An and Han, 2020). There are different reasons why independent contributors are motivated to become hybrid managers. Some enjoy the power that comes with it; better pay, while others want to make an impact. Becoming a manager is an internalised process experienced by the individual going through the transition and goes beyond the individual formally taking up the position. It is thus bound to be a unique experience with a different meaning for different people (Mallaby, Price and Hofmeyr, 2017; Bolander, Holmberg and Fellbom, 2019). There is no observable point at which one becomes a manager but rather becoming a manager is a continuous evolving process of personal development which comes through social and psychological learning (Barnes, 2015; Segal, 2017; Bolander, Holmberg and Fellbom, 2019; Park and Faerman, 2019). With time, the individual’s ability to understand

and interpret the role requirements improves because the length of time needed to settle into a role, after a transition, is inversely related to familiarity with the new experience (Mintzberg, 1971; Louis, 1980). When individuals take up managerial roles, they must adapt the role to their understanding of what it requires (von Knorring, Alexanderson and Eliasson, 2016; Smith et al., 2020) as well as adapting themselves to the role. However, when this manager is performing a technical or scientific role alongside the managerial role, adapting themselves to the dual roles and the dual roles to themselves becomes a bit more challenging.

Hybrid managers need to have a clear understanding of what a managerial role entails. They also need to be willing to intentionally initiate, and control, their own behaviours (Ryan and Deci, 2000; Graves and Luciano, 2013; Pfister and Lukka, 2019) in such a way that it allows them to find congruence with their managerial role. The organization also has a role to play in easing this transitional process. There is a need to ensure that the hybrid manager receives training and mentorship as they make the initial transition and also during their first couple of years in the hybrid role. This may improve the transitional experience for both the hybrid manager and their team.

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APPENDICES

Appendix A Comparison of Philosophical Paradigms

	Positivist/Objectivist	Interpretivist/Subjectivist	Pragmatist/Transformative
Ontology (nature of reality)	Reality is concrete, observed independently, independent of time, context and individual, governed by laws.	Reality is socially and experientially based. Largely dependent on experiences.	Reality is characterised by the practical relevance of research and the desire to search for novel and innovative approaches that serve human purposes.
Epistemology (researcher-participant relationship)	The relationship is objective, with a separateness existing between the researcher and the participant. Grounded in the view that knowledge can only be established through strict scientific methods based on neutral, objective and rigorous observations of external reality.	The relationship is subjective, with researchers and participants working together to co-construct a social reality.	Rejects the idea that epistemological issues exist on two opposing poles, instead viewing them as existing on a continuum. At some points in the research process, researchers and participants may require a highly interactive relationship (e.g. interviews), whereas, at other points, less interaction is required (e.g. surveys).
Human nature	Researchers assume that human behaviour is determined completely by the situation or environment – causes determine effects or outcomes.	Researchers perceive humans as masters and creators of their own environment, developing a theory or pattern of meaning throughout the research process.	Pragmatists believe that there is not one privileged description of events and that human behaviour can be a product of the environment or independent of this and that both are important narratives of how we make sense of the world.
Methodology (Process of research)	Knowledge is verified through scientific means. Supports the use of quantitative methodologies to test previously argued hypotheses in accordance with scientific rigour. Prominent tools include surveys.	Detailed analysis of the subject to allow its nature and characteristics to unfold. Prominent tools include in-depth interviews, which seek to emphasise depth of understanding.	Both qualitative and/or quantitative methods can be used, whereby methods are matched with the specific research purpose - see Table 4.2.

(McGroary, 2021, p. 120)

INDICATIVE INTERVIEW GUIDE

1. Tell me a bit about **your role**.
 - a. How long have you been in this role?
 - b. What role were you in prior to this one?
 - c. How was the transition into the role? Describe your experience in transitioning into this role
 - d. What do you understand by the term organizational support?
 - e. What kind of supports does your organization offer to the transition process?
 - f. Did you find these supports useful?
2. To what extent do you enjoy **managerial work**?
 - a. To what extent would you say that the managerial role is a good match for you? Howso?
 - b. How do you get yourself mentally ready for such a role?
 - c. Which aspects of your role do you enjoy least? How do you manage these?
 - d. What motivated you to take up the managerial role?
 - e. Have you ever regretted leaving your specialist work to take up a managerial role? Why and why not?
3. **Crafting**
 - a. What kind of changes to your technical role have you needed to make since taking up your managerial role?
 - b. Who or what helped you make the transition to managerial work?
 - c. What are the main challenges of your managerial work now?
 - d. How do you organize your work? How do you balance the technical and the managerial work given how different the nature of your roles can be?
 - e. What kind of training is given to support this adoption of what exactly or do you mean transition?
 - f. How has your workload changed as a result of your transition?
 - g. How do you manage the large number of meetings you're now involved in?
 - h. Have you needed to go beyond the remit of your role so that you could achieve an objective, maybe where you have tapped into new resources or teams?
4. **Autonomy**
 - a. To what extent does your managerial role provide you with autonomy? Can you give me examples of ways in which you get to exercise autonomy?
 - b. Could you describe any aspects of being a manager that you do not enjoy?
 - c. Tell me how you deal with completing demands on your time
 - d. Tell me how you manage unexpected demands that disrupt your plans
 - e. To what extent does being a manager allow you to do the things you want to do at work
5. **Competencies**
 - a. What skills or competencies do you feel you have further mastered through your managerial role?
 - b. Do you ever feel that you were unprepared for your managerial role? Why do you say this?
 - c. How has being a manager impacted on your technical role?
 - d. To what extent does being a manager enrich your technical role?
 - e. Do you ever self-reflect on your planning, work objectives and your approach to getting the job done?
6. **Relatedness**
 - a. How has being a manager impacted on your social network within the organization expanded since you started the new role?
 - b. How do you initiate interactions with others to develop your professional network?
 - c. How do your work relationships contribute towards your current role?
 - d. Is there anything in hindsight that would really have helped in your transition to a manager?

Crafting a Fit: Recurring Transitions between a Managerial and Specialist or Technical Role

Start of Block: Demographics

Please note: In the context of this survey a managerial role involves offering visible leadership; recognizing and motivating staff; promoting teamwork and cross-functional collaboration; managing team performance; aligning business area objectives with organizational strategy; and/or maintaining high quality standards of service delivery to customers

Do you have a technical or specialist role (such as design/engineering, research, research & development, scientific role or other) that you perform alongside a managerial role?

- Yes (28)
- No (29)

Skip To: End of Survey If Do you have a technical or specialist role (such as design/engineering, research, research & deve... = No

Note to the REC:

If participants choose “No” for the above questions, they will exit the survey and will be displayed the following message:

“Dear research participant,

Thank you for your interest in this research. As stated in the consent form, you must hold a dual managerial and technical or specialist role to participate in this study and to receive compensation. Your answer indicates that you do not meet the study requirements. Therefore, you are unfortunately not eligible to participate in the study and, in accordance with Amazon Mechanical Turk policy, are not able to receive compensation.

You may now close this window or use your Internet navigator to go back to the Amazon Mechanical Turk site.

Kind regards,

The research team”

Q1 How long have you been in your current position?

Q2 What is your gender?

- Male (1)
- Female (2)
- Other (3)
- Prefer not to say (4)

Q3 How many people do you supervise?

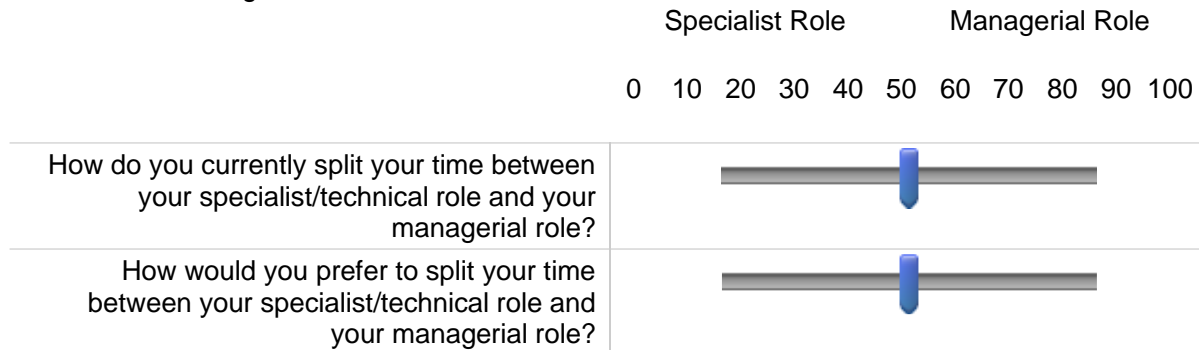
Q4 What is your specialist/technical role?

End of Block: Demographics

Start of Block: Time spent between the specialist role and managerial role

Q5 Please slide the bar below.

For example: If the slider is at 20% it indicates that 20% of the time is spent on the specialist/technical role and 80% on the managerial role. If the slider is placed at 70% it indicates that 70% of the time is spent on the specialist/technical role and 30% on the managerial role.



End of Block: Time spent between the specialist role and managerial role

Start of Block: SECTION A: Consider your managerial role as you respond to the questions below

Scales: Definitely false, probably false, neither true nor false, probably true, definitely true

1. I feel like I can make a lot of inputs to deciding how my job gets done (Autonomy)
2. I am free to express my ideas and opinions on the job (Autonomy)
3. On my job I do not get much of a chance to show how capable I am (Competence)
4. I feel pressured at work (Competence)
5. I really like the people I work with (Relatedness)
6. I get along with people at work (Relatedness)
7. I pretty much keep to myself when I am at work (Relatedness)
8. I feel like I can make a lot of inputs to deciding how my job gets done (Perceived Organizational Support)

Scales: Strongly disagree, somewhat disagree, neither agree nor disagree, somewhat agree, strongly agree

9. My organization values my contribution to its well-being (Perceived Organizational Support)
10. I enjoy doing the things that people in management do (Managerial congruence)
11. My organization really cares about my well-being (Perceived Organizational Support)
12. A managerial position is a good fit for me (Managerial congruence)
13. My organization cares about my general satisfaction at work (Perceived Organizational Support)

Scales: Never, sometimes, about half the time, most of the time, always

14. I expand my work by providing opinions on important issues (Work role expansion)
15. I actively develop my professional network (Social expansion)
16. I expand my work activities to make sure I take care of myself (Work role expansion)
17. I usually find ways to reduce the time I spend in meetings (Work role reduction)
18. Within my managerial role, I use new knowledge or technology to enhance communication with my team (Adoption)
19. I proactively seek out training to improve my managerial work (Adoption)
20. Within my managerial role, I work in a way that allows me to avoid bothersome tasks involved in my work (Withdrawal)
21. I use my thoughts to put myself into a good mood at work (Metacognition)

End of Block: SECTION A: Consider your managerial role as you respond to the questions below

Start of Block: SECTION B: Consider how you work when responding to the questions below

Scales: Definitely false, probably false, neither true nor false, probably true, definitely true

22. My feelings are taken into consideration at work (Autonomy)
23. I feel like I can pretty much be myself at work (Autonomy)
24. I have been able to learn interesting new skills on my job (Competence)
25. Most days I feel a sense of accomplishment from working (Competence)
26. I consider the people I work with to be my friends (Relatedness)
27. People at work care about me (Relatedness)
28. There are not many people at work that I am close to (Relatedness)

Scales: Strongly disagree, somewhat disagree, neither agree nor disagree, somewhat agree, strongly agree

29. Even if I did the best job possible, my organization would fail to notice (POS)
30. My organization shows very little concern for me (POS)
31. My organization takes pride in my accomplishments at work (POS)
32. My personality fits in well with the requirements of a managerial position (Managerial congruence)
33. I fit in well with others in a management position in an organisation (Managerial congruence)

Scales: Never, sometimes, about half the time, most of the time, always

34. I expand my work activities to acquire resources that will help me do my job (Work role expansion)
35. I expand my work by adding activities to my job that ensure the quality of my deliverables (Work role expansion)
36. I actively initiate positive interactions with others (Social expansion)
37. I actively work to improve the quality of my communication with others (Social expansion)
38. I usually find ways to get others to take my place in meetings (Work role reduction)
39. I usually find ways to bypass time-consuming tasks (Work role reduction)
40. I use new knowledge or technology to structure my managerial work (Adoption)
41. Within my managerial role, I work in a way that allows me to avoid others at work (Withdrawal)
42. I use my thoughts to get me out of a bad mood at work (Metacognition)
43. I use my thoughts to create a personal mental approach to work (Metacognition)

End of Block: SECTION B: Consider how you work when responding to the questions below

Start of Block: SECTION C: Consider your organization when responding to the questions below

Scales: Definitely false, probably false, neither true nor false, probably true, definitely true

44. When I am at work, I have to do what I am told (Autonomy)
45. There is not much opportunity for me to decide for myself how to go about my work (Autonomy)
46. I do not feel very competent when I am at work (Competence)
47. People at work tell me I am good at what I do (Competence)
48. When I am working, I often do not feel very capable (Competence)
49. The people I work with do not seem to like me much (Relatedness)
50. People at work are pretty friendly towards me (Relatedness)

Scales: Strongly disagree, somewhat disagree, neither agree nor disagree, somewhat agree, strongly agree

51. I have what it takes to be an effective manager (Managerial congruence)
52. My organization fails to appreciate any extra effort from me (POS)
53. My organization would ignore any complaints from me (POS)

54. The requirements of a managerial position match my talents and skills
(Managerial congruence)

Scales: Never, sometimes, about half the time, most of the time, always

55. I expand my work by adding activities to my job that enhance safety or security
(Work role expansion)

56. I actively work to improve the quality of group interactions (Social expansion)

57. I usually find ways to outsource my work to others outside my group (Work
role reduction)

58. I proactively seek out training on new technology to use in my managerial role
(Adoption)

59. I use new knowledge or technology to automate tasks within my managerial
role (Adoption)

60. Within my managerial role, I work in a way that allows me to avoid interacting
with people when working (Withdrawal)

61. I use my thoughts to help me focus and be engaged at work (Metacognition)

62. I use my thoughts to help me prepare for work I will be doing in the future
(Metacognition)

Appendix D Measurement Scales

Scale and Authors	Variable
<p>Self-Determination Theory (Deci <i>et al.</i>, 2001) (Scale: Definitely false - Definitely True)</p>	<p>Need Satisfaction</p> <ul style="list-style-type: none"> ● Autonomy (5 items) <ol style="list-style-type: none"> 1. I feel like I have control and can decide how my job gets done 2. I am free to express my ideas and opinions on my role (<i>dropped</i>) 3. My feelings are taken into consideration at work 4. When I am at work, I have to carry out my role as directed 5. There is not much opportunity for me to decide for myself how to go about my work (<i>dropped</i>) <p><u>Cronbach alpha</u> $\alpha = 0.69$ (after dropping the two items $\alpha = 0.53$)</p> <ul style="list-style-type: none"> ● Competence (7 items) <ol style="list-style-type: none"> 1. In my role I do not get much of a chance to show how capable I am 2. I feel pressured at work 3. I have been able to learn interesting new skills on my job (<i>dropped</i>) 4. Most days I feel a sense of accomplishment from working (<i>dropped</i>) 5. I do not feel very competent when I am at work 6. People at work tell me I am good at what I do (<i>dropped</i>) 7. When I am working I often do not feel very capable <p><u>Cronbach alpha</u> $\alpha = 0.75$ (before dropping the three items $\alpha = 0.59$)</p>

	<ul style="list-style-type: none"> ● Relatedness (6 items) <ol style="list-style-type: none"> 1. I get along with people at work (dropped) 2. I pretty much keep to myself when I am at work 3. People at work care about me (dropped) 4. There are not many people at work that I am close to 5. The people I work with do not seem to like me much 6. People at work are pretty friendly towards me (dropped) <p><u>Cronbach alpha</u> $\alpha = 0.68$ (before dropping three items $\alpha = 0.52$)</p>
<p>Approach–avoidance crafting (Bruning and Campion, 2018) (Scale: Never – Always)</p>	<p>Approach Crafting</p> <ul style="list-style-type: none"> ● Adoption (5 items) <ol style="list-style-type: none"> 1. Within my managerial role, I use new knowledge or technology to enhance communication with my team 2. I proactively seek out training to improve my managerial work 3. I use new knowledge or technology to structure my managerial work 4. I proactively seek out training on new technology to use in my managerial role 5. I use new knowledge or technology to automate tasks within my managerial role ● Metacognition (4 items) <ol style="list-style-type: none"> 1. I use my thoughts to put myself into a good mood at work 2. I use my thoughts to help me focus and be engaged at work 3. I use my thoughts to get me out of a bad mood at work

	<p>4. I use my thoughts to help me prepare for work I will be doing in the future</p> <ul style="list-style-type: none"> ● Social Expansion (4 items) <ol style="list-style-type: none"> 1. I actively develop my professional network 2. I actively initiate positive interactions with others 3. I actively work to improve the quality of group interactions 4. I actively work to improve the quality of my communication with others ● Work Organization (3 items) <ol style="list-style-type: none"> 1. I create structure in my managerial work processes 2. I create organization in my managerial work environment 3. I create plans and prioritize my managerial work in an organized manner ● Work Role Expansion (3 items) <ol style="list-style-type: none"> 1. I provide opinions on important issues relating to my work in order to further develop and expand my role 2. I go beyond my job description to grow and enrich my role 3. I add activities to my job that go beyond my role to guarantee the quality of my deliverables <p><u>Cronbach alpha</u> $\alpha = 0.89$</p>
	<p>Avoidance Crafting</p> <ul style="list-style-type: none"> ● Withdrawal (3 items) <ol style="list-style-type: none"> 1. Within my managerial role, I work in a way that allows me to avoid bothersome tasks involved in my work

	<ol style="list-style-type: none"> 2. Within my managerial role, I work in a way that allows me to avoid others at work 3. Within my managerial role, I work in a way that allows me to avoid interacting with people when working <ul style="list-style-type: none"> ● Work Role Reduction (4 items) <ol style="list-style-type: none"> 1. I usually find ways to reduce the time I spend in meetings 2. I usually find ways to get others to take my place in meetings 3. I usually find ways to bypass time-consuming tasks 4. I usually find ways to outsource my work to others outside my team or the immediate area of my responsibility <p><u>Cronbach alpha</u> $\alpha = 0.79$</p>
<p>Aspirations to senior management (Litzky and Greenhaus, 2007) (Scale: Strongly disagree - Strongly agree)</p>	<ul style="list-style-type: none"> ● Managerial Congruence (6 items) <ol style="list-style-type: none"> 1. I enjoy doing the things that people in management do 2. A managerial position is a good fit for me 3. My personality fits in well with the requirements of a managerial position 4. I fit in well with others in a management position in my organisation 5. I have what it takes to be an effective manager 6. The requirements of a managerial position match my talents and skills <p><u>Cronbach alpha</u> $\alpha = 0.75$</p>
<p>Perceived organizational support</p>	<ul style="list-style-type: none"> ● Perceived organizational support (8 items)

(Rhoades and Eisenberger, 2002)

(Scale: Strongly disagree - Strongly agree)

1. My organization values my contribution (*dropped*)
2. My organization really cares about my well-being (*dropped*)
3. My organization cares about my general satisfaction at work (*dropped*)
4. Even if I did the best job possible, my organization would fail to notice
5. My organization shows very little concern for me
6. My organization takes pride in my accomplishments at work (*dropped*)
7. My organization fails to appreciate any extra effort from me
8. My organization would ignore any complaints from me

Cronbach alpha $\alpha = 0.83$ (before dropping the four items $\alpha = 0.67$)

Appendix E Ethics Approval

Ollscoil Chathair Bhaile Átha Cliath
Dublin City University



Ms. Olive Maitha
DCU Business School

Prof. Patrick Flood
DCU Business School

Dr. Yseult Freeney
DCU Business School

28th August 2020

REC Reference: DCUREC/2020/179

Proposal Title: Crafting a Fit: Managing Recurring Transitions between Managerial and Specialist or Technical Roles

Applicant(s): Ms. Olive Maitha, Prof. Patrick Flood, and Dr. Yseult Freeney

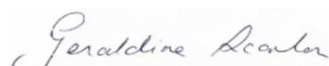
Dear Colleagues,

This research proposal qualifies under our Notification Procedure, as a low risk social research project. Therefore, the DCU Research Ethics Committee approves this project.

Materials used to recruit participants should state that ethical approval for this project has been obtained from the Dublin City University Research Ethics Committee.

Should substantial modifications to the research protocol be required at a later stage, a further amendment submission should be made to the REC.

Yours sincerely,


Dr Geraldine Scanlon

Chairperson
DCU Research Ethics Committee



Taighde & Nuálaíocht Tacaíocht
Ollscoil Chathair Bhaile Átha Cliath,
Baile Átha Cliath, Éire

Research & Innovation Support
Dublin City University,
Dublin 9, Ireland

T +353 1 700 8000
F +353 1 700 8002
E research@dcu.ie
www.dcu.ie

REC Amendment Form - DCUREC/2020/179

rec dcu <rec@dcu.ie>

16 December 2021 at 09:55

To: Olive Wachera Maitha <olive.maitha3@mail.dcu.ie>

Cc: "Prof. Yseult Freeney" <Yseult.Freeney@dcu.ie>, "Prof. Patrick Flood" <patrick.Flood@dcu.ie>

Dear Olive,

Thank you for submitting the amendment for your research project DCUREC/2020/179. I can confirm that the REC Chair has completed their review and issued approval for the amendment and all associated documentation. Please accept this email as formal approval.

Wishing you the very best for your research.

Kind regards

Adam Platt (on behalf of REC)

Riarthóir Coiste Eitice um Thaighde | DCU Research Ethics Committee Administrator

Tacaíocht Taighde & Núálaíochta | Ollscoil Chathair Bhaile Átha Cliath

Research and Innovation Support | Dublin City University

Email: rec@dcu.ie

Tel: +353 (0)1 700 5612

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Tacaíocht Taighde & Núálaíochta | Foirgneamh Invent | Ollscoil Chathair Bhaile Átha Cliath | Campas Ghlas Naíon | BÁC 9

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**Séanadh Ríomhphoist/Email Disclaimer**

Tá an ríomhphost seo agus aon chomhad a sheoltar leis faoi rún agus is lena úsáid ag an seolaí agus sin amháin é. Is féidir tuilleadh a léamh anseo.

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Séanadh Ríomhphoist/Email Disclaimer

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Séanadh Ríomhphoist/Email Disclaimer

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 DCUREC2020_179 Amendment Approved 16Dec21.pdf
381K

PLAIN LANGUAGE STATEMENT

Research Title: Crafting a Fit: Managing Recurring Transitions between Managerial and Specialist or Technical Roles

Researcher: Olive Maitha, 3rd Year PhD student at Dublin City University (DCU)
olive.maitha3@mail.dcu.ie

Academic Supervisors: Prof. Patrick Flood
patrick.flood@dcu.ie
 Dr. Yseult Freeney yseult.freeney@dcu.ie

Dear Research Participants,

This research seeks to understand how individuals who hold both a managerial and a specialist or technical role balance the simultaneous demands of both roles. Specifically, the research will focus on how these individuals actively adapt these dual roles so as to easily transition between them and how organizational support can impact this adaptation process. This research is important because dual roles are increasingly common yet they combine very different skill sets. Understanding how these individuals manage dual roles, will help inform individuals in similar roles of how to cope in such positions. Similarly, organizations will know what kind of support is valuable to such individuals. This research is funded by the Irish Research Council and is supervised by Prof. Patrick Flood and Dr Yseult Freeney from Dublin City University Business School, both with extensive experience in this area of research.

Individuals who hold a dual managerial and specialist role are invited to participate in a short 10-15 minute survey. Participation is voluntary and participants will receive €1.00 upon the completion of this first survey, which can only be completed once. Should you decide to participate, please note that I will invite you to fill in a second survey in 1 months' time. You will receive €2.00 upon completion of the second survey.

There are no known risks associated with this research. The survey does not seek to obtain any sensitive or personal information, and you are free to end your participation at any time with no explanation. The information gathered in this survey will be used as part of my PhD dissertation, and potentially as part of research papers submitted to academic journals. Surveys will be deleted 6-months after collection. Participants should be aware that confidentiality of information provided cannot always be guaranteed by researchers and can only be protected within the limitations of the law - i.e., in certain cases, it is possible for data to be subject to subpoena, freedom of information or mandated reporting by some professions.

To participate in this study, you will be required to take the following steps:

1. Follow the link to the survey*
2. Fill in the survey
3. Enter the code that you will get upon survey completion in the space provided when you submit your HIT. **Please note that only those entering the code given upon survey completion will be compensated**

If participants have concerns about this study and wish to contact an independent person, please contact: The Secretary, Dublin City University Research Ethics Committee, c/o Research and Innovation Support, Dublin City University, Dublin 9. Tel 01-7008000 E-mail: rec@dcu.ie.

Thank you for participating in this research project, which is critical to the completion of my PhD degree. I greatly appreciate your time and conscientiousness in filling in my research survey.

PLAIN LANGUAGE STATEMENT

Research Title: Crafting a Fit: Managing Recurring Transitions between Managerial, Specialist and Technical Roles
Researcher: Olive Maitha, PhD student at Dublin City University (DCU) (olive.maitha3@mail.dcu.ie)
Academic Supervisors: Prof. Patrick Flood (patrick.flood@dcu.ie)
Prof. Yseult Freeney (yseult.freeney@dcu.ie)

Research Overview

I am a PhD research student in DCU Business School. My research looks at managerial transitions with a specific focus on individuals who come into a managerial role from non-managerial backgrounds such as IT, Engineering, Medicine, Aviation, Software Development and Research. This research looks at the transitional experiences of these individuals as they combine their technical and managerial work into a hybrid role and explores how the organization can support this process. This research is funded by the Irish Research Council and is being supervised by Prof. Patrick Flood and Prof. Yseult Freeney from DCU Business School, both with extensive experience in this area of research.

Participation

As a hybrid manager, you are invited to participate in an online in-person interview that should take approximately 40 minutes. These interviews will be audio recorded to ensure that the information captured is correct. The audio recordings will be anonymized by stripping them of any identifying markers. These recordings will be stored in an encrypted folder on the researcher's DCU Google Drive. This storage space is only accessible through the researcher's student email account and requires a unique password. Once transcribed, the audio recordings will be deleted.

Participation is voluntary and you are free to withdraw your participation at any time without any consequence. There is no compensation offered for completing this survey, just my sincere gratitude to those that choose to participate. Please know that you are helping me to complete my PhD – therefore your participation is hugely valued. By participating, you will have the opportunity to share your experience on best practice for managing hybrid roles. There are no known risks associated with this research. No sensitive or personal information will be sort and the information gathered in this interview will be used as part of the PhD dissertation, and potentially as part of research papers submitted to academic journals. Should participants be interested in the research findings, a copy of report will be made available to them.

Legal Limitations to Data Confidentiality: As part of the DCU ethics approval process, participants must be aware that confidentiality of information provided cannot always be guaranteed by researchers and can only be protected within the limitations of the law - i.e., in certain cases, it is possible for data to be subject to subpoena or mandated reporting by some professions.

If participants have concerns about this study and wish to contact an independent person, please contact: The Secretary, Dublin City University Research Ethics Committee, c/o Research and Innovation Support, Dublin City University, Dublin 9. Tel 01-7008000 E-mail: rec@dcu.ie.

Appendix G Informed Consent



ELECTRONIC CONSENT:

Survey on Crafting a Fit: Managing Recurring Transitions between Managerial and Specialist or Technical Roles

Dear Research Participants,

The purpose of this research project is to gain a better understanding of transitions between managerial roles and specialist/technical roles. This research project is conducted by Olive Maitha at Dublin City University.

Participation:

You are invited to participate in this research project because you are an individual who holds both a managerial role and a specialist/technical role. The survey should take between 10 - 15 minutes to complete. Participation is voluntary and you have the right to withdraw from the research study at any time prior to the completion of the online survey by simply abandoning the survey. You may also skip any question(s) that they do not wish to answer.

By participating, you will have the opportunity to share your experiences within your role and you will also receive €1.00 upon the completion of this first survey, which can only be completed once. Should you decide to participate, please note that I will invite you to fill in a second survey in 1 month's time. You will receive

€2.00 upon completion of the second survey. To have your responses included, please click the "submit" button at the end of the survey. Enter the code that you will get upon survey completion in the space provided when you submit your HIT. Please note that only those entering the code given upon survey completion will be compensated

Data usage, storage and discarding:

All data is stored in a password protected electronic format, and surveys will be deleted six months after collection. The results of this study will be used for scholarly purposes only.

Contact:

If you have any queries about this research you may contact the researcher at olive.maitha3@mail.dcu.ie, or alternatively if you have concerns about this study and wish to contact an independent person, please contact: The Secretary, Dublin City University Research Ethics Committee, c/o Research and Innovation Support, Dublin City University, Dublin 9. Tel 01-7008000; Email rec@dcu.ie

Please select your choice below. You may print a copy of this consent form for your records.

Clicking on the "Agree" button indicates that;

- ✓ You have read the above information
- ✓ You voluntarily agree to participate
- ✓ You are 18 years of age or older

- Agree
- Disagree

INFORMED CONSENT FORM

This is a consent form relates to participation in an in-person interview which will be audio recorded and estimated to last approximately 40 minutes.

Research Overview: This research looks at managerial transitions from non-managerial backgrounds such as IT, Engineering, Medicine, Aviation, Software Development and Research. It explores the transitional experiences of these individuals as they combine their technical and managerial roles into a hybrid role and how the organization can support this process.

Participation: You are invited to participate in this research as you hold a hybrid role. Participation is voluntary and you are free to withdraw your participation at any time without any consequence. There is no compensation offered for participating, just the researcher's sincere gratitude to those that choose to participate. By participating, you will have the opportunity to share your experience on best practice for managing dual roles. Participation is in form of an in- person interview (approximately 40 minutes).

Anonymity: There are no known risks associated with this research. No sensitive or personal information will be required from participants. Interviews will be audio recorded to ensure that the information captured is correct. The audio recordings will be anonymized to strip them of any identifying markers.

Data usage, storage and discarding: The data collected will be stored in its anonymized format in an encrypted folder on the researcher's DCU Google Drive. This folder is only accessible through the researcher's student email account using a unique password. The data collected will be used as part of the researcher's PhD dissertation, and potentially as part of research papers submitted to academic journals. The results of this research will be used for scholarly purposes only. The anonymized data will then be disposed of by deleting it. Should participants be interested in the research findings, a copy of report will be made available to them.

Contact: If participants have any queries about this research they may email the researcher (olive.maithaz@mail.dcu.ie). Alternatively, if participants have concerns about this study and wish to contact an independent person, they may contact: **The Secretary, Dublin City University Research Ethics Committee, c/o Research and Innovation Support, Dublin City University, Dublin 9. Tel: 01-7008000, E-mail: rec@dcu.ie.**

Legal Limitations to Data Confidentiality: As part of the DCU ethics approval process, participants must be aware that confidentiality of information provided cannot always be guaranteed by researchers and can only be protected within the limitations of the law - i.e., in certain cases, it is possible for data to be subject to subpoena or mandated reporting by some professions.

Consent: Prior to starting the interviews, the participants will give written consent. This consent means that the participant has read and understood the information as outlined above, that they consent to the interview being recorded and that the participation is voluntary.

PERSONAL DATA SCHEDULE

Unit/Project: PhD, CRAFTING A FIT: MANAGING RECURRING TRANSITIONS BETWEEN MANAGERIAL, SPECIALIST AND TECHNICAL ROLES

Purpose of the PDSS:

1. To list the categories of personal data held or processed by this research project.
2. To set out the security measures, practices and controls to be applied for each category of personal data listed.
3. To guide the researcher as to their responsibilities when handling, processing or interacting with the personal data listed in any way.

1. Panel	Schedule Reference
2. Type, category or description of the personal data	Participant emails
3. Normal or Special (aka. Sensitive) personal data	Normal
4. Format of the data (Electronic / Paper / Both)	Electronic
5. Purpose for processing the data	Coordination of interviews only. They will be kept separate from the data.
6. Legal basis for processing the data	A, Consent
7. Responsibility for the security of the data	Researcher, DCU PhD student – Olive Wachera Maitha
8. Who may access the data?	Researcher, DCU PhD student – Olive Wachera Maitha
9. Who may amend the data?	Researcher, DCU PhD student – Olive Wachera Maitha
10. With whom may the data be shared?	Researcher, DCU PhD student – Olive Wachera Maitha
11. Safeguards and controls to be applied to the data by Unit staff / Research Team	<ul style="list-style-type: none"> • Participant emails will be used for coordination purposes only • The email addresses will be kept separate from the data
12. How long is the data to be held/retained?	The coordination emails will be deleted as soon as they have served their purpose.
13. Responsibility for the panel 12 task is assigned to?	Researcher, DCU PhD student – Olive Wachera Maitha
14. Method of disposal for the data	<p>The data will be disposed as per below:</p> <ul style="list-style-type: none"> • How: The emails will then be deleted from the inbox folder, the trash folder and any cloud mail backup. • When: Emails relating to coordination will be deleted as soon as they have served the intended purpose. • By whom: The researcher will be responsible for the disposal of the data and to ensure that there are no traces of it left after the described timeline.
15. Is the data shared outside of DCU?	No, the data will not be shared outside of DCU
16. Any other comments?	N/A



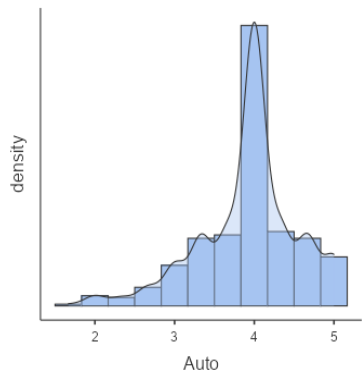
Principal Investigator
Date

Olive Maitha
26th November, 2021

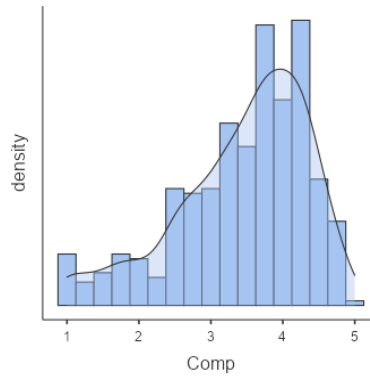
Appendix H Participant Hybrid Roles

Pseudonyms	Hybrid Roles	Gender	Years in Hybrid Role
Aaron	Airline Captain	Male	15 years
Bianca	Aviation Software Developer	Female	6 years
Charlie	Bio-Tech Engineering Manager	Male	5 years
Dave	Engineering Manager – Pharma	Male	6 years
Eoin	Engineering Manager - Tech	Male	13 years
Frances	IT Business Consultant Lead	Female	4 months
Gerry	IT Manager	Male	6 years
Henry	Operations Engineer - Pharma	Male	3 years
Ian	Operations Engineer – Aviation	Male	2 years
James	Operations Systems Engineer - Pharma	Male	1 year
Kieran	Security Systems Manager	Male	5 years
Liam	Senior Engineering Manager	Male	3 months
Marc	Senior Scientist Manager	Male	8 years
Niall	Software Development Lead	Male	3.5 years
Oisín	Software Engineer	Male	26 years

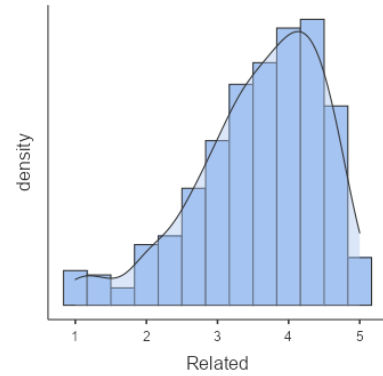
Appendix I Histograms



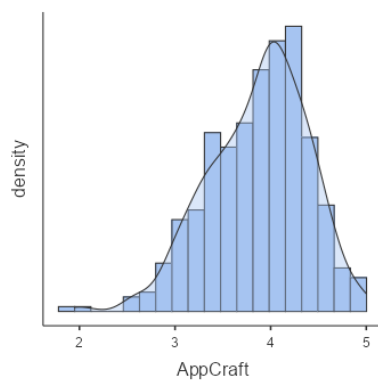
Autonomy



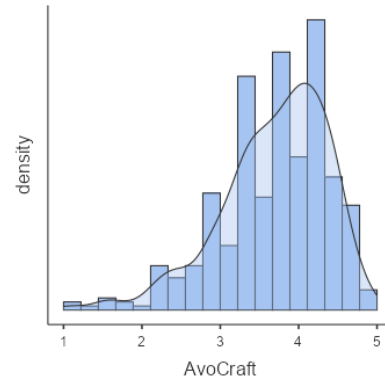
Competence



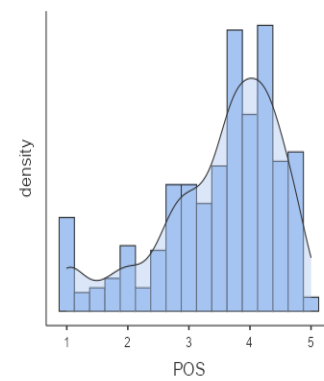
Relatedness



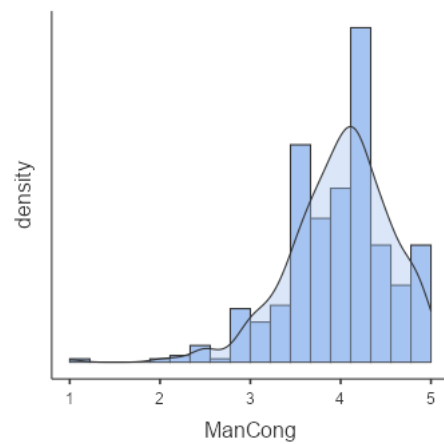
Approach Crafting



Avoidance Crafting



Perceived Organizational Support



Managerial Congruence

Appendix J

Contributions Table

	Supported	Developed	New
Theory	Work role transition (Nicholson, 1984)	Built on micro-transition research which has previously focused on work-life transitions as opposed to work role transitions (Ashforth, Kreiner and Fugate, 2000)	<p>Considers micro-transitions in hybrid roles, that is, dual technical/scientific roles and managerial roles</p> <p>This thesis builds on that gap in the work role transition theory by considering micro-transitions within formal organizational roles. Specifically, it does so by progressing the view of hybrid roles.</p>
		The research in this area has mainly focused on permanent transitions between roles, such as promotions, transfers, and retirements (West, Nicholson and Rees, 1987; Ashforth and Saks, 1995).	/By spotlighting micro-transitions that occur within these (dual) hybrid roles. These findings are the first to depict a crafting process through such transitions, where hybrid managers can perform dual roles by continuously adjusting or crafting different aspects of the roles as they micro-transition between them. This brings us to the second area of theoretical contribution, job crafting.
	Job crafting (Wrzesniewski and Dutton, 2001; Tims and Bakker, 2010; Tims, Derks and Bakker, 2016; Bruning and Campion, 2018)		<ol style="list-style-type: none"> 1. Uses job crafting theory to empirically test how hybrid managers can either expand or reduce their roles so that they can become more congruent with the managerial role. 2. The first to represent a crafting process using the concept of micro-transitions, where through continuous crafting, hybrid managers can perform their dual roles.

			Previously, job crafting has been understood through the lens of seeking resourcing and reducing demands therefore, this research provides a new perspective. As such, this thesis proposes that having resources (needs) satisfied in the first place, is fundamental to crafting and that this motivates crafting
			This is significant because we learn more about how the constant micro-transitions can vary the choice of crafting behaviour (Bruning and Campion, 2018; Ebert and Bipp, 2021). It indicates that hybrid managers may be motivated differently to adjust their task boundaries, and this may impact how they realize their managerial goals. It also highlights the kinds of training resources that are valuable to hybrid managers during these micro-transitions.
		Job crafting theory has predominantly been focused on lower-level employees, with little research attention being given to managers as an occupational group (Roczniewska and Puchalska-Kamińska, 2017), a gap that this research has addressed	Additionally, by considering crafting of dual roles, this thesis broadens the scope and application of job crafting research which previously focused on single roles (Wrzesniewski and Dutton, 2001; Tims and Bakker, 2010).
		Although previous attempts have been made to study dual roles, it has been in the context of roles at work and at home and how to achieve work-life balance (Ashforth, Kreiner and Fugate, 2000), however, research on how crafting is engaged in dual formal work roles, is scant	

	Perceived Support	Organizational	Research suggests that a high level of POS can encourage crafting behaviour because it increases resources (Deci and Ryan, 2000; Gagné <i>et al.</i> , 2010; Cheng and O-Yang, 2018). This thesis found that crafting, being a person-centric process, may yield the kinds of organizational supports needed by hybrid managers to differ among individual hybrid managers. Specifically, the stage of transition may guide this support requirement. For instance, structured support is more valuable in the early stages of the transition. With more experience, the hybrid manager may be less reliant on structured support as they know how to access the required resources.	
Conceptual	Job crafting (Bruning and Campion, 2018)		A fundamental assumption within the approach crafting and avoidance crafting research suggests that approach crafting is more superior to avoidance crafting as the latter tends to have negative implications such as turnover intentions.	<ol style="list-style-type: none"> 1. Broadens the discussions around crafting, to manage increasing role demands, by showing that in managerial roles, both forms of crafting can be beneficial. 2. There is not much research on crafting in the context of a managerial role. Therefore, the current operationalization of crafting is not sensitive to how reducing role demands would impact the people management aspects of their role.

Empirical Evidence	Research has shown that work role transitions require an adjustment on the part of the role holder and the role they hold.	Previous research has shown that crafting can be effective for managing an increased workload	Work role transition theory has only been applied for transitions across single roles but not from a single role into a dual one. Similarly, crafting has been studied as a bottom-up approach from managing work among lower level employees but not for managing role diversity among managers
	Job crafting (Bruning and Campion, 2018)	To contribute towards filling this gap, this thesis empirically tested the proposed approach-avoidance crafting taxonomy. It aimed to understand how hybrid managers use crafting to navigate the increasing demands that arise from their micro-transitions and how this leads to managerial congruence.	<p>In doing so, it supports previous suggestions that job crafting behaviour is neither good nor bad (Dierdorff and Jensen, 2018; Kim and Beehr, 2018). However, it contradicts the proposition by the taxonomy's proponents', that approach crafting is superior to avoidance crafting and that the latter is used with the intention of turnover (Bruning and Campion, 2018)</p> <p>However, it contradicts the proposition by the taxonomy's proponents', that approach crafting is superior to avoidance crafting and that the latter is used with the intention of turnover (Bruning and Campion, 2018). It was found that hybrid managers engage in avoidance crafting behaviour to manage their increasing demands and to provide opportunities for their teams to grow and develop.</p> <p>This improves our understanding that avoidance crafting may be beneficial to the individual and their team rather than just benefitting the individual by reducing their role demands. It is possible that the use of either approach crafting or avoidance crafting as a role management strategy (Carton and Ungureanu, 2018), is determined by the employee's level in the</p>

			organization and in this case, it is driven by the desire to achieve managerial congruence. The role of crafting towards managerial congruence has not been explored previously and as such, it is an important theoretical contribution.
		The findings also have implications for job crafting measures aimed at managers. Avoidance crafting is currently measured as withdrawing from bothersome time-consuming tasks, but it does not take into account the presence of structures that support avoidance crafting as a developmental tool for the team	This thesis found that with proper protocols, it is possible to engage in avoidance crafting and have it benefit both the hybrid manager and their team. Therefore, the items measuring avoidance crafting may not be suited for measuring job crafting for managers. However, it is also possible that there are other types of avoidance crafting that may be detrimental that current measures are not capturing.
		The findings also have implications for job crafting measures aimed at managers. Avoidance crafting is currently measured as withdrawing from bothersome time-consuming tasks, but it does not take into account the presence of structures that support avoidance crafting as a developmental tool for the team. This thesis found that with proper protocols, it is possible to engage in avoidance crafting and have it benefit both the hybrid manager and their team. Therefore, the items measuring avoidance crafting may not be suited for measuring job crafting for managers. However, it is also possible that there are other types of avoidance crafting that may be	

		detrimental that current measures are not capturing.	
Context	Previous research on work role transitions has considered entry into management by individuals with a technical background whilst crafting considers upward management by low level employees	Previous research on crafting has considered it for signal role positions but the current research will apply this to dual roles	This research considers crafting as a coping mechanism for managers as a self-management strategy
Knowledge of Practice	Work role transition research has been targeted to line managers and HR whilst crafting research has been directed at line managers as supervisors of the employees engaging in crafting	Building on the audience of work role transition research, crafting will be directed to managers but instead of empowering it for use by others, it will be for their own personal use	Managers in dual role positions will know how to remain self-aware as they go about doing their work. They will be better placed to more consciously adjust their tasks, relations and cognitive responses as they transition between the roles they are performing.
	For practice, it sheds light on the motivations behind a hybrid manager's choice, to engage either approach crafting or avoidance crafting behaviours, when attempting to manage micro-transitions between their dual roles.		

(Adapted from Farndale, 2004)