PROTEAN AND BOUNDARYLESS CAREER ATTITUDES AND EMPLOYEE WORK OUTCOMES: THE MEDIATING ROLE OF JOB CRAFTING

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Field of Study: Organisational Behaviour and Human Resource Management

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ABSTRACT

Despite the recent popularity of the protean and boundaryless career model in the literature, little empirical work has been done to examine the employee work outcomes of these career predispositions, particularly in terms of the psychological processes that link job crafting behaviour to these outcomes. As such, this study examined the mediating role of job crafting behaviour on the relationships between protean and boundaryless career attitudes and employee work outcomes. Regulatory focus theory was used as the theoretical foundation to explain the research model of this study. All the measures were adopted from the established work of previous researchers. Cross-sectional survey data were collected using self-administered questionnaires distributed to numerous private organisations located in Klang Valley, Malaysia. Two structured questionnaires were used to gather data from employees and their immediate supervisors. A total of 406 matched employee-supervisor questionnaires were collected over a duration of eight months from October 2013 to June 2014. Structural Equation Modeling (SEM) technique using the AMOS programme was used to validate the fit of the research model. The mediation hypotheses were analysed using the PROCESS macro for SPSS allowing the estimation of direct and indirect effects with multiple mediators. The findings confirmed that self-directed career management had indirect effects (i.e., via the mediating role of seeking resources and seeking challenges) on employee work outcomes. This study also found that job crafting behaviour was a significant predictor of several employee work outcomes. The findings showed that seeking resources of the job crafting behaviour positively influenced employability and subjective career success. Similarly, seeking challenges was found to positively influence thriving at work and employability, and negatively influence turnover intentions. These results confirmed and acknowledged that employees play a significant

role in actively shaping and influencing their work environment and outcomes. The results of this study highlighted that job crafting is a way for employees to improve their work lives and to achieve personally desirable outcomes. This also implied that with room to job craft, employees could create optimal job designs by utilising a variety of resources to achieve a better and improved outcomes at work. In particular, protean self-directed individual who crafted their level of job resources and challenging job demands were experiencing higher thriving at work, more employable and satisfied, and in turn, less likely to leave the organisation. Thus, interventions or programs that encourage employee job crafting behaviour are crucial and necessary.

ABSTRAK

Walaupun model kerjaya yang 'bermacam-ragam' dan 'tanpa sempadan' agak popular di dalam literatur baru-baru ini, kerja empirikal tidak banyak dilakukan untuk memeriksa hasil penyelidikan tentang hubungan di antara kecenderungan kerjaya, terutamanya di dalam aspek proses psikologi yang menghubungkan pengukiran kerja (*job crafting*) kepada hasil ini. Oleh itu, kajian ini bertujuan untuk mengkaji peranan pengantara pengukiran kerja pada hubungan antara sikap kerjaya bermacam-ragam (*protean*) dan tanpa sempadan (*boundaryless*) dan hasil kerja pekerja. Asas teori yang digunakan untuk menerangkan model penyelidikan ini ialah Teori Tumpuan Keberkesanan. Semua item diadaptasi daripada hasil kerja peyelidik yang lepas. Data kaji selidik cross sectional telah dikumpulkan dengan menggunakan borang soal selidik yang diagihkan kepada pelbagai organisasi swasta yang terletak di Lembah Klang, Malaysia. Dua borang soal selidik yang berstruktur telah digunakan untuk mengumpul data dari pekerja dan penyelia mereka. Sebanyak 406 borang soal selidik pekerja-penyelia yang dipadankan telah dikumpulkan sepanjang tempoh lapan bulan dari Oktober 2013 hingga Jun 2014. Teknik model persamaan struktur (SEM) yang menggunakan program AMOS digunakan untuk mengesahkan model penyelidikan ini. Hipotesis pengantaraan dianalisis menggunakan makro PROSES secara SPSS membolehkan anggaran kesan langsung dan tidak langsung dengan pelbagai pengantara. Hasil kajian ini mengesahkan bahawa pengurusan kerjaya kendiri (*self-directed career management*) mempunyai kesan tidak langsung (iaitu, melalui peranan pengantara mencari sumber dan mencari cabaran) kepada hasil kerja pekerja. Kajian ini juga mendapati bahawa pengukiran kerja adalah peramal yang signifikan kepada beberapa hasil kerja pekerja. Dapatan kajian menunjukkan bahawa pengukiran kerja untuk mencari sumber (*seeking resources*) itu mempunyai pengaruh yang positif kepada

kebolehpasaran (*employability*) dan kejayaan kerjaya subjektif (*subjective career success*). Begitu juga, mencari cabaran (*seeking challenges*) didapati mempengaruhi berkembang maju dan kebolehpasaran secara positif, dan mempengaruhi keinginan berhenti kerja (*turnover intentions*) secara negatif. Keputusan ini mengesahkan dan mengakui bahawa pekerja memainkan peranan penting dalam membentuk dan mempengaruhi secara aktif persekitaran dan hasil kerja mereka. Keputusan kajian ini menegaskan bahawa pengukiran kerja adalah satu cara untuk pekerja meningkatkan kehidupan kerja mereka dan untuk mencapai hasil yang diinginkan secara pribadi. Ini juga membawa maksud bahawa dengan ruang untuk kraf kerja, pekerja boleh menghasilkan rekabentuk kerja yang optimum dengan menggunakan pelbagai sumber untuk mencapai hasil yang lebih baik di tempat kerja. Secara khusus, pekerja yang mengukir tahap permintaan dan/atau sumber pekerjaan telah mengalami lebih tinggi berkembang maju di tempat kerja, menpunyai kebolehpasaran yang tinggi dan berpuas hati, dan seterusnya, kurang berkemungkinan untuk meninggalkan organisasi. Oleh itu, intervensi atau program yang mengalakan kelakuan pengukiran kerja adalah penting dan diperlukan.

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Chan Wai Sei

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LIST OF ABBREVIATIONS AND SYMBOLS

ABBREVIATIONS

AGFI	Adjusted Goodness-of-fit Index
AMOS	Analysis of Moment Structures
ASV	Average Shared Variance
AVE	Average Variance Extracted
BM	Boundaryless Mindset
CFA	Confirmatory Factor Analysis
CFI	Comparative Fit Index
CITC	Corrected Item-Total Correlation
CMIN/DF	Normed Chi-square
CR	Composite Reliability
CVR	Content Validity Ratio
D-A	Demand-Abilities
EFA	Exploratory Factor Analysis
GFI	Goodness-of-fit Index
HR	Human Resource(s)
HRD	Human Resource Development
JC	Job Crafting
JD-R	Job Demand-Resources
KMO	Kaiser-Myer-Olkin
MI	Modification Indices
ML	Maximum Likelihood
MLE	Maximum Likelihood Estimation
MSV	Maximum Shared Variance
N-S	Needs-Supplies
OMP	Organisational Mobility Preference
PCA	Principal Components Analysis
PCLOSE	p of Close Fit
PE	Perceived Employability
PNFI	Parsimony Normed Fit Index
PRATIO	Parsimony Ratio
RMSEA	Root Mean Square Error of Approximation

RO	Research Objective
RQ	Research Question
SC	Seeking Challenges
SCS	Subjective Career Success
SDCM	Self-directed Career Management
SEM	Structural Equation Modelling
SMC	Squared Multiple Correlations
SPSS	Statistical Package for the Social Sciences
SR	Seeking Resources
SRW	Standardised Regression Weight
S-V	Supply-Value
TI	Turnover Intentions
TLI	Tucker-Lewis Index
TW	Thriving at Work
VDCO	Values-driven Career Orientation
VIF	Variance Inflating Factor

SYMBOLS

±	Plus or minus
<	Less than
>	More than
≥	Equals or more than
p	Probability level
χ^2	Chi-square
Df	Degrees of freedom
μ	Mean
β	Beta

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CHAPTER 1: INTRODUCTION

1.1 Background of the Study

Within the contemporary careers literature, there have been debates about the shift from the traditional organisational career to the new career model of protean and boundaryless careers. The notion of these new career concepts emerged as a result of the substantial change in the nature of careers and work environment over the past few decades (Sullivan & Baruch, 2009; Sullivan, Carden, & Martin, 1998). Market forces such as globalisation, rapid advancement and development in technology, have increased the importance of structural flexibility and have forced organisations to become leaner to compete in a volatile economic environment (Defillippi & Arthur, 1994). To survive in an increasingly volatile economy and to remain flexible and competitive in turbulent times, organisations are forced to employ various strategies such as downsizing, delayering, restructuring, outsourcing and layoffs, and have become reluctant for investing in a lifelong relationship with their employees (Greenhaus, Callanan, & DiRenzo, 2008).

These changes in the working environment have significantly altered the employment relationships (Grame, Staines, & Pate, 1998) and career patterns (Biemann, Zacher, & Feldman, 2012; Vinkenburg & Weber, 2012), and have produced diminishing feelings of job security among employees (Smith, 2010). Today, facing with much uncertainties in the labour market and the reduced opportunities for internal promotion, employees can no longer anticipate a lifelong relational contract with their employers. Under the traditional relational contract, employees traded their loyalty for job security. In the new transactional contract, there are lower expectations for long-term employment, and employee productivity is exchanged for salaries, training and opportunities to develop

career capabilities and employability (Cappelli, 1999; Mirvis & Hall, 1994). Instead of expecting lifelong employment with a single employer, or a steady career progression within a single organisation, today's employees anticipate employed by several organisations during their career life in transactional relations that may allow them to stay valuable and marketable to future employers.

Today, more and more individuals are becoming aware of the importance of enhancing their own employability and also self-managing their careers (Direnzo & Greenhaus, 2011; Fugate, Kinicki, & Ashforth, 2004). This has led to an increased research interest in individuals as agents in shaping their own careers i.e. the notion of the protean career (Forrier, Sels, & Stynen, 2009), as well as the boundaryless career (Arthur & Rousseau, 1996). The characteristics of these career concepts are: less dependency to organisations, career self-management, emphases on individual values over organisational values, frequent career transitions, greater career mobility, and nonlinear career path.

Both protean and boundaryless career concepts were developed in the late 20th century. These two concepts have become increasingly relevant in today's rapid changing and unsettled economy and working environment. "Protean career" is a concept first developed by Hall in 1976 while the "boundaryless career" concept was devised for a conference theme and then popularised by Arthur (1994). The term 'protean' was derived from the metaphor of the Greek god Proteus, who could alter his shape as he wishes. Hall illustrates the protean career concept as pursuing personal meaning together with the "path with a heart" (Hall, 1996a, p. 10). The protean career, as opposed to the traditional career, is described as a career that is driven and managed by the person, not the organisation (Hall, 1996b; Hall, 2004). It encompasses the core values of freedom and growth, focusing on identity changes and continuous learning in organisations (Hall, 2004). According to Hall, those who embrace the protean career define success as internal, basing on the subjective (psychological success) rather than

the objective (salary and position) criteria for career success. In particular, protean careerists tend to have learning and employability rather than performance and job security goal orientations (Briscoe, Hall, & Frautschy DeMuth, 2006).

The boundaryless career is another form of career that is characterised by career paths with frequent career changes that move beyond the boundaries of a single employment setting (Defillippi & Arthur, 1994). A boundaryless career differs from the conventional career, as it places emphasis on the inter-organisational mobility and unpredictability (Arthur & Rousseau, 1996), and it is not restricted by the upward, orderly and linear career progression. Unlike the traditional careers that are bounded in well-defined roles, positions and jobs, boundaryless careers transcend individual experiences across organisations and jobs (Eby, Butts, & Lockwood, 2003). Consequently, the boundaryless careers are expected to reduce one's dependency on employers and increase career autonomy and mobility in one's work life (Arthur & Rousseau, 1996; Hall, 2002; Inkson, 2006; Inkson, Gunz, Ganesh, & Roper, 2012; Sullivan & Arthur, 2006). Both the protean and boundaryless careers have been considered to have distinctive capacities for enduring the contemporary challenges posed by current employment conditions.

As changing career patterns and the erosion of job security become more prevailing, individuals recognise the need to play an increasingly active role in ensuring their employability throughout the course of their career (Fugate et al., 2004), i.e. by engaging in job crafting activities. In fact, Baker and Aldrich (1996) speculates on the types of personal and social resources (can be acquired through job crafting) which may position individuals to take better advantage of the current changes in employment and career patterns. Engaging in job crafting activities would allow employees to foresee and create changes in the way the work is performed due to the increasing uncertainty and dynamism in the workplace (Grant & Parker, 2009). Parallel to this, a growing body

of literature has also been devoted to the study of employee job crafting, including its antecedents and outcomes. Nevertheless, there is still a lack in empirical evidence for the relationship between job crafting behaviour and employee work outcomes, such as thriving at work and employability.

1.2 Problem Statement

Despite the recent popularity of the protean and boundaryless career model in the literature, little empirical research exists to examine the work outcomes of these career attitudes (Briscoe et al., 2006; Pringle & Mallon, 2003). To date, most studies pertaining to the protean and boundaryless careers have focused more on the nature of the constructs, its operationalisation and measurements (Briscoe et al., 2006), why or how an individual may develop these career attitudes (Crowley-Henry, 2007; Sargent & Domberger, 2007) as well as the motivations, inclinations, and individual characteristics that led to the adoption of these career attitudes (Briscoe et al., 2006; Chan et al., 2015; Segers, Inceoglu, Vloeberghs, Bartram, & Henderickx, 2008). As such, there is a remarkable gap in the literature to examine the impact of these career predispositions.

Greenhaus et al. (2008) presented a conceptual model on boundaryless career perspectives that incorporated job crafting as a type of non-traditional boundary crossing or a form of within-job mobility pattern associated with the protean career attitudes. So far, only two studies (Ko, 2011; Leana, Appelbaum, & Shevchuk, 2009) have considered the effects of certain work orientations (i.e., job, career and calling) on employees' job crafting behaviour. Thus far, to the best of my knowledge, no empirical research have addressed this gap, and there is not much known about whether individuals with protean and boundaryless career orientation are more prone to engage in job crafting behaviour. Therefore, this study aims to bridge this gap by examining the relationships between these career attitudes and individual job crafting behaviour.

Today, either out of necessity or by own choice, individuals are experiencing greater career autonomy and flexibility as compared to any time in the past. Furthermore, job crafting has been seen as a mechanism for individuals to obtain more resources and to take charge on certain aspects of their work to accomplish personal desirable outcomes or to avoid undesirable consequences at work (Bakker & Demerouti, 2014). Despite its potential in helping individuals to deal with and to adapt to the changing work environment, research in job crafting is still in its infancy stage (Demerouti & Bakker, 2014). Prior studies have studied the effects of job crafting behaviour on organisational commitment (Ghitulescu, 2006), perceived control and readiness to change (Lyons, 2008); work engagement (Bakker, Tims, & Derks, 2012) and performance (Leana et al., 2009). Little is known about the effects of job crafting behaviour on other aspects of employee work outcomes, such as thriving at work, employability, career success and turnover intentions. Thus far, the published research lack empirical examination of the positive work outcomes that result from job crafting behaviour and the process through which it may lead individuals to attain personally meaningful goals. As such, this study aims to extend the existing literature by empirically examining the relationship between job crafting behaviour and employee work outcomes.

Most of the existing research have not considered the psychological processes that associate protean and boundaryless career attitudes to job crafting behaviour and subsequently to employee work outcomes. Therefore, this study aims to examine the mediating role of job crafting behaviour on the relationships between protean and boundaryless career attitudes and the positive employee work outcomes, namely thriving at work, employability and subjective career success.

Furthermore, there has been a traditional presumption that self-directedness and proactive components of the protean career would stimulate an increased tendency and pull-motives of employees' turnover intentions (Nauta, Van Vianen, Van der Heijden,

Van Dam, & Willemsen, 2009; Sturges, Guest, Conway, & Davey, 2002). This study argues that the protean and even the boundaryless career attitudes alone would not predict turnover intentions. In fact, it is the contention of this study that employees embracing these career attitudes are more likely to remain in their organisations through crafting activities. Drawing on regulatory focus theory (Higgins, 1997, 1998), this study proposes that the employee work outcomes is best understood when the joint effects of employee dispositions and their job crafting behaviour are taken under consideration. Thus, this study aims to advance the understanding of the impact of protean and boundaryless career attitudes on turnover intentions through job crafting behaviour. Also, following calls for more research on the individual differences (such as attitudes, characteristics and behaviours) as predictors of employee turnover (Felps et al., 2009; Vandenberghe, Panaccio, Bentein, Mignonac, & Roussel, 2011), this study would expand turnover literature by investigating how career attitudes affect turnover intentions via the mediating role of job crafting behaviour.

In summary, the present study thus builds on and extends prior work in four ways. First, this study extends the understanding of the protean and boundaryless career attitudes by examining their relationships with job crafting behaviour. This is grounded on the revelation that studies examining disposition factors as predictors of job crafting behaviour are rare in the literature. Second, this study sheds light on the possible effects of job crafting behaviour on the employee work outcomes. Third, this study extends prior work by examining the mediating role of job crafting behaviour on the relationships between protean and boundaryless career attitudes and employee work outcomes. Lastly, in bridging those research gaps, this study proposes to develop and test a model that incorporates several constructs in one study that link the protean and boundaryless career attitudes, job crafting behaviour and employee work outcomes. By doing so, a better understanding of how protean and boundaryless career attitudes

influence employee work outcomes via engagement in job crafting behaviour is achieved.

1.3 Objectives of the Study

The objective of this study is to draw a conclusion on the relationships among protean and boundaryless career attitudes, job crafting and employee work outcomes. Particularly, this study focuses on the direct and indirect relationships between these variables. Furthermore, this study examines the mediating role of job crafting behaviour in influencing career attitudes and employee work outcomes. Specifically, the following objectives will be addressed:

1. To establish if protean career attitudes (i.e., self-directed career management and values-driven career orientation) are related to employee job crafting behaviour.
2. To establish if boundaryless career attitudes (i.e., boundaryless mindset and organisational mobility preference) are related to employee job crafting behaviour.
3. To examine whether employee job crafting behaviour is related to employee work outcomes (i.e., thriving at work, employability, subjective career success, and turnover intentions).
4. To ascertain the mediating effect of job crafting behaviour on the relationships between protean and boundaryless career attitudes and employee work outcomes (i.e., thriving at work, employability, subjective career success, and turnover intentions).

To the best of my knowledge, no study to date has systematically examined the mediating role of job crafting behaviour in the relationships between protean and boundaryless career attitudes and employee work outcomes. As such, this is probably

the first study to establish whether job crafting behaviour mediates the relationships between protean and boundaryless career attitudes and their associated work outcomes.

1.4 Scope of the Study

This study is viewed as part of a larger effort by researchers to understand the antecedents and outcomes of job crafting within the organisational context. The focus of this study is on the protean and boundaryless career attitudes as antecedents of employee job crafting behaviour. Then, this study also examines the potential employee work outcomes of job crafting behaviour, including thriving at work, employability, subjective career success, and employee turnover intentions. The data for this study were collected from numerous private organisations located in the capital of Malaysia, Kuala Lumpur and its closest neighbour, the state of Selangor. Participants of this study are employees in a wide range of industries, including education, telecommunication and information technology, manufacturing, bank and financial services, hospitality and tourism and construction sectors. Therefore, the results of this study could be generalised across more industries compared to studies that are limited to participants from a single industry or organisation.

1.5 Significance of the Study

This study aims to contribute to the existing literature in this area by testing the relationship of the protean and boundaryless career attitudes with several pre-determined factors including thriving at work, employability, subjective career success, and turnover intentions via the intervening variable of job crafting behaviour. The following sub-sections describe the theoretical and practical significance of this study.

1.5.1 Theoretical Significance

Although the literature on protean and boundaryless careers consistently speculates positive relationship with employability and some other employee work outcomes, these

presumptions await empirical testing. By examining the mediating role of job crafting behaviour in the career attitudes and work outcomes relationship, this study aims to present a more dynamic picture of how protean and boundaryless career attitudes shape individuals' behaviours at work. Briscoe and Hall (2006) call for more research in examining the relationship between various career attitudes and specific opportunities related to individuals' motivation to change and their change strategies. Job crafting is a form of change strategy initiated by individuals in which they alter their jobs to fit their personal preferences, plans, and career goals. Hence, this study advances research by linking career attitudes to job crafting behaviour and employee work outcomes and also addresses the call by Hall and Heras (2010) for research on how individuals' career orientations and anchors affect their job crafting behaviour. Specifically, this study contributes to the theory by developing a theoretical framework to examine empirically the relationships between protean and boundaryless career attitudes, job crafting, thriving at work, employability, subjective career success as well as turnover intentions, thus providing a greater conceptual and empirical clarity among these constructs.

1.5.2 Practical Significance

This study contributes empirically to practice because it highlights the need for employers to be aware of the changing career attitudes due to the changing work environment, which may affect employee behaviour and work outcomes such as job crafting behaviour, thriving at work, employability, subjective career success, and turnover intentions. With the knowledge of how individuals' career attitudes can influence their propensity to engage in job crafting, this study provides a better understanding of the effect that an individual employee can have on his or her work environment. Thus suggesting that managers may want to consider implementing strategies or interventions such as providing employees with more autonomy and opportunities to craft their jobs to be more in line with the organisational goals and

objectives. Furthermore, it is important to have a better understanding of how job crafting behaviour may influence work outcomes such as employees' thriving at work, their employability level, subjective career success, as well as their intentions to turnover. The findings of this study, therefore, provide insights into a possible antecedent of the positive employee work outcomes that would allow employers to provide better attention and care to their employees' career needs. This can lead to an improved employer-employee relationships.

Given the existence of the protean and boundaryless careerists in the contemporary work environment, and the influence of these attitudes on employee job crafting and work outcomes, policy makers and employers may have no choice but to acknowledge employees' needs and understand their characteristics. Having a knowledge of the positive influence of these career attitudes on job crafting behaviour would help policy makers to redesign programmes that would help to develop these attitudes. Having a better understanding of the protean and boundaryless individuals would help employers and HRD practitioners to better manage their learning and development needs. A study by Park and Rothwell (2009) found that providing employees with an appropriate organisational learning climate would better foster career self-management, a behaviour that is highly sought after by the protean careerists. Providing more opportunities to job craft (i.e., to seek for more challenging tasks), for instance, may help fulfil the needs of the protean careerists for career growth and advancement. This in turn may enable employees to achieve greater career satisfaction, and ultimately reduce the employee intentions to quit.

1.6 Organisation of the Thesis

In total, this thesis is divided into seven chapters: introduction, literature review, research model and hypothesis development, research methodology, results, discussion, as well as and the implication and conclusion. Chapter 1 provides an overview and

background of the study. The research problem, significance, scope and objectives of the study are covered in this chapter.

Chapter 2 reviews the relevant past theoretical and empirical works on the variables that are examined in this study. Among the variables that are reviewed are protean and boundaryless career concepts, job crafting behaviour, thriving at work, employability, subjective career success, and turnover intentions.

Chapter 3 explains the development of the research model and hypotheses of this study. The chapter describes the relationships among the research constructs and justifies how this study bridges the gaps in the literature. The research model is constructed based on these rationalisations.

Chapter 4 depicts the research design, methodology and approaches used in the current study. It covers the philosophical position and research design, sampling procedure, selection of the research measures, development of the survey instrument, as well as the data collection procedures. The chapter concludes with a description of the statistical techniques used to analyse the data collected from the survey.

Chapter 5 establishes the results and findings in line with the stated objectives of the study. It begins with the descriptions of the data preparation process, demographic characteristics of the research samples, and the descriptive statistics of the research constructs. This is followed by the results of item-total correlations analysis, Exploratory Factor Analysis (EFA), reliability assessment, Structural Equation Modeling (SEM) analysis and mediation analysis. The chapter concludes with a summary of the hypotheses testing results.

Chapter 6 discusses the interpretation of the research findings and compares them with the theory and the findings of past theoretical and empirical work. The results of the study are summarised, discussed and interpreted in light of the regulatory focus theory

and other established theories from the literature. Chapter 7 discusses the theoretical and practical implications of the research findings. This chapter concludes with the limitations of the study and some recommendations for future research.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

This chapter reviews literature that is relevant to this study leading to the identification of the research gaps in the literature and to clarify the interconnection between the key variables in the present study. The relevance of the protean and the boundaryless career attitudes in today's workplace, along with the implications of job crafting behaviour on employee work outcomes are highlighted. This chapter begins with the review of the career literature, particularly on the protean and boundaryless career concepts. This is followed by a comprehensive review of the previous studies on job crafting behaviour, as well as several employee work outcomes relevant to this study. This includes thriving at work, employability, subjective career success, and turnover intentions.

2.2 Protean Career Attitudes

Although the protean career concept has provoked extensive discussion in the career literature, there is not much consensus on an acceptable definition. Principally, there are few notions of protean career, including: seeking intrinsic rewards from work (Hall, 1996a), serving the whole person, family, and life purpose (Hall, 2004), higher adaptability about performance and learning demands (Briscoe & Hall, 2006), an on-going re-invention of the self (Inkson, 2006), changing focus from the 'work self' to that of the 'whole self' (Hall & Chandler, 2005), and taking a whole life perspective (Briscoe et al., 2006). Because of the lack of consistency among definitions, empirical studies on the protean career was impeded and remained somewhat stagnant. Thus, scholars have proposed that, instead of trying to define the protean career concept, it is more practical and appropriate to view the concept as a psychological orientation influencing employees to specific career behaviours (Inkson, 2006). As such, Briscoe and Hall (2006) equate the protean career as an attitude that guides action. Specifically,

it is a form of career mindset or attitude that signifies autonomy, self-direction, and making career decisions according to one's personal values.

Despite the growing scholarly interest in the protean career concept, empirical evidence is still limited, especially beyond the US cultural context from where this concept originated. Thus far, much of the research on protean career attitudes have been concentrating on the nature of the constructs, its operationalisation or measurements (Briscoe et al., 2006), and the antecedents of these career attitudes (Briscoe et al., 2006; Segers et al., 2008). Subsequent to this, few studies have started to investigate the outcomes of these career attitudes, specifically looking at the effects of protean career attitudes on expatriates' career satisfaction, life satisfaction, and intention to stay in the host country (e.g., Cao, Hirschi, & Deller, 2013); job search activity and job improvement (Waters, Briscoe, Hall, & Wang, 2014); and work-life balance (Direnzo, Greenhaus, & Weer, 2015).

In addition to this, a growing body of literature has also been devoted to the study of employability, as a result of the changing career patterns, erosion of job security and the increasing importance of individual employability within the boundaryless career era. Furthermore, some authors (Arthur & Rousseau, 2001; Baker & Aldrich, 1996) have been speculating on the types of personal and social resources (i.e. in terms of how individuals craft job resources) which may enable some individuals to take better advantage of the current changes in careers and employment patterns. In this increasingly uncertain and dynamic world of work (Grant & Parker, 2009), job crafting has been acknowledged as a promising new approach that enable employees to anticipate and create changes (Grant & Parker, 2009; Oldham & Hackman, 2010; Petrou, Demerouti, Peeters, Schaufeli, & Hetland, 2012). Also, it is argued that job crafting can be a new approach to job redesign through which proactive individuals may create a pleasant work environment that positively contributes to their job performance and

outcomes (Tims, Bakker, & Derks, 2014). Nevertheless, studies that examine these associations, especially on how protean career may potentially influence job crafting behaviour, and other employee work outcomes are limited.

This study employs the conceptualisation of the protean career attitudes developed by Hall (2004) and validated by Briscoe et al. (2006). They are based on two dimensions, namely the *self-directed career management* and the *values-driven career orientation*. These two dimensions of the protean career attitudes have their distinct meanings (Briscoe et al., 2006) and have been widely used in the past studies (e.g., Briscoe, Henagan, Burton, & Murphy, 2012; Çakmak-Otluoğlu, 2012; Enache, Sallan, Simo, & Fernandez, 2011). The following sub-sections provide explanations on the two distinct dimensions of the protean career attitudes.

2.2.1 Self-directed Career Management

Self-directed career management reflects the extent to which individuals feel independent and in charge of their own career (Briscoe et al., 2006). It implies one's pro-activeness in taking independent actions to pursue ongoing career opportunities. In other words, a protean self-directed individual will have strong concerns for autonomy and personal control over career decisions. According to Hall (2004), a protean self-directed person possesses the capability to be adaptive concerning performance and learning demands. Besides, they also have self-directedness, willingness and ability to pursue new opportunities and update skills, together with the need for personal responsibility, continuous learning, and autonomy (Hall, 2004).

2.2.2 Values-driven Career Orientation

Values-driven career orientation, on the other hand, describes the degree to which personal values drive the individual's career decisions as opposed to extrinsic values, such as money and promotion (Hall, 2004). Specifically, values-driven career oriented

individuals guide the direction of their careers consistent with their personal values, rather than with the values of the society or organisation (Briscoe et al., 2006). This implies that individuals who are values-driven in their career orientation are aware of their personal values and can utilise them to guide their career and development decisions. In other words, to be values driven, one is being clear about his or her interests, needs, values, abilities as well as motivation. According to Briscoe and Hall (2006), it is these personal values and goals that motivate career decisions and establish the criteria for experiencing career success.

2.3 Boundaryless Career Attitudes

The boundaryless career attitudes is another key career concept developed by Hall and tested by Briscoe and his colleagues in 2006. Arthur (1994) defines the boundaryless career as the career that is independent of the conventional organisational career principles and arrangement. Boundaryless career is a form of career which is neither bounded to a single employer nor represented by an organised structure (Arthur & Rousseau, 1996). It is characterised by the move from a stable to a dynamic employment; focusing on inter-organisational rather than intra-organisational phenomena. Specifically, boundaryless careers are the opposite of the organisational careers, which is frequently portrayed as a form of career that provides higher mobility beyond organisational boundaries. As such, individuals with boundaryless career attitudes are proactive in their pursuit of career goals and prepared to cross beyond organisational boundaries to gain diverse working experiences.

Briscoe et al. (2006) maintained that protean and boundaryless career attitudes are related yet theoretically different constructs. Nevertheless, studies that examine these two constructs separately are surprisingly limited. More so, some scholars even use the two constructs interchangeably (e.g., Harrison, 2006; Inkson, 2006). As conceptualised by Briscoe et al. (2006), boundaryless career attitudes encompass both the boundaryless

mindset (i.e., similar to one's psychological mobility) and the organisational mobility preference (i.e., similar to one's physical mobility). The subsequent sub-sections provide explanations on the two distinct dimensions of the boundaryless career attitudes.

2.3.1 Boundaryless Mindset

Boundaryless mindset, according to Briscoe and Finkelstein (2009), indicates preferences for working with other people across departmental and organisational boundaries. Individuals with this boundaryless mindset are enthusiastic about establishing and maintaining an active relationship beyond a single department and organisation (Briscoe et al., 2006). Specifically, employees with this mindset enjoy working on projects with people from numerous departments or organisations and feel enthusiastic about engaging in new experiences outside a single organisation. Nevertheless, according to Briscoe et al. (2006), possessing this boundaryless mindset does not imply actual physical or employment mobility. Rather, it implies the positive attitude toward initiating and pursuing work-related relationships with others. Thus, individuals who possess this mindset feel more comfortable or even enthusiastic about creating and sustaining active relationships beyond organisational boundaries (Briscoe et al., 2006). Few authors (Arthur, 1994; Arthur & Rousseau, 2001; Defillippi & Arthur, 1994) advocate that these individuals are likely to develop and enhance the knowing-whom competencies, which in turn provide access to resources possessed by others, entailing a source of expertise, reputation development and learning.

2.3.2 Organisational Mobility Preference

Organisational mobility preference, on the other hand, refers to one's preferences to be employed by multiple organisations, not just a single employer (Briscoe et al., 2006). Individuals embracing this attitude "would be comfortable with or even prefer a career played out across several employers" (Briscoe et al., 2006, p. 31). It indicates an attitude to conduct actual shifts among different occupations, jobs and organisations (Defillippi

& Arthur, 1994; Sullivan & Arthur, 2006). Specifically, an individual who possess high organisational mobility preference chooses to work in several different organisations by taking employment in another company. This attitude is often motivated by a person's pursuit of new learning and personal growth opportunities. It is the psychological readiness to move to a different employer to increase the returns on one's human capital (Lazarova & Taylor, 2009).

Arthur and Rousseau (1996) offer six elements of the boundaryless career concept, in which it: (a) involves movement through the boundaries of numerous employers; (b) draws validation and marketability from outside the current employer; (c) is sustained by external networks and information; (d) breaks traditional organisational assumptions on hierarchy and career progression; (e) involves declining current career opportunities for personal and/or family reasons; and (f) is according to the interpretations of the career actor who may perceive a boundaryless potential regardless of structural constraints. These elements share similar characteristics, in which they constitute the opposite of organisational careers (i.e., careers bounded within a single employment setting), and they involve both objective features (e.g., mobility) and the subjective attitude of being boundaryless (Inkson, 2006).

Table 2.1: Boundaryless versus Traditional Careers (Sullivan, 1999)

	Boundaryless Career	Traditional Career
Employment Relationship	Employability for performance and flexibility	Job security for loyalty
Organisational Boundaries	Multiple organisations	Single to two organisations
Skills	Transferrable	Organisation-specific
Measurement of Success	Psychologically meaningful work	Salary/Promotion/Status
Career Management	Individual	Organisation
Training	Formal and Informal	Formal
Milestones	Learning-related	Age-related

Note. Adapted from "The changing nature of careers: A review and research agenda," by S.E. Sullivan, 1999, *Journal of Management, 25(3)*, p. 458. Reprinted with permission.

Sullivan (1999) presents a comparison table between the boundaryless and the traditional careers (as illustrated in Table 2.1), which clearly distinguished and explained the new boundaryless careers from the traditional careers. Boundaryless careers are characterised by high-level of mobility and non-linearity; such a career differs from a traditional organisational career which is frequently connected to career paths that are moving upward, permanent, and linear within a single organisational hierarchy. As a result, transferable skills, knowledge, and abilities across multiple firms are vital to succeed in the boundaryless career era (Arthur, Priscilla, Robert, & Adams, 1995; Baker & Aldrich, 1996; Bird, 1994). Furthermore, in the boundaryless career era, individuals are driven by their personal definition of success (see Hall, 1996b; Hall & Mirvis, 1995) and the success is measured based on subjective rather than the objective criteria (Eby et al., 2003). Some other hallmarks of the boundaryless careers, as reviewed by Sullivan (1999), include: focusing on employability for performance rather

than job security; formal training and informal on-the-job learning; and emphasising on individual responsibility for career management.

While the career literature recognised the key differences between the boundaryless and the traditional careers, limited studies have been devoted to the understanding of the employee outcomes of the boundaryless careers. To date, most studies on boundaryless career attitudes have been looking at the antecedents of this career mindset. Only a few studies have examined the possible outcomes of these career attitudes, such as career satisfaction (Tolentino, Garcia, Restubog, Bordia, & Tang, 2013), external support seeking and active coping (Briscoe et al., 2012) career competencies (Colakoglu, 2011), job search effectiveness and reemployment quality (Koen, Klehe, Van Vianen, Zikic, & Nauta, 2010), organisational commitment (Briscoe & Finkelstein, 2009; Çakmak-Otluoğlu, 2012), career success (De Vos & Soens, 2008; Enache et al., 2011) and employability (McArdle, Waters, Briscoe, & Hall, 2007).

Baker and Aldrich (1996) claimed that boundaryless career is conditioned by the employees' ability to build a multi-employer career that requires the employees to continuously accumulate knowledge and overcome challenges of personal identity. There are three conditions suggested by Baker and Aldrich (1996), for a career to be boundaryless. To pursue boundaryless careers, one needs to have career histories that are characterised by high inter-employer mobility, high development of transferable knowledge and capabilities, and strong personal identity.

Nevertheless, consistent with the conceptualisations provided by Arthur and Rousseau (1996), this study considers the boundaryless career as a form of career attitudes or mindset rather an employment condition or an actual change of employers. As advocated by some scholars (Arthur & Rousseau, 1996; Briscoe & Finkelstein, 2009), there are several ways in which a career can be boundaryless, other than changing

employers. For instance, a boundaryless career can occur when one makes career decisions based on family or personal reasons, or when one obtains career validation beyond current employer, or when one perceives a boundaryless career irrespective of the structural and physical constraints. Despite this, Baker and Aldrich (1996) argue that some employees may be positioned to take better advantage in the boundaryless career era, by utilising different types of personal and social resources available in their workplace. Building on these insights, the next section covers several constructs that are relevant within the boundaryless career era.

2.4 Job Crafting Behaviour

Greenhaus et al. (2008) observed that job crafting is a specific form of mobility pattern that is rarely discussed in the protean and boundaryless career literature. Unlike the mobility between jobs or organisations, job crafting is the mobility "within" jobs which is highly relevant to those who uphold protean and boundaryless career attitudes, especially when both intra and inter-organisational mobility are impossible (Greenhaus et al., 2008). Moreover, job crafting is seen as a means of exercising self-directedness in one's job or career; enabling employees to develop their identity and to connect with others in ways that alter their work identity and meaning (Wrzesniewski & Dutton, 2001).

Job crafting refers to the voluntary actions taken by an individual to shape and redefine his or her job. It involves the ways in which employees seek to carry out their work in their own way, in which they mould their jobs to fit their personal preferences, plans, and even career goals. It includes physical and cognitive changes employees make in the task and relational boundaries of their work (Wrzesniewski & Dutton, 2001). Specifically, job crafting can occur by physically modifying the job (such as the nature a task), psychologically changing the way the job is perceived, and/or changing to whom one interacts with on the job. It is a form of self-initiated and change-oriented

behaviour at work. Consistent with the Job Demand-Resources (JD-R) model (Bakker & Demerouti, 2007; Demerouti, Bakker, Nachreiner, & Schaufeli, 2001), Tims and Bakker (2010) define job crafting as changes that employees create to balance their job demands and resources with their personal needs and abilities. This is particularly true as job crafting entails initiating changes in the job design. Therefore, the construct is operationalised in the current study, according to the types of job characteristics suggested in the JD-R model. Central to the JD-R model, there is two factors, namely the job demands and job resources that lie within every occupation and work environment. Job demands, according to Bakker and Demerouti (2007), refer to those physical, psychological, social, or organisational aspects of the job that demand continuous physical and psychological effort or skills and are therefore connected to some physiological and/or psychological costs. Job resources, in contrast, refer to those physical, psychological, social, or organisational aspects of the job that may: (a) be useful in attaining work goals; (b) reduce job demands and the related physiological and psychological costs; (c) stimulate personal development, learning, and growth (Bakker & Demerouti, 2007; Demerouti et al., 2001).

Scholars in job crafting literature have argued that the job crafting construct differ from a few different but related constructs such as job design, organisational citizenship behaviours and taking charge. For example, job crafting differs from job design in that, in job crafting, employees act as the active initiators to change elements of their jobs and relationship with others so as to revise work meaning and the social environment at work. In contrast, job design focuses on employees' passive reaction to the design of work in which the job elements are externally determined (Wrzesniewski & Dutton, 2001). Unlike citizenship behaviour, which is mostly targeted at helping others in the organisation or the organisation itself (Smith, Organ, & Near, 1983), job crafting focuses on changing the task and relational boundaries to shape work meaning and

identity. Wrzesniewski and Dutton (2001) explain that the intention of job crafting is not to promote the good of others and the organisation but to create more meaningful work for the job holder, which is very much impartial from others.

Wrzesniewski and Dutton (2001) maintain that an employee's actions of changing the elements of his or her job and the social environment at work are motivated by three personal needs, namely the need for personal control over job and work meaning, the need for positive self-image, and the need for human connection with others. This is very much related to both the boundaryless and the protean career orientations. For example, individuals with high self-directedness would want more freedom and personal control in performing their work; individuals who are driven by personal values may value affiliation and human connection over task performance; individuals with boundaryless mindset may enjoy jobs that require them to interact with people from different organisations.

Consistent with Tims, Bakker, and Derks (2012), this study examines two dimensions of job crafting behaviours, namely seeking resources and seeking challenges. Tims and Bakker (2010) posit that resources seeking can be a means of mobilising more job resources in order to cope with challenging job demands. This includes behaviours such as asking advice from supervisors or colleagues, seeking more opportunities for learning and asking feedback on one's job performance. Seeking challenges, on the other hand, is a form of behaviours that may include voluntarily taking on more responsibilities, or looking for new tasks at work when one finishes one's tasks at hand (Tims et al., 2012). Karasek and Theorell (1990) observe that challenges seeking behaviours can be stimulated by active jobs that are characterised by high job demands and high control.

For the purpose of this study, job crafting is defined as a positive and proactive employee behaviour consisting of seeking resources and seeking challenges. This study focuses on the "positive" side of job crafting, as the "negative" or dysfunctional side of job crafting, which is reducing job demands, is considered irrelevant to the boundaryless and protean career attitudes. This is because individuals immersed in the protean and boundaryless career attitudes hold a promotion focus, as they enact their careers to fulfil their aspirations, growth and advancement needs. Besides, reducing resources is a job crafting dimension that is not considered a purposeful behaviour (Hobfoll, 2001; Petrou et al., 2012).

This study focuses on how an individual's protean and boundaryless career attitudes may influence his or her job crafting behaviour and, in turn, affect his or her work outcomes. Also, this study proposes that job crafting serves as the primary conduit between protean and boundaryless career attitudes and employee work outcomes. The following section reviews the other key constructs in this study, namely the outcome variables including thriving at work, employability, subjective career success, and turnover intentions.

2.5 Thriving at Work

The notion of "thriving" has recently received much attention in the positive organisational behaviour literature although the concept of thriving has been embedded in the literature of several different fields such as psychology, medicine, social psychology, and youth development. Drawing on previous interdisciplinary studies, and following the definition provided by Spreitzer, Sutcliffe, Dutton, Sonenshein, and Grant (2005), this study focuses on employees thriving at work. The authors define thriving at work as the joint experience of learning (cognitive component) and vitality (affective component), indicating one's psychological experience of personal growth and development. Specifically, learning indicates the acquisition and application of

knowledge and skills to build capability (Edmondson, 1999), while vitality signifies the sense that one is energised (Nix, Ryan, Manly, & Deci, 1999) and has enthusiasm for life (Miller & Stiver, 1997). The two elements of thriving, learning and vitality, have been seen as a "marker" or a "thermometer" that can help employees gauge if they are 'overheating' (with a tendency for burning out) or 'too cold' (signifying stagnation and fatigue) at work. They can be used as a mechanism to assess both short-term individual functioning and long-term adaptability at work (Spreitzer et al., 2005). Spreitzer and his colleagues (2005) argue that short of any of the thriving dimension could affect the optimal level of thriving at work as both elements of thriving are combined to optimise one's level of thriving. For instance, if an employee is learning but feels exhausted, thriving deteriorates. On the other hand, if an employee feels energised and alive in his or her work but realises personal learning to be stagnant, limited thriving is experienced.

Thus far, research on thriving at work found positive associations to work-related outcomes such as well-being (Shirom, Toker, Berliner, Shapira, & Melamed, 2008), job performance (Carmeli, Brueller, & Dutton, 2009; Colquitt, LePine, & Noe, 2000), proactivity at work (Carmeli & Spreitzer, 2009), and innovative work behaviours (Carmeli & Spreitzer, 2009). More recently, Spreitzer, Porath, and Gibson (2013) found that employees who thrive at work reported better health, fewer physical complaints, much lesser doctor visits, and reduced propensity to burn out. All these enable thriving employees to sustain their performance over time. However, there are limited studies on the antecedents of thriving at work. Among the few studies on the predictors of thriving, Sonenshein, Dutton, Grant, Spreitzer, and Sutcliffe (2006) in their qualitative study found that properties of work (challenge, novelty and variety), working closely with others (i.e., with the supervisors, colleagues and clients), and organisational properties (culture, structure and physical space) enabled individuals to thrive at work. Moreover, Spreitzer et al. (2013) found that working adults in their mid-life, positive affective

resources and agentic work behaviours were significant predictors of thriving at work. This suggests that employees in all types of jobs will have the potential to thrive if they have the chance to exercise agency in their work and can create and nurture the required resources in doing their work. In another study involving university staff and non-profit managers, Spreitzer, Porath, and Gibson (2012) found that collaboration skills were the strongest predictors of thriving. Similarly, a recent study by Cullen, Gerbasi, and Chrobot-Mason (2015) found that political skills predict workplace thriving and those who possess high political skills can prioritise and strategically respond to information requests, reducing their experience of role ambiguity. The findings of these studies showed that individual differences have the likelihood to explain why some employees are more likely to thrive in their workplace. To date, however, no study has empirically examined the relationship between career attitudes and thriving at work. This study, therefore, aims to examine how different career attitudes of employees enable job crafting behaviour, which subsequently fosters learning and the feeling of vitality at work.

2.6 Employability

The body of empirical research on employability has grown in recent years, including both its antecedents (see Berntson, Sverke, & Marklund, 2006; De Cuyper, Bernhard-Oettel, Berntson, De Witte, & Alarco, 2008; Wittekind, Raeder, & Grote, 2010) and its outcomes (Berntson & Marklund, 2007; De Cuyper, Van der Heijden, & De Witte, 2011). The increased interest in employability research is partly due to the recent economic downturn experienced by the global economy that causes massive job losses, layoffs of workers, downsizing, restructuring and an increase in unemployment. Consequently, the nature of careers are undergoing changes and transitions (Baruch, 2006), and there is an erosion of job security among employees (Hillage & Pollard, 1998; van der Heijden, 2002). Several scholars (Baruch, 2001; Clarke, 2008) therefore

argue that employees need to gain employability rather than secure and lifetime employment. In fact, few authors (Carbery & Garavan, 2005; Forrier & Sels, 2003) speculate that there has been a major shift in paradigm from lifetime employment to lifetime employability. As such, the study of employability has become highly relevant and timely (Rothwell, Jewell, & Hardie, 2009), especially within the era of boundaryless career.

Employability is a broad term and can be studied from different perspectives (e.g., individual and contextual) and at various levels (eg., industrial, organisational, and individual level) (Van der Heijde & Van Der Heijden, 2006). Hence, its definitions can be very distinct, depending on the perspective from which the concept is explained. For example, from the individual perspective, the employability concept has been addressed from the notion of psycho-social (Fugate et al., 2004; McArdle et al., 2007), competency-based (Benson, 2006; Van der Heijde & Van Der Heijden, 2006; Van der Heijden, de Lange, Demerouti, & Van der Heijde, 2009), as well as dispositional approaches (Fugate & Kinicki, 2008; Nauta et al., 2009; Van Dam, 2004).

Thus, there is little consensus concerning the definition of the construct. For instance, past studies on employability have taken into account an extensive range of definitions including, but not limited to, adaptability (Fugate et al., 2004), mobility (Van Dam, 2004), career development (Sterns & Dorsett, 1994), maintaining one's position internally and externally (Rothwell & Arnold, 2007) and occupational expertise (Van der Heijde & Van Der Heijden, 2006). Specifically, Van der Heijde Van der Heijde and Van Der Heijden (2006, p. 453) define employability as "continuous fulfilling, acquiring or creating of work through the optimal use of one's competencies".

Corresponding with the major shift of responsibility for career management from employers to employees, Fugate et al. (2004) offer a definition emphasising on person

centred career adaptability. Fugate and his colleagues suggest that employability "enables workers to identify and realise career opportunities" (2004, p. 16). It encompasses three related but distinct dimensions: career identity, personal adaptability, social capital and human capital. In 2008, Fugate and Kinicki revised their original conceptualisation of employability and presented dispositional employability to the literature, covering five dimensions: career identity, work and career proactivity, career motivation, openness to changes in employment, as well as work and career resilience. This new dispositional employability emphases the importance of one' ability to "(pro) actively adapt to their work and career environments" (Fugate & Kinicki, 2008, p. 268).

Some scholars equate employability with marketability (see DiRenzo, 2010; Viney, Adamson, & Doherty, 1997) whereas others distinguish the two concepts (see De Vos, De Hauw, & Van der Heijden, 2011). For instance, De Vos et al. (2011) consider employability as the individuals' competencies such as knowledge, skills, and abilities, and their potential to fulfil, acquire or create new work. Marketability, on the other hand, is considered as a positive career outcome of this potential, namely the perceptions regarding one's added value in the internal as well external labour market. Taken together, most of these conceptualisations involve some notion of the personal resources that can positively influence career as well as work outcomes. Thus, employability, as opposed to job insecurity, enhances individual value in the workforce, offering better opportunities and security for career progression and success.

In keeping with the original Van der Heijde and Van der Heijden (2006) conceptualisation of employability, and following the conceptualisation used by De Vos et al. (2011), this study considers three essential elements of employability, namely expertise, anticipation and optimisation, and flexibility, into explaining the employability concept in this boundaryless era. The expertise dimension denotes one's knowledge, skills, and abilities required to perform various tasks adequately and to

carry out job duties and responsibilities. Anticipation and optimisation, on the other hand, entails the preparation for future work variations in an individual and creative way. Flexibility refers to a person's adaptability to variations in the internal and external labour market (De Cuyper et al., 2008; Fugate et al., 2004; Van Dam, 2004; Van der Heijde & Van Der Heijden, 2006). This definition recognises the importance of maintaining and enhancing lifetime employability, not only for the current job but also for future employment. Specifically, it stresses on the individuals' role and responsibilities to proactively promote and sustain lifetime employability.

In this study, the focus is on the subjective dimension of individual employability i.e. individuals' perceived employability. This has been widely discussed in the employability literature (Fugate et al., 2004; McArdle et al., 2007; Rothwell et al., 2009; Van der Heijde & Van Der Heijden, 2006). Perceived Employability makes people interpret their situation the way they do (i.e., regarding their ability to adjust and act in the ever-changing work environment) and motivates them to take their respective actions. Hence, this study addresses employability from an individual perspective. Furthermore, this study focuses on employees who are currently employed in various organisations. Hillage and Pollard (1998) posit that the notion of employability is related to three different career phases: (a) when moving from education to work, (b) when applying for a job while unemployed, and (c) when seeking a new job while employed. This study focuses on those currently employed individuals because the perception of being employable is essential not only for the graduates and the unemployed individuals but also for employees in the current labour market characterised by much uncertainties and insecurities.

Given that today's careers have transformed from hierarchical, lifelong employment and promised job security to multi-directional careers that endorse flexibility and short-term contracts of employment (Baruch, 2004; Bird, 1994; Hall & Mirvis, 1995), individuals

are expected to embrace career self-management and to look for ways to enhance their employability rather than relying on the employer for career planning and job security (Clarke, 2008). In other words, individuals are required to develop the capacity to predict and anticipate the skills that will be required in the future and to learn new skills instead of simply maintaining the existing skill sets. More specifically, to succeed in the new employment context and to better prepare oneself for the future, employees are required to embrace attitudes and behaviours that are more future-oriented (e.g., flexibility, adaptability and proactivity).

Today, employers expect to employ individuals with the right skills, abilities and experience but are becoming increasingly reluctant to provide continuing skill development for their employees when they have a limited expectation for long-term employment relationship (Clarke, 2008). As such, employees can no longer expect to have a job-for-life, rather, they need to engage in proactive behaviours to enhance their employability and to manage their own careers. Nevertheless, Baruch (2004) posits that organisations should invest in employability and promotes responsibilities among individual, organisational, and national for managing careers in the future. From the human capital theory's perspective, investments in employability will enhance individuals' value in the labour market (Becker, 2009). Similarly, Fugate et al. (2004) maintain that investing in employees' knowledge and skills that are generalisable and transferable, will lead to greater employee job mobility within and among organisations.

As opposed to providing transferable and generic skills training designed to prepare employees for future employment, many employers today favour firm-specific training designed to produce immediate results (Carbery & Garavan, 2005). Employers have the concern that up-skilling employees will increase the likelihood that they will quit for a better-paid position in another organisation (Baruch, 2001). For instance, a study of HR directors and managers in the United Kingdom found that organisations were reluctant

to offer training and development programmes related to strengthening individual employability, instead, they prefer to focus on organisation-specific training that would benefit their own needs (Baruch, 2001). This issue is further worsened by the changing nature of employment contracts from long-term to short-term contracts. Many employers are often reluctant to provide training and skill development to short-term contract staff since they do not anticipate a good return on their investment over the duration of the contract (Connell & Burgess, 2006). However, according to Clarke and Patrickson (2008), employers who are more willing to provide career development opportunities to enhance their employees' employability will be winners in the labour market. They will become employers of choice rather than struggling to find and retain talents. Similarly, individuals who accept their role in managing their own employability will be benefited by having more options in the labour market. More employable individuals are in turn possess higher confident in their abilities and marketability. These individuals are more capable of demonstrating initiative and maturity rather than an immature reliance on their employers (Clarke & Patrickson, 2008).

2.7 Subjective Career Success

Career success is often defined as the positive psychological or works outcomes one accumulates thru work experiences (Judge, Cable, Boudreau, & Bretz Jr, 1994; Seibert, Crant, & Kraimer, 1999). Accordingly, career success can be viewed from both objective and subjective perspectives (Hughes, 1937). Objective career success can be described as those career accomplishments that are directly observable and measurable (i.e., salary, position, organisational status, and promotions); while subjective career success is based on personal assessments of own career accomplishments which reflect the importance of one's values, mind-sets, and goals in evaluating his or her career success (Greenhaus, 2002; Judge et al., 1994). Some scholars (Arthur, Khapova, &

Wilderom, 2005; Gattiker & Larwood, 1988; Wolff & Moser, 2009) argue that the subjective appraisal of one's career success is not just affected by objective criteria, but also by intrinsic influences such as personal motivation and aspiration, social comparisons, and assessments of the situational constraints. As such, subjective career success covers both the intrinsic and extrinsic aspects of one's career and define the one's unique set of values that guide personal evaluations of success.

Moreover, in this era of boundaryless careers, subjective career success or the intrinsic dimension of success has become particularly relevant and essential because individuals in this career era are often engaging in non-linear careers and, therefore, are much more inclined to set their career plan and to determine the standards by which its success is measured (Heslin, 2005). Also, many scholars speculate that objective measures can no longer adequately capture subjective career success in this contemporary career era (Arthur & Rousseau, 1996). As the result of changes in career paths from linear and vertical promotion to non-linear, it is unlikely that hierarchical status and salary affect career satisfaction as what have been previously theorised. Hence, in view of the changed nature of modern careers, subjective career success denotes a more thorough perspective since research proposes that individuals can achieve extrinsic success, and yet still feels dissatisfied with their career (Korman, Wittig-Berman, & Lang, 1981). Furthermore, in this study, where the protean career attitudes contain values-driven dimension, stressing on personal values over organisational values, subjective career success is deemed to be a more salient measure for success. Hence, the present study chooses to use subjective career success as the indicator of career success perceived by employees.

Several studies in the past have examined the predictors of career success. Some of these studies focused on the traditional and organisational career context (see Cannella & Shen, 2001; Kirchmeyer, 2002). Many other studies on career success did not

distinguish the traditional from the non-traditional careers (see Abele & Spurk, 2009; Barnett & Bradley, 2007). However, Eby et al. (2003) argue that factors that constitute to career success for a conventional organisational career may be quite distinct from those of a non-traditional patterns of career. Individuals who embrace the protean and boundaryless career attitudes may place a higher value on career mobility, flexibility, autonomy and control in making career decisions over other factors. Lee et al. (2006) explored the definitions of career success amongst 87 part time professionals in the U.S. and Canada. The study found that the three most often occurring themes were: (a) the ability to have a life outside work; (b) having an impact or making a contribution; (c) continuing to grow professionally. Other presents but less prominent themes were upward mobility, financial or non-financial recognitions.

Ng, Eby, Sorensen, and Feldman (2005) performed a meta-analysis of 140 empirical research papers about the predictors of career success without making any distinction between the traditional and the boundaryless career patterns in the analysis. The analysis reported 26 predictors, which were grouped into four categories: (a) human capital, (b) organisational sponsorship, (c) socio-demographic status, and (d) stable individual differences. The results demonstrated that organisational sponsorship (e.g. training and skills development opportunities) and stable individual differences (e.g. proactivity, openness to experience) were more strongly related to subjective career success. The authors also call for more research to identify other predictors of career success especially within the boundaryless career research.

More recently, numerous studies began to investigate predictors of subjective career success in the contemporary career era. For instance, De Vos and Soens (2008) found that the protean career attitudes were a significant predictor of career satisfaction and that the relationship was fully mediated by the development of career insight. Furthermore, Vos, Clippeleer, and Dewilde (2009) in their longitudinal study found that

career self-management behaviours were positively related to career satisfaction among graduates during their early years of career. In a recent study by van den Born and van Witteloostuijn (2013) of professional freelancers found that both personal capital (i.e., career insight, pro-activeness, and openness) and motivational factors (i.e., flexibility, work-life balance and autonomy) were positively related to subjective career success. Likewise, O'Shea, Monaghan, and D. Ritchie (2014) examined early career employees during the economic recession in Ireland, found that autonomy and skill specialisation were positively related to career satisfaction for those who held a strong self-directed career attitude. Recently, Zhang et al. (2015) in their study of Chinese employees found that protean self-directed career attitude is positively associated with career and life satisfaction, mediated by the employees' perception of calling.

According to Judge, Higgins, Thoresen, and Barrick (1999), individuals' career success is important not only to individuals but also to organisations because an employee's personal success can eventually contribute to organisational success. Hence, factors that contribute to individuals' success in their careers and jobs are likely to help organisations to succeed in their endeavours also. Given that much of the responsibility for managing careers is shifting from employers to employees, it remains vital to identify the predictors of career success in this changing career landscape. However, some emerging variables within the new career context (e.g., the protean and boundaryless career attitudes and job crafting behaviour) have largely been overlooked in the career research. Thus, this study aims at examining the protean and boundaryless career attitudes and job crafting behaviour as antecedents to subjective career success.

2.8 Turnover Intentions

Research on voluntarily turnover and turnover intentions has been well-established over the years. Turnover intentions are commonly defined in the turnover literature as an individual's perceived probability of staying or leaving an employing organisation

(Cotton & Tuttle, 1986). Similarly, Tett and Meyer (1993) defined turnover intentions as a deliberate and conscious willfulness to quit the organisation. For Hom and Griffeth (1991), turnover intentions refer to the relative strength of one's intent towards voluntary permanent withdrawal from the organisation. The intention to turnover is usually conceptualised as the last in the cognition withdrawal process, from thinking of quitting, to having the intention to search for other alternative employment (Hom & Griffeth, 1991). Hence, for the purpose of the present study, turnover intentions is defined as an employee's estimated probability that he or she has a deliberate and purposeful intent to permanently quitting the organisation at some point in the near future.

From the reviews of the turnover literature, four main factors that can predict employee turnover intentions have been identified (Fottler, Hernandez, & Joiner, 1988). They are psychological (i.e., job satisfaction and organisational commitment), individual (i.e., attitudes, skills and personal aspirations), organisational (i.e., type and size of the organisation) and environmental (i.e., culture and location) factors. Much of the turnover literature reported that there was a significant relationship between job attitudes and behavioural intentions (Allen, Shore, & Griffeth, 2003; Ghiselli, La Lopa, & Bai, 2001; Parnell & "Rick" Crandall, 2003; Tett & Meyer, 1993). In fact, the employee turnover construct is derived from the beliefs-attitudes-behavioural intentions model by Fishbein and Ajzen (1975). Mor Barak, Nissly, and Levin (2001) in their review of antecedents to turnover claimed that numerous studies use turnover intentions rather than actual turnover as the outcome variable for two main reasons. Firstly, it is evident that employees usually make a conscious decision to leave the job before actually doing so. In fact, numerous empirical studies (Hendrix, Robbins, Miller, & Summers, 1998; Lambert, Hogan, & Barton, 2001; Price, 2001) have revealed a significant and positive relationship between turnover intentions and actual turnover. As

such, it is justified to make turnover intentions as an outcome variable. More so, a few scholars (Price (Price, 2001; Price & Mueller, 1981) have advocated the use of the turnover intentions construct as a substitute for measuring actual turnover. Secondly, it is more practical to ask employees of their intentions to turnover in a cross-sectional study than actually tracking the actual turnover through a longitudinal study. Some studies claim that economic recession may reduce one's opportunity to leave the organisation and, therefore, resulted in a lower correlation between turnover intentions and actual turnover. Although the intentions to quit may not necessarily lead to an actual turnover, a meta-analysis by Bluedorn (1982) found that in 13 out of 14 empirical studies, turnover intentions were found to be highly correlated with an actual turnover. In fact, some scholars (Allen et al., 2003; Griffeth, Hom, & Gaertner, 2000; Price, 2001) maintained that turnover intentions are the best immediate predictor of voluntary turnover. As such, the use of turnover intentions construct as an outcome variable in the present study is considered appropriate.

It has been acknowledged that high employee turnover has a significant negative impact on the productivity and profits of an organisation. According to Hinkin and Tracey (2000), the cost of replacing an employee who leaves can amount to 70% of the annual salary. Correspondingly, turnover intentions are also costly for organisations, given that they represent one of the best predictors of actual employee turnover (see Griffeth et al., 2000). Previous studies (Thoms, Wolper, Scott, & Jones, 2001) have established that turnover intentions have direct effects on deviant behaviour at work. In fact, some studies (Christian & Ellis, 2014; Tepper et al., 2009) discovered that turnover intentions create an environment that enables a full-range expression of moral disengagement at work, which in turn stimulate employees to turn immoral thoughts into deviant behaviours.

In this study, considering career changes and job mobility have become common phenomena (Rousseau, 1998), and individuals' career is no longer tied to one organisation, a better understanding of the process leading to employees' turnover is crucial. Studies have also reported that the increasing uncertainty in the labour market and the insecure working conditions, including the possibility of becoming redundant, have resulted in higher turnover intentions and exit considerations among employees (Davy, Kinicki, & Scheck, 1997; Sverke, Hellgren, & Näswall, 2002). However, the process by which this takes place is largely unexplored. Some scholars (Sturges et al., 2002; Sullivan, 1999) speculate that the protean and boundaryless careers indicate a decrease in employee intention to remain within the same organisation. Little work, however, has examined how employees' protean and boundaryless career attitudes may trigger their intentions to quit. As such, this study aims to examine the relationships between the protean and boundaryless career attitudes and behavioural intentions (i.e. turnover intentions), mediated by job crafting behaviour.

2.9 Chapter Summary

The preceding sections of this chapter have described the research constructs and have reviewed the key literature in this study conceptually, theoretically and empirically. Previous studies on protean and boundaryless careers, job crafting, thriving at work, employability, subjective career success and turnover intentions were reviewed, and comparison was made regarding definitions of terminology, operationalisation variables and conceptualisation of concepts, theoretical background as well as the interpretation of empirical results. Research gaps and critical issues pertaining to the study area were identified. The next chapter highlights the rationale of the study, discusses the hypothesised relationships among the constructs, and presents the research model in this study.

CHAPTER 3: RESEARCH MODEL AND HYPOTHESIS DEVELOPMENT

3.1 Introduction

This chapter describes the hypotheses development of the present study and presents the research model that serve as the basis for empirical analysis. Hence, the relationships between and among the research constructs in the study are established and translated into hypotheses. Specifically, this chapter examines the extent to which employee job crafting behaviour mediates the relationship between protean and boundaryless career attitudes and employee work outcomes.

3.2 Rationale for the Study

Understanding how individuals can create a resourceful work environment and positive work outcomes for themselves has become increasingly important due to the changes in the current working environment. For this study, job crafting is seen as a very promising organisational tool given the changing career patterns and organisational landscape, although it has not received much research attention. Due to the rapid changes in today's working environment, careers are currently believed to be the responsibility of the individual (Grant & Parker, 2009). Therefore, employees play a crucial role in shaping their careers and working environment. Also, it is becoming highly imperative for employees to create a work environment that allows them to realise both their work as well as personal goals. Despite this, not much empirical research has been devoted to the understanding of how employees could proactively shape their career and work outcomes.

In this study, the relationships between career attitudes, job crafting behaviour, and employee work outcomes are explored. As there is no empirical evidence to confirm

these relationships, the effect of specific forms of career attitudes, namely the protean and the boundaryless career attitudes within the hypothesised relationships are examined.

This study contends that job crafting is related to thriving at work, employability, subjective career success and turnover intentions. It would be interesting to determine whether job crafting behaviour is associated with these employee work outcomes. Job crafting behaviour is shown to have demonstrated positive relationships to several employee outcomes (Wellman & Spreitzer, 2011).

The present study is designed to extend the literature in four ways. First, the possible effects of different career attitudes on job crafting behaviour are examined. Specifically, to do this, the relationships between the protean and the boundaryless career attitudes on job crafting behaviour is examined. As noted earlier, virtually no research has empirically examined the impact of these career attitudes among employees on their crafting behaviour. Second, this study sheds light on the possible effects of job crafting behaviour on the employee work outcomes. Third, prior work is extended by examining the process through which job crafting behaviour influence the employee work outcomes as these processes have not been empirically studied. Fourth, a model that incorporates several constructs in one study is tested. By doing so, a better understanding of how protean and boundaryless career attitudes influence employee work outcomes via engagement in job crafting activities can be achieved.

3.3 Research Model and Hypotheses Development

Behavioural science scholars have focused on two main sets of distinct determinants (i.e., individual dispositions and environmental factors) when seeking to explain an individual's motivation and subsequent work behaviour and outcomes. For instance, extensive empirical studies are indicating that individual differences play important

roles in predicting and explaining employee motivation and behaviour (e.g., Barrick & Mount, 1991; Direnzo et al., 2015; Zimmerman, 2008). Similarly, a few studies have shown that differences in the characteristics of the work situation, for example, the redesign of work through job crafting (i.e., Petrou & Bakker, 2015; Tims, Bakker, & Derks, 2015), play a significant role in influencing employee work outcomes. However, very few research has systematically examined the joint and interactive effects of these two sets of influences. To address the influences of both the elements of individual dispositions (i.e., the protean and boundaryless career attitudes) and the job behaviour (i.e., job crafting), this study makes use of the regulatory focus theory (Higgins, 1997).

According to the regulatory focus theory (Higgins, 1997), self-regulation is the process in which individuals want to align themselves with their goals and standards. The regulatory focus theory distinguished two different self-regulatory systems: the promotion focus (focusing on aspirations and accomplishments) and the prevention focus (focusing on responsibilities and safety). Individuals who are promotion-focused strive for growth and development, and aim to achieve goals which are associated with their ideal self, namely their hopes, wishes and aspirations (Higgins, 1997). In contrast, prevention-focused individuals strive for security and aim to fulfil goals which are related to their ought self, namely their duties, obligations and responsibilities. Higgins (1997) suggests that promotion-focused individuals want to maximise positive outcomes, and therefore once they succeed in achieving their goals and aligning themselves with their ideal selves, they will experience the pleasure of gain. Conversely, prevention-focused individuals will experience the pleasure of non-loss when negative outcomes are minimised.

Individuals with the protean and boundaryless career mindset hold a promotion focus, as they enact their careers in the quest of fulfilling their aspirations. When they hold a promotion focus, their growth and advancement needs motivate them to try to bring

themselves into alignment with their ideal selves (Brockner & Higgins, 2001). These promotion-focused individuals are thereby more likely to craft their jobs in line with their ideal selves to attain personal meaningful outcomes (Tims & Bakker, 2010). Promotion-focused individuals are also more open to change while prevention-focused individuals prefer stability over change (Liberman, Idson, Camacho, & Higgins, 1999). Engaging in job crafting provides the benefits of advancement and accomplishment, which is highly sought after by those promotion-focused individuals. Generally, individuals with a promotion focus seek positive outcomes and strive for self-defined and autonomous values (Brockner, Higgins, & Low, 2004).

Job resources and challenging job demands via job crafting activities are useful in helping individuals to attain work goals and stimulate personal growth, learning and development (Bakker & Demerouti, 2007). As promotion-focused individuals desire to grow and develop themselves, it is expected that they will be inclined to engage in job crafting activities to increase their job resources and challenging job demands at work. In fact, recent research by Brenninkmeijer and Hekkert-Koning (2015) had provided support to this proposition. The study found that promotion focus was related to crafting job resources and job challenges, while prevention focus was related to crafting hindering job demands. Building upon regulatory focus theory, it can be expected that the protean and boundaryless careerists who adopt a promotion focus attempt to achieve their ideal state by accomplishing goals through job crafting activities.

Drawing upon the regulatory focus theory to explain how personal disposition and job behaviour jointly and interactively influence work outcomes, this study extends the previous works by addressing the gaps that arise from the review of previous literature particularly in the career and job crafting literature. This study aims to examine the influence of the protean and boundaryless career attitudes on job crafting behaviour and subsequently how job crafting behaviour influences employee work outcomes. Figure

3.1 presents the research model of this study. It illustrates diagrammatically the relationships among the constructs in this study. The aim of this study is to test the relationships between protean and boundaryless career attitudes and employee work outcomes empirically. This study also seeks to examine how job crafting behaviour mediates these relationships. The arguments and theoretical logic for the hypotheses are provided in the sections that follow.

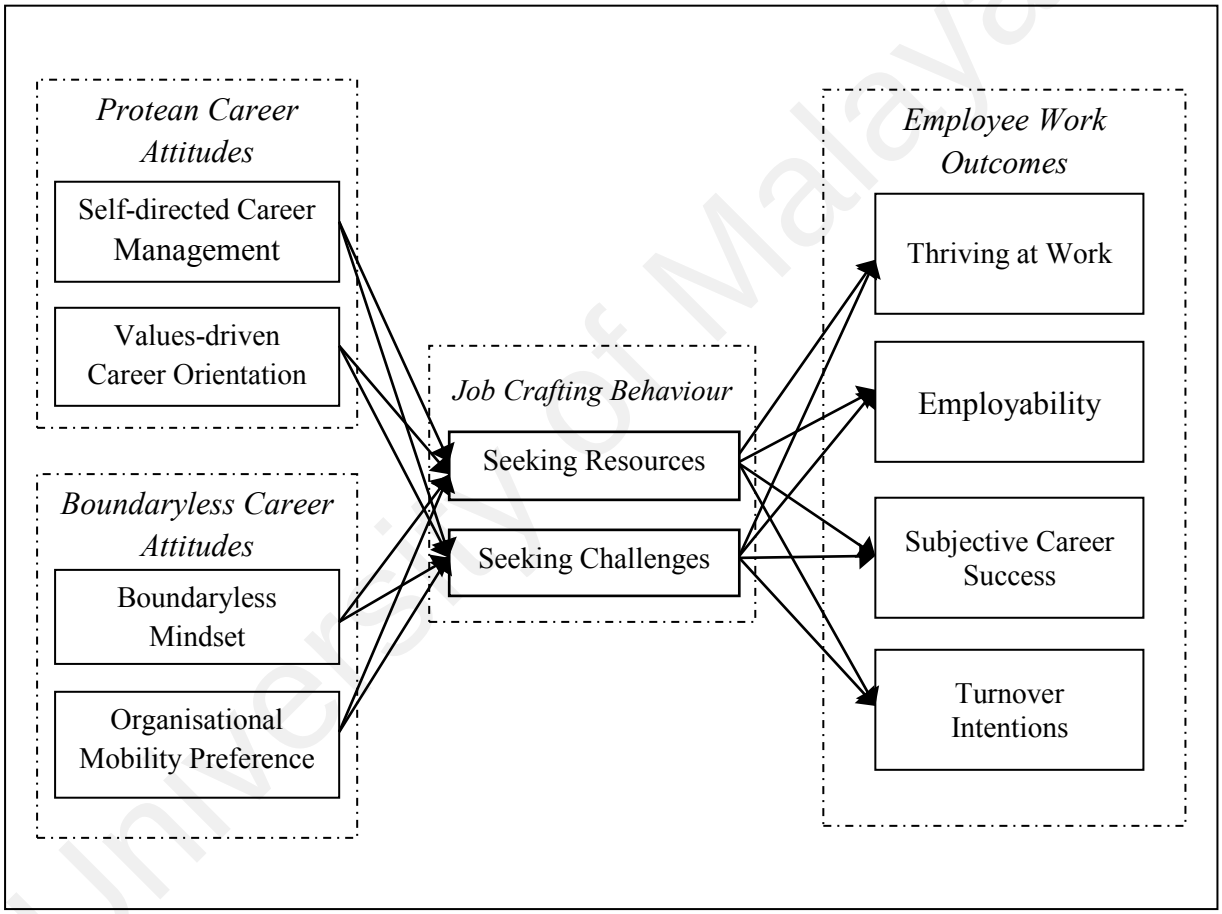

Figure 3.1: The research model

3.3.1 Protean Career Attitudes and Job Crafting Behaviour

Prior studies in the job crafting literature have established a relationship between individuals' work orientation and job crafting behaviour (Ko, 2011; Park, 2008; Wrzesniewski & Dutton, 2001). For instance, Wrzesniewski and Dutton (2001) have proposed in their original job crafting model that individual work orientation, especially

the calling orientation is related to job crafting behaviour. They argued that those who view work as a calling are more engaged with their work and thus may act as active crafters of their jobs because of the values they place on their jobs. This is supported by a study wherein Ko (2011) found that those who engaged in job crafting reported significantly higher score on Calling and Career orientation. Given that the protean career attitudes share some similar elements with the calling orientation, such as the decisions regarding one's career are based on personal values versus financial or other extrinsic factors, it is predicted that protean career attitudes will influence job crafting behaviour. Since no prior study has empirically examined the relationship between protean career attitudes and job crafting, this study proposes to test the relationship between these two constructs.

An underlying explanation as to why self-directed career management is positively related to seeking resources and seeking challenges of the job crafting behaviour lies in the basic notion that protean self-directed individuals are likely to engage in proactive behaviour (Seibert, Kraimer, & Crant, 2001) such as job crafting. Job crafting is a form of proactive behaviour involving adjustments and change which would alter both the meaning of one's work and his or her work identity (Berg, Wrzesniewski, & Dutton, 2010). Drawing upon the regulatory focus theory (Higgins, 1997, 1998), it can be argued that protean self-directed individuals are intrinsically motivated, and they seek out challenges to attain their ideals and to achieve their higher capacities by engaging in job crafting activities. Prior studies (Bakker et al., 2012; Tims et al., 2012) found that proactive personality and personal initiative were positively correlated with seeking resources and seeking challenges of the job crafting behaviour. Given that protean self-directed individuals are proactive and self-directed in their career management, they are likely to seek job resources and challenges in achieving their ideal or personally desired outcomes. On the basis of this thinking, the following hypothesis is formulated:

Hypothesis 1: Self-directed career management is positively related to (a) seeking resources and (b) seeking challenges of the job crafting behaviour.

Besides being self-directed in career management, protean careerists are values-driven and are motivated to shape their careers around their personal values, motivations, and desires (Briscoe et al., 2006). Drawing on the regulatory focus theory (Higgins, 1997, 1998), it can be reasoned that values-driven individuals are more inclined to strive for their ideal goals that are to fulfil their own needs, dreams and aspirations. As such, values-driven individuals are promotion-focused and are striving for self-defined and autonomous values. Such promotion-focused individuals are more open to change and are more likely to craft aspects of their jobs (such as resources and challenges) to be aligned with their ideal self. As job crafting enables an individual to shape jobs to be more consistent with his or her own values and goals, it is predicted that:

Hypothesis 2: Values-driven career orientation is positively related to (a) seeking resources and (b) seeking challenges of the job crafting behaviour.

3.3.2 Boundaryless Career Attitudes and Job Crafting Behaviour

Boundaryless career attitudes encompass both the boundaryless mindset and organisational mobility preference dimensions. Boundaryless mindset indicates one's inclination for working with different people and organisations across organisational boundaries (Briscoe & Finkelstein, 2009). Organisational mobility preference, on the other hand, refers to one's preference towards working for not just one's single employer but for multiple organisations. Accordingly, employees with these attitudes seek job assignments for new learning experiences and feel enthusiastic about engaging in new experiences outside a single organisation. They also enjoy working on projects

with people from numerous organisations. As these mindsets involve an emphasis on seeking more opportunities and relationships (Briscoe & Hall, 2006; Defillippi & Arthur, 1994; Sullivan & Arthur, 2006), it is, therefore, logical to predict that employees with such mindsets will craft their jobs to seek for more challenges and resources.

Consistent with this contention, Segers et al. (2008) found that boundaryless mindset is strongly correlated with openness to experience. Employees with this mindset are intrinsically driven by both affiliation and autonomy, and, therefore, more likely to take the initiative in crafting their jobs. Similarly, Briscoe et al. (2006) maintain that those with a boundaryless mindset tend to have a more proactive personality and may be more likely to engage in job crafting activities. Accordingly, I hypothesise the following:

> *Hypothesis 3:* Boundaryless mindset is positively related to (a) seeking resources and (b) seeking challenges of the job crafting behaviour.

Although organisational mobility preference indicates one's preference towards working for multiple organisations, it may be constrained by uncontrollable external factors such as economic conditions and availability of job opportunities. For example, King, Burke, and Pemberton (2005) argue that careers can be bounded by prior career history, occupational identity and by institutional constraints. Thus, when physical mobility from one organisation to another is not possible, individuals may resort to craft career alternatives, such as concentrating on other interesting activities, to compensate for not being able to move physically to other organisations. Greenhaus et al. (2008) posit that job crafting is a form of boundary crossing that one undertakes to redefine and reorganise his/her careers. It involves physically modifying the task boundaries of a job,

cognitively altering the perceptions of a job, or changing the way one interacts with other people on a job.

Through job crafting, employees can craft and alter the perception of their jobs to offer themselves new variety and better psychological autonomy and freedom although staying in the same organisation (Greenhaus et al., 2008). Likewise, Mansah-Owusu (2013) found that those who crafted their jobs within the boundaries of organisations are demonstrating a psychologically boundaryless mindset and being comfortable with co-operating with people from other organisations. Similarly, Fried, Grant, Levi, Hadani, and Slowik (2007) maintain that a person will take the initiative to mould the job (by seeking more job resources and challenges) to fit his or her personal preferences and plans, and often this can be for his or her future career beyond the current job. Hence, this study proposes that employees who embrace the preference of organisational mobility, though remaining within the existing organisation due to external constraints, will mostly likely to craft their job to fit their personal preferences and plans beyond the current job. Accordingly, the following hypothesis is formulated:

Hypothesis 4: Organisational mobility preference is positively related to (a) seeking resources and (b) seeking challenges of the job crafting behaviour.

3.3.3 Job Crafting Behaviour and Thriving at Work

Thriving is a positive psychological state comprising both the cognitive (i.e., learning) and emotional (i.e., vitality) development at work. Berg, Dutton, and Wrzesniewski (2008) propose that employee job crafting behaviours may lead to several positive outcomes, including thriving at work. Similarly, Tims and Bakker (2010) argue that employees will thrive at work when they take on more challenges at work through crafting more challenging tasks and personally grow from them. Furthermore, Spreitzer

et al. (2005) suggest that employees can become more active agents in crafting the job contexts that allow their thriving at work. In other words, it can be posited that employees determine their own adaptive capacities by crafting their jobs to increase learning and energy. This is consistent with other research (Tsui & Ashford, 1994; Wrzesniewski & Dutton, 2001) that construe employees as active crafters of their own learning and development at work.

In a recent model proposed by Kira and Balkin (2014), they claim that positive and personally meaningful work situation via job crafting activities energises employees and improve learning. When employees seek to increase job resources and more challenging job demands, they learn more about their work and how it can be carried out and this, in turn, fosters thriving at work. Likewise, Wellman and Spreitzer (2011) argue that employees can create meaning by crafting more challenge into the content of their jobs and these challenges can energise them and help them learn more from their work. As such, the following hypothesis is derived at:

Hypothesis 5: (a) Seeking resources and (b) seeking challenges of the job crafting behaviour is positively related to thriving at work.

3.3.4 Job Crafting Behaviour and Employability

Fried et al. (2007) suggest that employees are more likely to craft their jobs to increase stimulation when they feel that doing so will advance them in their careers. As such, by crafting more job resources and challenging job demands, employees are preparing themselves for career advancement and growth. This is in line with Van der Heijde and Van der Heijden (2005)'s operationalisation of employability that takes into account work improvement and career advancement. Employability refers to continuously fulfilling, acquiring or producing work by fully utilising one's competencies (Van der Heijde & Van Der Heijden, 2006). In this study, the focus is on the 'occupational

expertise', 'anticipation and optimisation', and the 'personal flexibility' dimensions of employability (Van der Heijde & Van Der Heijden, 2006), which are essential qualities in this boundaryless era. Expertise refers to an individual's knowledge, skills, and abilities needed to adequately perform various tasks and carry out responsibilities within a job. Anticipation and optimisation refer to the way in which individuals prepare for future work changes so as to strive for the best achievable career and job outcomes. Flexibility refers to a person's adaptability to variations in the internal and external labour market (De Cuyper et al., 2008; Fugate et al., 2004; Van Dam, 2004; Van der Heijde & Van Der Heijden, 2006).

Tims et al. (2012) found that job crafting behaviour correlated positively with colleague-ratings of employability, work engagement, and performance. As such, it is expected that employees who engage in job crafting activities are likely to be perceived by their supervisors as possessing the "occupational expertise" or the "know-how" in the job domain (Van der Heijde & Van Der Heijden, 2006). To sustain and improve one's employability often require one's efforts to learn new knowledge and skills or to remain up to date with enhancements in the occupation. As such, by crafting more job resources and challenging job demands, employees are likely to be more employable. In other words, when employees increase their job resources and challenging job demands at work, they may perceive this as beneficial to their current or future employment. Challenging job demands, according to Crawford, LePine, and Rich (2010) are demands that are experienced as difficult or stressful but they contribute to positive outcomes such as better skills and personal growth. Furthermore, the work environment may provide job resources that can reduce the impact of job demands, and may stimulate personal growth, learning, and development (Demerouti et al., 2001). A recent study by Brenninkmeijer and Hekkert-Koning (2015) found that crafting job resources were positively related to employability. Thus, it is expected that employees who seek

challenging job demands and increase their job resources via job crafting activities will be viewed by their supervisors as more employable. Accordingly, the following hypothesis is formulated:

> *Hypothesis 6:* (a) Seeking resources and (b) seeking challenges of the job crafting behaviour is positively related to employability.

3.3.5 Job Crafting Behaviour and Subjective Career Success

The notion that changes in job characteristics influence employee well-being and career success are not new. For instance, Hackman, Pearce, and Wolfe (1978) studied the impact of a job re-design intervention on the well-being of employees in a big company. They found that changes in the job characteristics influenced general satisfaction, growth satisfaction and internal motivation of employees. Similarly, Heuvel, Demerouti, and Peeters (2015) investigated and found that job crafting intervention improved employees' well-being. In fact, Wrzesniewski and Dutton (2001) highlighted in their initial job crafting literature that individuals may actively change both the task and relational boundaries of their jobs to create work in which they are more satisfied. As job crafting is a form of proactive work behaviour, which entails bottom-up job redesign by employees to change the characteristics of their jobs, it is expected that job crafting will lead to higher level of subjective career success.

Research finding by King (2004) also points towards the effects of proactive career management behaviour on positive psychological outcomes, including career and life satisfaction and individual well-being. Likewise, Seibert et al. (2001) found that people who have a proactive character attain extrinsic career advancement and intrinsic fulfilment with their careers. In a nutshell, several other studies (e.g., Barnett & Bradley, 2007; Bozionelos, 2004; Eby et al., 2003; Sturges, Conway, Guest, & Liefooghe, 2005; Vos et al., 2009) have consistently concluded that career success is a function of

individual agency and of contextual elements surrounding the employees. More specifically, Tims, Bakker, and Derks (2013) found that job crafting can build well-being in the form of increased engagement, job satisfaction, and decreased burnout over time. Therefore, this study proposes that job crafting behaviour is important to shape the perceptions of career success because it is likely to help the employees to enhance their careers by obtaining desired job assignments from their supervisors and achieving personal career goals. Based on these arguments, it is proposed that job crafting behaviour (i.e. seeking resources and seeking challenges) will predict subjective career success, and the following hypothesis will be tested in that relation.

Hypothesis 7: (a) Seeking resources and (b) seeking challenges of the job crafting behaviour is positively related to subjective career success.

3.3.6 Job Crafting Behaviour and Turnover Intentions

Past studies on job crafting predominantly focussed on its positive outcomes such as job engagement, job satisfaction, job performance, and work commitment. Relatively less attention has been devoted to the negative outcomes of job crafting, namely turnover intentions. Thus far, only a few studies have looked at the relationship between job crafting and turnover intentions. For example, Leana et al. (2009) found that collaborative job crafting enabled high-performing childcare teachers to become more engaged to their jobs and less likely to quit because their jobs had been redesigned to enhance teacher-job fit. This finding is consistent with findings of Mittal, Rosen, and Leana (2009), which draws on Herzberg's motivation-hygiene theory to understand the factors related to turnover and retention of direct care workers. The findings showed that leavers were more likely to focus on negative aspects of the job such as offensive supervisory behaviour and lack of flexibility in the job. In contrast, stayers were far more focused on positive aspects of the job such as its relational aspects and the

flexibility in carrying out their tasks. In the study, several stayers reported crafting their jobs to better suit the circumstances, which may allow them to continue to stay on in the job. Thus, it is expected that both dimensions of the job crafting behaviour are associated with lower turnover intentions. Hence Hypothesis 8 will be tested to prove this.

Hypothesis 8: (a) Seeking resources and (b) seeking challenges of the job crafting behaviour is negatively related to turnover intentions.

3.3.7 The Mediating Role of Job Crafting

Lu, Wang, Lu, Du, and Bakker (2014) reported that changes in both the physical and the relational job crafting mediate the relationship between work engagement and changes in demands–abilities fit and changes in needs–supplies fit respectively. In this study, it is proposed that job crafting may explain (i.e. mediate) the relationships between protean and boundaryless career attitudes and employee work outcomes. The following sections offer the rationale for the mediating role of job crafting behaviour (i.e. seeking resources and seeking challenges) in the relationship between protean career attitudes (i.e. self-directed and values-driven career orientation), boundaryless career attitudes (i.e. boundaryless mindset and organisational mobility preference) and employee work outcomes (i.e. thriving at work, employability, subjective career success and turnover intentions).

3.3.8.1 Protean and Boundaryless Career Attitudes and Thriving at Work as Mediated by Job Crafting Behaviour

Protean careerists are likely to engage in job crafting activities (i.e. seeking resources and challenges) which in turn enable thriving at work. Prior studies (Spreitzer et al., 2005; Tsui & Ashford, 1994; Wrzesniewski & Dutton, 2001) suggest that individuals can become active agents in crafting their jobs, which enable their thriving at work. As

such, it is anticipated that seeking resources and seeking challenges will serve as mediators in the relationships between self-directed career management and thriving at work. Besides, values-driven career oriented individuals are motivated to craft their careers around their personal values, motives, and needs (Briscoe et al., 2006) to achieve higher personal growth and development, which may be transcended into a higher level of thriving at work.

Similarly, in a study of 362 working adults within the context of the recent economic recession, Briscoe et al. (2012) examined the coping mechanisms related to different career attitudes and their subsequent influence on key employee work outcomes. The study reported that external support seeking and active coping fully mediated the relationships between boundaryless mindset and the outcome variables. In a recent diary study on 47 employees from various organisations conducted by Tims and his colleagues (2014), it is reported that both day-level job crafting and work enjoyment mediate the relationships between day-level self-efficacy and day-level performance. Given that individuals with boundaryless career attitudes will craft their jobs to seek more challenges and resources (Briscoe & Hall, 2006; Defillippi & Arthur, 1994; Sullivan & Arthur, 2006), this, in turn, may enable them to fulfil their individual preferences and desired outcomes for learning and personal growth. As such, job crafting behaviour serves as the conduit between boundaryless career attitudes (i.e. boundaryless mindset and organisational mobility preference) and thriving at work. Taken together, it is anticipated that both seeking resources and seeking challenges are important mechanisms that link self-directed career management, values-driven career orientation, boundaryless mindset and organisational mobility preference with thriving at work. Therefore, Hypotheses 9 and 10 are constructed to support this argument:

> *Hypothesis 9:* Seeking resources mediates the relationship between (a) self-directed career management, (b) values-driven career orientation, (c)

boundaryless mindset, (d) organisational mobility preference and thriving at work.

Hypothesis 10: Seeking challenges mediates the relationship between (a) self-directed career management, (b) values-driven career orientation, (c) boundaryless mindset, (d) organisational mobility preference and thriving at work.

3.3.8.2 Protean and Boundaryless Career Attitudes and Employability as Mediated by Job Crafting Behaviour

Given that the findings of several prior studies provided evidence that an individual work orientation (i.e., calling orientation) is related to job crafting behaviour (Ko, 2011; Park, 2008; Wrzesniewski & Dutton, 2001), and individuals who craft their jobs will be perceived by their colleagues as more employable (Tims et al., 2012), this study posits that job crafting behaviour mediate the relationship between protean and boundaryless career attitudes and employability. A recent survey by Praskova, Creed, and Hood (2015) found that work effort and career strategies mediated the relationship between career calling and employability. Furthermore, Tims et al. (2012) found that seeking challenges and resources create better-performing employees because they are actively shaping their work to their needs. Hence, this study proposes that the behaviour of seeking resources and seeking challenges create opportunities for personal development thus enhance the perceptions of employability. Thus, it is argued that job crafting behaviour serve as the mechanism through which protean and boundaryless careerists become more employable. As the consequences of resource and challenge seeking activities in the workplace, employees may be able to increase their employability. Drawing on regulatory focus theory, promotion-focused individuals aim to grow and develop themselves, and the protean and boundaryless careerists are promotion-focused. As such, it is expected that these promotion-focused individuals will be more inclined to

seek more job resources and challenges, which in turn allow them to meet their needs and goals for personal development and employability. This leads to the following hypotheses:

Hypothesis 11: Seeking resources mediates the relationship between (a) self-directed career management, (b) values-driven career orientation, (c) boundaryless mindset, (d) organisational mobility preference and employability.

Hypothesis 12: Seeking challenges mediates the relationship between (a) self-directed career management, (b) values-driven career orientation, (c) boundaryless mindset, (d) organisational mobility preference and employability.

3.3.8.3 Protean and Boundaryless Career Attitudes and Subjective Career Success as Mediated by Job Crafting Behaviour

In a cross-sectional study of 289 Belgian employees who have participated in career counselling, De Vos and Soens (2008) reported that protean career attitude is a significant predictor of career success and that this relationship is fully mediated by the development of career insight. Similarly, Praskova et al. (2015) found that work effort and emotional regulation mediated the relationship between career calling and life satisfaction. Thus, in this study, I argue that the protean and boundaryless careerists will strive to obtain their desired career goals by seeking more resources and challenges at work. By engaging in job crafting activities, the protean and boundaryless careerists should feel more satisfied and successful in their careers (see Arthur et al., 2005; Ng et al., 2005; Wrzesniewski, McCauley, Rozin, & Schwartz, 1997). Given the emphasis on taking an independent role in managing one's career, employees holding a strong protean and boundaryless career attitudes should be more satisfied when they are given the autonomy to engage in job crafting activities, relative to those who do not. Thus, the following hypotheses are formulated:

Hypothesis 13: Seeking resources mediates the relationship between (a) self-directed career management, (b) values-driven career orientation, (c) boundaryless mindset, (d) organisational mobility preference and subjective career success.

Hypothesis 14: Seeking challenges mediates the relationship between (a) self-directed career management, (b) values-driven career orientation, (c) boundaryless mindset, (d) organisational mobility preference and subjective career success.

3.3.8.4 Protean and Boundaryless Career Attitudes and Turnover Intentions as Mediated by Job Crafting Behaviour

Based on the theoretical arguments and empirical findings presented that job crafting behaviour affects thriving at work, employability, and subjective career success in a positive manner, this study expects that job crafting does not only influence employee turnover intentions in a negative manner but also mediates the relationship between protean and boundaryless career attitudes and turnover intentions. Taken together, it is anticipated that both seeking resources and seeking challenges is an important mechanism that links self-directed career management and values-driven career orientation, boundaryless mindset, and organisational mobility preference with turnover intentions. Therefore, Hypotheses 15 and 16 are constructed to support this argument:

Hypothesis 15: Seeking resources mediates the relationship between (a) self-directed career management, (b) values-driven career orientation, (c) boundaryless mindset, (d) organisational mobility preference, and turnover intentions.

Hypothesis 16: Seeking challenges mediates the relationship between (a) self-directed career management, (b) values-driven career orientation, (c)

boundaryless mindset, (d) organisational mobility preference, and turnover intentions.

This study employs Structural Equation Modeling (SEM) and PROCESS macro for SPSS to test the 16 hypotheses proposed. Table 3.1 provides a summary of the research hypotheses.

Table 3.1: Hypotheses of the Study

Hypothesis 1: Self-directed career management is positively related to (a) seeking resources and (b) seeking challenges of the job crafting behaviour.
Hypothesis 2: Values-driven career orientation is positively related to (a) seeking resources and (b) seeking challenges of the job crafting behaviour.
Hypothesis 3: Boundaryless mindset is positively related to (a) seeking resources and (b) seeking challenges of the job crafting behaviour.
Hypothesis 4: Organisational mobility preference is positively related to (a) seeking resources and (b) seeking challenges of the job crafting behaviour.
Hypothesis 5: (a) Seeking resources and (b) seeking challenges of the job crafting behaviour is positively related to thriving at work.
Hypothesis 6: (a) Seeking resources and (b) seeking challenges of the job crafting behaviour is positively related to employability.
Hypothesis 7: (a) Seeking resources and (b) seeking challenges of the job crafting behaviour is positively related to subjective career success.
Hypothesis 8: (a) Seeking resources and (b) seeking challenges of the job crafting behaviour is negatively related to turnover intentions.
Hypothesis 9: Seeking resources mediates the relationship between (a) self-directed career management, (b) values-driven career orientation, (c) boundaryless mindset, (d) organisational mobility preference and thriving at work.
Hypothesis 10: Seeking challenges mediates the relationship between (a) self-directed career management, (b) values-driven career orientation, (c) boundaryless mindset, (d) organisational mobility preference and thriving at work.
Hypothesis 11: Seeking resources mediates the relationship between (a) self-directed career management, (b) values-driven career orientation, (c) boundaryless mindset, (d) organisational mobility preference and employability.
Hypothesis 12: Seeking challenges mediates the relationship between (a) self-directed career management, (b) values-driven career orientation, (c) boundaryless mindset, (d) organisational mobility preference and employability.
Hypothesis 13: Seeking resources mediates the relationship between (a) self-directed career management, (b) values-driven career orientation, (c) boundaryless mindset, (d) organisational mobility preference and subjective career success.
Hypothesis 14: Seeking challenges mediates the relationship between (a) self-directed career management, (b) values-driven career orientation, (c) boundaryless mindset, (d) organisational mobility preference and subjective career success.
Hypothesis 15: Seeking resources mediates the relationship between (a) self-directed career management, (b) values-driven career orientation, (c) boundaryless mindset, (d) organisational mobility preference, and turnover intentions.
Hypothesis 16: Seeking challenges mediates the relationship between (a) self-directed career management, (b) values-driven career orientation, (c) boundaryless mindset, (d) organisational mobility preference, and turnover intentions.

3.4 Chapter Summary

In this chapter, the theoretical and conceptual framework for the research model is presented. This chapter describes the development of the research model and the established research hypotheses formulated for this study. Job crafting behaviour (i.e. seeking resources and seeking challenges) was identified as the mechanism that explains the relationships between protean and boundaryless career attitudes and employee work outcomes. The following chapter discusses the research methodology employed to gather and analyse the data required in order to meet the research objectives presented in Chapter 1.

CHAPTER 4: RESEARCH METHODOLOGY

4.1 Introduction

This chapter explains the research methodology and strategies employed in this study. It begins with an explanation of the philosophical position that determines the research approach embedded in this study. Next, a description of the research design, the sampling procedure, and the data collection procedures are provided. Subsequently, the development of the questionnaires, the selection of the research measures for this study as well as the results of the pilot study are reported. This chapter also provides explanations and justifications of the statistical techniques employed in this study, namely the Exploratory Factor Analysis (EFA), the Structural Equation Modelling (SEM) and PROCESS macro for SPSS.

4.2 Philosophical and Methodological Considerations

There are several research paradigms debated by scholars, including positivist, neo-positivist, pragmatism, critical theory, conventionalism and postmodernism (Johnson & Duberley, 2000). Despite the increasing acceptance and employment of many different philosophical orientations, positivism remains the most influential epistemological orientation in the management discipline (Johnson & Duberley, 2000). Positivism involves a scientific process or the adoption of the natural science techniques into explaining the social world. As such, research establishing from the positivist stance employs an objective means to measure the subject under study, rather than to rely on the subjective inferences. The positivist approach in the management studies intends to provide as much objectivity, independence, and generalisability as possible. Therefore is it often associated with the quantitative and deductive research approach (Johnson & Duberley, 2000). Since the objective of this study is establish the relationships between the protean and boundaryless career attitudes, job crafting behaviour, and employee

work outcomes by testing several pre-determined hypotheses, a positivist approach is deemed appropriate. A positivist approach focuses on enhancing the understanding of the relationships that exist among predictor and outcome variables, to provide significant findings and conclusions. A positivist research believes that the evidence obtained from the empirical-based studies will lead to the discovery of laws in a causal and predictive form, which will enable human intervention to change the social conditions for a better and more desirable outcome.

Given that this study aims to examine the protean and boundaryless career attitudes as a form of human attitude, which can be objectively measured by employing standard scientific methods, it is therefore considered appropriate to adopt a quantitative deductive approach followed by empirical evaluations. A deductive approach is clarified under positivism and it is used for testing theories by collecting quantitative data (Saunders, Saunders, Lewis, & Thornhill, 2011). To employ the deductive approach, according to Robson (2002), some procedures are essential, that is theory building, hypothesis construction, data collection, findings, and hypotheses confirming or rejecting, followed by a revision of theory. Based on the purpose and philosophical position of the present study, a quantitative deductive approach is employed for this study. The following section will thereby describe the research design and the research process pursued in this study.

4.3 Research Design

Since this study aims to examine the relationships between the protean and boundaryless career attitudes and employee work outcomes while taking into account the mediation effect of job crafting behaviour, this study employs a conclusive research design as opposed to an exploratory design. This is because the exploratory research intends to explore the research questions and to provide insights into the nature of the situations. Exploratory research is qualitative in nature and usually has a flexible and

unstructured research process. The insights gained from the exploratory research are considered tentative and may serve as inputs for conclusive research. The conclusive research design, on the other hand, has its philosophical roots in positivism, basing on the belief of the existence of an objective external reality. Research basing on positivism intends to identify casual relationships for advancing generalisable theories and explanations that can better predict human behaviour. This is also aligned with the positivist philosophical stance. Moreover, a conclusive research, is usually employed to examine relationships between different factors through hypothesis testing (Malhotra, 2010), thus more appropriate for this study. Furthermore, the sample selected for conclusive research is usually large and representative, and the findings can usually be generalised to the whole population.

In addition, this study employed a dyadic, cross-sectional and correlational research design. The dyadic design was employed to avoid problems associated with the common method variance arising from using a self-report or a single source data. Cross-sectional research involves the collection of data from any given sample of the population at only one point in time (Saunders et al., 2011). While it limits the ability to derive a causal conclusion, cross-sectional studies affords substantial time and cost advantages, and it is deemed suitable for research that contain many variables and a big group of participants or respondents. Correlational designs, on the other hand, assess quantifiable variables in their naturally occurring state to determine whether, and to what extent, relationships exist. Unlike the experimental approach, a correlational study enables researchers to examine complex multivariate models and independent variables that are not easily manipulated.

Given the conclusive nature of this study, the questionnaire survey technique was employed as the main data collection method for this study, as a survey research is a method best suitable for studying and describing large populations. For the self-

administered questionnaire survey of this study, two sets of structured questionnaires were developed to collect data from the employee-supervisor dyads. Prior to administering the survey forms, sessions were held with the potential participants to introduce and explain the purpose of the study and to solicit voluntary participation in the survey. The research design employed in the present study is summarised in Table 4.1. In addition, the process involved in conducting the present study is presented in Figure 4.1, comprising three main phases. Phase I involves the model and measures development via in-depth literature reviews. Phase II involves the systematic data gathering, and data analysis and the final phase involves identifying the final research outcomes and the drawing of conclusions.

Table 4.1: Research Design of the Study

Issues	Decisions
The purpose of the study	Hypothesis testing
Extent of researcher interference	Minimal
Study setting	Field study
Time horizon	Cross-sectional
Data collection method	Questionnaires
Data analysis	Quantitative

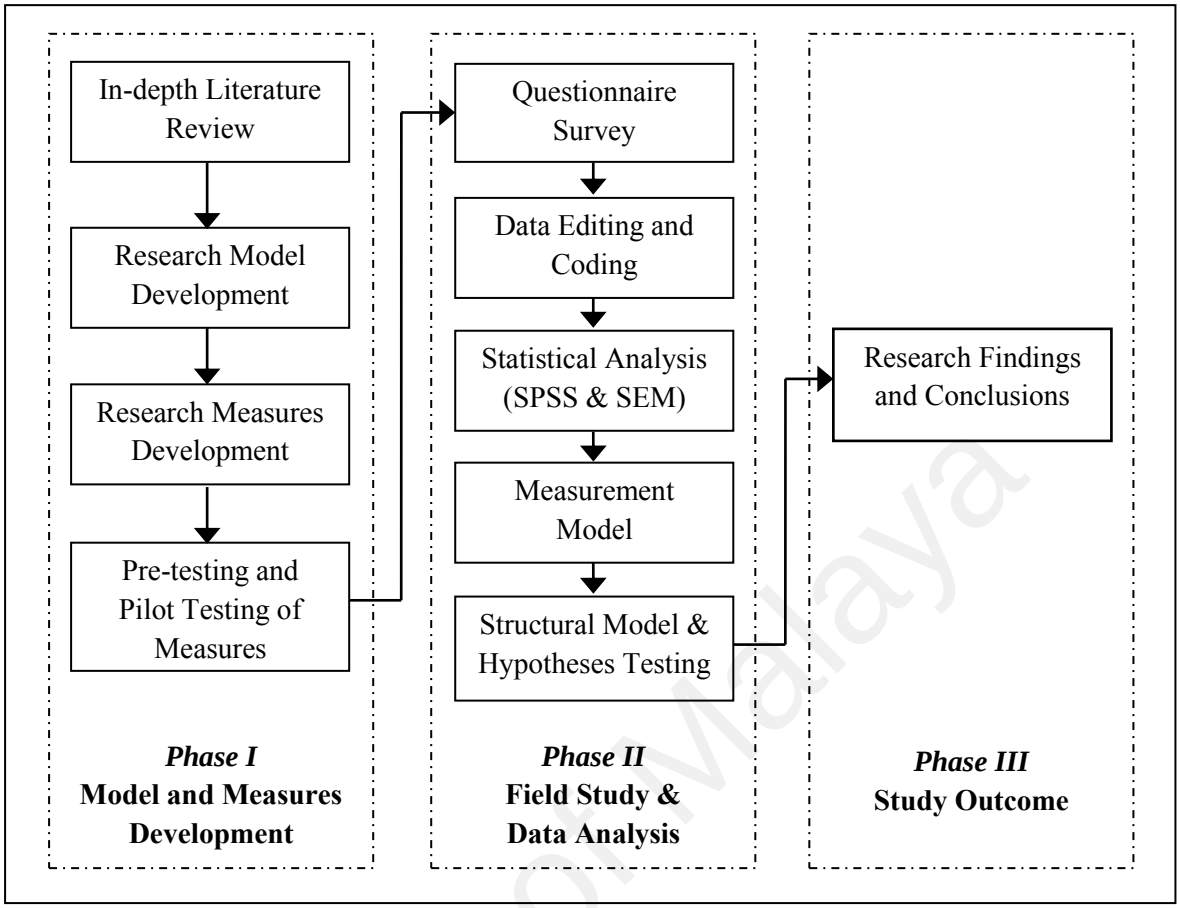

Figure 4.1: The research process flow chart

4.4 Sample and Data Collection Procedures

Employee-supervisor dyads data were collected over a period of eight months from October 2013 to June 2014. The participants were full-time employees from various industries of the private sector organisations located in Kuala Lumpur and the state of Selangor. The locations were restricted to these areas to facilitate the several repeated visits to each of the participating organisations. Through personal contacts, direct communication with personnel or human resource (HR) managers or their representatives was made possible. They were contacted via the phone, emails, or even face to face. Information on the size of the company was supplied by the personnel or HR managers of the participating organisations. Only organisations with at least 30 employees were included in the sample frame. After some persistent attempts, eighteen organisations agreed to allow their employees to participate in the survey. The

organisations were from the education, telecommunication and information technology, banking, finance and insurance services, manufacturing, hospitality and tourism, electricity, gas and water, as well as real estate and construction sectors. Some organisations refused to take part in the survey because the senior management considered the survey was not timely for their organisations, or they had policies of refusing all external surveys requests.

For the purpose of this study, self-administered questionnaires were distributed to the full-time employees and their immediate supervisors. Self-administered questionnaire enables data to be collected within a short period of time and the questionnaires are to be collected immediately after they are completed. This method allows respondents to clarify doubts and ask questions on the spot, the research topic and objectives can also be explained and clarified in order to motivate respondents to participate in the survey. A cover letter was attached to each questionnaire assuring respondents of confidentiality, and to inform them of the voluntary nature of their participation in the survey, and to explain the purpose of the study. My contact details and that of my supervisor were provided in the cover letter for the participants in case they require more information pertaining to the research. To reduce the potential response sets, respondents were informed about the general purpose of this study that is to investigate their career mindset and the possible influence of this mindset on their career or work outcomes. The respondents who were unable to return the survey form to me on the same day were requested to post the completed form using the pre-addressed, postage-paid return envelope provided.

The instrument administration process involved several steps. First, the participating organisations' HR representatives were asked to identify a few managers or supervisors to me. The managers or supervisors who agreed to participate voluntarily in the survey were then requested to encourage their subordinates to take part in the study. All

participants were then briefed about the purpose and nature of the survey, as well as the anonymity of the survey. They were also informed that there were no right or wrong answers and thus they were encouraged to answer the questions as honestly as possible. Before filling in the survey forms, the participating supervisors were requested to write in pencil the names of their subordinates on the corresponding survey forms. This is to avoid confusion while rating more than one subordinate and allowing the supervisors to focus on the correct participating employee. Subsequent to completing the survey, the supervisors were asked to erase their subordinates' names on the survey forms to ensure anonymity for the employees. In its place, pre-assigned matched code reference numbers were used to match each subordinate's survey form to their corresponding supervisors' ratings. For this, a unique three digit identity numbers were written on each of the supervisors' survey forms to identify the participating supervisors. All participants were assured that the coding system and their returned survey forms were confidential and that no one in their organisations had access to them. These procedures should reduce respondents' evaluation apprehension and, therefore, would be less likely to alter their responses to be more socially desirable, lenient, or conforming to the expecting outcomes of the study (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003).

A total of 550 employee and supervisor questionnaires were distributed to those who have agreed to participate voluntarily in the survey. Of these, a total of 130 immediate supervisors received another set of supervisor questionnaires for the evaluation of the 550 corresponding employees. The immediate supervisors were asked to evaluate their subordinates' job crafting behaviour and their employability. Each respondent was then asked to return their completed survey forms in sealed envelopes to protect the confidentiality of their responses. The respondents took about 15 to 20 minutes to complete the questionnaires. Most of the respondents chose to return their questionnaires immediately, but a small number of respondents who were busy or

wished to complete the questionnaires in their own time were requested to mail the questionnaires in the pre-paid envelopes addressed provided. To boost the response rates, follow-up letters and emails were sent to the non-returns two weeks after the questionnaires were distributed.

4.5 The Survey Instrument Development

Two sets of structured questionnaires were developed to collect the data from the full-time employees and their immediate supervisors (see Appendix A-1 and A-2). While developing the instrument, attention was given to the issue of potential common method variance arising from obtaining the measures of both predictor and outcome variables from the same source or rater (see Podsakoff et al., 2003). As such, to control for it, the data was collected from more than one source (i.e. from the employees and their immediate supervisors). Moreover, the predictor and the outcome variables were collected from different sources. The advantage of this procedure is that it makes the raters impossible to bias the observed relationship between the predictor and outcome variables, and, therefore, eliminating the effects of social desirability tendencies, consistency motifs and any other biases resulted from using the same source (Podsakoff et al., 2003). Besides, to further minimise common method variance in this study, careful attention was paid to the development of construct measurement. This study employed and adopted measures that were previously validated and examined in the established literature. Furthermore, the selected measures were also reviewed by a panel of experts from the human resource management field (refer Section 4.5.1). In each section of the questionnaires, clear instructions were provided on how to rate the questionnaire items. This is to improve respondents' understanding of how to answer each section without any trouble and as effortlessly as possible. Besides, the design of the questionnaires was enhanced based on the comments from a panel of experts and field respondents in the pre-testing stage (see Section 4.5.1). For instance, big clear font,

less packed sentences with high-quality printing were ensured in the questionnaire design (see Appendix A-1 and A-2).

The employee questionnaire (see Appendix A-1) comprises of five sections. In Sections A and B, the respondents were asked to evaluate their career attitudes. In Sections C and D, they were requested to access their level of thriving at work, subjective career success, and turnover intentions, respectively. The last section of the questionnaire consists of both close-ended and open-ended questions designed to collect data on the demographic profile of the respondents. Questions about the respondents' gender, ethnicity, age, academic qualification, job designation level, the number of years or months employed, total years of working experiences, as well as the industry they are presently working in were asked in this section. The supervisor questionnaire (see Appendix A-2) contains three sections. In Sections A and B, the supervisors were asked to evaluate the participating employees' employability level and job crafting behaviour. Section C covers demographic profile of the supervisors. Table 4.2 and Table 4.3 summarise the contents of the employee questionnaire and the supervisor questionnaire respectively.

Table 4.2: Contents in Employee Questionnaire

Section	Construct	No. of Items	Total Items
A	Self-direct Career Management Organisational Mobility Preference	8 5	13
B	Boundaryless Mindset Values-driven Career Orientation	8 6	14
C	Thriving at Work	10	10
D	Subjective Career Success Turnover Intentions	5 4	13
E	Demographic Characteristics	Industry category, job designation level, number of years/months employed in current organisation and in current position, total number of years worked, employment type, academic qualification, ethnicity, gender, and age	

Table 4.3: Contents in Supervisor Questionnaire

Section	Construct	No. of Items	Total Items
A	Employee's Employability	15	15
B	Employee's Job Crafting Behaviour	11	11
C	Demographic Characteristics	Industry category, job designation level, number of years/months employed in current organisation and current position, length of time supervising the employee, employment type, academic qualification, ethnicity, gender, and age	

4.5.1 Pre-testing the Instrument

To ensure content validity of the survey instrument (Bryman & Bell, 2007), three panel of academicians from the human resource and organisational behaviour fields, two Ph.D. senior candidates, and three human resource practitioners were involved in reviewing the questionnaires. They were requested to review the instrument's relevancy to the research topic and the overall user-friendliness, clarity, as well as the simplicity of the two sets of questionnaires (e.g., the wordings, the clarity of a sentence, the order or flow of statements, adequacy of instruction, level of understanding, and length of the survey).

The reviewers were also asked to give subjective feedback on the questionnaires, all of which were taken into consideration for the design of the final questionnaires. The questionnaires were refined based on their feedback. Subsequent to the pre-testing phase and the associated revision, the questionnaires were then sent for pilot testing.

4.5.2 Pilot Study

To further validate the research instrument, a pilot study was carried out and distributed to 40 employees and their respective supervisors within the target population. A pilot testing serves as a way to evaluate the appropriateness of study and instrument design before the actual field study (Malhotra, 2010). The data obtained from the pilot study was examined for the completeness of the responses and the internal consistency of the constructs. Besides, the pilot study conducted allowed an estimation of the time required to complete the questionnaires. No substantial comments were received from the respondents regarding the length and the time required to complete the questionnaires. No substantial remarks were found concerning the difficulty in answering the questionnaire items or regarding the format and structure of the questionnaires. Thus, no major change and adjustment were performed to any of the items. Consequently, the structure and the layout of the questionnaires were retained and the two sets of the questionnaires were maintained for the final distribution stage. As shown in Table 4.5, the internal consistencies of all the measures in this pilot study were ranging from .79 to .95. The Cronbach's alpha coefficient value of minimum 0.6 indicates good reliability among items in assessing a specific dimension (Malhotra, 2010). The results showed a satisfactory level of the initial indication of the internal consistency of all the items measured in the pilot study.

Table 4.4: Internal Consistencies of the Research Measures from Pilot Study (n = 40)

Construct	No. of items	Cronbach's alpha
Boundaryless Mindset	8	.89
Employability (rated by supervisors)	15	.82
Job Crafting - Seeking Challenges (rated by supervisors)	5	.93
Job Crafting - Seeking Resources (rated by supervisors)	6	.93
Organisational Mobility Preference	5	.87
Self-directed Career Management	8	.79
Subjective Career Success	5	.91
Thriving at Work	10	.93
Turnover Intentions	4	.95
Values-driven Career Orientation	6	.84

4.5.3 The Research Measures

This study employed and adapted measures from well-established scales in the literature, and multi-item scales were used. Nevertheless, the items were adapted, and the shortened versions of the scale were utilised whenever necessary. The conceptual definitions of each construct guided the development of the measuring scale. The participating employees rated their own protean and boundaryless career attitudes, thriving at work, subjective career success, and turnover intentions. The supervisors assessed the employees' job crafting behaviour and employability level. The following sub-sections provide details of the research measures, including the sources and some example items.

4.5.3.1 Protean Career Attitudes Measures

Protean career attitudes were measured using the two-component Protean Career Attitudes Scale developed by Briscoe et al. (2006). The scale has been widely used by several respectable studies (Briscoe et al., 2012; Çakmak-Otluoğlu, 2012; Cao et al., 2013; De Vos & Soens, 2008; Uy, Chan, Sam, Ho, & Chernyshenko, 2015; Waters et al., 2014) and has been well accepted for demonstrating high reliability and validity. Eight items measured self-directed career management. A sample item is "*I am in*

charge of my own career." Six items measured the values-driven career orientation. A sample item is "*I navigate my own career, based on my personal priorities, as opposed to my employer's priorities.*" Responses were made on a 5-point scale ranging from 1 (i.e., to little or no extent) to 5 (i.e., to a great extent), to indicate the extent of agreement with each item. All the items from this scale were included in the final survey as the items were clearly understood by the participants during the pre-test and pilot study.

4.5.3.2 Boundaryless Career Attitudes Measures

Boundaryless career attitudes were measured using Briscoe et al. (2006)'s two-component Boundaryless Career Attitudes Scale. Eight items measured the boundaryless mindset. A sample item is "*I enjoy working with people outside of my organisation.*" Five items measured the organisational mobility preference. Participating employees were asked to indicate on a 5-point Likert scale ranging from 1 (to a little or no extent) to 5 (to a great extent) the degree to which each item described them, such as "*I prefer to stay in a company I am familiar with rather than look for employment elsewhere.*" The measures also demonstrated established reliability and validity in numerous studies (Briscoe & Finkelstein, 2009; Briscoe et al., 2006; Çakmak-Otluoğlu, 2012; Enache et al., 2011). Again, since all the items were clearly understood by the participants during the pre-testing and pilot-testing stage, they were all included in the final survey.

4.5.3.3 Job Crafting Measures

Job crafting was assessed using the modified version of the Dutch job crafting scale developed by Tims et al. (2012). Consistent with Petrou et al. (2012) and Bakker et al. (2012), this study used two sub-dimensions from the general level job crafting, labelled as seeking resources and seeking challenges. Seeking resources included six items from the original general level of seeking resources items by Petrou et al. (2012) while

seeking challenges included five items from the Increasing Challenging Job Demands scale by Tims et al. (2012). The supervisors were asked to assess how often their subordinates engaged in each of the behaviours (1 = never, 2 = seldom, 3 = regularly, 4 = often, 5 = very often). To enable the supervisors to evaluate their subordinates, the items were slightly rephrased to gauge the supervisors' assessment of their subordinates' job crafting behaviour. The original items and the rephrased items are presented (in parentheses and italic typeface respectively) below:

General level of seeking resources

I ask others for feedback on my job performance.
(He/she asks others for feedback on his/her job performance.)

I ask colleagues for advice.
(He/she asks colleagues for advice.)

I ask my supervisor for advice.
(He/she asks me (supervisor) for advice.)

I try to learn new things at work.
(He/she tries to learn new things at work.)

I contacted other people from work (e.g., colleagues, supervisors) to get the necessary information for completing my tasks.
(He/she contacted other people from work (e.g., colleagues, supervisors) to get the necessary information for completing his/her tasks.)

When I have difficulties or problems at my work, I discuss them with people from my work environment.
(When he/she has difficulties or problems at work, he/she discusses them with people from the work environment.)

General level of seeking challenges

When an interesting project comes along, I offer myself proactively as project co-worker. *(When an interesting project comes along, he/she offers himself/herself proactively as project co-worker.)*

If there are new developments, I am one of the first to learn about them and try them out. *(If there are new developments, he/she is one of the first to learn about them and try them out.)*

When there is not much to do at work, I see it as a chance to start new projects. *(When there is not much to do at work, he/she sees it as a chance to start new projects.)*

I regularly take on extra tasks even though I do not receive extra salary for them. *(He/she regularly takes on extra tasks even though he/she does not receive extra salary for them.)*

I try to make my work more challenging by examining the underlying relationships between aspects of my job.
(He/she tries to make his/her work more challenging by examining the underlying relationships between aspects of his/her job.)

4.5.3.4 Thriving at Work Measures

Thriving at work was measured using the original 10-item measure developed by Porath, Spreitzer, Gibson, and Garnett (2012). This measure includes five items for learning and five items for vitality. A sample item for learning is "*At work, I find myself learning often*." A sample item for vitality is "*At work, I feel alive and vital.*" The alpha reliability coefficient for this variable was .93.

4.5.3.5 Employability Measures

Employability was assessed using a 15-item measure adapted from Van der Heijde and Van Der Heijden (2006). This study utilised the modified items for supervisor ratings from Van der Heijden et al. (2009). They reported Cronbach's alpha ranging from .95, .89 and .88 for the supervisor ratings in scales that defined the expertise, anticipation and optimisation and flexibility, respectively. In line with the previous operationalisation (e.g., De Cuyper et al., 2008; Fugate et al., 2004; De Vos et al., 2011), this study utilises three relevant dimensions, namely expertise, anticipation and optimisation, as well as flexibility. Expertise was assessed via six items from the 'occupational expertise' subscale. Responses were made on a 7-point scale ranging from 1 (strongly disagree) to 7 (strongly agree). A sample item is "*In general, this employee is competent to carry out work independently*". Anticipation and optimisation were assessed using five items from 'anticipation and optimisation' subscale. A sample item is "*He/she is focused on continuously developing himself/herself*". Flexibility was assessed using four items from the 'personal flexibility' subscale. The supervisors were

asked to evaluate their subordinates based on a seven-point Likert scale, to what extent they believed that their subordinates have the capacity to adapt easily to changes in the internal and external labour market (e.g., *He/she adapts easily to changes in the work environment*") For the objective of this study, and given the high intercorrelation between the three dimensions, all items are dissolved into one macro employability scale.

4.5.3.6 Subjective Career Success Measures

Subjective career success was assessed using four items from Greenhaus, Parasuraman, and Wormley (1990). This scale has been well established and has demonstrated high reliability and validity in many studies (Barnett & Bradley, 2007; O'Shea et al., 2014; Seibert et al., 1999). The participating employees were asked to answer on a five-point Likert scale the extent to which they were satisfied with their career successes, career progress, income, as well as development progress. A sample item is "*I am satisfied with the success I have achieved in my career.*"

4.5.3.7 Turnover Intentions Measures

Turnover intentions construct was assessed by the 4-item measure from the established scale by Kelloway, Gottlieb, and Barham (1999). The responses were measured on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Sample item are "*I am thinking about leaving this organisation*," "*I am planning to look for a new job*," "*I intend to ask people about new job opportunities*," and "*I don't plan to be in this organisation much longer*." All items were retained for the final survey since they were considered clear and easy to understand by the participants in both the pre-test and pilot test phase.

4.6 Data Analysis Strategy

This study utilised two statistical software packages to prepare the raw data for analysis and subsequently for actual data analysis. First, the IBM SPSS Statistics for Windows,

Version 21.0 was used for pilot testing, and for the data screening, descriptive statistical analysis, reliability analysis, and exploratory factor analysis (EFA) of the final study. Next, this study employed the Structural Equation Modeling (SEM) with AMOS 20.0 for the model fit and hypotheses testing. In addition, for the mediation analysis, this study employed PROCESS macro for SPSS developed by Hayes (2013) to compute confidence intervals for specific indirect effects based on 5,000 bootstrap samples as AMOS does not perform bootstrapping for specific but only for total indirect effects. The following subsections provide an overview of the EFA, SEM, and PROCESS macro tools employed in this study.

4.6.1 Exploratory Factor Analysis

The Exploratory Factor Analysis (EFA) is a popular multivariate statistical technique used to define the fundamental constructs or dimensions (factors) assumed to underlie the original variables (Gorsuch, 2003). Therefore, it can be employed to serve the dual purposes of data summarisation and data reduction into a smaller set of components without losing much of the information contained in the original variables (Hair, Black, Babin, & Anderson, 2010). Performing EFA prior to the confirmatory factor analysis (CFA) is highly recommended because CFA does not reveal how well the items are loaded on the non-hypothesised factors (Gerbing & Hamilton, 1996; Kelloway, 1995). For that reason, both the EFA and CFA for each construct were performed in the present study. Besides, according to Hair et al. (2010), there are a number of factors to be considered for an effective EFA. First, the sample size should preferably be 100 or more, with a minimum of 50. Second, the desirable ratio of observations to variables analysed is 10:1, with the minimum being 5:1. Third, there should be adequate correlations in the data matrix to warrant the use of factor analysis, and the visual assessment should reveal a substantial number of correlations greater than .30. In this

study, these factors were taken into considerations prior to performing the EFA. A more detailed explanation is provided in the succeeding chapter.

4.6.2 Structural Equation Modeling

Structural Equation Modeling **(**SEM) is an advanced and powerful statistical analysis tool used to understand and analyse complex relationships between variables in numerous disciplines, including social sciences. The SEM technique is a hybrid of factor analysis and multiple regression analysis (Hair et al., 2010). It expresses the linear relationships between the latent constructs, which can be either exogenous (independent) or endogenous (dependent) variables. SEM allows the relationships between multiple endogenous and exogenous to be analysed and explained concurrently and simultaneously in a single model. In other words, one variable can be treated as endogenous in one relationship, and as exogenous in another relationship within the same model. Further, SEM allows the determination of the goodness-of-fit between the hypothesised model and the actual data, and to examine the measurement errors in the statistical estimation process (Hair et al., 2010). Additionally, SEM tool has significant potential for theory testing and development in addition to the validation of constructs (Anderson & Gerbing, 1988; Reisinger & Mavondo, 2007). Given these capacities, SEM offers a more comprehensive analysis that allows the testing of model fit and hypothesised relationships for this study.

Besides, SEM allows the assessment of the nature and magnitude of hypothesised dependence relationships and at the same time examines the direct and indirect relationships between these variables (Schumacker & Lomax, 1996). In other words, SEM can be used to determine the significance of the direct and indirect (mediated) relationships within a single model. Given that the research framework of this study involves the mediating and also dependence relationships, SEM is deemed an appropriate tool for this study. In this study, the two-step approach by Anderson and

Gerbing (1988) was employed to test the hypothesised model. A confirmatory factor analysis (CFA) was carried out to identify the relationships between the observed indicators and unobserved constructs in the measurement model (Hair et al., 2010). Measurement models were assessed by global fit indices and model parameter estimate. In view of the fact that "no golden rule" exists to determine the most suitable index (Byrne, 2013), multiple indices were used to assess the overall model fit. These indices entail the traditional Chi-Square test of model fit, the Root Mean Square Error of Approximation (RMSEA), the Goodness-of-Fit Index (GFI), the Comparative Fit Index (CFI), and the Tucker Lewis Index (TLI).

Right after the validation of the measurement models, the structural model was developed and specified to test the hypotheses in the second stage. The structural model indicates how the unobserved constructs and observed variables are interrelated based on the proposed theoretical model (Hair et al., 2010). It is also used to determine whether the structural relationships among the research constructs are consistent with theoretical support (Anderson & Gerbing, 1988). The fit indexes that were used to examine the validity of structural model include the chi-square ($\chi 2$) goodness-of-fit statistics, the chi-square ratios, the Root Mean Square Error of Approximation (RMSEA), the Goodness-of-Fit Index (GFI), the Comparative Fit Index (CFI), and the Tucker Lewis Index (TLI).

4.6.3 PROCESS Macro for SPSS

PROCESS macro is an easy to use add-on for SPSS and SAS for statistical mediation, moderation, and conditional process analysis developed by Hayes (2013). It uses ordinary least squares regression procedure for continuous outcomes and logistic regression procedure for categorical outcomes in estimating direct and indirect effects in single or multiple mediating models for both serial and parallel mediation (Preacher & Hayes, 2004, 2008). PROCESS performs mediation analyses using the bootstrapping

procedure. Bootstrapping provides greater statistical power and smaller Type 1 and Type 2 errors than the traditional Sobel test for complex models tested with low-to moderate-sized samples (Preacher & Hayes, 2008). Given that the research framework of this study involves two mediating variables operating in parallel, and PROCESS allows estimation of mediation models with multiple parallel mediators (Model 4), it is therefore considered an appropriate tool for this study.

To conduct the mediation analysis, a macro (PROCESS version 2.13; released September 2014) was downloaded from Hayes' professional website (http://www.afhayes.com/spss-sas-and-mplus-macros-and-code.html). This macro was added to IBM SPSS Statistics 21.0 to test the proposed mediation hypotheses. The macro allows for the simultaneous testing of several independent variables, mediators and dependent variables. Confidence intervals (95%) for the parameter estimates of the indirect effects were calculated, with the parameter estimate being significant when the confidence intervals do not contain zero (Hayes, 2013). This method of inference is suggested to be more accurate and powerful than other methods (i.e., normal theory approach), as it does not make assumptions about normality and it understands the irregularity of the shape of the sampling distribution of the indirect effect (Hayes, 2013). All continuous predictors were mean-centered before analyses (Cohen, Cohen, West, & Aiken, 2013).

Furthermore, there are three advantages to using this statistical approach. First, multiple mediators can be tested simultaneously. Secondly, it does not rely on the assumption of a normal sampling distribution (see Lockwood & MacKinnon, 1998; MacKinnon, Lockwood, & Williams, 2004; Preacher & Hayes, 2004). Lastly, the number of inferential tests is minimised, therefore reducing the probability of Type 1 error.

4.7 Chapter Summary

This chapter explained the philosophical position and methodological considerations of the present study. Positivism embracing deductive research approach was adopted in the study. Next, this chapter discussed the research design and methods employed in the present study basing upon the philosophical assumption adopted. In addition, the instrument design and development, as well as the data collection procedures were reported in the later part of the chapter. This chapter also explained and justified the statistical analysis strategies employed in the study, namely the Exploratory Factor Analysis (EFA), Structural Equation Modeling (SEM) and PROCESS macro for SPSS. The results of these statistical analyses are presented in the next chapter.

CHAPTER 5: RESULTS

5.1 Introduction

This chapter presents the data cleaning, multivariate assumptions and descriptive statistics on the demographic profile of the participating employees and their supervisors, as well as the normality tests, item-total correlations analysis, and the description of mean and standard deviation of the items in each construct. This is followed by the Exploratory Factor Analysis (EFA), reliability analysis, and correlation analysis results. The analysis was performed using the IBM SPSS Statistics for Windows, Version 21.0 software. After the factor solution is derived, the inter-item correlation and corrected item to total correlation and reliability were examined. The chapter also presents the confirmatory factor analysis (CFA), structural model assessment, mediation analysis, and hypotheses testing results. Structural Equation Modeling (SEM) with IBM AMOS 20.0 was used to test the measurement model and structural model. The mediation hypotheses were tested using PROCESS macro for SPSS.

5.2 Data Preparation for Analysis

A total of 550 employee and 550 supervisor questionnaires were distributed in numerous private organisations located in Kuala Lumpur and Selangor. Of these, 450 sets of employee-supervisor questionnaires were returned. After discarding questionnaires that were incomplete and unusable, a total of 421 matched employee-supervisor questionnaires constituted the final matched sample. The dyadic employee-supervisor data were used to reduce the problem associated with common method variance.

5.2.1 Data Screening

The data of this study were screened using the SPSS Version 21.0 software for frequency test, errors and missing values. The frequencies of all cases for each item were checked to detect logically inconsistent and out of range data, as well as data with values not defined by the coding scheme. The inconsistent and out of range values in the data file were then replaced with the correct values. The questionnaires with missing data were discarded. Frequency test was then run again to obtain clean data. The test confirmed the data to be in compliance with its true range, and the data file was then ready for further statistical analysis. Next, outliers were identified by residual scatter plot. In doing so, standardised values or the Z score were generated for each of the 72 study items. In a scatter plot, the standardized residual of cases (Z score) must be within the range of $-3.3<x<3.3$; In other words, any Z-score values of ± 3.3 and above are considered as outliers (Tabachnick & Fidell, 2007). Outliers are defined as out-of-range values and cases with extreme values must be excluded from analysis as they may alter the statistic results (Hair et al., 2010). Fifteen cases were identified as outliers, and these cases were deleted as the z-scores were above the cut-off point, leaving a remaining 406 usable matched employee-supervisor samples for further analysis.

5.2.2 Variable Re-specification

The process of transforming data to create new variables or to modify existing data is known as variable re-specification (Malhotra, 2010). This is performed to create variables that are consistent with the objectives of the study, such as to recode a ratio variable into a categorical variable. Eight reverse-coded items and few items of demographic profile variables were transformed. Age of the employees and their supervisors, tenure in the current organisation and position, the employees' years of working experience, and the supervisors' length of time supervising the employee variables were undergone scale transformation, from ration scale to nominal scale.

5.3 Test for Multivariate Assumptions

The multivariate assumptions must be fulfilled as any violation will lead to an inaccurate result and wrong prediction of the dependent variable and hypothesised relationships (Hair et al., 2010). As such, 406 usable matched employee-supervisor samples are assessed on the four multivariate assumptions: Normality, Homoscedasticity, Linearity, and Multicollinearity.

5.3.1 Normality

Normality is assessed by examining the skewness and kurtosis values to ensure that the distribution of the observed variables is normal. A value of ±2.58 at the probability level of 0.01 and ±1.96 at 0.05 error level are indicative for normality (Hair et al., 2010). Table 5.1 indicates that the variables distribution fell within these limits, indicating normality of the data. Thus, the data satisfies the normality assumption. Table 5.1 shows the skewness and kurtosis of all observed variables.

Table 5.1: Skewness and Kurtosis of All Variables

Variable	Skewness	Kurtosis
Boundaryless Mindset	-0.330	0.615
Employability	-0.751	0.950
Job Crafting - Seeking Challenges	0.224	-0.155
Job Crafting - Seeking Resources	0.002	0.026
Organisational Mobility Preference	0.003	-0.359
Self-directed Career Management	-0.235	-0.297
Subjective Career Success	-0.261	-0.032
Thriving at Work	-0.991	1.835
Turnover Intentions	0.078	-0.116
Values-driven Career Orientation	0.065	0.138

5.3.2 Linearity and Homoscedasticity

Linearity measures the relationship between independent and dependent variables whereas homoscedasticity validates that the dependent variable(s) exhibit equal levels of variance across the range of independent variable(s) (Hair et al., 2010; Malhotra, 2010). Linearity can be determined by scatterplots, normal probability plots (P-P plots), and regression-standardized residuals, while homoscedasticity is usually assessed by Scatterplot and Boxplot (Pallant, 2005). In this study, normal probability plots and scatterplots (Hair et al., 2010; Malhotra, 2010) were used to test linearity and homoscedasticity respectively. Linear relationship was tested between self-directed career management, values-driven career orientation, boundaryless mindset, organisational mobility preference and job crafting, job crafting and perceived employability, thriving at work, subjective career success and turnover intentions.

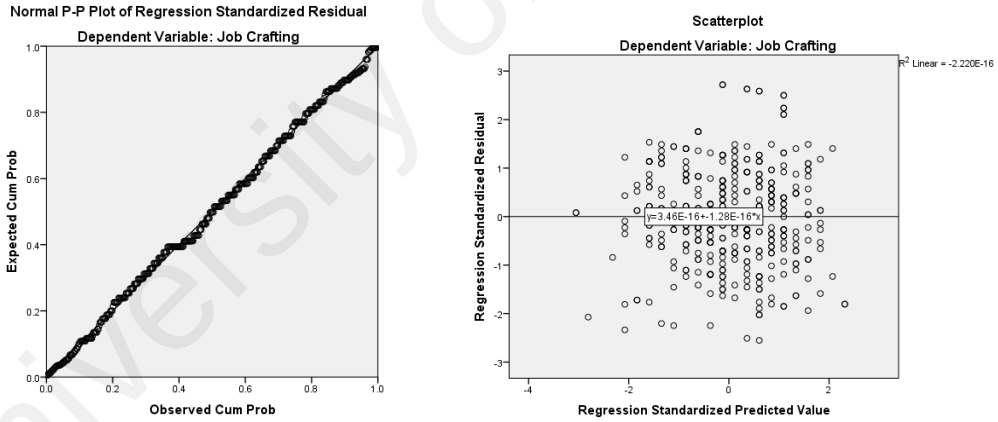

Figure 5.1: Linearity and homoscedasticity in the relationship between self-directed career management and job crafting

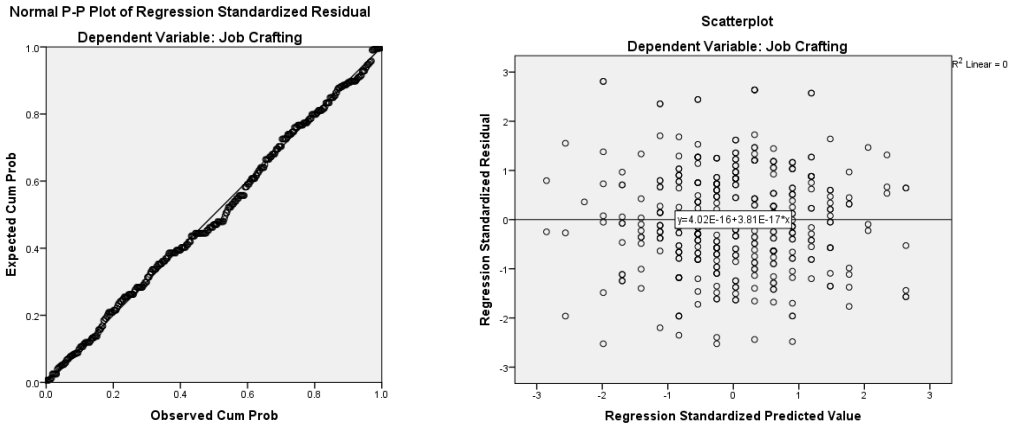

Figure 5.2: Linearity and homoscedasticity in the relationship between values-driven career orientation and job crafting

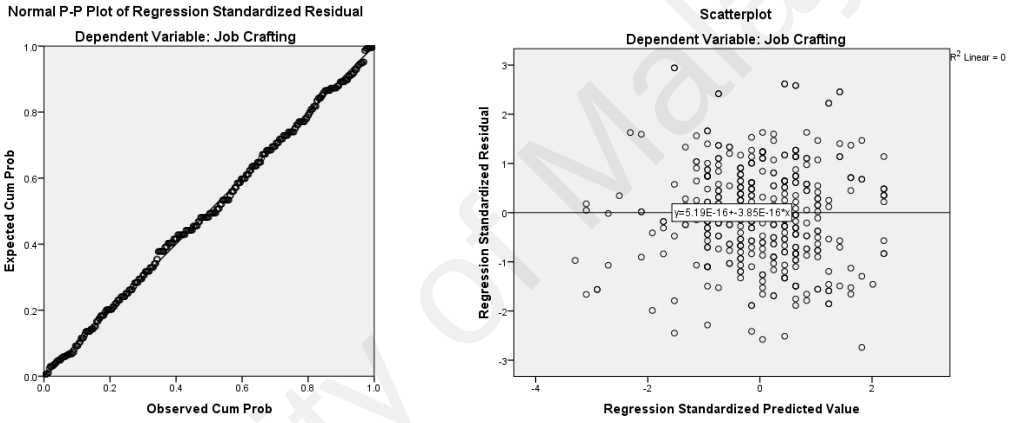

Figure 5.3: Linearity and homoscedasticity in the relationship between boundaryless mindset and job crafting

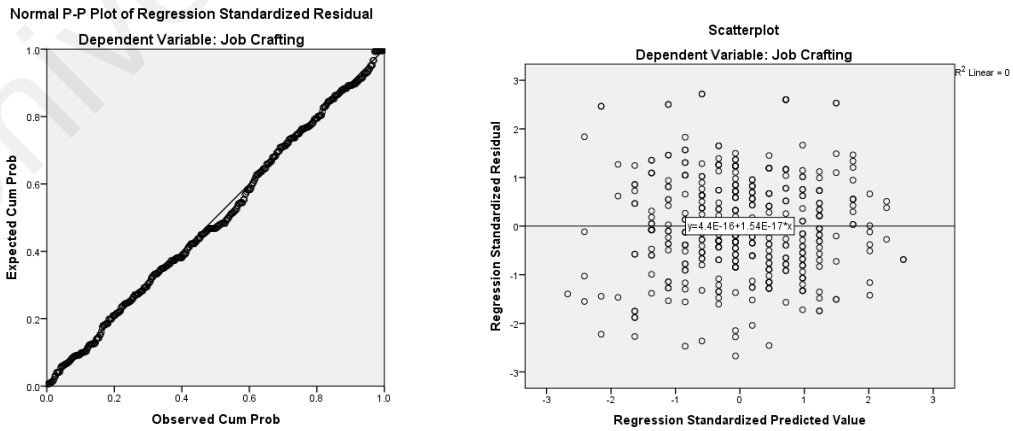

Figure 5.4: Linearity and homoscedasticity in the relationship between organisational mobility preference and job crafting

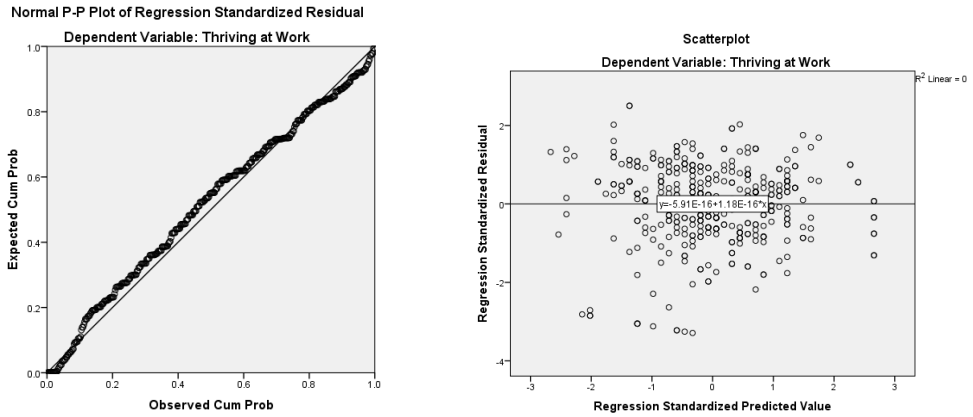

Figure 5.5: Linearity and homoscedasticity in the relationship between job crafting and thriving at work

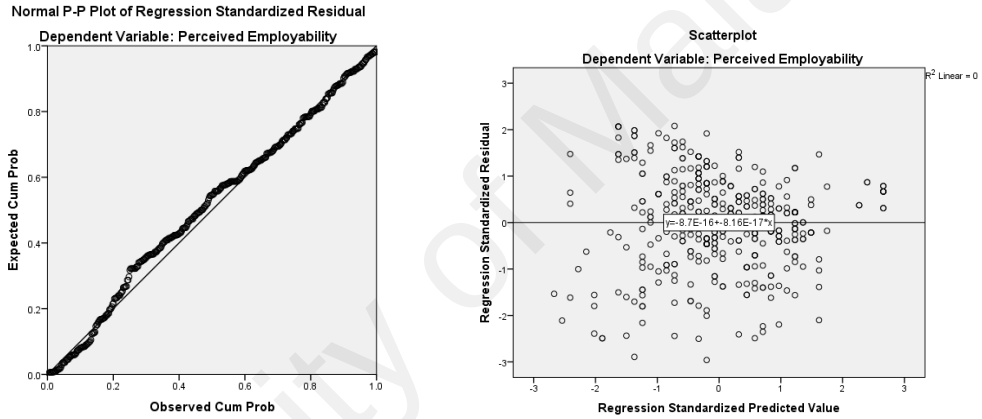

Figure 5.6: Linearity and homoscedasticity in the relationship between job crafting and employability

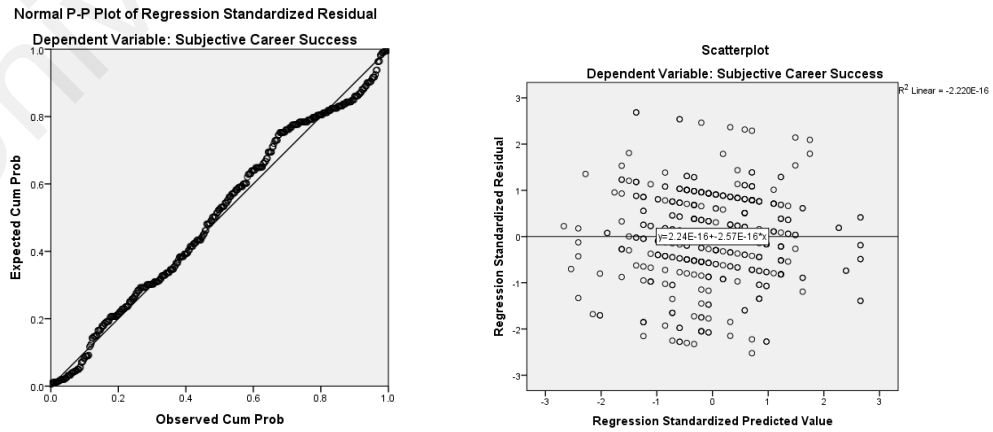

Figure 5.7: Linearity and homoscedasticity in the relationship between job crafting and subjective career success

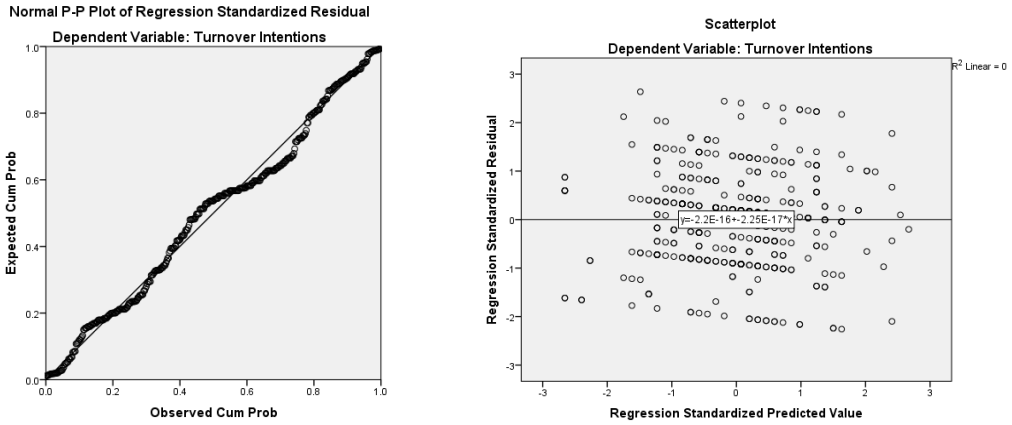

Figure 5.8: Linearity and homoscedasticity in the relationship between job crafting and turnover intentions

As shown in Figures 5.1 to 5.9, there were no obvious indications of non-linearity (i.e., the dots are far away from the diagonal axis). This indicates that linear relationships exist between the independent variables and the dependent variables of this study. The scatterplots above illustrated that the pattern of data points or the dots are spread out across the graph and not concentrated in the centre thus had not violated the assumptions. There were no extreme outliers identified in the graphs as all the cases were well located in the specified residual range of between 3.3 and -3.3. The results revealed that the independent and dependent variables of this study satisfy the linearity and homoscedasticity assumptions.

5.3.3 Multicollinearity

The issue of multicollinearity arises when there are high inter-correlations among the independent variables that may cause inaccurate results of regression coefficient estimation (Tabachnick & Fidell, 2007). Tolerance and Variance Inflation Factor (VIF) values are used to identify multicollinearity (Pallant, 2005). Tolerance is a value that measures the degree of the independent variable's variation not explained by other independent variables in the model. The VIF is the reciprocal of the Tolerance (1 /

(Tolerance value). Tolerance values of less than 0.1 and VIF value of more than ten would indicate the possibility of multicollinearity (Belsley, Kuh, Roy, & Welsch, 1980). Table 5.2 reveals that all tolerance values are well above 0.1 while the VIF values are less than 10. This indicates that there are no multicollinearity issues among the independent variables in this study. Taken together, the results discussed above show that all the multivariate assumptions are met. As such, the data can be utilised for multivariate analysis.

Table 5.2: Collinearity Statistics for All Constructs

Dependent Variable	Independent Variables	Collinearity Statistics	
		Tolerance	VIF
Self-directed Career Management	Values-driven Career Orientation	.867	1.153
	Boundaryless Mindset	.849	1.178
	Organisational Mobility Preference	.979	1.022
	Job Crafting - Seeking Resources	.443	2.255
	Job Crafting - Seeking Challenges	.446	2.243
Values-driven Career Orientation	Self-directed Career Management	.803	1.246
	Boundaryless Mindset	.801	1.248
	Organisational Mobility Preference	.979	1.021
	Job Crafting - Seeking Resources	.441	2.266
	Job Crafting - Seeking Challenges	.446	2.244
Boundaryless Mindset	Self-directed Career Management	.758	1.319
	Values-driven Career Orientation	.773	1.294
	Organisational Mobility Preference	.979	1.021
	Job Crafting - Seeking Resources	.441	2.266
	Job Crafting - Seeking Challenges	.447	2.238
Organisational Mobility Preference	Self-directed Career Management	.693	1.442
	Values-driven Career Orientation	.749	1.335
	Boundaryless Mindset	.776	1.288
	Job Crafting - Seeking Resources	.444	2.252
	Job Crafting - Seeking Challenges	.446	2.244
Job Crafting - Seeking Resources	Self-directed Career Management	.692	1.445
	Values-driven Career Orientation	.744	1.344
	Boundaryless Mindset	.771	1.297
	Organisational Mobility Preference	.979	1.022
	Job Crafting - Seeking Challenges	.962	1.039
Job Crafting - Seeking Challenges	Self-directed Career Management	.689	1.451
	Values-driven Career Orientation	.745	1.343
	Boundaryless Mindset	.773	1.293
	Organisational Mobility Preference	.973	1.028
	Job Crafting - Seeking Resources	.953	1.049

5.4 Description of the Research Samples

The descriptive statistics of the research samples are presented in this section. Frequency analysis was performed on the final 406 matched employee-supervisor questionnaires. Tables 5.3 and 5.4 summarise the demographic characteristics of the

employees and their supervisors respectively, on gender, ethnicity, age, and academic qualification, tenure in the organisation and position, total years of working experiences as well as their job designation level.

Of the total 406 employees, 36.7% were male and 63.3% were female. Malays, Chinese, and Indians made up 39.2%, 47.5%, and 9.9% of the employees, respectively. Regarding age distribution, the result indicated that most of the employees were young working adults, with the average age of 33.77 years. The majority of the sample of employees belonged to the 26-30 (32.0%) years age group, and this is followed by 31-35 years (22.9%) and those above 40 years old (17.7%). With regard to the respondents' educational level, about 27.3% of them had completed college qualification and the majority of them (38.4%) had obtained bachelor degrees. A substantial number (24.6%) of the respondents had Master's degree qualification and only 6.9% with secondary level education, and 2.5% had Ph.D. or doctorate qualification. As for the tenure in the organisation and current position, a vast majority of the samples (42.4%) had worked for their organisations within one to three years, and more than half of them (51%) had been in their current position for one to three years period. Overall, many respondents (36.7%) had between 1 to 5 years of working experience, and 27.8% of the respondents had between 6 to 10 years of experience. In addition, nearly 60% of the samples worked as executives or senior executives. The 406 sample of employees came from diverse industries, in which 31.3% were from education and training, followed by 17.7% from telecommunication or information technology industry. The rest of the employees served for banking, finance or insurance, manufacturing, hospitality and tourism, electricity, gas and water, as well as real estate and construction sectors.

Table 5.3 depicts the demographic profile of the 97 supervisors who participated in the survey. The sample included 51 male (52.6%) and 46 female (47.4%). The majority of them were Chinese (57.7%). Most of them were between the ages of 41 to 45 (32.0%)

and had bachelor degrees (47.4%). A considerable number (41.2%) of the supervisors had been working for their organisations for more than ten years, and more than half of them (51.5%) had been supervising the participating employee(s) between 1 to 3 years period. The supervisors were mostly from the middle management level (n = 56; 57.7%), followed by the first line management level (n = 25; 25.8%).

Table 5.3: Demographic Profile of 406 Employees

Demographic Variables		Frequency	Percentage (%)
Gender	Male	149	36.7
	Female	257	63.3
Ethnicity	Malay	159	39.2
	Chinese	193	47.5
	Indian	40	9.9
	Others	14	3.4
Age (years)	25 or less	42	10.3
	26 - 30	130	32.0
	31 - 35	93	22.9
	36 - 40	69	17.0
	Over 40	72	17.7
Academic Qualification	Primary Education	1	.2
	Secondary Education	28	6.9
	Certificate / Diploma / College	111	27.3
	Bachelor's degree	156	38.4
	Master's degree	100	24.6
	PhD / Doctorate	10	2.5
Tenure in Organisation	Less than 1 year	50	12.3
	1 - 3 years	172	42.4
	4 - 6 years	87	21.4
	7 - 9 years	30	7.4
	10 years or more	67	16.5
Tenure in Current Position	Less than 1 year	60	14.8
	1 - 3 years	207	51.0
	4 - 6 years	73	18.0
	7 - 9 years	27	6.7
	10 years or more	39	9.6
Total Years of Work Experience	Less than 1 year	9	2.2
	1 - 5 years	149	36.7
	6 - 10 years	113	27.8
	11 - 15 years	48	11.8
	16 - 20 years	51	12.6
	21 years or more	36	8.9
Job Designation Level	Top Management	2	.5
	Middle Management	14	3.4
	First Line Management	81	20.0
	Executive / Senior Executive	242	59.6
	Others	67	16.5
Industry Category	Retail and Wholesale	18	4.4
	Telecommunication / IT	72	17.7
	Construction	11	2.7
	Education / Training	127	31.3
	Real Estate	15	3.7
	Manufacturing	38	9.4
	Banking / Finance / Insurance	55	13.5
	Hospitality and Tourism	29	7.1
	Electricity, Gas and Water	28	6.9
	Others	13	3.2

Table 5.4: Demographic Profile of 97 Supervisors

Demographic Variables		Frequency	Percentage (%)
Gender	Male	51	52.6
	Female	46	47.4
Ethnicity	Malay	28	28.9
	Chinese	56	57.7
	Indian	8	8.2
	Others	5	5.2
Age (years)	30 or less	4	4.1
	31 - 35	15	15.5
	36 - 40	26	26.8
	41 - 45	31	32.0
	Over 45	21	21.6
Academic Qualification	Primary Education	1	1.0
	Secondary Education	3	3.1
	Certificate / Diploma / College	19	19.6
	Bachelor's degree	46	47.4
	Master's degree	26	26.8
	PhD / Doctorate	2	2.1
Tenure in Organisation	Less than 1 year	5	5.2
	1 - 3 years	17	17.5
	4 - 6 years	18	18.6
	7 - 9 years	17	17.5
	10 years or more	40	41.2
Tenure in Current Position	Less than 1 year	6	6.2
	1 - 3 years	36	37.1
	4 - 6 years	22	22.7
	7 - 9 years	16	16.5
	10 years or more	17	17.5
Length of Time Supervising this Employee	Less than 1 year	12	12.4
	1 - 3 years	50	51.5
	4 - 6 years	18	18.6
	7 - 9 years	11	11.3
	10 years or more	6	6.2
Job Designation Level	Top Management	9	9.3
	Middle Management	56	57.7
	First Line Management	25	25.8
	Executive / Senior Executive	6	6.2
	Others	1	1.0
Industry Category	Retail and Wholesale	5	5.2
	Telecommunication / IT	18	18.6
	Construction	5	5.2
	Education / Training	11	11.3
	Real Estate	7	7.2
	Manufacturing	11	11.3
	Banking / Finance / Insurance	23	23.7
	Hospitality and Tourism	6	6.2
	Electricity, Gas and Water	7	7.2
	Others	4	4.1

5.5 Descriptive Statistics for Constructs

This section provides the descriptive analysis of 10 key constructs in this study, including self-directed career management, values-driven career orientation, boundaryless mindset, organisational mobility preference, seeking resources, seeking challenges, thriving at work, employability, subjective career success and turnover intentions.

5.5.1 Self-directed Career Management (SDCM)

The SDCM construct was measured with 5-point Likert scale. As depicted in Table 5.5, the mean score ranges from 3.32 to 4.12. This implies that the respondents agreed to some or considerable extent with all the items measured. Among the items, Item SD2 reports the highest mean score (4.12±0.762), followed by SD5 (4.04±0.845) and SD4 (4.02±0.876). The respondents' agreement on the item '*I am responsible for my success or failure in my career*' was higher than other items. However, the lowest mean value (3.32± 0.834) was reported from item SD1.

Table 5.5: Descriptive Statistics for Self-directed Career Management

	Self-directed Career Management	Mean	Std. Deviation
SD1	When development opportunities have not been offered by my company, I've sought them out on my own.	3.32	.834
SD2	I am responsible for my success or failure in my career.	4.12	.762
SD3	Overall, I have a very independent, self-directed career.	3.72	.797
SD4	Freedom to choose my own career path is one of my most important values.	4.02	.876
SD5	I am in charge of my own career.	4.04	.845
SD6	Ultimately, I depend upon myself to move my career forward.	3.96	.729
SD7	Where my career is concerned, I am very much "my own person".	3.60	.825
SD8	In the past I have relied more on myself than others to find a new job when necessary.	3.74	.879

Note. A 5-point Likert scale was used. Scale: 1 = To little or no extent; 5 = To a great extent.

5.5.2 Values-driven Career Orientation (VDCO)

The VDCO construct was measured by six items using the 5-point Likert scale. As illustrated in Table 5.6, all the items were reported above 3 mean scores, indicating that the respondents agreed to some extent with all the items for this construct. Comparatively, there was no significant difference in the respondents' agreement on each item.

Table 5.6: Descriptive Statistics for Values-driven Career Orientation

	Values-driven Career Orientation	Mean	Std. Deviation
VD1	I navigate my own career, based on my personal priorities, as opposed to my employer's priorities.	3.39	.847
VD2	It doesn't matter much to me how other people evaluate the choices I make in my career.	3.54	.890
VD3	What's most important to me is how I feel about my career success, not how other people feel about it.	3.91	.869
VD4	I'll follow my own conscience if my company asks me to do something that goes against my values.	3.51	.877
VD5	What I think about what is right in my career is more important to me than what my company thinks.	3.41	.867
VD6	In the past I have sided with my own values when the company has asked me to do something I don't agree with.	3.11	1.004

Note. A 5-point Likert scale was used. Scale: 1 = To little or no extent; 5 = To a great extent.

5.5.3 Boundaryless Mindset (BM)

Using a 5-point Likert scale, eight items were used to measure the Boundaryless Mindset construct. Table 5.7 depicts the mean scores as well as the standard deviation of all items in the construct. The mean values for all items were well above 3, with BM1 reports the highest mean value (3.91±0.801). This indicates that the respondents seek job assignments that allow them to learn something new.

Table 5.7: Descriptive Statistics for Boundaryless Mindset

	Boundaryless Mindset	Mean	Std. Deviation
BM1	I seek job assignments that allow me to learn something new.	3.91	.801
BM2	I would enjoy working on projects with people across many organizations.	3.76	.777
BM3	I enjoy job assignments that require me to work outside of the organization.	3.47	.923
BM4	I like tasks at work that require me to work beyond my own department.	3.41	.855
BM5	I enjoy working with people outside of my organization.	3.52	.899
BM6	I enjoy jobs that require me to interact with people in many different organizations.	3.66	.882
BM7	I have sought opportunities in the past that allow me to work outside the organization.	3.28	.984
BM8	I am energized in new experiences and situations.	3.75	.790

Note. A 5-point Likert scale was used. Scale: 1 = To little or no extent; 5 = To a great extent.

5.5.4 Organisational Mobility Preference (OMP)

The five items from the OMP construct was measured with 5-point Likert scale. All items are negatively worded items. As shown in Table 5.8, most items were reported above 3 mean scores except for two items, namely OMP1 and OMP3. In short, OMP5 (If my ideal career I would work for only one organization.*) received the highest mean score among other items (3.521±0.108). As this is a negatively worded item, it indicates that the respondents would not work for only one organisation in their ideal career.

Table 5.8: Descriptive Statistics for Organisational Mobility Preference

	Organisational Mobility Preference	Mean	Std. Deviation
OMP1	I like the predictability that comes with working continuously for the same organization.*	2.61	.853
OMP2	I would feel very lost if I couldn't work for my current organization.*	3.17	1.106
OMP3	I prefer to stay in a company I am familiar with rather than look for employment elsewhere.*	2.83	1.002
OMP4	If my organization provided lifetime employment, I would never desire to seek work in other organizations.*	3.14	1.042
OMP5	If my ideal career I would work for only one organization.*	3.52	1.108

Note. A 5-point Likert scale was used. Scale: 1 = To little or no extent; 5 = To a great extent.

*All items are a negatively-worded item.

5.5.5 Job Crafting (JC)

Using the 5-point Likert scale, 11 items measured the JC construct. The evaluation of these scales was performed by supervisors on their employees. Most items in relation to 'seeking resources' (i.e. JC2, JC3, JC4, JC5, JC6) have the highest mean values (3.21±0.807, 3.35±0.869, 3.35±0.868, 3.39±0.799, 3.32±0.812 respectively), except for JC1. One of the 'seeking challenges' items (i.e. JC9) seems to have the lowest mean values (2.86±0.954). The results suggest that the respondents seek out more resources regularly at their workplace to complete their tasks. In contrast, activities involving seeking more challenges at work such as '*starting new project when there is not much work to do*' are infrequently requested by the employees, as perceived by their supervisors.

Table 5.9: Descriptive Statistics for Job Crafting – Seeking Resources

	Job Crafting - Seeking Resources	Mean	Std. Deviation
JC1	He/she asks others for feedback on his/her job performance.	2.90	.927
JC2	He/she asks colleagues for advice.	3.21	.807
JC3	He/she asks me (supervisor) for advice.	3.35	.869
JC4	He/she tries to learn new things at work.	3.35	.868
JC5	He/she contacted other people from work (e.g., colleagues, supervisors) to get the necessary information for completing his/her tasks.	3.39	.799
JC6	When he/she has difficulties or problems at work, he/she discusses them with people from the work environment.	3.32	.812

Note. A 5-point Likert scale was used. Scale: 1 = Never; 5 = Very often.

Table 5.10: Descriptive Statistics for Job Crafting – Seeking Challenges

	Job Crafting - Seeking Challenges	Mean	Std. Deviation
JC7	When an interesting project comes along, he/she offers himself/herself proactively as project co-worker.	2.99	.963
JC8	If there are new developments, he/she is one of the first to learn about them and try them out.	2.92	.946
JC9	When there is not much to do at work, he/she sees it as a chance to start new projects.	2.86	.954
JC10	He/she regularly takes on extra tasks even though he/she does not receive extra salary for them.	3.15	.942
JC11	He/she tries to make his/her work more challenging by examining the underlying relationships between aspects of his/her job.	3.10	.837

Note. A 5-point Likert scale was used. Scale: 1 = Never; 5 = Very often.

5.5.6 Thriving at Work (TW)

The TW construct was measured by ten items on the 7-point Likert scale. Item T5 and T7 are negatively-worded statements in the construct. As illustrated in Table 5.10, all items reported mean score above 5, which is leaning towards the "agree" stance. This implies that the respondents are striving positively at their workplace, where they feel energetic and alive most of the time. Item T9 scored the highest mean value (5.99±1.010) where the respondents found themselves learning often at their workplace.

Table 5.11: Descriptive Statistics for Thriving at Work

	Thriving at Work	Mean	Std. Deviation
T1	I feel alive and vital.	5.31	.985
T2	I have energy and spirit.	5.38	.971
T3	I am looking forward to each new day.	5.33	1.118
T4	I feel alert and awake.	5.34	.874
T5	I do not feel very energetic.*	5.19	.928
T6	I continue to learn more as time goes by.	5.43	.970
T7	I am not learning.*	5.62	.968
T8	I am developing a lot as a person.	5.45	.925
T9	I find myself learning often.	5.99	1.010
T10	I see myself continually improving.	5.42	1.087

Note. A 7-point Likert scale was used. Scale: 1 = Strongly disagree; 7 = Strongly agree.

*T5 and T7 are a negatively-worded items.

5.5.7 Employability (PE)

The 7-point Likert scale was used to measure the 15 items of the PE construct. The 15 items were rated by the supervisors participated in this study on their employees. Item PE6 is a negatively-worded statement in the construct. The mean scores and standard deviation for each item are shown in Table 5.9. All the items reported mean value above 5, indicating that the respondents' agreement to the statements was towards the more positive stand. Item PE3 scored the highest mean value (5.67±0.808) and item PE14 recorded the lowest mean (5.03±0.978).

Table 5.12: Descriptive Statistics for Employability

	Employability	Mean	Std. Deviation
PE1	He/she adapts easily to changes in the work environment.	5.48	.939
PE2	He/she takes responsibility for maintaining his/her labour market value.	5.51	.899
PE3	This employee has confidence in his/her capacities within his/her area of expertise.	5.67	.808
PE4	In general, this employee is competent to distinguish main issues from side issues and to set priorities.	5.39	1.017
PE5	He/she is focused on continuously developing himself/herself.	5.34	1.005
PE6	The quality of his/her skills is not of such a high level.*	5.34	1.06
PE7	He/she generally anticipates quickly on changes in the work environment.	5.08	1.025
PE8	He/she approaches the development of his/her weaknesses in a systematic manner.	5.04	.999
PE9	He/she is competent to provide information on his/her work in a way that is comprehensive.	5.38	.910
PE10	He/she generally anticipates quickly on changes in his/her job.	5.04	1.037
PE11	He/she is competent to be of practical assistance to colleagues with questions about the approach to work.	5.45	.856
PE12	He/she consciously devotes attention to applying newly acquired knowledge and skills.	5.33	.984
PE13	In general, this employee is competent to carry out work independently.	5.66	.920
PE14	In formulating career goals he/she takes account of external market demand.	5.03	.978
PE15	He/she adapts to developments within the organisation.	5.44	.840

Note. A 7-point Likert scale was used. Scale: 1 = Strongly disagree; 7 = Strongly agree.

*PE6 is a negatively-worded item.

5.5.8 Subjective Career Success (SCS)

The SCS construct was assessed by five items employing the 5-point Likert scale. Table 5.12 illustrates that the mean values of all the 5 items are all above 3. Item SCS 5 scored the highest mean score (3.55±0.761) while item SCS3 had the lowest mean score (3.15±0.881). This implies that the respondents were more satisfied with their progress in developing new skills but less satisfied towards their progress in meeting goals for income.

Table 5.13: Descriptive Statistics for Subjective Career Success

	Subjective Career Success	Mean	Std. Deviation
SCS1	I am satisfied with the success I have achieved in my career.	3.43	.822
SCS2	I am satisfied with the progress I have made toward meeting my overall career goals.	3.45	.757
SCS3	I am satisfied with the progress I have made toward meeting my goals for income.	3.15	.881
SCS4	I am satisfied with the progress I have made toward meeting my goals for advancement.	3.36	.792
SCS5	I am satisfied with the progress I have made toward meeting my goals for the development of new skills.	3.55	.761

Note. A 5-point Likert scale was used. Scale: 1 = Strongly disagree; 5 = Strongly agree.

5.5.9 Turnover Intentions (TI)

The TI construct was measured by four items using the 5-point Likert scale. As shown in Table 5.13, the mean values of all the items are below 3, which is leaning towards "disagree" stance. Although the mean score for TI3 is the highest (2.92±1.044), the difference with the other three items is rather small. This implies that all four items are almost equally important, and the respondents did not intend to leave their organisations.

Table 5.14: Descriptive Statistics for Turnover Intentions

	Turnover Intentions	Mean	Std. Deviation
TI1	I am thinking about leaving this organization.	2.79	.997
TI2	I am planning to look for a new job.	2.84	.997
TI3	I intend to ask people about new job opportunities.	2.92	1.044
TI4	I don't plan to be in this organization much longer.	2.73	1.013

Note. A 5-point Likert scale was used. Scale: 1 = Strongly disagree; 5 = Strongly agree.

5.6 Item-total Correlation Analysis

Item-total correlations analysis is a process of evaluating items in the study to purify and to improve the internal consistency of the scales by eliminating 'ill-fitting' items before determining the factors that represent the construct (Churchill Jr, 1979). Hair et al. (2010) suggest that the corrected item-total correlation (CITC) for each item should be .50 or greater. The CITC analysis was performed for each construct and the results are presented in Table 5.15. The CITC scores ranged from .308 to .869. A total of 11 items (BM1, OMP1, SD1, SD3, SD7, SD8, VD1, VD2, VD3, VD4 and VD6) were found to have CITC score below the threshold value of .50. For the VDCO construct, item VD3 with the lowest CITC score (i.e. .342) was removed first and subsequently VD2 (scored .373 for CITC) and VD1 (scored .369 for CITC) were dropped one after another.

However, there were five items (i.e., BM1, SD3, SD7, and VD4) with CITC scores just slightly below .50. Thus, these items were retained for subsequent analyses. Nevertheless, all the items with CITC scores below .45 were dropped from further analyses. From the initial 72 items, six of them were removed (i.e., OMP1, SD1, SD8, VD1, VD2 and VD3), and the remaining 66 items were retained for subsequent analyses. Overall, six items with CITC below .45 were eliminated, and the 66 remaining items indicated acceptable CITC scores which ranged from .450 to .869. Exploratory Factor Analysis (EFA) was also used to refine the measurement items further. The results of EFA were reported in the following section.

Table 5.15: Corrected Item-Total Correlation (CITC)

Construct	Item Statement	CITC
Boundaryless Mindset	BM1. I seek job assignments that allow me to learn something new.	.499
	BM2. I would enjoy working on projects with people across many organizations.	.671
	BM3. I enjoy job assignments that require me to work outside of the organization.	.702
	BM4. I like tasks at work that require me to work beyond my own department.	.641
	BM5. I enjoy working with people outside of my organization.	.693
	BM6. I enjoy jobs that require me to interact with people in many different organizations.	.764
	BM7. I have sought opportunities in the past that allow me to work outside the organization.	.551
	BM8. I am energized in new experiences and situations.	.607
Employability	PE1. He/she adapts easily to changes in the work environment.	.700
	PE2. He/she takes responsibility for maintaining his/her labour market value.	.719
	PE3. This employee has confidence in his/her capacities within his/her area of expertise.	.627
	PE4. In general, this employee is competent to distinguish main issues from side issues and to set priorities.	.786
	PE5. He/she is focused on continuously developing himself/herself.	.754
	PE6. The quality of his/her skills is not of such a high level.*	.554
	PE7. He/she generally anticipates quickly on changes in the work environment.	.697
	PE8. He/she approaches the development of his/her weaknesses in a systematic manner.	.677
	PE9. He/she is competent to provide information on his/her work in a way that is comprehensive.	.714
	PE10. He/she generally anticipates quickly on changes in his/her job.	.733
	PE11. He/she is competent to be of practical assistance to colleagues with questions about the approach to work.	.679
	PE12. He/she consciously devotes attention to applying newly acquired knowledge and skills.	.766
	PE13. In general, this employee is competent to carry out work independently.	.696
	PE14. In formulating career goals he/she takes account of external market demand.	.637
	PE15. He/she adapts to developments within the organisation.	.728
Job Crafting - Seeking Resources	JC1. He/she asks others for feedback on his/her job performance.	.697
	JC2. He/she asks colleagues for advice.	.744
	JC3. He/she asks me (supervisor) for advice.	.720
	JC4. He/she tries to learn new things at work.	.755
	JC5. He/she contacted other people from work (e.g., colleagues, supervisors) to get the necessary information for completing his/her tasks.	.747
	JC6. When he/she has difficulties or problems at work, he/she discusses them with people from the work environment.	.697

Note. * denotes negatively worded item. CITC <.45 are in boldface and underlined.

Table 5.15, continued

Construct	Item Statement	CITC
Job Crafting - Seeking Challenges	JC7. When an interesting project comes along, he/she offers himself/herself proactively as project co-worker.	.822
	JC8. If there are new developments, he/she is one of the first to learn about them and try them out.	.842
	JC9.When there is not much to do at work, he/she sees it as a chance to start new projects.	.840
	JC10. He/she regularly takes on extra tasks even though he/she does not receive extra salary for them.	.741
	JC11. He/she tries to make his/her work more challenging by examining the underlying relationships between aspects of his/her job.	.821
Organisational Mobility Preference	OMP1. I like the predictability that comes with working continuously for the same organization.*	**.420**
	OMP2. I would feel very lost if I couldn't work for my current organization.*	.568
	OMP3. I prefer to stay in a company I am familiar with rather than look for employment elsewhere.*	.640
	OMP4. If my organization provided lifetime employment, I would never desire to seek work in other organizations.*	.679
	OMP5. If my ideal career I would work for only one organization.*	.635
Self-directed Career Management	SD1. When development opportunities have not been offered by my company, I've sought them out on my own.	**.269**
	SD2. I am responsible for my success or failure in my career.	.535
	SD3. Overall, I have a very independent, self-directed career.	.494
	SD4. Freedom to choose my own career path is one of my most important values.	.581
	SD5. I am in charge of my own career.	.626
	SD6. Ultimately, I depend upon myself to move my career forward.	.612
	SD7. Where my career is concerned, I am very much "my own person".	.453
	SD8. In the past I have relied more on myself than others to find a new job when necessary.	**.308**
Subjective Career Success	SCS1. I am satisfied with the success I have achieved in my career.	.743
	SCS2. I am satisfied with the progress I have made toward meeting my overall career goals.	.775
	SCS3. I am satisfied with the progress I have made toward meeting my goals for income.	.686
	SCS4. I am satisfied with the progress I have made toward meeting my goals for advancement.	.800
	SCS5. I am satisfied with the progress I have made toward meeting my goals for the development of new skills.	.731

Note. * denotes negatively worded item. CITC <.45 are in boldface and underlined.

Table 5.15, continued

Construct	Item Statement	CITC
Thriving at Work	T1. I feel alive and vital.	.746
	T2. I have energy and spirit.	.738
	T3. I am looking forward to each new day.	.622
	T4. I feel alert and awake.	.720
	T5. I do not feel very energetic.*	.677
	T6. I continue to learn more as time goes by.	.749
	T7. I am not learning.*	.741
	T8. I am developing a lot as a person.	.712
	T9. I find myself learning often.	.666
	T10. I see myself continually improving.	.605
Turnover Intentions	TI1. I am thinking about leaving this organization.	.814
	TI2. I am planning to look for a new job.	.869
	TI3. I intend to ask people about new job opportunities.	.797
	TI4. I don't plan to be in this organization much longer.	.803
Values-driven Career Orientation	VD1. I navigate my own career, based on my personal priorities, as opposed to my employer's priorities.	**.478**
	VD2. It doesn't matter much to me how other people evaluate the choices I make in my career.	**.482**
	VD3. What's most important to me is how I feel about my career success, not how other people feel about it.	**.342**
	VD4. I'll follow my own conscience if my company asks me to do something that goes against my values.	.450
	VD5. What I think about what is right in my career is more important to me than what my company thinks.	.619
	VD6. In the past I have sided with my own values when the company has asked me to do something I don't agree with.	**.374**

Note. * denotes negatively worded item. CITC <.45 are in boldface and underlined.

5.7 Exploratory Factor Analysis

A sample size of 406 cases for a total of 66 measurement items in the study exceeded the desired cases-to-item ratio of 5:1 recommended by Hair et al. (2010). Exploratory Factor Analysis (EFA) was performed on the 66 items to assess the factor structure of the scales based on the Malaysian samples. As suggested by Hair et al. (2010), the possibility of poor EFA results is high if the researcher indiscriminately includes an enormous number of variables in hoping that the factor analysis will 'figure it out'. As such, it is important to understand the conceptual basis for any variables to be included

to effectively derive factors based on the conceptually defined dimensions. This approach has been applied in various studies involving many variables (see Boshoff & Allen, 2000; Boshoff & Tait, 1996). For this purpose, two phases of exploratory factor analyses were carried out for job crafting and its antecedent variables, and the dependent variables.

For the two phases of analysis, Bartlett's test of Sphericity and the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy were used to determine the appropriateness of using the EFA. The factorability is assumed when Bartlett's test of Sphericity is substantial and significant, and the Kaiser-Meyer-Olkin measure of sampling adequacy is more than .60 (Hair et al., 2010). Furthermore, principal components analysis (PCA) of factor extraction along with varimax rotation was employed to capture the greatest portion of the total variance in a set of data with the minimum number of factors or components. The varimax orthogonal rotation was chosen to reduce the data to a set of uncorrelated measures to be subsequently used in other multivariate techniques (Hair et al., 2010). In this study, based on Hair et al. (2010)'s suggestion, only items loaded at .50 or higher on the intended factor were retained for further analyses. The EFA results for the job crafting and its antecedent variables, as well as the dependent variables, are reported in Section 5.7.1 and 5.7.2 respectively.

5.7.1 Exploratory Factor Analysis – Assessing Job Crafting and its Antecedents

EFA was performed on a total of 32 items relating to the job crafting and its antecedent variables. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy is clearly greater than the .60 value (KMO=.879) and Bartlett's test of Sphericity was large and significant (6961.82; df = 496; p = .000), indicating appropriateness to continue with the factor analysis. Results from the PCA with varimax rotation revealed that four factors had eigenvalues greater than 1 (see Appendix B-1). A total of six factors were extracted with 63.34% of the total variance explained. The first factor (job crafting – seeking

challenges) accounted for the greatest variance in the data (13.78%); the second factor (boundaryless mindset) accounted for 13.50%, followed by the third factor (job crafting – seeking resources) accounted for 11.35%; the fourth factor (self-directed career management) accounted for 10.38%; the fifth factor (organisational mobility preference) accounted for 8.17%, and the sixth factor (values-driven career orientation) accounted for 6.17% of the variance. Table 5.16 illustrates that each item had a loading greater than .50 on the expected factor. The average loading for job crafting and its antecedent variables was good (.729), wherein the detailed EFA results are presented in Appendix B-1.

Table 5.16: Factor Loadings for Exploratory Factor Analysis with Varimax Rotation of Items Assessing Job Crafting and its Antecedent Variables

Factor / Scale	Factor Loading
Boundaryless Mindset	
BM1. I seek job assignments that allow me to learn something new.	**.508**
BM2. I would enjoy working on projects with people across many organizations.	**.721**
BM3. I enjoy job assignments that require me to work outside of the organization.	**.790**
BM4. I like tasks at work that require me to work beyond my own department.	**.765**
BM5. I enjoy working with people outside of my organization.	**.790**
BM6. I enjoy jobs that require me to interact with people in many different organizations.	**.819**
BM7. I have sought opportunities in the past that allow me to work outside the organization.	**.662**
BM8. I am energized in new experiences and situations.	**.621**
Job Crafting - Seeking Challenges	
JC7. When an interesting project comes along, he/she offers himself/herself proactively as project co-worker.	**.806**
JC8. If there are new developments, he/she is one of the first to learn about them and try them out.	**.814**
JC9. When there is not much to do at work, he/she sees it as a chance to start new projects.	**.844**
JC10. He/she regularly takes on extra tasks even though he/she does not receive extra salary for them.	**.804**
JC11. He/she tries to make his/her work more challenging by examining the underlying relationships between aspects of his/her job.	**.830**
Job Crafting - Seeking Resources	
JC1. He/she asks others for feedback on his/her job performance.	**.605**
JC2. He/she asks colleagues for advice.	**.830**
JC3. He/she asks me (supervisor) for advice.	**.750**
JC4. He/she tries to learn new things at work.	**.649**
JC5. He/she contacted other people from work (e.g., colleagues, supervisors) to get the necessary information for completing his/her tasks.	**.737**
JC6. When he/she has difficulties or problems at work, he/she discusses them with people from the work environment.	**.679**
Self-directed Career Management	
SD2. I am responsible for my success or failure in my career.	**.728**
SD3. Overall, I have a very independent, self-directed career.	**.607**
SD4. Freedom to choose my own career path is one of my most important values.	**.696**
SD5. I am in charge of my own career.	**.752**
SD6. Ultimately, I depend upon myself to move my career forward.	**.720**
SD7. Where my career is concerned, I am very much "my own person".	**.593**
Organisational Mobility Preference	
OMP2. I would feel very lost if I couldn't work for my current organization.*	**.752**
OMP3. I prefer to stay in a company I am familiar with rather than look for employment elsewhere.*	**.799**
OMP4. If my organization provided lifetime employment, I would never desire to seek work in other organizations.*	**.832**
OMP5. If my ideal career I would work for only one organization.*	**.792**
Values-driven Career Orientation	
VD4. I'll follow my own conscience if my company asks me to do something that goes against my values.	**.713**
VD5. What I think about what is right in my career is more important to me than what my company thinks.	**.795**
VD6. In the past I have sided with my own values when the company has asked me to do something I don't agree with.	**.819**

Note. * denotes negatively worded item. Factor loading >.50 are in boldface.

5.7.2 Exploratory Factor Analysis – Assessing Dependent Variables

The Bartlett's test of sphericity for all the dependent variables was large and significant (11822.90; df = 703; p = .000), and the Kaiser-Meyer-Olkin measure of sampling adequacy was .913, which is far greater than .60, indicating suitability to continue further with the factor analysis. The EFA yielded a four-factor solution with eigenvalues greater than 1, and these four factors accounted for 56.48% of the total variance explained (see Appendix B-2). The factors were termed as Employability (Factor 1), Thriving at Work (Factor 2), Subjective Career Success (Factor 3) and Turnover Intentions (Factor 4). Table 5.17 illustrates that all the factor loadings exceeded .50.

In summary, a total of 66 items were retained for subsequent analyses. The results of the EFA showed that these items have loadings of at least .50 on their intended factors. Next, a reliability analysis was performed to determine the internal consistency of each scale, followed by confirmatory factor analysis. Only after taking into consideration the results of reliability indicators and confirmatory factor analysis, the final factor solutions would then be established for further analysis. The results of the reliability assessment are discussed in the following section.

Table 5.17: Factor Loadings for Exploratory Factor Analysis with Varimax Rotation of Items Assessing Dependent Variables

Factor / Scale	Factor Loading
Perceived Employability	
PE1. He/she adapts easily to changes in the work environment.	**.735**
PE2. He/she takes responsibility for maintaining his/her labour market value.	**.766**
PE3. This employee has confidence in his/her capacities within his/her area of expertise.	**.693**
PE4. In general, this employee is competent to distinguish main issues from side issues and to set priorities.	**.839**
PE5. He/she is focused on continuously developing himself/herself.	**.793**
PE6. The quality of his/her skills is not of such a high level.*	**.610**
PE7. He/she generally anticipates quickly on changes in the work environment.	**.738**
PE8. He/she approaches the development of his/her weaknesses in a systematic manner.	**.743**
PE9. He/she is competent to provide information on his/her work in a way that is comprehensive.	**.755**
PE10. He/she generally anticipates quickly on changes in his/her job.	**.784**
PE11. He/she is competent to be of practical assistance to colleagues with questions about the approach to work.	**.719**
PE12. He/she consciously devotes attention to applying newly acquired knowledge and skills.	**.816**
PE13. In general, this employee is competent to carry out work independently.	**.764**
PE14. In formulating career goals he/she takes account of external market demand.	**.683**
PE15. He/she adapts to developments within the organisation.	**.778**
Thriving at Work	
T1. I feel alive and vital.	**.575**
T2. I have energy and spirit.	**.566**
T3. I am looking forward to each new day.	**.518**
T4. I feel alert and awake.	**.680**
T5. I do not feel very energetic.*	**.622**
T6. I continue to learn more as time goes by.	**.864**
T7. I am not learning.*	**.884**
T8. I am developing a lot as a person.	**.864**
T9. I find myself learning often.	**.728**
T10. I see myself continually improving.	**.757**
Subjective Career Success	
SCS1. I am satisfied with the success I have achieved in my career.	**.797**
SCS2. I am satisfied with the progress I have made toward meeting my overall career goals.	**.845**
SCS3. I am satisfied with the progress I have made toward meeting my goals for income.	**.774**
SCS4. I am satisfied with the progress I have made toward meeting my goals for advancement.	**.857**
SCS5. I am satisfied with the progress I have made toward meeting my goals for the development of new skills.	**.813**
Turnover Intentions	
TI1. I am thinking about leaving this organization.	**.877**
TI2. I am planning to look for a new job.	**.904**
TI3. I intend to ask people about new job opportunities.	**.869**
TI4. I don't plan to be in this organization much longer.	**.883**

Note. * denotes negatively worded item. Factor loading >.50 are in boldface.

5.8 Reliability Assessment

Cronbach's alpha (1951) reliability coefficient, one of the most widely used correlation coefficient method (Hair et al., 2010), was applied to assess the reliability and the internal consistency of each scale. Table 5.18 presents the means, standard deviations, and corrected item-total correlations (CITC) for each measurement items, together with reliabilities for all scales. The value of Cronbach's alpha should not be less than .70 (Nunnally, 1978).

Table 5.18: Means, Standard Deviations, CITC, and Reliabilities of Study Variables

Variable	*M*	*SD*	CITC	α
Boundaryless Mindset				.877
BM1. I seek job assignments that allow me to learn something new.	3.91	.801	.499	
BM2. I would enjoy working on projects with people across many organizations.	3.76	.777	.671	
BM3. I enjoy job assignments that require me to work outside of the organization.	3.47	.923	.702	
BM4. I like tasks at work that require me to work beyond my own department.	3.41	.855	.641	
BM5. I enjoy working with people outside of my organization.	3.52	.899	.693	
BM6. I enjoy jobs that require me to interact with people in many different organizations.	3.66	.882	.764	
BM7. I have sought opportunities in the past that allow me to work outside the organization.	3.28	.984	.551	
BM8. I am energized in new experiences and situations.	3.75	.790	.607	
Employability				.941
PE1. He/she adapts easily to changes in the work environment.	5.48	0.939	.700	
PE2. He/she takes responsibility for maintaining his/her labour market value.	5.51	0.899	.719	
PE3. This employee has confidence in his/her capacities within his/her area of expertise.	5.67	0.808	.627	
PE4. In general, this employee is competent to distinguish main issues from side issues and to set priorities.	5.39	1.017	.786	
PE5. He/she is focused on continuously developing himself/herself.	5.34	1.005	.754	
PE6. The quality of his/her skills is not of such a high level.*	5.34	1.060	.554	
PE7. He/she generally anticipates quickly on changes in the work environment.	5.08	1.025	.697	
PE8. He/she approaches the development of his/her weaknesses in a systematic manner.	5.04	0.999	.677	
PE9. He/she is competent to provide information on his/her work in a way that is comprehensive.	5.38	0.910	.714	
PE10. He/she generally anticipates quickly on changes in his/her job.	5.04	1.037	.733	
PE11. He/she is competent to be of practical assistance to colleagues with questions about the approach to work.	5.45	0.856	.679	
PE12. He/she consciously devotes attention to applying newly acquired knowledge and skills.	5.33	0.984	.766	
PE13. In general, this employee is competent to carry out work independently.	5.66	0.920	.696	
PE14. In formulating career goals he/she takes account of external market demand.	5.03	0.978	.637	
PE15. He/she adapts to developments within the organisation.	5.44	0.840	.728	

Note. * denotes negatively worded item. CITC = corrected item-total correlations.

Table 5.18, continued

Variable	*M*	*SD*	CITC	α
Job Crafting - Seeking Resources				.899
JC1. He/she asks others for feedback on his/her job performance.	2.90	.927	.697	
JC2. He/she asks colleagues for advice.	3.21	.807	.744	
JC3. He/she asks me (supervisor) for advice.	3.35	.869	.720	
JC4. He/she tries to learn new things at work.	3.35	.868	.755	
JC5. He/she contacted other people from work (e.g., colleagues, supervisors) to get the necessary information for completing his/her tasks.	3.39	.799	.747	
JC6. When he/she has difficulties or problems at work, he/she discusses them with people from the work environment.	3.32	.812	.697	
Job Crafting - Seeking Challenges				
JC7. When an interesting project comes along, he/she offers himself/herself proactively as project co-worker.	2.99	.963	.822	.941
JC8. If there are new developments, he/she is one of the first to learn about them and try them out.	2.92	.946	.842	
JC9.When there is not much to do at work, he/she sees it as a chance to start new projects.	2.86	.954	.840	
JC10. He/she regularly takes on extra tasks even though he/she does not receive extra salary for them.	3.15	.942	.741	
JC11. He/she tries to make his/her work more challenging by examining the underlying relationships between aspects of his/her job.	3.10	.837	.821	
Organisational Mobility Preference				.810
OMP2. I would feel very lost if I couldn't work for my current organization.*	3.17	1.106	.568	
OMP3. I prefer to stay in a company I am familiar with rather than look for employment elsewhere.*	2.83	1.002	.622	
OMP4. If my organization provided lifetime employment, I would never desire to seek work in other organizations.*	3.14	1.042	.685	
OMP5. If my ideal career I would work for only one organization.*	3.52	1.108	.640	
Self-directed Career Management				.802
SD2. I am responsible for my success or failure in my career.	4.12	.762	.557	
SD3. Overall, I have a very independent, self-directed career.	3.72	.797	.487	
SD4. Freedom to choose my own career path is one of my most important values.	4.02	.876	.584	
SD5. I am in charge of my own career.	4.04	.845	.649	
SD6. Ultimately, I depend upon myself to move my career forward.	3.96	.729	.611	
SD7. Where my career is concerned, I am very much "my own person".	3.60	.825	.471	

Note. * denotes negatively worded item. CITC = corrected item-total correlations.

Table 5.18, continued

Variable	*M*	*SD*	CITC	α
Subjective Career Success				.896
SCS1. I am satisfied with the success I have achieved in my career.	3.43	.822	.743	
SCS2. I am satisfied with the progress I have made toward meeting my overall career goals.	3.45	.757	.775	
SCS3. I am satisfied with the progress I have made toward meeting my goals for income.	3.15	.881	.686	
SCS4. I am satisfied with the progress I have made toward meeting my goals for advancement.	3.36	.792	.800	
SCS5. I am satisfied with the progress I have made toward meeting my goals for the development of new skills.	3.55	.761	.731	
Thriving at Work				.915
T1. I feel alive and vital.	5.31	.985	.756	
T2. I have energy and spirit.	5.38	.971	.754	
T3. I am looking forward to each new day.	5.33	1.118	.625	
T4. I feel alert and awake.	5.34	.874	.717	
T5. I do not feel very energetic.*	5.19	.928	.697	
T6. I continue to learn more as time goes by.	5.43	.970	.743	
T7. I am not learning.*	5.62	.968	.722	
T8. I am developing a lot as a person.	5.45	.925	.688	
T9. I find myself learning often.	5.99	1.010	.657	
T10. I see myself continually improving.				
Turnover Intentions				.922
TI1. I am thinking about leaving this organization.	2.79	.997	.814	
TI2. I am planning to look for a new job.	2.84	.997	.869	
TI3. I intend to ask people about new job opportunities.	2.92	1.044	.797	
TI4. I don't plan to be in this organization much longer.	2.73	1.013	.803	
Values-driven Career Orientation				.709
VD4. I'll follow my own conscience if my company asks me to do something that goes against my values.	3.51	.877	.476	
VD5. What I think about what is right in my career is more important to me than what my company thinks.	3.41	.867	.578	
VD6. In the past I have sided with my own values when the company has asked me to do something I don't agree with.	3.11	1.004	.537	

Note. * denotes negatively worded item. CITC = corrected item-total correlations.

The reliabilities for the four independent variables were ranging from .709 to .877, which was greater than .70. The boundaryless mindset scale reported the highest internal consistency (.81) among the four variables. This is comparable with the Cronbach's alpha (.83) reported by Çakmak-Otluoğlu and K. Övgü (2012). The mean scores for boundaryless mindset items were between 3.28 and 3.91. Overall, the respondents had agreed to some extend to the eight statements asked on their attitudes

towards career boundaryless. All these items were retained for further analyses as they had met the minimum cut-off point of .50 for CITC score.

The seeking challenges of the job crafting scale yielded a high internal consistency with a Cronbach's alpha of .94. The mean scores for job crafting – seeking challenges ranged between 2.86 and 3.15, indicating that the supervisor samples agreed that the employees seek job challenges regularly in their workplace. The seeking resources of the job crafting scale yielded an internal consistency of .899. The mean score for seeking resources ranged between 2.90 to 3.39, indicating that employees seek job resources regularly according to their supervisors. The reliabilities for the four employee work outcome variables were ranging from .896 to .941, which was far greater than .70. The perceived employability (PE) and turnover intentions (TI) displayed high internal reliabilities of .941 and .922, respectively. The mean scores for PE ranged between 5.03 and 5.67, and the average scores for TI ranged between 2.73 and 2.92. Table 5.18 demonstrates that all the scales had acceptable internal consistencies, and the CITC of the 66 items were ranging from .471 to .869. The EFA and internal reliability analysis had provided sufficient support for the unidimensionality and reliability of each measurement scale, and they could be used in the subsequent analyses (Bollen, 1989).

5.9 Confirmatory Factor Analysis

Based on the EFA results, a Confirmatory factor analysis (CFA) was performed to validate the proposed model in the measurement model. Subsequently, the hypotheses were tested in the structural model after the omission of irrelevant items. In other words, a two-stage approach was employed in this study, in which the measurement model was first estimated, followed by the assessment of the structural model in the second stage (Anderson & Gerbing, 1988). This is performed to avoid model complexity which may prevent the fitting of the model to the data (De Ruyter, Moorman, & Lemmink, 2001) as this study involved a relatively large number of constructs which were measured by

multi-item scales. The following sub-sections discuss the CFAs performed on career attitudes (antecedents), job crafting behaviour (intervening variables), and employee work outcomes (dependent variables). Separate CFAs were carried out because of the large number of variables involved in this study. Besides, performing separate CFAs for exogenous and endogenous constructs is widely practised and commonly applied in the literature (Hair et al., 2010; Hartline & Ferrell, 1996).

5.9.1 Measurement Model Assessment for Antecedent Variables

The measurement model for the antecedent or exogenous variables was specified in this sub-section. All the career attitudes variables were put together for the purpose of confirmatory factor analysis. Each variable was allowed to correlate with other variables in the model while constraining the measurement items and their error terms to be uncorrelated. A large chi-square (χ^2) value generally indicates that the model does not adequately fit the data. The CFA analysis in the first iteration showed an acceptable fit across all the fit measures (absolute, incremental, parsimony) except for GFI (refer Table 5.19). Hence, the model was modified, and BM1 and BM4 were deleted due to large modification indices value. Subsequent after the amendment, the model fit of the second iteration further enhanced as shown in Table 5.19. The absolute fit indices performed higher than the acceptable levels (CMIN/DF = 2.018; RMSEA = 0.050; PCLOSE = 0.477). Although the model failed to achieve a *p*-value above 0.05 (χ^2 = 395.367, df = 164, $p < 0.001$), it is among the common cases for CFA according to Hair et al. (2010) as the Chi-square value is very sensitive to large sample. Both CFI (0.943) and TLI (0.933) were greater than the threshold of 0.9, signifying a proper incremental fit. As recommended by Mulaik et al. (1989), the parsimony fit index (PNFI = 0.763) was also above the 0.5 value. Lastly, the Hoelter's critical N for 0.5 (241) and 0.1 (260) were all above the satisfactory value of 200 as recommended by Hoelter (1983). Hence,

the measurement model for the antecedent constructs after the second modification was supported by sufficient sample size and can be accepted based on the Chi-square value.

Table 5.19: Goodness of Fit (GoF) Measures of Antecedent Constructs

Measures	Fit Indexes	Acceptable Level	Iteration 1	Iteration 2
			Value(s)	Value(s) DEL BM1 & BM4
Absolute	Chi-square (χ^2)	< 2 times of df	501.364	294.673
	Degrees of freedom (df)		183	146
	Probability level (*p*)	> 0.05	0.000	0.000
	Normed Chi-square (CMIN/DF)	< 3	2.740	2.018
	Goodness-of-Fit Index (GFI)	> 0.90	0.889	0.929
	Root Mean Square Error of Estimation (RMSEA)	≤ 0.08	0.066	0.050
	p of Close Fit (PCLOSE)	> 0.05	0.000	0.477
Incremental	Tucker-Lewis Index (TLI)	≥ 0.90	0.883	0.933
	Comparative Fit Index (CFI)	≥ 0.90	0.898	0.943
	Adjusted Goodness-of-Fit Index (AGFI)	> 0.80	0.860	0.908
Parsimony	PNFI	> 0.5	0.740	0.763
	PRATIO		0.871	0.854
Sample Size Adequacy	HOELTER .05	≥ 75	175	241
	HOELTER .01	≥ 75	187	260

Table 5.20: Regression Weights for Antecedent Constructs

			Estimate	S.E.	C.R.	P	SRW	SMC
SD2	<---	SDCM	1				0.624	0.389
SD3	<---	SDCM	0.910	0.101	9.011	***	0.543	0.295
SD4	<---	SDCM	1.209	0.116	10.436	***	0.656	0.431
SD5	<---	SDCM	1.356	0.118	11.523	***	0.763	0.582
SD6	<---	SDCM	1.082	0.099	10.982	***	0.706	0.498
SD7	<---	SDCM	0.912	0.104	8.773	***	0.525	0.276
VD4	<---	VDCO	1				0.560	0.314
VD5	<---	VDCO	1.441	0.174	8.301	***	0.816	0.666
VD6	<---	VDCO	1.301	0.150	8.668	***	0.636	0.405
BM2	<---	BM	1				0.701	0.491
BM3	<---	BM	1.183	0.092	12.835	***	0.697	0.486
BM5	<---	BM	1.249	0.090	13.830	***	0.756	0.572
BM6	<---	BM	1.392	0.091	15.349	***	0.859	0.737
BM7	<---	BM	1.137	0.098	11.641	***	0.629	0.395
BM8	<---	BM	0.921	0.078	11.743	***	0.635	0.403
OMP2	<---	OMP	1				0.631	0.398
OMP3	<---	OMP	1.029	0.092	11.133	***	0.717	0.514
OMP4	<---	OMP	1.199	0.102	11.786	***	0.803	0.645
OMP5	<---	OMP	1.160	0.103	11.270	***	0.731	0.534

Note. SRW = Standardised Regression Weight; SMC = Squared Multiple Correlation

As illustrated in Table 5.20, all the standardised regression weights were above 0.5 which reflect convergent validity (Hair et al., 2010). Unidimensionality was further confirmed when all items indicated positive directions and statistically significant at 0.001 alpha (Byrne, 2001). This indicates that all the measuremement items for the Antecedent constucts were significantly associated with their respective latent variables as per the research hypothesises. Figure 5.10 illustrates the specification of the measurement model for the antecedent variables after the second iteration.

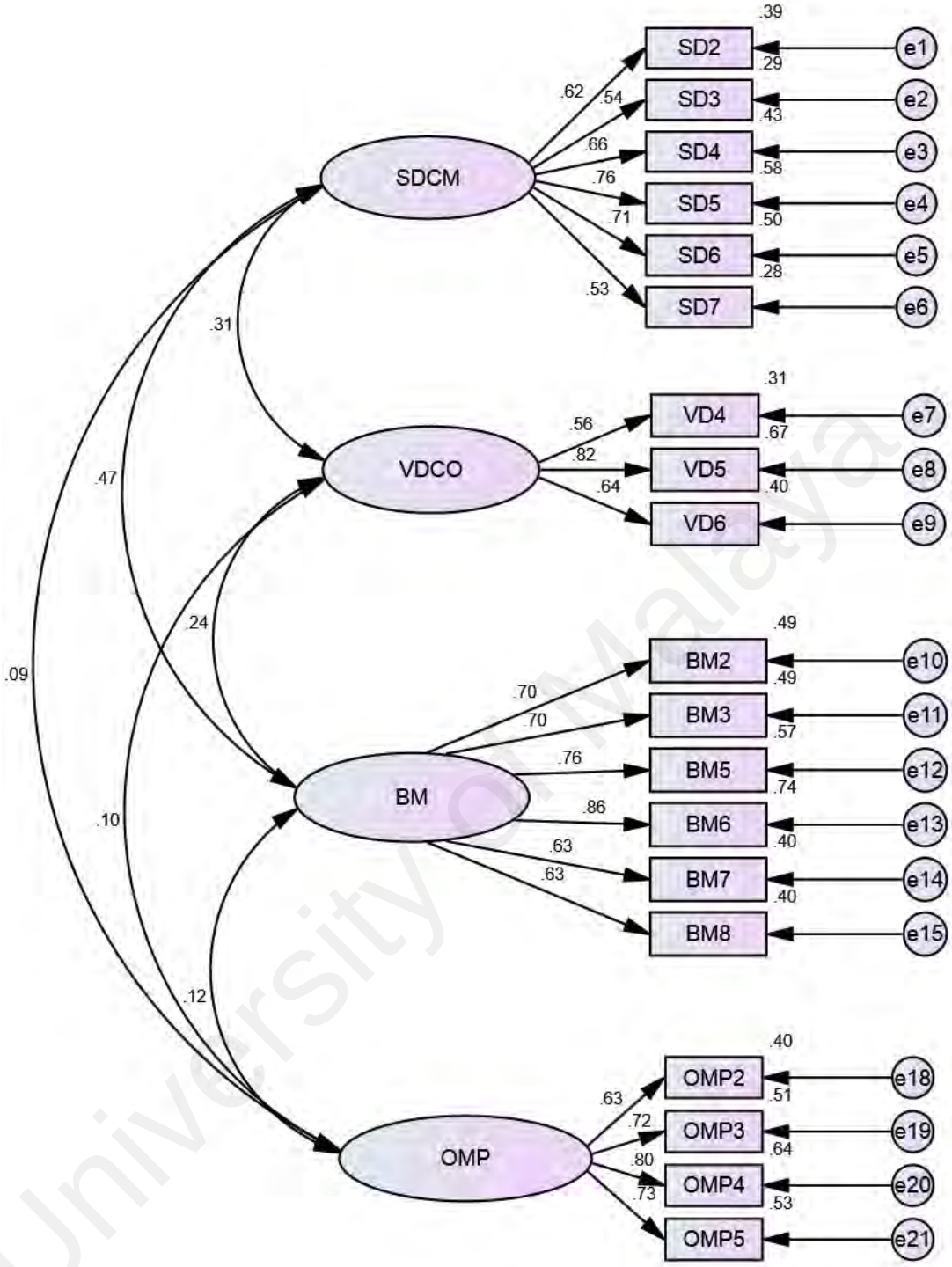

Figure 5.9: Measurement Model for the Antecedent Variables after Second Iteration

5.9.1.1 Reliability, Discriminant and Convergent Validity of the Antecedent Constructs

The convergent and discriminant validity were carried out on the measurement model for the antecedent variables after the second iteration. The convergent validity of each variable can be evaluated via the Average Variance Extracted (AVE) and Composite Reliability (CR). A CR value of at least 0.7 indicates good convergent validity while the threshold value for AVE is 0.5 (Hair et al., 2010). As indicated in Table 5.21, the CR values of all antecedent variables were above the threshold, ranging from 0.715 to 0.863. However, the AVE values for SDCM and VDCO were below the 0.50 threshold. Nevertheless, they were retained for further analysis as the factor loading of the items was above 0.5 (Hair et al., 2010). As shown in Table 5.21, the square root of AVE on the diagonal was higher than the correlations between the dimensions (Fornell & Larcker, 1981) therefore discriminant validity is attained. The maximum shared variance (MSV) and average shared variance (ASV) were lesser than average variance extracted (AVE) provide confirmation of discriminant validity. The results concluded that the model has a good convergent validity and discriminant validity.

Table 5.21: Convergent and Discriminant Validity of the Antecedent Variables

	CR	AVE	MSV	ASV	SDCM	VDCO	BM	OMP
SDCM	0.805	0.412	0.219	0.108	0.642			
VDCO	0.715	0.461	0.097	0.054	0.311	0.679		
BM	0.863	0.514	0.219	0.096	0.468	0.237	0.717	
OMP	0.813	0.523	0.014	0.011	0.094	0.102	0.119	0.723

5.9.2 Measurement Model Assessment for Intervening Variable

In the exploratory factor analysis (refer Section 5.7.1), two factors were derived from the job crafting construct, i.e. seeking resources and seeking challenges. Confirmatory factor analysis was then performed on these two factors. After removing low loading items, the final model yielded a model with adequate fit measures. CFA results indicated that the two-factor structure fits the data well after the third iterations. In the initial iteration, most indices (i.e., incremental, parsimony and sample size adequacy) already met the threshold value except for the absolute measures. Two items were removed (JC1 and JC10) as the standardised residual covariance was high. After the modification, the model fit of the second iteration was better than the first – GFI = 0.956; AGFI = 0.924, TLI = 0.970, CFI, 0.978, and RMSEA = 0.074. However, few indices still below the cut-off point (CMIN/DF = 3.242, PCLOSE = 0.012, and p = 0.000). Thus, the model was further modified in the third iteration. Upon the third modification, most of the fit indices performed above the acceptable levels as showed in Table 5.22 (CMIN/DF = 2.792 < 3, GFI = 0.986, AGFI = 0.968, TLI = 0.978, CFI = 0.985, RMSEA = 0.067, and Hoelter's critical N' for 0.5 and 0.1 level was 231 and 277 respectively. While the model did not get a p-value above 0.05 (χ^2 = 53.045, df = 19, p < 0.001), this is very common as the value of the Chi-square is very vulnerable to large sample size (Hair et al., 2010). Both CFI (0.985) and TLI (0.978) values were higher than the threshold of 0.9, demonstrating a good incremental fit. The parsimony fit index (i.e., PNFI = 0.663) was also above the 0.5 value as proposed by Mulaik et al. (1989). Besides, the Hoelter's critical N for 0.5 (231) and 0.1 (277) were greater than the desirable value of 200 as suggested by Hoelter (1983). Hence, the measurement model for the intervening construct following the third iteration can be accepted based on the Chi-square value and was supported by sufficient sample size.

Table 5.22: Goodness of Fit (GoF) Measures of Job Crafting

Measures	Fit Indexes	Acceptable Level	Iteration 1	Iteration 2	Iteration 3
			Value(s)	Value(s) DEL JC2 & JC10	Value(s) DEL JC5
Absolute	Chi-square (χ^2)	< 2 times of df	227.436	86.357	38.688
	Degrees of freedom (df)		43	26	19
	Probability level (*p*)	> 0.05	0.000	0.000	0.005
	Normed Chi-square (CMIN/DF)	< 3	5.289	3.321	2.036
	Goodness-of-Fit Index (GFI)	> 0.90	0.913	0.954	0.977
	Root Mean Square Error of Estimation (RMSEA)	≤ 0.08	0.103	0.076	0.051
	p of Close Fit (PCLOSE)	> 0.05	0.000	0.008	0.450
Incremental	Tucker-Lewis Index (TLI)	≥ 0.90	0.930	0.968	0.987
	Comparative Fit Index (CFI)	≥ 0.90	0.945	0.977	0.991
	Adjusted Goodness-of-Fit Index (AGFI)	> 0.80	0.866	0.921	0.957
Parsimony	PNFI	> 0.5	0.730	0.699	0.667
	PRATIO		0.782	0.722	0.679
Sample Size	HOELTER .05	≥ 75	106	183	316
Adequacy	HOELTER .01	≥ 75	121	215	379

Table 5.23: Regression Weights for Job Crafting

			Estimate	S.E.	C.R.	P	SRW	SMC
JC6	<---	SR	1				0.727	0.602
JC4	<---	SR	1.231	0.077	15.964	***	0.836	0.689
JC3	<---	SR	1.067	0.077	13.878	***	0.724	0.577
JC1	<---	SR	1.182	0.082	14.426	***	0.753	0.536
JC11	<---	SC	1				0.832	0.691
JC9	<---	SC	1.187	0.054	21.789	***	0.867	0.752
JC8	<---	SC	1.240	0.052	23.682	***	0.913	0.833
JC7	<---	SC	1.208	0.055	22.034	***	0.873	0.762

Note. SRW = Standardised Regression Weight; SMC = Squared Multiple Correlation

Table 5.23 shows that all the SRW were far above 0.5, which indicate convergent validity while the SMC were all above 0.4 (Hair et al., 2010). Thus, all items were significantly connected to the latent variable as hypothesised in the study. Figure 5.11 displays the measurement model for the job crafting construct after three iterations. Also, as shown in Figure 5.11, all the items loaded significantly on the construct, displaying an average factor loading of more than .5.

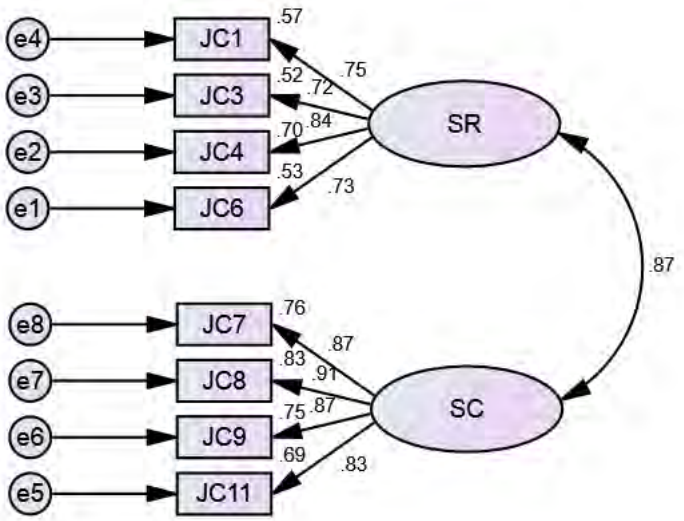

Figure 5.10: Measurement Model for Job Crafting after Third Iteration

5.9.3 Measurement Model Assessment for Dependent Variables

The measurement model for the dependent or endogenous variables was specified where all the employee work outcome constructs were put together for the purpose of confirmatory factor analysis. As depicted in Table 5.24, the fit indices for the initial model (Iteration 1) were below acceptable thresholds (the *p* was significant at 0.05 with CMIN/DF = 3.860; GFI =0.744, AGFI = 0.708, RMSEA = 0.084). The model was re-specified by deleting T2, T7 and T8 as the standardised residual covariance (SRC) were above 2.5. The iteration two demonstrated a better model fit, where CMIN/DF = 3.072, GFI = 0.826, and RMSEA = 0.072. However, few indices were still below the acceptable threshold (i.e., TLI = 0.879; CFI = 0.889, and AGFI = 0.799). Thus, the decision was made to improve the model further by removing PE3, PE13 and SCS3 as the SRC was above 2.5. The third iteration had further improved the model fit except for CMIN/DF (3.008), TLI (0.892), GFI (0.848) and the probability level still appeared to be below the minimum threshold. Following the four iterations, the model has obtained acceptable fit (refer Table 5.24), although the model did not achieve a *p*-value higher than 0.05 (χ^2 = 656.521, df = 246, *p* = 0.000). This is among the common cases

that happen to CFA where the Chi- square value is very sensitive to big sample size (Hair et al., 2010, p. 666). Nevertheless, all other fit indices were met (CMIN/DF = 2.669 <3; AGFI = 0.853, RMSEA = 0.064), and CFI (0.928) as well as TLI (0.919) were higher than the threshold of 0.9, indicating a good incremental fit. Thus, the measurement model for the employee work outcome constructs after the fourth iteration was supported by adequate sample size and can be accepted for further analysis.

Table 5.24: Goodness of Fit (GoF) Measures of Dependent Variables

Measures	Fit Indexes	Acceptable Level	Iteration 1	Iteration 2	Iteration 3	Iteration 4
			Value(s)	Value(s) DEL T2, T7 & T8	Value(s) DEL PE3, PE13 & SCS3	Value(s) DEL PE7, PE9, PE10 & PE11
Absolute	Chi-square (χ^2)	< 2 times of df	2010.867	1314.708	1034.816	656.521
	Degrees of freedom (df)		521	428	344	246
	Probability level (p)	> 0.05	0.000	0.000	0.000	0.000
	Normed Chi-square (CMIN/DF)	< 3	3.860	3.072	3.008	2.669
	Goodness-of-Fit Index (GFI)	> 0.90	0.744	0.826	0.848	0.880
	Root Mean Square Error of Estimation (RMSEA)	≤ 0.08	0.084	0.072	0.070	0.064
	p of Close Fit (PCLOSE)	> 0.05	0.000	0.000	0.000	0.000
Incremental	Tucker-Lewis Index (TLI)	≥ 0.90	0.831	0.879	0.892	0.919
	Comparative Fit Index (CFI)	≥ 0.90	0.843	0.889	0.920	0.928
	Adjusted Goodness-of-Fit Index (AGFI)	> 0.80	0.708	0.799	0.820	0.853
Parsimony	PNFI	> 0.5	0.743	0.777	0.783	0.793
	PRATIO		0.929	0.920	0.910	0.891
Sample Size Adequacy	HOELTER .05	≥ 75	116	148	152	175
	HOELTER .01	≥ 75	121	154	160	186

As illustrated in Table 5.25, all the standardised regression weights were above 0.5 which reflect convergent validity (Hair et al., 2010). Unidimensionality was further confirmed when all items indicated positive directions and statistically significant at 0.001 alpha (Byrne, 2001; Segar, 1997). This suggests that all study items were significantly linked to their specific latent variables as hypothesised in the present study.

Figure 5.12 illustrates the specification of the measurement model for the outcome constructs after the fourth iteration.

Table 5.25: Regression Weights for the Dependent Variables

			Estimate	S.E.	C.R.	P	SRW	SMC
T10	<---	T	1				0.603	0.364
T9	<---	T	1.056	0.095	11.079	***	0.686	0.470
T6	<---	T	1.047	0.092	11.329	***	0.708	0.501
T5	<---	T	1.007	0.089	11.371	***	0.711	0.506
T4	<---	T	1.042	0.086	12.112	***	0.781	0.611
T3	<---	T	1.203	0.106	11.307	***	0.706	0.498
T1	<---	T	1.204	0.098	12.304	***	0.801	0.642
PE15	<---	PE	1				0.746	0.556
PE14	<---	PE	1.031	0.078	13.222	***	0.660	0.436
PE12	<---	PE	1.207	0.077	15.586	***	0.768	0.590
PE8	<---	PE	1.081	0.079	13.608	***	0.678	0.460
PE6	<---	PE	0.986	0.085	11.573	***	0.583	0.340
PE5	<---	PE	1.283	0.079	16.281	***	0.800	0.639
PE4	<---	PE	1.313	0.080	16.491	***	0.809	0.654
PE2	<---	PE	1.107	0.071	15.664	***	0.772	0.596
PE1	<---	PE	1.073	0.074	14.428	***	0.716	0.513
SCS5	<---	SCS	1				0.796	0.634
SCS4	<---	SCS	1.083	0.061	17.861	***	0.828	0.686
SCS2	<---	SCS	1.042	0.058	17.972	***	0.833	0.694
SCS1	<---	SCS	1.101	0.063	17.432	***	0.811	0.658
TI4	<---	TI	1				0.832	0.693
TI3	<---	TI	1.032	0.051	20.377	***	0.834	0.696
TI2	<---	TI	1.096	0.046	23.872	***	0.927	0.859
TI1	<---	TI	1.026	0.047	21.702	***	0.868	0.754

Note. SRW = Standardised Regression Weight; SMC = Squared Multiple Correlation

5.9.3.1 Reliability, Discriminant and Convergent Validity of the Dependent Variables

The test for discriminant and convergent validity were run on the measurement model for the employee work outcome variables. As depicted in Table 5.26, all variables in the measurement model meet the threshold where CR values were all above 0.7, and AVE values were all above 0.5 (Hair et al., 2010). The AVE ranges from 0.513 to 0.750 while the CR values were ranging from 0.880 and 0.923. The outputs confirmed that the model has a high level of internal consistency and good convergent validity.

Table 5.26: Convergent and Discriminant Validity of the Dependent Variables

	CR	AVE	MSV	ASV	SCS	T	PE	TI
SCS	0.889	0.668	0.152	0.080	0.817			
T	0.880	0.513	0.152	0.116	0.390	0.716		
PE	0.910	0.532	0.110	0.050	0.194	0.332	0.729	
TI	0.923	0.750	0.085	0.046	-0.222	-0.292	-0.048	0.866

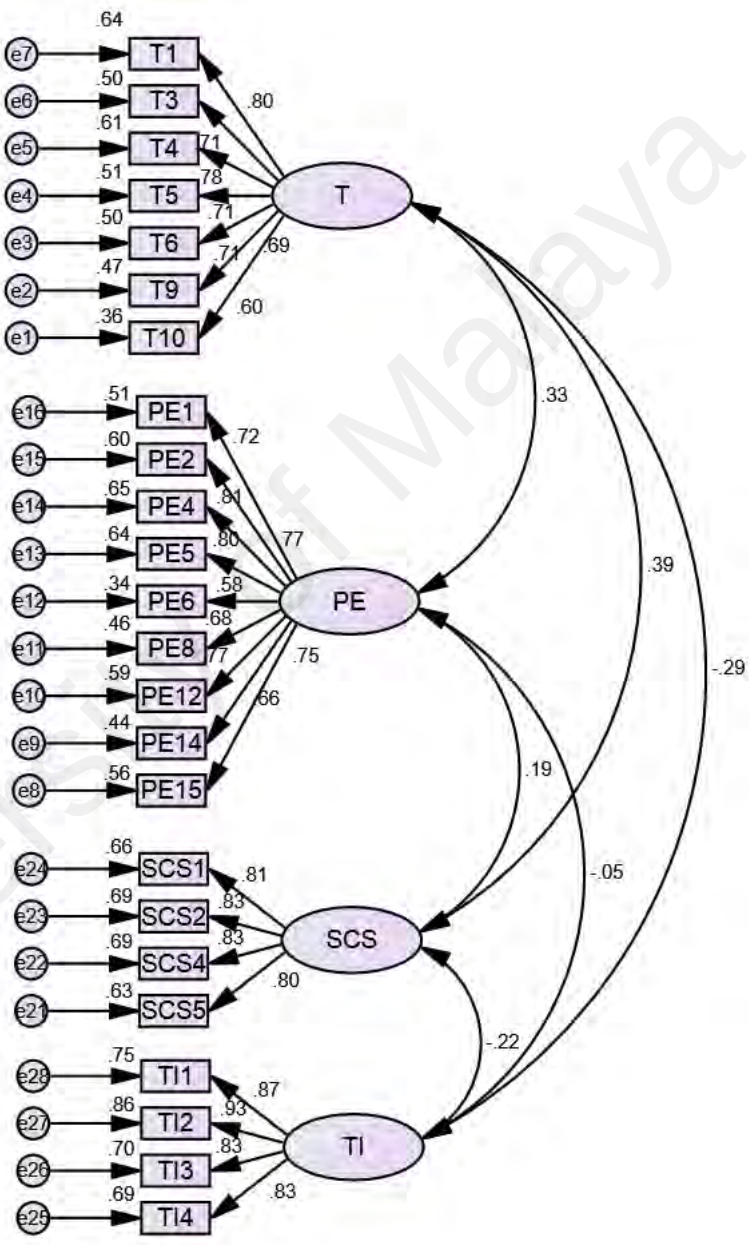

Figure 5.11: Measurement Model for Dependent Variables after Fourth Iteration

5.10 Structural Model Assessment

The structural model which represent the path analysis was estimated in the second stage of analysis. The structural model depicts the causal relationship among the exogenous and the endogenous constructs, as well as the indicators of each of the constructs, along with the measurement errors. Tests for multivariate assumptions were performed and presented in Section 5.3, which had confirmed the suitability of the data for multivariate analysis. The proposed model was first validated by EFA and CFA; then it was forwarded to a structural model for hypotheses testing purposes. The initial structural model showed reasonable model fit - CMIN/DF = 2.400 < 3, significant *p* at 0.000 level, GFI = 0.791, AGFI = 0.769, TLI = 0.845, CFI = 0.853, RMSEA = 0.060. The fit indices were lower than the threshold with the exception of CMIN/ df <3.0, RMSEA <0.08, HOELTER 0.05 and HOELTER 0.01 (See Table 5.27). Thus, a model re-specification was considered to improve the model further by eliminating SD6, T5 and PE1 where the items demonstrated high MI values. Upon the second iteration, the results show that the model fitted the data reasonably well, and the proposed model achieved a satisfactory level of fit across all three fit measures (See Table 5.27).

5.10.1 Structural Model

The basic structural model examined sixteen hypotheses (H1a, H1b, H2a, H2b, H3a, H3b, H4a, H4b, H5a, H4b, H6a, H6b, H7a, H7b, H8a and H8b) and the results depicted in Table 5.28 demonstrates that nine out of sixteen hypotheses are supported. The self-directed career management (SDCM), values-driven career orientation (VDCO), boundaryless mindset (BM) and the organisational mobility preference (OMP) explained 19% (R^2) and 11% (R^2) of the association between these constructs and seeking resources (SR) and seeking challenges (SC) respectively. In other words, one unit increase in the independent variables is associated with an average 19% increase in SR and 11% increase in SC respectively.

As predicted in H1, SDCM was found to have significant and positive relationship with SR and SC of the job crafting behaviour, with β = .411, p <.001 and β = .317, p <.001 respectively. This implies that SDCM is significantly correlated with both dimensions of the job crafting behaviour. The results, therefore, supported Hypothesis 1a and Hypothesis 1b. However, VDCO and BM did not have significant relationships with both seeking resources and seeking challenges (refer Table 5.28). Thus, Hypothesis 2 to Hypothesis 3 were not supported. On the other hand, OMP was found to have significant and positive relationship with both seeking resources (SR) and seeking challenges (SC), with β = .159, p <.05 and β = .110, p <.05 respectively. Hence, Hypothesis 4a and 4b were supported.

Regarding the relationships between SR and SC and other constructs, as shown in H5 to H8, five out of eight of the hypotheses were supported. The SR and SC explained 36% (R^2) of the association between these constructs and Employability (PE). Specifically, one unit increase in the job crafting activities is associated with an average 36% increase in employability. In relation to Hypothesis 5, only SC was reported to be positively linked to thriving at work (T), with β = .249, p <.05. Thus, H5b was supported. As for Hypothesis 6, the relationship between SR and PE generated a coefficient value of 0.385, and this was significant at p <.001 (SE=0.052; C.R=6.949). Similarly, the results reported a significant and positive relationship between SC and PE (β = .406, p <.001). This means that both SR and SC have a significant relationship with PE. Hence, Hypothesis 6a and 6b were supported in this study.

Hypothesis 7a was also supported as SR was significantly and positively related to subjective career success (SCS) with β = .190, p <.05. In addition, SC was found to have significant and negative relationship with turnover intentions (TI), with β = -.170, p <.05. Hence, Hypothesis 8b was supported. Among the significant paths to employability, the highest coefficient values were scored by seeking challenges (β

= .406), followed by seeking challenges (β = .385). This result implies that seeking challenges was the strongest predictor of employability. Among the proposed relationship, the self-directed career management to seeking resources path was the strongest (β = .411) and this was followed by seeking challenges to employability path (β = .406).

Table 5.27: Goodness of Fit (GoF) Measures of Basic Structural Model

Measures	Fit Indexes	Acceptable Level	Iteration 1	Iteration 2
			Value(s)	Value(s) DEL SD6, T6 & PE1
Absolute	Chi-square (χ^2)	< 2 times of df	2885.033	2480.034
	Degrees of freedom (df)		1202	1058
	Probability level (p)	> 0.05	0.000	0.000
	Normed Chi-square (CMIN/DF)	< 3	2.400	2.344
	Goodness-of-Fit Index (GFI)	> 0.90	0.791	0.805
	Root Mean Square Error of Estimation (RMSEA)	≤ 0.08	0.060	0.058
	p of Close Fit (PCLOSE)	> 0.05	0.000	0.000
Incremental	Tucker-Lewis Index (TLI)	≥ 0.90	0.845	0.856
	Comparative Fit Index (CFI)	≥ 0.90	0.853	0.865
	Adjusted Goodness-of-Fit Index (AGFI)	> 0.80	0.769	0.784
Parsimony	PNFI	> 0.5	0.730	0.739
	PRATIO		0.943	0.938
Sample Size	HOELTER .05	≥ 75	181	186
Adequacy	HOELTER .01	≥ 75	186	191

Table 5.28: Hypotheses Testing Results on Direct Paths

Hypotheses and Paths	β	S.E.	C.R.	P	Support
H1a: Self-directed Career Management → Seeking Resources	0.411	0.082	5.337	***	Yes
H1b: Self-directed Career Management → Seeking Challenges	0.317	0.081	4.407	***	Yes
H2a: Values-driven Career Orientation → Seeking Resources	-0.074	0.065	-1.156	0.248	No
H2b: Values-driven Career Orientation → Seeking Challenges	-0.063	0.067	-1.006	0.315	No
H3a: Boundaryless Mindset → Seeking Resources	-0.013	0.085	-0.201	0.840	No
H3b: Boundaryless Mindset → Seeking Challenges	0.016	0.088	0.248	0.804	No
H4a: Organisational Mobility Preference → Seeking Resources	0.159	0.047	2.769	0.006*	Yes
H4b: Organisational Mobility Preference → Seeking Challenges	0.110	0.048	1.982	0.047*	Yes
H5a: Seeking Resources → Thriving at Work	0.101	0.069	1.786	0.074	No
H5b: Seeking Challenges → Thriving at Work	0.249	0.064	4.505	***	Yes
H6a: Seeking Resources → Perceived Employability	0.385	0.052	6.949	***	Yes
H6b: Seeking Challenges → Perceived Employability	0.406	0.046	7.784	***	Yes
H7a: Seeking Resources → Subjective Career Success	0.190	0.058	3.285	0.001*	Yes
H7b: Seeking Challenges → Subjective Career Success	0.068	0.052	1.251	0.211	No
H8a: Seeking Resources → Turnover Intentions	-0.006	0.071	-0.110	0.912	No
H8b: Seeking Challenges → Turnover Intentions	-0.170	0.065	-3.144	0.002*	Yes

* Significant at 0.05 level

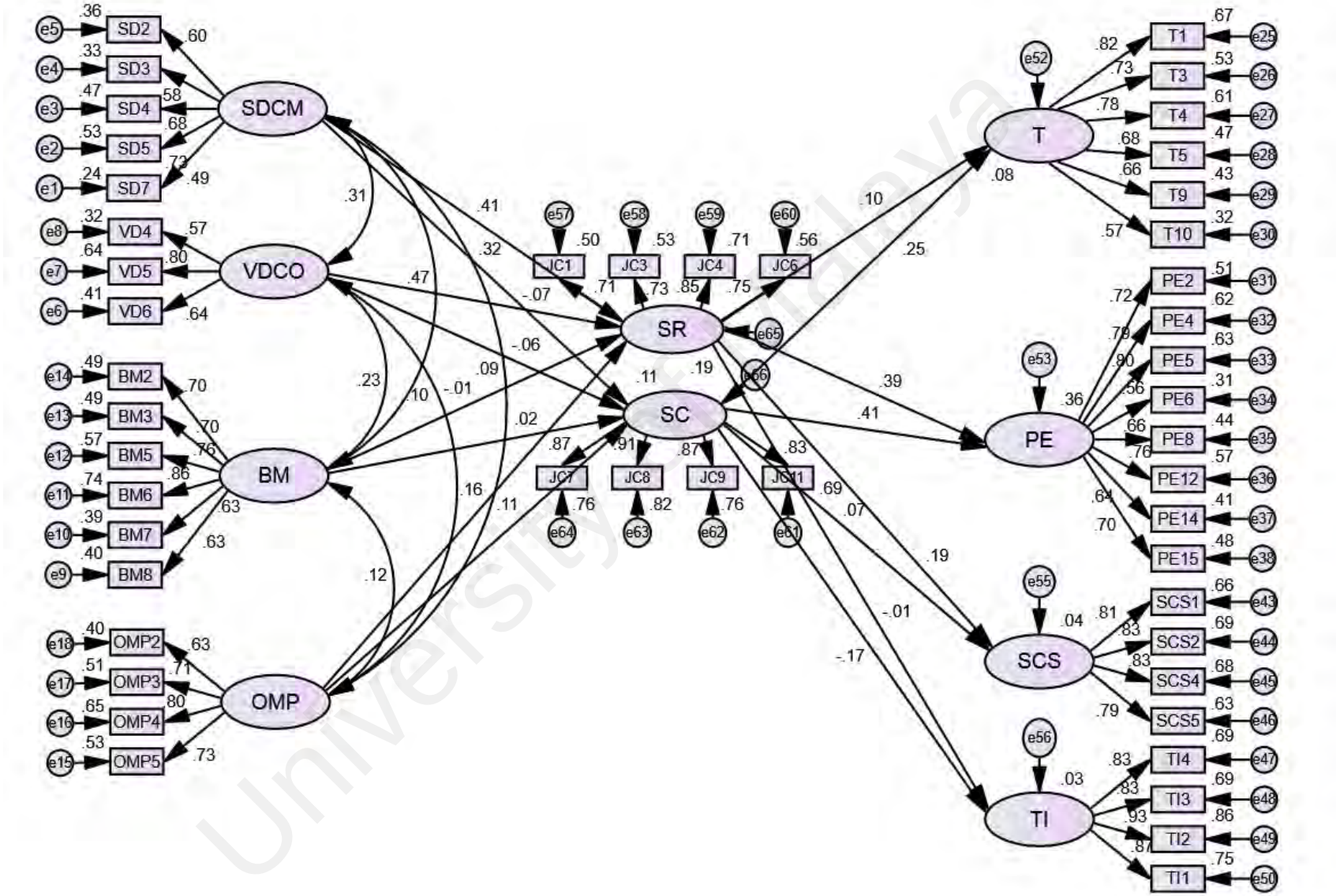

Figure 5.12: Basic Structural Model after Iteration 2

5.10.2 Mediation Analysis

A mediator is a variable or a construct that intervene between the independent variable(s) and the dependent variable(s). This study used the approach developed by Preacher and Hayes (2008) to test for the mediation effect. Specifically, this study employed Hayes' (2013) PROCESS macro for SPSS to compute confidence intervals for specific indirect effects based on 5,000 bootstrap samples as AMOS does not perform bootstrapping for specific but only for total indirect effects. To determine whether seeking resources and seeking challenges mediate the relationships between the antecedent and outcome variables, bootstrapping analyses were performed using methods described by Preacher and Hayes (2008) for estimating direct and indirect effects with multiple mediators.

A mediation analysis comprises three effects of X on Y: the first effect is the direct effect *c'*, the second effect is the indirect effect *ab*, and the third effect is the total effect *c* (Preacher & Hayes, 2008). Hence, to test for a mediation effect or indirect effect, according to Preacher and Hayes (2008), do not require the direct effect before testing the indirect effect. In other words, the indirect effect results from the causal influence of X on M which in turn affect Y is manifested through mean differences. With this logic, the direct effect is simply the mean difference in Y, regardless of the effect of X on M. Likewise, the total effect is the cumulative difference in group-means for Y (Edwards & Lambert, 2007).

This method for testing the mediation hypotheses is favoured over the traditional Baron and Kenny (1986) method for three main reasons. First, the method popularised by Baron and Kenny (1986) suffers from very low statistical power as demonstrated by Fritz and MacKinnon (2007). Second, it has been argued that the traditional Baron and Kenny's technique overemphasise the importance of a direct effect while suppressing the actual focus of the mediation analysis that is the indirect effect (Zhao, Lynch, & Chen, 2010). Third, the Baron and Kenny (1986) method suffers from the assumption

that a lack of correlation between X and Y nullifies the potential for mediation, which has been proven to be a false assumption (Bollen & Stine, 1990; Hayes, Preacher, & Myers, 2011). Zhao et al. (2010) maintain that the test between X and Y is never relevant to establishing mediation. In fact, many researchers (MacKinnon, Krull, & Lockwood, 2000; Preacher & Hayes, 2004; Shrout & Bolger, 2002) indicated that there is no need to demonstrate a relationship to be mediated to establish mediation.

In addition, the Preacher and Hayes (2008) bootstrapping approach is favoured over the classic Sobel test for two reasons. First, the Sobel test is founded on the assumption of normality in the sampling distributions, which has been shown to be a false assumption (Hayes, 2009). Second, the Sobel test is not as statistically robust as compared to a bootstrap test popularised by Preacher and Hayes (2004) and it can only test a single independent variable at a time (Hayes, 2009; Hayes et al., 2011). To test the mediation relationships in this study, Preacher and Hayes (2008) bootstrapping approach was used. Bootstrapping is a widely used technique in social sciences to gauge the extent and significance of indirect effects (Preacher, Rucker, & Hayes, 2007). In bootstrapping, a large number of samples are taken from the data, re-sampling to compute the standard errors of the indirect effect (Preacher & Hayes, 2008). In this study, as recommended by Preacher et al. (2007), 5000 bootstrap samples were used to obtain estimates of the indirect relationships.

The mediation hypotheses H9 to H16 were analysed using the PROCESS macro for SPSS (Model 4, Hayes, 2013). PROCESS calculates a bias-corrected bootstrapped confidence interval (5,000 resamples) for the size of each indirect effect, with significant mediation indicated by a confidence interval that does not contain zero. A macro was downloaded from Hayes' professional website (http://www.afhayes.com/spss-sas-and-mplus-macros-and-code.html) to conduct the mediation analyses. This macro was added to IBM SPSS Statistics 21.0 to test the

proposed mediation hypotheses. The macro allows for the simultaneous testing of several independent variables, mediators and dependent variables and enables the use of the bootstrap method. This study hypothesised that both seeking resources and seeking challenges could mediate the relationship between protean and boundaryless career attitudes and the employee work outcomes. Hence, this study used a parallel multiple mediator models (Hayes, 2013) in which both dimensions of the job crafting behaviour were included as mediators. Specifically, this study tested whether seeking resources and seeking challenges mediated the relationships between four predictor variables (self-directed career management, values-driven career orientation, boundaryless mindset and organisational mobility preference) and four outcome variables (thriving at work, employability, subjective career success and turnover intentions).

Table 5.29 depicts the results of direct and indirect effects analysed using the macro developed by Hayes (2013). The significant indirect paths are indicated by 95% confidence intervals (CI) that exclude zero. In other words, if the lower and upper 95% CIs are either both below or both above zero, there is a statistically significant indirect effect. The results indicate that self-directed career management had positive and significant effects on thriving at work (estimate = .053, SE = .025, 95% CI = [.015, .119]) through seeking challenges, thus supporting Hypothesis 10a. The indirect effect from self-directed career management to thriving at work was non-significant when the mediator was seeking resources (estimate = -.012, SE = .023, 95% CI = [-.063, .032]).

Furthermore, there was positive and significant indirect paths from self-directed career management to employability through seeking resources (estimate = .072, SE = .033, 95% CI = [.021, .153]) and seeking challenges (estimate = .125, SE = .051, 95% CI = [.036, .234]). As such, Hypotheses 11a and 12a were supported. Besides, the indirect effect of organisational mobility preference to employability through seeking resources

was positive and significant (estimate = .034, SE = .020, 95% CI = [.005, .092]), thus supporting Hypothesis 11d.

The indirect effect of self-directed career management to turnover intentions through seeking challenges was negative and significant (estimate = -.025, SE = .018; CI = [-.074, -.001]). Thus, Hypothesis 16a was supported. The direct effect between self-directed career management and turnover intentions was not significant (estimate = -.027, SE = .067, t = -.408) indicating full mediation or indirect-only mediation (Zhao et al., 2010).

These findings lend supports to H10a, H11a, H11d, H12a and H16a and suggest that the relationships between self-directed career management and three employee work outcomes (i.e. thriving at work, employability, and turnover intentions) are mediated by seeking challenges. Besides, seeking resources was found to mediate the relationships between self-directed career management and employability, organisational mobility preference and employability. The indirect and direct effect of seeking challenges was significant between self-directed career management and two outcome variables (i.e., thriving at work and employability), suggesting a complementary mediation or partial mediation (Zhao et al., 2010). Similarly, both the indirect and direct effect of seeking resources was significant from self-directed career management and organisational mobility preference to employability, indicating complementary mediations or partial mediations.

Table 5.29: Summary of Path Models

Path	Direct Effects			Indirect Effects			
	Estimate	S.E.	t-value	Estimate	S.E.	CI_L	CI_U
H9a: SDCM → SR → T	0.551	0.078	7.100***	-0.012	0.023	-0.063	0.032
H9b: VDCO → SR → T	-0.291	0.096	-3.034**	0.004	0.012	-0.008	0.047
H9c: BM → SR → T	0.087	0.055	1.572	-0.002	0.006	-0.024	0.005
H9d: OMP → SR → T	-0.119	0.061	-1.955	-0.006	0.012	-0.036	0.013
H10a: SDCM → SC → T	0.551	0.078	7.100***	**0.053**	**0.025**	**0.015**	**0.119**
H10b: VDCO → SC → T	-0.291	0.096	-3.034**	-0.0151	0.027	-0.073	0.037
H10c: BM → SC → T	0.087	0.055	1.572	0.0212	0.016	-0.007	0.058
H10d: OMP → SC → T	-0.119	0.061	-1.955	-0.024	0.019	-0.006	0.070
H11a: SDCM → SR → PE	0.360	0.087	4.137***	**0.072**	**0.033**	**0.021**	**0.153**
H11b: VDCO → SR → PE	0.025	0.107	0.237	-0.025	0.025	-0.078	0.020
H11c: BM → SR → PE	-0.013	0.062	-0.205	0.014	0.016	-0.013	0.054
H11d: OMP → SR → PE	0.205	0.068	3.011**	**0.034**	**0.020**	**0.005**	**0.092**
H12a: SDCM → SC → PE	0.360	0.087	4.137***	**0.125**	**0.051**	**0.036**	**0.234**
H12b: VDCO → SC → PE	0.025	0.107	0.237	-0.036	0.062	-0.157	0.088
H12c: BM → SC → PE	-0.013	0.062	-0.205	0.050	0.035	-0.023	0.118
H12d: OMP → SC → PE	0.205	0.068	3.011**	0.056	0.041	-0.021	0.144
H13a: SDCM → SR → SCS	0.111	0.049	2.275*	0.026	0.018	-0.002	0.712
H13b: VDCO → SR → SCS	0.064	0.060	1.060	-0.009	0.011	-0.044	0.004
H13c: BM → SR → SCS	0.081	0.035	2.338*	0.005	0.007	-0.003	0.026
H13d: OMP → SR → SCS	-0.137	0.038	-3.578***	0.012	0.010	-0.0002	0.041
H14a: SDCM → SC → SCS	0.111	0.049	2.275*	0.008	0.011	-0.009	0.037
H14b: VDCO → SC → SCS	0.064	0.060	1.060	-0.002	0.007	-0.026	0.005
H14c: BM → SC → SCS	0.081	0.035	2.338*	0.003	0.005	-0.003	0.020
H14d: OMP → SC → SCS	-0.137	0.038	-3.578***	0.004	0.006	-0.003	0.025
H15a: SDCM → SR → TI	-0.027	0.067	-0.408	-0.008	0.022	-0.057	0.032
H15b: VDCO → SR → TI	0.273	0.082	3.315**	0.003	0.010	-0.010	0.036
H15c: BM → SR → TI	-0.050	0.047	-1.064	-0.002	0.006	-0.021	0.006
H15d: OMP → SR → TI	0.181	0.052	3.456***	-0.004	0.011	-0.035	0.013
H16a: SDCM → SC → TI	-0.027	0.067	-0.408	**-0.025**	**0.018**	**-0.074**	**-0.001**
H16b: VDCO → SC → TI	0.273	0.082	3.315**	0.007	0.015	-0.014	0.047
H16c: BM → SC → TI	-0.050	0.047	-1.064	-0.010	0.009	-0.037	0.002
H16d: OMP → SC → TI	0.181	0.052	3.456***	-0.011	0.011	-0.044	0.002

Note. SE = standard error; CI_L = lower confidence interval; CI_U = upper confidence interval; 5,000 bootstrap samples, *p < .05. **p < .01. ***p < .001. Boldface values represent significant indirect effects. All models include other independent variables as a covariate.

5.11 Summary of Hypothesis Results

In the present study, H1a-b, H4a-b, H5b, H7a, H8b, H10a, H11a, H11d, H12a, and H16a were supported. Table 5.30 summarises the hypothesis testing results, where the supported Hypotheses are in boldface.

Table 5.30: Summary of Hypothesis Testing Results

Research Hypothesis	Findings
H1. Self-directed career management is positively related to (a) seeking resources and (b) seeking challenges of the job crafting behaviour.	**Supported**
H2. Values-driven career orientation is positively related to (a) seeking resources and (b) seeking challenges of the job crafting behaviour.	Not Supported
H3. Boundaryless mindset is positively related to (a) seeking resources and (b) seeking challenges of the job crafting behaviour.	Not Supported
H4. Organisational mobility preference is positively related to (a) seeking resources and (b) seeking challenges of the job crafting behaviour.	**Supported**
H5. (a) Seeking resources and (b) seeking challenges of the job crafting behaviour is positively related to thriving at work.	**H5b Supported**
H6. (a) Seeking resources and (b) seeking challenges of the job crafting behaviour is positively related to employability.	**Supported**
H7. (a) Seeking resources and (b) seeking challenges of the job crafting behaviour is positively related to subjective career success.	**H7a Supported** H7b Not Supported
H8. (a) Seeking resources and (b) seeking challenges of the job crafting behaviour is negatively related to turnover intentions.	**H8b Supported** H8a Not Supported
H9. Seeking resources mediates the relationship between (a) self-directed career management, (b) values-driven career orientation, (c) boundaryless mindset, (d) organisational mobility preference and thriving at work.	Not Supported
H10. Seeking challenges mediates the relationship between (a) self-directed career management, (b) values-driven career orientation, (c) boundaryless mindset, (d) organisational mobility preference and thriving at work.	**H10a Supported**
H11. Seeking resources mediates the relationship between (a) self-directed career management, (b) values-driven career orientation, (c) boundaryless mindset, (d) organisational mobility preference and employability.	**H11a & H11d Supported**
H12. Seeking challenges mediates the relationship between (a) self-directed career management, (b) values-driven career orientation, (c) boundaryless mindset, (d) organisational mobility preference and employability.	**H12a Supported**
H13. Seeking resources mediates the relationship between (a) self-directed career management, (b) values-driven career orientation, (c) boundaryless mindset, (d) organisational mobility preference and subjective career success.	Not Supported
H14. Seeking challenges mediates the relationship between (a) self-directed career management, (b) values-driven career orientation, (c) boundaryless mindset, (d) organisational mobility preference and subjective career success.	Not Supported
H15. Seeking resources mediates the relationship between (a) self-directed career management, (b) values-driven career orientation, (c) boundaryless mindset, (d) organisational mobility preference and turnover intention.	Not Supported
H16. Seeking challenges mediates the relationship between (a) self-directed career management, (b) values-driven career orientation, (c) boundaryless mindset, (d) organisational mobility preference and turnover intentions.	**H16a Supported**

Note. Hypotheses supported are in boldface.

5.12 Chapter Summary

This chapter reported the entire data analysis process from data preparation to the final output of research findings. It reported the initial data screening, statistical tests for multivariate assumptions and the descriptive statistics of the respondents and research constructs. Exploratory Factor Analysis (EFA), reliability analysis, and correlation analysis results. These tests were conducted using the IBM SPSS Statistics 21.0 software. The chapter also presents the confirmatory factor analysis (CFA), structural model assessment, mediation analysis, and hypotheses testing results. Structural Equation Modeling (SEM) with IBM Amos 20.0 and PROCESS macro for SPSS were used to test the research hypotheses. The results showed significant mediation effects of seeking resources and seeking challenges in the relationships between some antecedent variables and employee work outcomes. The research findings are discussed in Chapter 6.

CHAPTER 6: DISCUSSION

6.1 Introduction

This chapter discusses the research findings of the study. For this, the research questions, research objectives and hypotheses presented in Chapter 1 are revisited and the relevant answers according to the research findings are discussed. Following an overview of the current research, a brief summary of the research findings are provided. The discussion addresses several key research results of the study and focuses on the relationships among the antecedent, mediating and outcome variables of the study.

6.2 Research Overview

The main objective of this study was to test the hypothesised relationships between the protean and boundaryless career attitudes on job crafting behaviour and employee work outcomes. This section revisits the research questions presented in Chapter 1 and provides the answers with explanations according to the research findings reported in Chapter 5. Seven research questions and objectives were formulated at the initial stage of this research, which guided the entire research process. The seven research objectives are:

RO1. To establish if self-directed career management and values-driven career orientation are related to employee job crafting behaviour.

RO2. To establish if boundaryless mindset and organisational mobility preference are related to employee job crafting behaviour.

RO3. To examine whether employee job crafting behaviour is related to employee work outcomes (i.e., thriving at work, employability, subjective career success, and turnover intentions).

RO4. To ascertain the mediating effect of job crafting behaviour on the relationships between protean and boundaryless career attitudes and thriving at work.

RO5. To determine whether job crafting behaviour mediates the relationships between protean and boundaryless career attitudes and employability.

RO6. To determine whether job crafting behaviour mediates the relationships between protean and boundaryless career attitudes and subjective career success.

RO7. To determine whether job crafting behaviour mediates the relationships between protean and boundaryless career attitudes and turnover intentions.

To address these research objectives and to answer the research questions posed in Chapter 1, the study was conducted in three phases. In the first phase of the study, an extensive and in-depth literature review were performed on the literature within the research areas. From the literature review, research gaps were then identified, and a research model was developed. This was followed by the research measures identification, instrument design and testing. All measures utilised in this study were adopted from the prior established studies, with minor modifications to suit the present study. Subsequently, two sets of questionnaires were developed to collect responses from the employee-supervisor dyads. Pre-testing of the questionnaires was carried out to confirm the face and content validity, by a panel of experts from the HR and organisational behaviour field. The questionnaires were improved taking into considerations the suggestions given by the panel of experts. A pilot study followed to confirm the user-friendliness of the questionnaires and to test for the internal consistencies of the proposed constructs.

The second phase of the research involved the actual data collection via a questionnaire survey. The eight months data collection period produced 450 responses, resulting in a return rate of 81%. The collected data were then edited and coded. The reverse-coded or

negatively-worded items were transformed before the actual data analysis. Data preparation and screening was performed using SPSS software in which data outliers, normality, homoscedasticity, linearity, and multicollinearity were checked. Next, an exploratory factor analysis (EFA) procedure was performed to generate a set of items that represent the constructs. Following that, a structural equation modelling (SEM) was carried out to assess the measurement as well as the structural model of the data. The final structural model results confirmed that the relationships between self-directed career management and job crafting behaviour (i.e. seeking resources and seeking challenges) were significant. Moreover, the relationships between seeking challenges of the job crafting behaviour and most employee work outcomes examined in this study were also significant, including thriving at work, employability, and turnover intentions. In addition, there were significant relationships between seeking resources and employability as well as subjective career success. Lastly, the role of seeking resources and seeking challenges of the job crafting behaviour as mediators between self-directed career management and employability was tested and was found to be significant. There were also significant indirect effects between self-directed career management and thriving as well as turnover intentions through seeking challenges. The results of the empirical analysis showed that the fourteen research hypotheses were supported as depicted in Table 6.1. The next section discusses the key research findings in greater detail.

Table 6.1: Summary of Research Findings

Research Question	Research Objective	Research Hypothesis	Result
What is the relationship of protean career attitudes to job crafting behaviour?	To establish if self-directed career management and values-driven career orientation are related to employee job crafting behaviour.	H1. Self-directed career management is positively related to (a) seeking resources and (b) seeking challenges of the job crafting behaviour.	Supported
		H2. Values-driven career orientation is positively related to (a) seeking resources and (b) seeking challenges of the job crafting behaviour.	Not Supported
What is the relationship of boundaryless career attitudes to job crafting behaviour?	To establish if boundaryless mindset and organisational mobility preference are related to employee job crafting behaviour.	H3. Boundaryless mindset is positively related to (a) seeking resources and (b) seeking challenges of the job crafting behaviour.	Not Supported
		H4.Organisational mobility preference is positively related to (a) seeking resources and (b) seeking challenges of the job crafting behaviour.	Supported

What is the relationship of job crafting behaviour to employee work outcomes?	To examine whether job crafting behaviour is related to thriving at work, employability, subjective career success and turnover intentions.	H5. (a) Seeking resources and (b) seeking challenges of the job crafting behaviour is positively related to thriving at work.	H5b Supported
		H6. (a) Seeking resources and (b) seeking challenges of the job crafting behaviour is positively related to employability.	Supported
		H7. (a) Seeking resources and (b) seeking challenges of the job crafting behaviour is positively related to subjective career success.	H7a Supported
		H8. (a) Seeking resources and (b) seeking challenges of the job crafting behaviour is negatively related to turnover intentions.	H8b Supported
To what extent does job crafting behaviour mediate the relationship between protean and boundaryless career attitudes and thriving at work?	To ascertain the mediating effect of job crafting behaviour on the relationships between protean and boundaryless career attitudes and thriving at work.	H9. Seeking resources mediates the relationship between (a) self-directed career management, (b) values-driven career orientation, (c) boundaryless mindset, (d) organisational mobility preference and thriving at work.	Not Supported
		H10. Seeking challenges mediates the relationship between (a) self-directed career management, (b) values-driven career orientation, (c) boundaryless mindset, (d) organisational mobility preference and thriving at work.	H10a Supported
To what extent does job crafting behaviour mediate the relationships between protean and boundaryless career attitudes and employability?	To determine whether job crafting behaviour mediates the relationships between protean and boundaryless career attitudes and employability.	H11. Seeking resources mediates the relationship between (a) self-directed career management, (b) values-driven career orientation, (c) boundaryless mindset, (d) organisational mobility preference and employability.	H11a & H11d Supported
		H12. Seeking challenges mediates the relationship between (a) self-directed career management, (b) values-driven career orientation, (c) boundaryless mindset, (d) organisational mobility preference and employability.	H12a Supported
Does job crafting behaviour mediate the relationships between protean and boundaryless career attitudes and subjective career success?	To determine whether job crafting behaviour mediates the relationships between protean and boundaryless career attitudes and subjective career success.	H13. Seeking resources mediates the relationship between (a) self-directed career management, (b) values-driven career orientation, (c) boundaryless mindset, (d) organisational mobility preference and subjective career success.	Not Supported
		H14. Seeking challenges mediates the relationship between (a) self-directed career management, (b) values-driven career orientation, (c) boundaryless mindset, (d) organisational mobility preference and subjective career success.	Not Supported
Does job crafting behaviour mediate the relationships between protean and boundaryless career attitudes and turnover intentions?	To determine whether job crafting behaviour mediates the relationships between protean and boundaryless career attitudes and turnover intentions.	H15. Seeking resources mediates the relationship between (a) self-directed career management, (b) values-driven career orientation, (c) boundaryless mindset, (d) organisational mobility preference and turnover intention.	Not Supported
		H16. Seeking challenges mediates the relationship between (a) self-directed career management, (b) values-driven career orientation, (c) boundaryless mindset, (d) organisational mobility preference and turnover intentions.	H16a Supported

6.3 Discussion of the Key Research Findings

The objectives of this study were to examine whether job crafting behaviour mediates the relationships among the protean and boundaryless career attitudes and employee work outcomes. The antecedents and the outcomes of job crafting behaviour were also investigated. The key findings of the present study are discussed in the following sub-sections.

6.3.1 Antecedents of Job Crafting Behaviour

Self-directed career management, values-driven career orientation, boundaryless mindset and organisational mobility preference were proposed as the antecedents of job crafting behaviour. Specifically, this study examined whether these career attitudes predict job crafting behaviour. The research findings showed that only self-directed career management appeared to be significantly and positively related to both dimensions of the job crafting behaviour (i.e. seeking resources and seeking challenges). Hence, the results supported Hypothesis 1a ($\beta = .411$, $p < .001$) and Hypothesis 1b ($\beta = .317$, $p < .001$). The findings implied that protean self-directed individuals are more likely to craft jobs that serve their values and to enable assertiveness. The results of this study affirmed a relatively similar findings by Ko (2011), which found that the way individuals approach their work (i.e. their work orientation) influences how and to what extent they engage in job crafting activities. Specifically, the study by Ko found that individuals' career orientation significantly and positively linked to job crafting behaviour. The findings from this study also supported Hall and Heras (2010)'s contention that individuals with a protean career orientation, who are self-directed, are more likely than their predecessors to seek jobs that allow for autonomy so that they can craft jobs that serve their values and facilitate self-expression.

While Ko (2011) found a significant and positive relationship between Calling (similar to values-driven career orientation) and job crafting behaviour, the results of this study revealed that values-driven career orientation did not play a significant role in predicting employee job crafting behaviour. Thus, Hypothesis 2 was not supported. Moreover, it was surprising to discover that the values-driven career orientation had a negative relationship with both dimensions of the job crafting behaviour (i.e., seeking resources and seeking challenges). A possible explanation may be that individuals with strong values-driven career orientation showed higher concerns for having time for non-work

activities such as family and community contributions, which in turn affect their work behaviour. In fact, the results of this study are consistent with Dobrow (2004)'s longitudinal findings that individuals with a strong sense of attitudes or orientation to pursue an own passion outside work will have deteriorated performance and career satisfaction. Similarly, Berkelaar and Buzzanell (2014) found that calling orientation or pursuing one's own passion and values can undermine agency and proactivity at work. In the same vein, when employees consider their personal values as the primary sources of work identity and make career decisions based on this orientation, they may be less likely to consider alternative roles, which in turn affect their proactivity to seek new opportunities and career advancement.

Indeed, Hall, Kossek, Briscoe, Pichler, and Lee (2013) found that individuals with strong values-driven career orientation showed strong concerns for having time for non-work involvements such as family and community contributions, which in turn affect their work performance. This applies in particular to the individuals in the collectivist societies. Collectivistic cultures give higher emphasis to bonding between individuals, harmonious relationship and belongingness to groups (Hofstede & Hofstede, 2001). Thus, they tend to involve themselves in the voluntarily works to make meaningful contributions to the society in return for the strong bonding (Ismail & Lu, 2014). As such, the results of the current findings could be influenced by the Malaysia's highly collectivist cultures. In other words, because of relatively strong structural influences, individuals in a more collectivist culture (e.g., Malaysia) might have lower values-driven career orientation scores and less connection between scores and work outcomes compared to those individuals from more individualist cultures (see Gubler, Arnold, & Coombs, 2014). Furthermore, a culture with a high degree of collectivism such as the culture in Malaysia, nurtures an interdependent self-view and thus makes individuals exhibit a prevention focus that may undermine proactive work behaviour and deteriorate

performance (Aaker & Lee, 2001). This reasoning could explain why there was a negative relationship between values-driven career orientation and job crafting behaviour, though the relationship was insignificant.

In addition, the results of this study demonstrated only one dimension of the boundaryless career attitudes (i.e. organisational mobility preference) was significantly and positively related to both seeking resources and seeking challenges. Thus, Hypothesis 4a and 4b were supported ($\beta = .159$, $p < .05$ and $\beta = .110$, $p < .05$ respectively). The boundaryless mindset was not significantly related to job crafting behaviour. Therefore, Hypotheses 3 was not supported. The lack of significant relationships between boundaryless mindset and job crafting behaviour was surprising as prior research supported the notion that career mobility across multiple organisations, occupations and industries turn out to be the instruments for employees to craft social capital and employability (Jones, 1996; Saxenian, 1996). The absence of a significant positive relationship between boundaryless mindset and job crafting could be attributed to the fact that the career attitudes of the participating employees are not manifested enough to give them opportunities to craft their jobs to mobilise resources and to develop social networks outside of their current organisations. This raises the question of whether there are other variables at various levels of analysis that may affect the relationship of boundaryless career attitudes to job crafting behaviour. The relationships could be influenced by individual differences beyond these career attitudes, or some situational or contextual factors such as the culture of the organisation and autonomy to job craft.

6.3.2 Job Crafting Behaviour and Employee Work Outcomes

As expected, seeking resources of the job crafting behaviour was significantly related to employability and subjective career success. Hence, Hypotheses 6a and 7a were supported. These findings support prior research in that job crafting behaviour

concerning seeking more resources, are crucial for individuals to enhance their employability, and ultimately accomplish higher career satisfaction (Heuvel et al., 2015; Tims & Bakker, 2010). Furthermore, seeking challenges of the job crafting behaviour was significantly related to thriving at work, employability and turnover intentions. Thus, Hypothesis 5b, 6b and 8b were supported. The challenge-seeking job crafting behaviour not only enable employees to thrive and become more employable but also reduce the intentions to turnover in the face of changing organisational context (Black & Ashford, 1995; Lu et al., 2014; Mittal et al., 2009; Tims & Bakker, 2010). These findings also support prior research in that by crafting more challenging job demands, individuals enhanced their learning and become more alert and energetic in their workplace (Spreitzer et al., 2012).

As predicted in Hypothesis 5b, the findings of the present study showed that seeking challenges ($\beta = .249$, $p < .001$) was significantly and positively related to thriving at work. This finding had provided empirical support to Spreitzer et al. (2005)'s contention that crafting more meaningful work will energise people in the workplace and enhance thriving at work. However, this study did not find a significant relationship between seeking resources and thriving at work. This is surprising as prior studies found that a resourceful working environment via mobilising more personal resources can reduce job burnout (Huang & Luthans, 2015) and activated employees' psychological capital comprising self-efficacy, hope, optimism and resiliency (Luthans, Avolio, Avey, & Norman, 2007).

Consistent with prior research, the findings of this study showed that both resource and challenge seeking of the job crafting behaviour were significantly and positively related to employability. Therefore, Hypothesis 6a ($\beta = .385$, $p < .001$) and 6b ($\beta = .406$, $p < .001$) were supported. Tims et al. (2012) established a positive relationship between job crafting behaviour and employability. The findings of this study support past studies

that crafting more job resources and challenging job demands, employees become more employable.

The findings of this study also provided empirical evidence that employees who are an active crafter of their jobs will feel more satisfied with the progression of their career (i.e., subjective career success). As such, Hypothesis 7a was supported (β = .190, p <.05). This study supported prior works, which found that proactive behaviours at work affect subjective career success (Barnett & Bradley, 2007; King, 2004; Vos et al., 2009). Also, as predicted in Hypothesis 8b, the findings of this study confirmed that seeking challenges of the job crafting behaviour was significantly and negatively related to employee turnover intentions (β = -.170, p <.05). This finding verified and provided supports for the qualitative study by Mittal et al. (2009). The qualitative study found that direct care workers who were still staying on, reported that autonomy in carrying out their work (i.e., job crafting) served as the retention enhancement driver. Likewise, Leana et al. (2009) found that high-performing teachers who engaged in job crafting reported lower turnover intentions. In other words, providing avenues for job crafting is perhaps a powerful tool for staff retention.

Besides, there was no significant relationship between challenge seeking job crafting behaviour and subjective career success. Thus, Hypotheses 7b was not supported. This finding was surprising and differ from the literature wherein crafting more challenging demands has been shown to have adverse effects on levels of burnout and, therefore, increasing effects on occupational well-being (Tims et al., 2013). In addition, job crafting behaviour was also reasoned as strategies that employees use to adjust their job characteristics, i.e. job demands and job resources, to make their jobs healthier, motivating (Tims & Bakker, 2010), and to increase well-being (Heuvel et al., 2015). The absence of a significant positive relationship between seeking challenges and subjective career success could be attributed to the fact that this challenge seeking

behaviour of the participating employees are not manifested enough to develop the feeling of satisfaction in their careers.

6.3.3 The Mediating Role of Job Crafting Behaviour

The potential roles of the protean and boundaryless career attitudes and job crafting behaviour have not been examined simultaneously in relation to employees work outcomes. This study extends the prior literature by revealing that a protean self-directed individual is better able to craft their jobs and thus accomplishing more positive work outcomes (e.g., experienced thriving at work, more employable, and reduced the intentions to leave the organisation). Accordingly, Hypotheses 10a, 11a, 11d, 12a and 16a were supported. As predicted in these hypotheses, self-directed career management alone was not sufficient to have significant effects on thriving, employability, as well as turnover intentions. This implied that the protean self-directed individuals need to engage in job crafting activities to fulfil the positive work outcomes that they desired. The results thus supported the mediating role of job crafting behaviour.

Although prior research affirmed that some disposition characteristics of the employees are related to positive work outcomes and behaviour (Bozionelos, 2004; Seibert et al., 1999), this study helps to explain why embracing certain career attitudes might not be sufficient for employees to realise certain types of work outcomes. Given that personal identification with meaningful work as a key attribute of the protean career (Mirvis & Hall, 1994), thus, those who have strong attitudes towards self-directing their career will achieve more promising work outcomes when they are provided with the avenues for job crafting, relative to those who do not. These findings are, in fact, in agreement with regulatory focus theory. The results demonstrated that the protean self-directed employees who exhibit a promotion focus experienced higher thriving at work through seeking more job challenges. In line with regulatory focus theory (Higgins, 1997, 1998), individuals who are self-directed in career management, are proactive and adaptive to

their job and learning demands, thus see themselves as working towards the attainment of their ideals. Theoretical and practical implications of this study are discussed in the next chapter.

6.4 Chapter Summary

In summary, this chapter presented the overview of the research objectives and findings of the study. This chapter also devoted a summary and discussions of the sixteen hypotheses tested earlier. Building upon the Regulatory Focus Theory, this dyadic study examined whether job crafting behaviours (i.e. seeking resources and seeking challenges) mediate the relationships between protean and boundaryless career attitudes, and four employee work outcomes. The results indicated that self-directed career management had an indirect positive relationship with employability through seeking resources and seeking challenges, and with thriving at work and turnover intentions through seeking challenges. This study also found that both seeking resources and seeking challenges were significant predictors of employability. Subsequently, the following chapter discusses the research implications, limitations, the future direction of the study and finally end with concluding remarks of the study.

CHAPTER 7: IMPLICATION AND CONCLUSION

7.1 Introduction

The chapter provides discussion on the research implications in term of the theoretical as well as the practical contributions of the findings of this study. As a final point, this chapter discusses the limitations encountered during the research process and presents recommendations for future studies. The last section of this chapter provides the concluding remarks of the study.

7.2 Implications of the Study

There are some theoretical and practical implications that could be drawn from the current study. This study contributes to emerging research on contemporary career attitudes, and also enhances the contextual model of work design, thus enriching the findings from previous studies in the career and job crafting literature. The findings from the present study provide meaningful theoretical and practical insights for managing employees in the current changing organisational context. The following sub-sections discuss both the theoretical contributions and practical implications of this research, respectively.

7.2.1 Theoretical Implications

This study extends earlier theory and research on career and job crafting in several ways. First, this study establishes job crafting behaviour as a mediator in career attitudes – work outcomes relationships. No empirical studies to date, to my knowledge, have examined protean and boundaryless career attitudes and employee work outcomes, taking the mediation effect of job crafting behaviour into account. The choice of assessing job crafting as the mediator answers Oldham and Hackman (2010)'s call for more research on the antecedents and outcomes of job crafting and thus extends the knowledge of this new job design concept. The findings of this study suggest that

challenge seeking job crafting behaviour is a significant mediator between self-directed career management and several forms of employee work outcomes, namely, thriving at work, employability, and turnover intentions. Furthermore, crafting job resources is also a significant mediator between self-directed career management and employability. These findings advance the literature on job crafting and help to explain why a protean self-directed individual can achieve greater work outcomes through seeking more job resources and challenges.

In addition, the relationship between organisational mobility preference and employability is mediated by crafting job resources. However, both dimensions of the job crafting behaviour did not significantly mediate the relationship between values-driven career orientation, boundaryless mindset and all employee work outcomes examined in this study. This is not entirely surprising given that there are potentially other disposition and contextual factors that influence the relationships. This study makes a significant theoretical contribution to career and job crafting literature in showing that self-directed career management is a strong antecedent to job crafting behaviour, which in turn positively impacts thriving at work, employability, and negatively influence turnover intentions.

Second, this study makes use of regulatory focus theory in explaining the relationships between various constructs. The findings of the current study clarify conceptual and empirical controversies regarding the type of career attitudes that influences job crafting behaviour. This study has developed and tested a theoretical model that linked protean and boundaryless career attitudes, job crafting behaviour and employee work outcomes. As illustrated in Figure 3.1 (refer to page 42), this research model embodied few main constructs: protean career attitudes, boundaryless career attitudes, job crafting behaviour and employee work outcomes. The findings provided evidence that there are both direct and indirect relationships among protean career attitudes, job crafting behaviour and

employee work outcomes, as shown in Figure 5.12 (refer to page 128). The framework established in this study has theoretically introduced the job crafting behaviour as the intervening construct on the relationships between protean and boundaryless career attitudes, and several work outcomes. Thus far, research on job crafting is still scarce, especially on the modern career attitudes, and how these attitudes give rise to the proactive behaviour (i.e., job crafting) and in turn influence work outcomes in both positive and negative manners. Although prior studies demonstrating that job crafting are related to various work and career outcomes (Bakker et al., 2012; Ghitulescu, 2006; Leana et al., 2009), this study provided a new perspective in such research, demonstrating that employees' career attitudes also need to be considered. This study advanced research by linking career attitudes to job crafting behaviour and employee work outcomes and addressed the call by Hall and Heras (2010) for research on the role of individuals' career orientations in job crafting research. This study demonstrates that job crafting is an important construct to consider for an improved employee work outcomes. These findings also highlight the relevance of self-regulatory inclinations among those protean self-directed individuals to engage in the job crafting activities. This adds to the literature on careers and job design research (Fried et al., 2007; Hall & Heras, 2010; Oldham & Hackman, 2010), and has important practical implications for organisations, which will be discussed in the next sub-section.

Third, this study examines the supervisors' perspective on the employees' job crafting behaviour and employability. Unlike previous research (e.g., Tims et al., 2012) that has examined the peer-rated job crafting behaviour, this study used an adjusted supervisor-rated job crafting scale aiming to provide a different perspective besides to minimise the potential self-report bias. Tims et al. (2012) indicated that job crafting represents behaviours that others can also observe, which lend supports to the use of supervisor as another rating source. This is a significant contribution in light of the fact that this study

has shown that supervisors are also informed of the crafting activities initiated by their subordinates. Thus far, little is known about the influence of supervisors' role in employees' job crafting behaviour. Nevertheless, Tims and Bakker (2010) highlighted the importance of examining the role of supervisors in job crafting research, as they can either inspire or discourage proactive employee behaviours. For instance, prior studies have revealed that supervisors can positively influence subordinates' proactive feedback seeking by being supportive and reassuring (Ashford, Blatt, & Walle, 2003; Williams, Miller, Steelman, & Levy, 1999).

7.2.2 Practical Implications

The findings of this study have implications for the employees in general as well as for the managers and organisations in particular. The results of this study indicated that both seeking resources and seeking challenges of the job crafting behaviour were significantly and positively related to employability. This may imply that by crafting more job resources and job challenges, employees show that they are prepared for promotion. Besides, crafting job resources were found to be significantly and positively related to subjective career success. In other words, job crafting is a way for employees to improve their work lives and to achieve personally desirable outcomes. This also implied that with room to job craft, employees could create optimal job designs by utilising a variety of resources to achieve a better and improved outcomes at work. Nevertheless, bottom-up job crafting does not devalue the importance of job design assigned by the management. It is about the flexibility and resourcefulness underlying the building blocks of each job that can be reorganised, restructured and reframed (Berg et al., 2008).

This study demonstrated that to enhance employee employability and performance, and to retain valuable employees; the focus should be placed on the design of the jobs as employees reported that they could alter their work characteristics and outcomes.

Particularly, employees who crafted their level of job demands and/or resources were experiencing higher thriving at work, more employable and satisfied, and in turn, less likely to leave the organisation. Thus, interventions that stimulate employees to craft their optimal level of job characteristics are crucial and necessary. One way to guide interventions at the organisational level is to introduce regular employee surveys in which employees report how they experience their job resources and job demands (Bakker et al., 2012). These reports could also include personalised feedback with suggestions on how employees could optimise their work characteristics to achieve meaningful change in the job with the support from the organisation.

Besides that, the results of this study showed that the protean self-directed career attitudes influence employee work outcomes indirectly through the mediating role of job crafting behaviour. This indicated that protean self-directed individuals are likely to customise their jobs to accommodate their unique motives and preferences so to achieve a more positive career and work outcomes. This implied that selecting people with these career attitudes could be a useful strategy for HR managers striving for enhanced performance and work outcomes. However, a greater approach to achieving an optimised performance and outcome is not only about selecting people with these career orientations but is more of assigning these individuals to jobs where they feel they have the autonomy and freedom to decide how they carry out their work.

Again, this stressed the important role played by management at the organisational level. Prior studies reported that training and counselling can effectively enhance and stimulate the protean self-directedness (Park & Rothwell, 2009; Verbruggen & Sels, 2008; Waters et al., 2014) as well as job crafting behaviour (Bakker & Demerouti, 2014). Since inculcating the protean self-directedness can produce mutual benefits for both individuals and organisations, organisations can provide training programmes and activities to support the development of these career attitudes and job crafting behaviour.

Management can offer, for instance, career services such as self-assessments and career counselling to help individuals understand themselves better. Furthermore, management can also provide extensive training and intervention programmes enabling employees to gain job crafting skills and other flexible transferable skills. For example, Van den Heuvel, Demerouti and Peeters (2012, as cited in Bakker & Demerouti, 2014) developed a training programme to foster the awareness of employees concerning the ways in which they can adjust their jobs according to personal needs so to have more fun, engagement, and meaning in their work. Throughout the training programmes, employees were encouraged to incorporate job crafting in their daily work, by learning to execute self-specified job crafting assignments and action. The results reported that the training programmes not only altered the working conditions but also successfully increased employee well-being (Bakker & Demerouti, 2014).

In summary, this study suggested that employee work outcomes can be improved by promoting employee self-directedness and also by encouraging job crafting behaviour in the workplace. It is important for organisations to recognise the presence and influence of bottom-up approach to job redesign and to manage it so that it provides favourable outcomes to the employees and the organisations. However, this study does not suggest substituting top-down job design approach with job crafting. Instead, the findings of this study advocate organisation to encourage, promote and train their employees to craft their jobs in a way that fits them and at the same time in line with the organisational objectives.

7.3 Limitations of the Study

The purpose of this study was to examine the association between career attitudes, job crafting behaviour and employee work outcomes. While interesting conclusions have been derived from the analysis and findings, several limitations inherent in this research which warrant further investigation. There are few methodological limitations of this

doctoral research. First, this study used cross-sectional, correlational research designs which impede conclusive inferences regarding causal relationships among the study variables. Hence, statements involving causal relationships need to be interpreted cautiously. More specifically, this study was vulnerable to the problem of reverse causality. For instance, it is difficult to ensure whether job crafting behaviour was positively related to employability or the reverse. It could be that more employable employees will engage more actively in job crafting activities. Thus, more research using longitudinal or experimental designs are needed to contribute to the understanding of the nature and direction of these relationships.

Second, this study examined only four antecedent variables of career attitudes (i.e., self-directed career management, values-driven career orientation, boundaryless mindset, and organisational mobility preference) and two mediators (seeking resources and seeking challenges). Other variables could be important in fostering high levels of thriving at work, employability and career satisfaction. Therefore, including additional antecedent variables and mediators may provide more complex and richer insights. Future research seeking to advance the job crafting research may wish to consider the inclusion of other variables, which could offer more theoretical insights and implications. Third, although the data were collected from the employee-supervisor dyads with the aim of eliminating the issues of same-source bias, there are still some limitations concerning the use of multi-source data. Supervisors might not be the best source of information about the work behaviour and the performance of employees. The co-workers of the employees, for instance, may evaluate the work behaviour and performance of the employees more accurately. Moreover, favouritism may cause some supervisors to provide biassed information.

Lastly, while individuals in a number of private organisations located in Kuala Lumpur and Selangor were surveyed, the results reported in this study may not be generalisable

to those individuals working in the public sector or other parts of the country. Thus, the results regarding the research variables and their relationships might differ in another cultural setting and should be interpreted with caution. It is likely that employees working in a large, male-dominated, and highly structured public service organisations may describe careers as less protean and boundaryless than those in private sectors. In addition, the traditional careers characterised by loyalty and vertical success may not have transformed as severely in the public sectors as the careers literature (see Arthur & Rousseau, 2001; Hall, 1996b) advocates.

Despite these limitations, this study was able to arrive at significant findings and conclusions about the relationships between career attitudes, job crafting behaviour and the employee work outcomes. This study provided an explanation of the relationships among protean and boundaryless career attitudes, and how these modern career attitudes affect job crafting behaviour and in turn shown to be related to important employee work outcomes. Taken together, the results from this study also present some interesting issues that could be further explored in future research. The subsequent section discusses other interesting directions for future studies.

7.4 Recommendations for Future Studies

There are few essential ways in which future research could extend the findings of the present study. Primarily, future research should consider the implementation of longitudinal designs that allow for testing the direction of causality between job crafting behaviour and employee work outcomes. In particular, future job crafting research should examine whether job crafting behaviour at one point in time affects future levels of thriving, employability and career satisfaction. Next, instead of looking at some specific career attitudes, namely the protean and boundaryless career attitudes, future research may explore other possible antecedents of job crafting behaviour. For instance,

future studies could explore other types of orientations such as the job, career and calling orientations (Wrzesniewski et al., 1997), as antecedents of job crafting behaviour.

While this study employed supervisors' rating in assessing employees' job crafting behaviour and their employability level, future research could include objective measures of employees' job crafting in testing the relationships. For example, future studies could assess actual job crafting more accurately by using diary method for recording actual crafting activities. In addition, future research could also extend this study by identifying a potential moderator for the relationships among career attitudes, job crafting behaviour, and employee work outcomes. It may be interesting to examine the conditions under which a moderator may affect these relationships as this study did not use demographic variables in analysing the results. Future studies may consider using demographic variables as moderators or as the control variable in the analysis of results. Including moderators such as demographic variables, work characteristics, individual skills, task complexity, and task interdependence would make a valuable contribution to the relationships.

Lastly, it would be especially useful for future research to examine, both theoretically and empirically, issues related to the organisational context in which the job crafting behaviour is encouraged and fostered. As this is not within the scope of this research and, therefore, this study did not collect data to examine such variables as organisational characteristics, industry differences, supports from the supervisors, and organisational culture that may encourage or hinder job crafting behaviour. Future research should consider the impact of these contextual factors. In summary, subsequent research should take into consideration the use of a more rigorous method to examine the relationships of the variables in this study.

7.5 Concluding Remarks

The primary purpose of this study was to test the hypothesised relationships between the protean and boundaryless career attitudes and employee work outcomes through the mechanism of job crafting behaviour. The findings confirmed that self-directed career management had indirect effects (i.e., via the mediating role of seeking resources and seeking challenges) on employee work outcomes. This study also found that job crafting behaviour was a significant predictor of several employee work outcomes. The findings showed that seeking resources of the job crafting behaviour positively influenced employability and subjective career success. Similarly, seeking challenges job crafting was found to positively influenced thriving and employability, and negatively influenced turnover intentions. These results confirmed and acknowledged that employees play a significant role in actively shaping and influencing their work environment and outcomes.

The study provided several promising avenues for future studies and advocated management researchers to continue studying the role of job crafting, its antecedents, and outcomes. To conclude, this study has shown that those protean self-directed employees are most likely to craft their own jobs, by mobilising their own resources and setting their own challenges, these employees actively shape their own career and work outcomes. The findings from this study also suggested that the management should acknowledge the importance of job crafting and the opportunities it provides to maximise employee potential for an improved individual as well as organisational outcomes.

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