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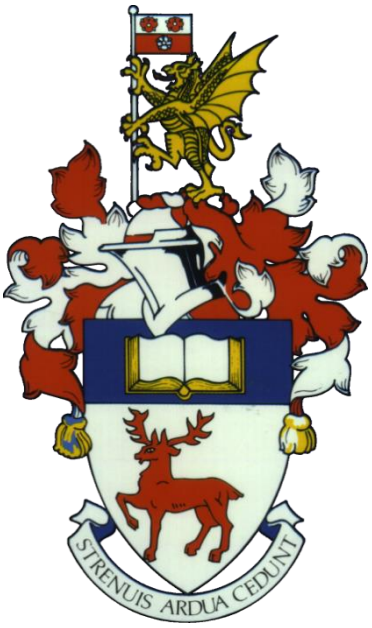

Predictors of CEO career success in a transition economy – Evidence from Vietnam

by

Kien Duc Nguyen

Thesis for the degree of Doctor of Philosophy in Management

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ABSTRACT

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Reasons for the study. This thesis was motivated by the controversial associations which reflect the characteristics of career success stipulated by numerous sets of predictors, whereby career success may be evaluated either subjectively and objectively, or by a combination of the two aspects. Originating from recommendations made by influencial scholars, a customised set of moderators was selected to investigate the associations. Moreover, the author has established a population in a novel context, focusing on chief executive officers (CEOs) of listed firms in a Southeast Asian transition economy. All of these factors facilitated the testing of hypotheses partly developed from related theories, namely, psychological success model, human capital theory, political skill framework, five-factor model of personality, protean career theory, managerial power theory and Judge et al.'s (1995) model.

Purpose. The research aimed to empirically examine the controversial associations characterised by the relationships between the sets of predictors and two popular aspects of career success, as well as between these aspects themselves. The research covered the important sets of predictors, namely, human capital, political skill, protean career orientation, managerial power and objective-vs-subjective career success. Additionally, the study investigated the various effects of moderators on the important relationships, which included the effects of firm size and ownership structure on political skill - career success and protean career orientation-career success, as well as the effect of the employment sector on personality traits - career success relationships.

Design/methodology/approach. The study design employed the correlational research approach and the cross-sectional survey method, while the database was constructed from two main sources: the quota sampling survey of the 179 CEOs of the 179 firms publicly listed in the two stock exchange markets in Vietnam, and the archival hand-collected data extracted from the Vietnamese General Department of Taxation, gleaned from annual reports, boards' reports, financial reports and websites of the 179 firms, as well from trustworthy websites, namely, www.cafef.vn and www.finance.vietstock.vn. The SPSS Statistics 22 program was employed for carrying out data-preparation-and-screening, in order to justify the erroneous-and-missing data, the outliers, the common method variance, the sample size, to calibrate the assumptions, to validate the unidimensionality and reliability, as well as to confirm the validity. Moreover, the Mplus 7.0 program was utilised for conducting the structural equation modelling (SEM) in order to evaluate the direct relationships. The program was also employed to carry out the latent moderated structural equation analysis to determine the latent variable interactions. This program was beneficial in providing the multi-group SEM analysis for reflecting an interaction between a continuous predictor and a dichotomous moderator.

Findings. Particularly interesting were the findings that the measure of objective career success was positively associated with the two measures pertaining to the subjective one. Another finding was that human capital, political skill, protean career orientation and managerial power sets of predictors resulted in a highly reliable characterisation of career success, where it was suggested that the variables leading to objective career success were not different from those linked to subjective career success. Additionally, the results partly confirmed that there were slight moderating effects of firm size and ownership structure on the political skill - career success relationship and on the protean

career orientation – career success relationship, and of the employment sector on the personality traits – career success relationship. As a result, contextual factors, namely, firm size, ownership structure and the employment sector, may play a crucial role in the relationships between career success and its related predictors.

Originality/value. In addition to extending the original work of Judge et al. (1995), this study makes original contributions to the field of career success research by not only testing existing theories, but also by building new theories. The study has grounded predictions with the relevant existing theories, conceptual arguments and references to past findings. Further, this study has examined a previously unexplored relationship between CEO managerial power and his career success. Additionally, the study has introduced, as well as empirically tested, the three new moderators of existing relationships, including firm size, employment sector and ownership structure. In addition, this study have constructed a holistic and novel context for demonstrating how to characterise transitional economies in South East Asia, where our novel approach invoking multiple disciplines has been applied.

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DECLARATION OF AUTHORSHIP

I, Kien Duc Nguyen, declare that this thesis and the work presented in it are my own and has been generated by me as the result of my own original research.

Predictors of CEO career success in a transition economy – Evidence from Vietnam

I confirm that:

1. This work was done wholly or mainly while in candidature for a research degree at this University;
2. Where any part of this thesis has previously been submitted for a degree or any other qualification at this University or any other institution, this has been clearly stated;
3. Where I have consulted the published work of others, this is always clearly attributed;
4. Where I have quoted from the work of others, the source is always given. With the exception of such quotations, this thesis is entirely my own work;
5. I have acknowledged all main sources of help;
6. Where the thesis is based on work done by myself jointly with others, I have made clear exactly what was done by others and what I have contributed myself;

Signed: .....

Date: .....

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LIST OF ACRONYMS

ADF	Asymptotically Distribution-Free
AFA	Actual Financial Attainment
AVE	Average Variance Extracted
CEO	Chief Executive Officer
CFA	Confirmatory Factor Analyses
CFI	Comparative Fit Index
CI	Confidence Interval
CMV	Common Method Variance
CR	Composite Reliability
EFA	Exploratory Factor Analysis
EPC	Expected Parameter Change
FFM	Five-Factor Model
HC	Human Capital
HC-CS	Human Capital – Career Success
HCT	Human Capital Theory
KMO	Kaiser-Mayer Olkin
LMS	Latent Moderated Structural Equations
ML	Maximum Likelihood
MP-CS	Managerial Power – Career Success
MPT	Managerial Power Theory
NEO-PI-R	Neuroticism, Extraversion, Openness Personality Inventory
OCEAN	Openness, Conscientiousness, Extraversion, Agreeableness And Neuroticism
OCS	Objective Career Success
OLS	Ordinary Least Squares
O-SCS	Objective – Subjective Career Success
PCA	Principal Components Analysis
PCO	Protean Career Orientation
PCO-CS	Protean Career Orientation – Career Success
PFA	Perceived Financial Attainment
PLS	Partial Least Squares
POPS	Perceptions Of Organizational Politics
POS	Perceived Organizational Support
PS	Political Skill
PS-CS	Political Skill – Career Success
PSI	Political Skill Inventory
PT-CS	Personality Traits – Career Success
RMSEA	Root Mean Square Error Of Approximation
SCS	Subjective Career Success
SEM	Structural Equation Modelling
SPSS	Statistical Package For Social Sciences
SQRT(AVE)	Square root of Average Variance Extracted
SRMR	Standardized Root Mean Square Residual
TLI	Tucker-Lewis Index
ULS	Unweighted Least Squares

Chapter 1 Introduction

1.1. Background of the problem

CEO studies have attracted scholars' attention since the 1970s (e.g., Lieberson and O'Connor, 1972; Berg and Smith, 1978). Studies of CEOs cover an array of related topics and phenomena, such as CEO effect (e.g. Hambrick and Quigley, 2014; Fitza, 2017), power and influence (e.g., Daily and Johnson, 1997), attributions (e.g., Hayward and Hambrick, 1997), identity (e.g., Boivieet al., 2011), reputation (e.g., Zajac and Westphal, 1996), and decision making (e.g., Arendt et al., 2005). However, research specifically or purely focusing on CEO career success per se has been relatively limited (Koyuncu et al., 2017), especially in Southeast Asia countries (Mohd Rasdi et al., 2011), although there have been calls to expand research on careers outside the West since Granrose and Chua (1996) or Sullivan et al. (1998).

In addition, most research on careers in general, and on contemporary careers in particular, appears to presume that changes to career structure are universalistic (Chudzikowski et al., 2009). Under the universalistic paradigm, it is assumed that careers (including career success) are basically similar, regardless of the context in which they operate. However, importance of the national context has more recently been emphasised by scholars when examining the nature of careers (Parry et al., 2015). For instance, Mayrhofer et al. (2007) suggested that the course of career transition is influenced by many contextual factors – the context of origin, the context of work, the context of society, the global context and the cultural context. Similarly, Briscoe et al. (2012) concluded that context made an 'enormous difference' (p. 107) to careers and that context is particularly crucial in developing countries, and within those emerging economies in which older and younger generations face very different circumstances. Based on these assertions, this thesis investigates the nature of career success within an emerging economy from a perspective which includes both universalistic and contextual views.

Vietnam has been emerging as a provider of an interesting, non-Western, context for career studies. Being a Southeast Asian country with cultural socioeconomic differences, its context may make a significant contribution to enrich existing theories (Barkema et al., 2015). Inglehart and Welzel (2010) argue that Vietnamese society belongs to South Asia in the global cultural map (see Appendix 1). In addition, reforms have transformed Vietnam from one of the world's poorest countries 25 years ago to a lower middle-income country (World Bank, 2013). As a transition economy with its own characteristics and achievements, it provides a fascinating research laboratory for testing and developing theories. This is because the transition processes bring a series of unique socioeconomic quasi-experiments typically characterized by inefficient markets, institutional idiosyncrasies, the active involvement of government and government-related entities, extensive business networking, and high uncertainty. These socioeconomic quasi-experiments permit researchers to test the generalisability of existing theories and to point out hidden features and assumptions that are not usually mentioned when conducting studies of mature market economies (Whetten, 1989; Hoskisson et al., 2000; Meyer and Peng, 2005; Wright et al., 2005; Whetten, 2009; Whetten et al., 2009; Jia et al., 2011; Xu and Meyer, 2013). As a result, Vietnam was chosen as empirical setting to study CEO career success.

For the above-mentioned reasons, such as a relatively limited amount of research on CEO career success, the national context of a Southeast Asia country and an emerging economy, CEO career success in Vietnam is an interesting and relevant topic to study.

1.2. Statement of the problem

The importance of understanding the predictors of CEO career success has had a significant increase recently (Baruch et al., 2013). However, there have been ten research gaps in this topic, especially in a transitional economy. Firstly, the area of CEO career success has been still under-researched (Busenbark et al., 2016; Koyuncu et al., 2017) and, unfortunately, to date there have been no academic publications using the context of a Southeast Asian country (Mohd Rasdi et al., 2011; Poon et al., 2015). Studies of the career success of non-CEOs in the region include Mohd Rasdi et al. (2011) who looked at Malaysian managers, Chow (2002) who studied Singaporean and Thai managers, and Funnell and Chi Dao (2013) who examined Vietnamese university rectors.

Secondly, there has been limited research of both the objective and subjective aspects of CEO career success combined in one study, such as that by Orser and Leck (2010) because of the difficulty in collecting data on the subjective career success of CEOs (Koyuncu et al., 2017).

Thirdly, findings on the relationship between objective career success and subjective (self-referent) career success are controversial (Abele et al., 2011). While no relationship was found in the study by Richardsen et al. (1997), a positive relationship was found in the research by Judge et al. (1999b) and Cable and DeRue (2002) and mixed results were in Judge et al.'s (1995).

Fourthly, although much has been written about the need for interdisciplinary research on career success (e.g. Arthur et al., 1989; Schein, 2007; Arthur, 2008; Lawrence, 2011), limited work exists (Lawrence, 2011). There has been an urgent need for interdisciplinary careers research in the emerging global knowledge economy (Arthur, 2008). Additionally, in today's world, interdisciplinary approaches to careers are required in order to have a complete and unbiased understanding of the dynamic nature of careers (Sullivan and Baruch, 2009; Khapova et al., 2011; Baruch et al., 2013). However, despite calls for more integrated discussions in which theory evolves from two or more perspectives (Arthur et al., 1989; Schein, 2007), the careers literature with few exceptions reflects disciplinary separation (Lawrence, 2011). Furthermore, researchers appear to assume that objective and subjective career success are predicted by the same variables when determining predictors of both aspects of career success in one study (e.g. Judge et al., 1995; Ng et al., 2005; Cocchiara et al., 2010; Mohd Rasdi et al., 2011; Ngo and Li, 2015). Ng et al., (2005) argued that scholars have raised this concern for a number of years (e.g. Jaskolka et al., 1985; Poole et al., 1993; Judge et al., 1995), but research to date has typically not identified and developed theory around the unique predictors of objective and subjective career success. To achieve this, Ng et al., (2005) suggested that researchers move toward developing different approaches for predicting aspects of career success, isolating key variables that predict a particular aspect of career success (e.g., James, 2000), and developing unique theory-based predictions to guide the selection of predictors.

Fifthly, evidence for the relationship between human capital and subjective career success remains inconclusive. This relationship is either partially supported (Judge et al., 1995 with 1,388 executives in the sample; Ng et al., 2005 based on 140 articles; Orser and Leck, 2010; Park, 2010; Ng, and Feldman, 2014 with a meta-analytic review based on 191 empirical articles), or not supported by the empirical results (Pfeffer and Fong, 2002; Mohd Rasdi et al., 2011).

Sixthly, the results of empirical research indicate the inconclusive relationship between political skill and career success (PS-CS). For example, while Gentry et al. (2012) and Munyon et al. (2015) reported the positive PS-CS relationship, Ferris et al. (2008) revealed a controversial relationship. In addition, the meta-theoretical framework of political skill was firstly proposed by Ferris and colleagues (2007) and then advanced by Munyon et al. (2015); therefore, it lack empirical evidence.

Seventhly, to date examinating the moderating effect of environmental factors on the the relationships between certain individual characteristics and career success appears to be crucial but not have done yet. Given a series of studies examining the specific effects of either individual or organisational characteristics on career success, the developing literature suggests that interactive effects between environmental and individual characteristics on career success are no less important to study. However, despite strong interest, more than 30 years after Olian and Rynes (1984) asserted that these interactive effects are important to consider, responses to this call have

only recently begun to be put forward (e.g. Breland et al., 2007; Brouer et al., 2009; Harris et al., 2009; Treadway et al., 2010). Additionally, there remains substantial room for further development (e.g. Sonnenfeld and Peiperl, 1988; Judge et al., 1995; Ng et al., 2005; Gallagher and Laird, 2008; Abele et al., 2011; Michiels et al., 2013; Kimura, 2015). When the environmental factors usually include organisational size and ownership structure, individual characteristics like political skill, personality traits and protean career orientation are recommended for examination.

Eigthly, the influence of agreeableness and openness on career success may be moderated by the specific occupational context, such as the employment sector (as suggested by Seibert and Kraimer 2001; Baum and Locke, 2004; Spurk and Abele, 2011). Unfortunately, these moderation relationships have been an under-researched area in the existing literature (Spurk and Abele, 2011).

Ninthly, the findings with respect to the link between protean career orientation and objective career success have been inconclusive. Specifically, with regard to salary, the most common proxy for objective career success, the results have been disentangled. Some researchers found a positive relationship between PCO and salary (e.g. Baruch, 2014) while others did not (e.g. Baruch and Quick, 2007; Gasteiger, 2007; Volmer and Spurk, 2011; Baruch et al., 2012). Regarding other proxies of objective career outcomes, the findings have also been ambiguous. The posive relationship between PCO and hierarchical position was reported (e.g. Jung and Takeuchi, 2011; Grimland et al. 2012; Baruch et al., 2014) when no relationship between PCO and number of promotions was found (e.g. Gasteiger, 2007; Volmer and Spurk, 2011).

Tenthly, CEO power has received attention for more than two decades (e.g. Finkelstein, 1992; Westphal and Zajac, 1995; Shen and Cannella, 2002a; van Essen et al., 2015). Correlates of CEO power, especially with CEO compensation, one of main indicators of objective career success, continue to proliferate (e.g. Finkelstein and Hambrick, 1989; Core et al., 1999; Bebchuk,et al., 2002; Murphy, 2002; Bebchuk and Fried, 2003; Bebchuk et al., 2011; Chen et al., 2011; van Essen et al., 2015; Shin, 2016). Unfortunately, the literature is characterized by divergent and conflicting findings (O'Reilly and Main, 2010; van Essen et al., 2015). In addition, studies of the role of power on subjective career success have been an overlooked area.

1.3. Overall aim and objectives of the study

Overall aim. This study aimed to empirically examine both a link between the objective and subjective aspects of CEO career success and the relationships between CEO career success and its affecting factors in the context of a South East Asian emerging country, in order to extend human capital theory, managerial power theory, the five-factor model of personality, the political skills framework and the protean career concept. To do this, the author not only embeds predictions into existing theories or models, but also introduces new mediators or moderators of existing relationships and examines certain previously unexplored or inclusive relationships between career success and the affecting factors.

Objectives. The specific research objectives of this thesis are as follows:

1) To examine the relationship between the objective and subjective measures of career success.

2) To employ interdisciplinary approaches to careers in order to identify the key variables predicting the objective or subjective aspects of career success.

3) To examine the relationship between human capital and subjective career success.

4) To investigate the PS-CS relationship.

5) To investigate the moderating roles of firm size and ownership structure on the relationships between certain individual characteristics (e.g., political skill, personality traits and protean career orientation) and career success.

6) To examine the moderating roles of occupational context on the relationships between agreeableness or openness and career success.

7) To empirically test the relationship between PCO and objective career success.

8) To examine the relationship between managerial power and career success.

1.4. Theoretical underpinnings and frameworks

Psychological success model, human capital theory, political skill framework, five-factor model of personality, protean career theory and managerial power theory were the theoretical foundations of the this study, as they are relevant, practicable and popular approaches to CEO career success, as suggested by Judge et al. (1995), Ng et al. (2005) and van Essen et al. (2015).

1.5. Thesis structure

As implied in the previous sections, this study mainly explains the relationships between career success and its determinants, as well as some moderators of these relationships. Thus, the best approach to this study was to begin by addressing its theoretical underpinnings. As the main objective of this study was to explain the predictors of career success, the purpose of chapter 2 is to summarise the related theories, models and frameworks which are consistent with the groups of predictors mentioned in the conceptual framework or research model (Figure 2.4). They include human capital theory, the political skills framework, the five-factor model of personality, the protean career concept and managerial power theory. In addition, the concepts of CEO, career, career success, CEO career and CEO career success as well as its predictors are addressed in this chapter. The relevant literature on the determinants of CEO career success is critically reviewed. The hypotheses and conceptual framework of this research are developed based on the theoretical underpinnings identified and the relevant literature discussed.

Chapter 3 contains explanations of the research approach and the arguments for the choice of combination between positivism and constructivism as well as a quantitative approach. The research design is explained in order to understand any possible issues or problems regarding the research process. The approach set the guidelines for data collection and data analysis. However, extra effort and unexpected events were assumed by the researcher during the research process. The reliability and validity of the measurement scales are argued, and a description of the selected statistical method is given, to provide a quality research design which ensured the rigor, thoroughness, and high quality of the research findings. In addition, this chapter describes the statistical testing involved in the early development of the measurement model until the final, refined, quality model was achieved. This chapter shows the efforts made to obtain the findings.

In Chapter 4, results of the data screening in terms of erroneous data, missing data, sample size, outliers and assumptions are also reported. Additionally, the descriptive statistics is presented. Furthermore, the results of the statistical analyses performed on the data in the form of Structural Equation Modelling (SEM) models are presented. Moreover, moderation analyses are described, and their results are reported.

Chapter 5 summarises the major findings and describes the links between the research findings with the proposed hypotheses according to each theory or model. Additionally, it discusses the theoretical, practical and methodological implications. Finally, the limitations of the study are outlined, and following on from this, a number of suggestions for future research are presented.

Overall, this thesis has been structured in such a way that it is convenient for its readers to understand the issues discussed. The structure of the thesis is illustrated in Figure 1.1 below.

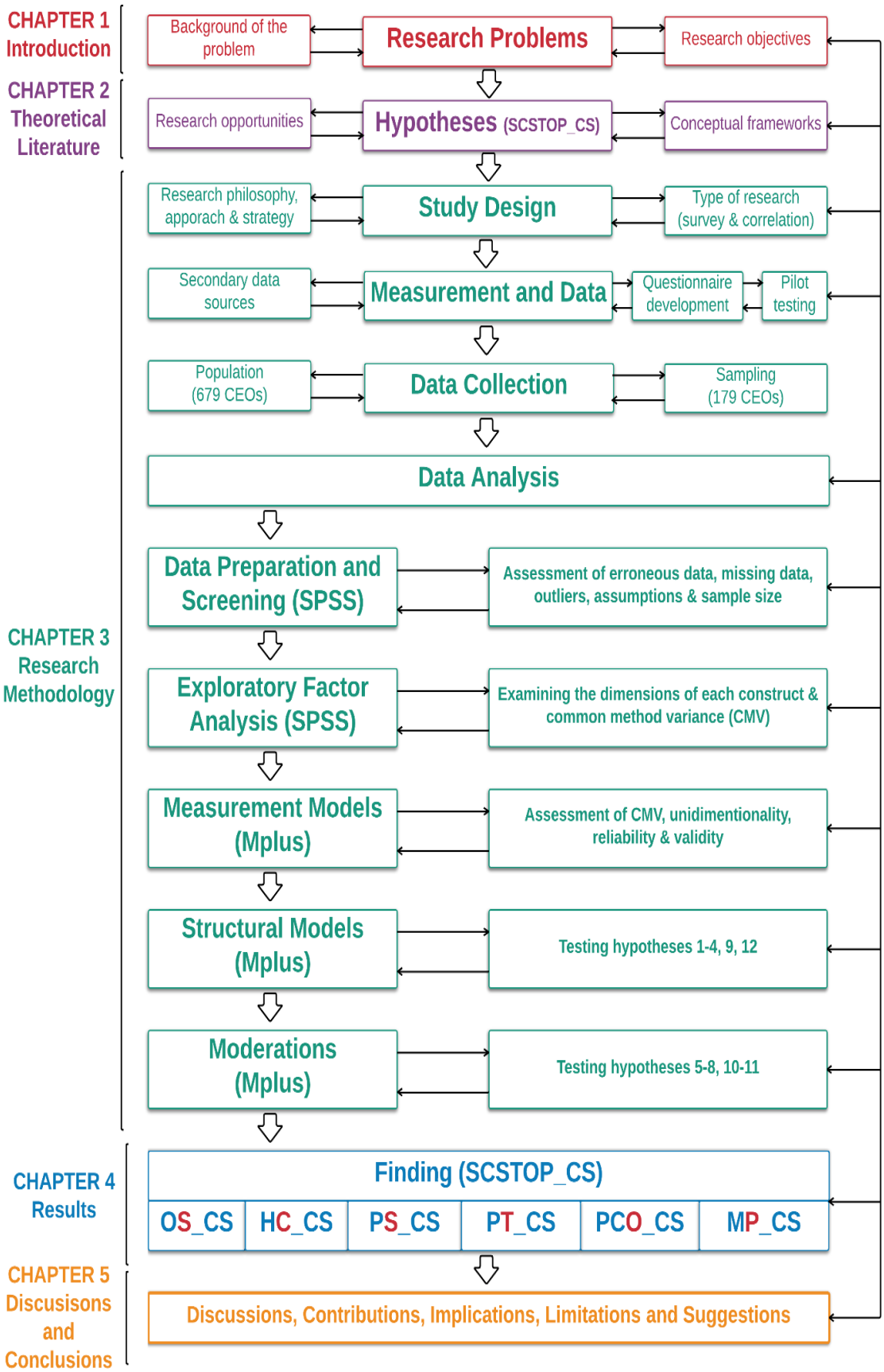


Figure 1.1. Struture of the thesis

Chapter 2. Theoretical Literature

2.1. Introduction

Career success has long attracted considerable interest to career scholars (e.g., Parsons, 1909; Hughes, 1958) and practitioners (e.g., Robbins, 2003; Ziglar, 1997). Career success research draws on career theory, and therefore on the ideas—underlying definitions, concepts, relationships and assumptions—included in career theory (Arthur et al., 2005). Authur and his colleagues suggested below six definitions and five attributes that are especially relevant to career success research. The definitions cover the key terms career, objective career, subjective career, career success, objective career success and subjective career success. The first three attributes concern the duality of the objective and subjective sides of the career, the interdependence between these two sides, and the theoretical adequacy of the research model adopted.

In addition, from a boundaryless career theory perspective, Arthur et al. (2005) proposed two further attributes related to career success concerned with (a) inter-organizational mobility and (b) extra-organizational career support. In addition, the nature of careers has changed over time (Sullivan and Baruch, 2009). The changing nature of work, context and career actor have resulted in major transition in the shape of careers (e.g. Baruch, 2006; Baruch et al., 2015; Sullivan and Baruch, 2009). Therefore, career studies in search for theory should provide a brief historical background with traditional and contemporary careers as well as new career realities.

Besides, through a critical analysis, Arnold and Cohen (2008) identified two broad strands of career success research. One concerns the different ways of construing career success, and how they are (or are not) related to each other (e.g. Heslin, 2003, 2005; Sturges, 1999). The second strand concerns what predicts success. Most studies use more than one indicator of career success (Arthur et al., 2005). This thesis would follow the second strand because of the research problem and objectives mentioned in Chapter 1.

Definitions, attributes and literatures presented in this research are selected based on the recommendations from Arthur et al. (2005) and analysis of Arnold and Cohen (2008) on career success research as well as the research objectives of the current study. The purpose of this chapter is to provide a selective review of the academic literature on relationships between career success and its affecting factors. The importance of understanding the predictors of CEO career success has had a significant increase recently (Baruch et al., 2013). The literature on career success (one of the core topics of research in career studies) has been vast as for the last twenty years. Therefore it is not possible to provide a comprehensive review. Instead the researcher focused on the classic papers that provided theoretical perspectives and underpinnings for empirical research, and on the more recent literature that reflects the current research agenda towards which empirical research is moving.

The first section of this chapter focuses on the related concepts. It begins with the definition, role and importance of CEO. In addition, the working definition of career, the traditional career, new career realities, contemporary careers, and the objective and subjective careers are discussed. Finally, defining, conceptualising and measuring career success as well as determining affecting factors of career success are presented to provide strong foundations to understand CEO career success and related theoretical perspectives.

The second section of this chapter focuses on core theoretical perspectives; emphasis is given to human capital theory, political skill framework, five-factor model of personality, protean career approach and managerial power theory because they are the relevant and practicable approaches to CEO career success suggested by Judge et al. (1995), Ng et al. (2005) and van Essen et al. (2015). Each theory or model is discussed in terms of its history, overview, assumption, key idea, prediction, critical perspective and application in this thesis. The applications and the possible extensions of these theories and models are analysed in detail.

Studies of CEO career are a focus of the third section of this chapter. This section provides the perspectives and themes of CEO career studies in order to offer the broad context of research on CEO career success.

In this chapter, the empirical literature on CEO career success and its relationships with affecting factors is presented. The empirical findings of the relationship between the two aspects of CEO career success is discussed. In addition, the results of associations between CEO career success and its predictors are grouped according to the relevant theories. The hypotheses of this research are developed in this section based on the relevant theoretical perspectives and empirical findings.

2.2. CEO, careers and career success

2.2.1. CEO

"CEO is the executive who has overall responsibility for the conduct and performance of an entire organization, not just a subunit" (Nicholson et al., 2005, 35). The CEO designation has gained widespread use since about 1970, as a result of the need to draw distinctions among various senior executive positions in today's elaborate corporate structures. For example, sometimes a chief operating officer, who is responsible for internal operational affairs, is among the executives who reports to a CEO; in such a case, the CEO primarily focuses on integrating internal and external, longer term issues such as acquisitions, government relations, and investor relations (Nicholson et al., 2005).

In publicly traded corporations, sometimes the chairman of the board of directors is also the CEO, while the president (if such a title even exists) is the COO - Chief Operating Officer. In other cases (particularly European companies), the chairman is not an executive officer at all, but rather is an external overseer, while the president is the senior ranking employed manager or CEO. Other variations exist as well. Further complicating the scholar's task of identifying the CEO of a company is that the label may not be explicitly bestowed on anyone. Still, theorists and other observers of organizations are drawn to the idea that some one person has overall responsibility for the management of an enterprise and that, in turn, that person's characteristics and actions are of consequence to the organization and its stake holders (Barnard, 1948).

The roles of a CEO are many and varied, including decision making (on major and sometimes minor issues), monitoring and transmitting information (both inside and outside the company), and interacting with internal and external parties (many constituencies believe they warrant the CEO's personal attention) (Mintzberg, 1973). CEO roles can also be thought of as spanning from the substantive (tangible actions) to the symbolic (the intangible, added meaning that is attached to a senior leader's behaviours, by virtue of the position he or she holds) (Pfeffer, 1981). Far more research has been done on CEO substantive actions than on symbolism, but recent theory and investigations have pointed to the great significance of the latter.

The issue of whether or how much CEOs matter to organizational outcomes is of longstanding debate among scholars (Nicholson, Audia, and Pillutla, 2005). However, the upper-echelons perspective, prevalent in strategic management research, suggests that firm functioning and performance is affected not only by the capabilities of the entire top management team but also by the CEO (Cannella et al., 2008; Carpenter et al., 2004; Hambrick and Mason, 1984; Hambrick et al. 1996).

2.2.2. Vietnam context

2.2.2.1. Vietnam – a country overview

Vietnam has been emerging as a provider of an interesting, non-Western context for career studies. It is a transition country with a population of less than 90 million people living in an area totalling 331,210 square km (GSO, 2014). Being a Southeast Asian country with cultural socioeconomic differences, its context may make a significant contribution to enrich existing theories (Barkema et al., 2015). Vietnamese society belongs to South Asia in the global cultural map.

In addition, this country is still in a process of transition from a centrally planned to a market-oriented economy (e.g. Ngo et al., 2016; Ngo et al., 2018). In addition, it is a Marxist-Leninist one-party state but pursues a market economy with socialist orientation, in which: the role of the state sector is predominant; the protection of private property rights is poor; most of the essential economic resources are under public ownership; and government intervention in the economy is strong (Abonyi, 2005; Bui, 2006; World Bank, 2006; Le and Walker, 2008; Van Tuan and Tuan, 2016). The reforms have transformed Vietnam from one of the world's poorest countries 25 years ago to a lower middle-income country (World Bank, 2013). In addition, the economic structure of Vietnam is much different from the one of OECD countries. In 2013, the contribution of industry and services (including finance) sectors to GDP in Vietnam was 33% and 39% while the one in OECD countries was 23% and 69%, respectively (World Bank, 2018).

2.2.2.2. Corporate governance practices in Vietnam

The corporate governance practice in Vietnam is in the early stages of development (World Bank, 2006a; Connelly et al., 2017). Corporate governance is a new concept for Vietnam and there is no equivalent Vietnamese terminology that fully explains the meaning of the term 'corporate governance' (Nguyen et al., 2015). This term is translated as 'quản-trị-công-ty', similar in meaning to 'company administration' (OECD, 2006). In addition, the country introduced OECD-type principles of good governance only during the first decade of the 21st century in order to attract foreign investors and stimulate the development of a capital market (Ngo et al., 2018).

The current situation of the corporate governance system can be characterised as follows. Corporate governance regulations are underdeveloped (World Bank, 2006a). Public awareness regarding corporate governance is poor (Freeman and Nguyen, 2006). The role of the state sector is predominant (World Bank, 2006a; Le and Walker, 2008; Nguyen, 2008). The protection of private property rights is weak (World Bank, 2006a; Le and Walker, 2008; Nguyen, 2008). Both internal and external corporate governance mechanisms are limited (World Bank, 2006a; Le and Walker, 2008; Nguyen, 2008).

There have been many obstacles necessary to overcome in order for corporate governance practices in Vietnam to reach levels equal to the practices observed in peer nations in the Southeast Asian region. The 2006 International Finance Corporation and 2006 World Bank reports identify three major challenges: implementing new laws, granting enhanced powers to the regulatory agencies, and strengthening enforcement (Freeman and Nguyen, 2006; World Bank, 2006a). It would appear that the major problem with the corporate governance system in Vietnam is not about the regulatory framework or the lack of adequate legal regulations for corporate governance. On the contrary, the Vietnamese law seems to have provided a relatively robust structure for corporate governance. The major challenge is on how the law is enforced to check the abuse of power by the board and to ensure the enforcement of the law in a manner that can sufficiently provide adequate investor protection mechanisms and good corporate governance standards (Owoeye and Pijl, 2016).

2.2.2.3. Corporate governance practices in Vietnamese listed firms

Compared with corporate governance practices in developed economies, the corporate governance practice in Vietnamese listed firms may have the following differences.

Although Vietnam's stock exchange is in its primary stage of development, the firms listed in the stock exchanges can be seen as market leaders in good corporate governance, compared with the types of firms in the country. However, despite the efforts made by the government to improve the standard of governance practiced by publicly listed firms, the corporate governance system in Vietnam remains underdeveloped (Connelly et al., 2017). The corporate governance practices at Vietnamese public firms lagging behind practices observed at public firms in neighbouring countries.

Indeed, Vietnam ranked 166th out of 183 economies for the strength of investor protection (World Bank, 2011). The most recent corporate governance scorecard for 2011, conducted by the International Finance Corporation (2012), reported that the average corporate governance score in Vietnam is only 42.5%, which is much less than those of other markets across the Asia region. For example, the average scores of Thailand (in 2011), Hong Kong (in 2009), and the Philippines (in 2008) are 77%, 73% and 72%, respectively.

The observance of the OECD Corporate Governance Principles in Vietnam conducted by Robinett et al. (2013) provided further evidence for the underdeveloped corporate governance system of the listed firms (see Table 2.1). Furthermore, the applications of OECD-type governance principles in the firms were compared with in OECD ones. The corporate governance indicators (except extent of disclosure index indicator) in Vietnamese listed firms were much lower than in OECD ones.

Table 2.1. Corporate governance comparison between Vietnam and OECD

Indicator	Vietnam	OECD
Extent of disclosure index (0-10)	**6.0**	**6.0**
Extent of director liability index (0-10)	**1.0**	**5.0**
Ease of shareholder suits index (0-10)	**2.0**	**7.0**
Strength of investor protection index (0-10)	**3.0**	**6.1**

Source: Robinett et al., 2013, p.21

In complying with Vietnam. Law on Enterprises 2005 [LOE 05] and Vietnam. Corporate Governance Codes for Listed Firms 2007 and 2012 [CGC 07 and CGC 12], the typical governance structure of a Vietnamese listed firm follows a two-tier model. The governance structure consists of four governance bodies: (i) a general meeting of shareholders, (ii) a board of directors, (iii) a board of supervisors and (iv) a chief executive officer, each with certain statutory powers and functions. However, in addition to the statutory powers prescribed by law, the company's constitution can expand - but not decrease - the powers of the above corporate governance bodies (Le, 2008).

The general meeting of shareholders, the most powerful body of a publicly listed company, establishes the company's constitution and elects the members of both the board of directors and board of supervisors. In accordance with the company's constitution, either the members of the director board or the general meeting of shareholders may elect the chairperson.

The board of directors in a Vietnamese listed firm has four major duties: (i) making decisions regarding management strategies, (ii) nominating the CEO and approving senior executive positions, (iii) monitoring daily managerial operations and (iv) submitting matters for the consideration of the general meeting of shareholders. Compared to the German internal corporate governance model, the board of directors in Vietnamese firms has a more direct role in monitoring daily management (Le and Walker, 2008).

In Vietnam, like in other transition economies, an independent director is defined mainly as a nonexecutive director. Initially, the CGC 07 stipulated that an independent director cannot hold a management position in the firm, meaning that an independent director in Vietnam, at that time, was similar to a nonexecutive director. The CGC 12 introduced further compliance criteria for independent directors. These criteria include: not being able to hold a management position in a subsidiary or

related firm, not being a representative or a relative of the company's majority shareholders, not having provided legal, advisory, or auditing services to the company, and not being involved in business transactions that represent 30% or more of their company turnover. This means that the 2012 definition of independent directors is more closely aligned with the “international” and stricter definition of independent director. It is noteworthy that, in a listed company, one third of the members of the board of directors must be non‐executive independent members. However, in reality, many listed firms in the country have reported the untrue independent directors in order to meet the required percentage of independent directors in the board.

A board of supervisors, as stipulated by the LOE 05, must be established in a Vietnamese listed firm. The membership of a board of supervisors must range from three to five members who need not be shareholders or employees of the firm. Unlike the one-tier board structure in developed economies where a supervisory committee is composed and nominated by the board of directors, the members of a board of supervisors in a Vietnamese listed firm are elected by the general meeting of shareholders and function independently from the board of directors (Bui and Nunoi, 2008). The major role of the board of supervisors is to supervise the performance of both the board of directors and CEO. However, the absence of clear legal guidance for the board of supervisors in Vietnamese firms on what and how to supervise the board of directors and CEO means the supervisory role of the supervisory board is largely ineffective (World Bank, 2006a). Further, unlike in developed economies, the LOE 05 has no provisions permitting a board, or any other corporate governance body, to set up and delegate its powers to sub-committees such as audit, remuneration, and nomination committees. Therefore, these sub-committees rarely exist in Vietnamese listed firms (Ngo et al., 2018). Consequently, the board of supervisors in a Vietnamese listed firm, in reality, appears to exist in form rather than in substance (Bui and Nunoi, 2008) or just exists on paper because it is required by law (Nguyen, 2004).

A Vietnamese listed firm must have a chief executive officer (CEO) selected by the board of directors to run the daily operations of the company. The CEO has statutory powers to manage and decide on matters regarding the daily operations of the company, implement the decisions of the board of directors, and select managers and officers who are not under the power of the board. Beside the statutory powers prescribed in the Law, the powers of the CEO can be expanded by the company constitution.

Appointment rights are key strategies for controlling the company and addressing the agency problem (Hansmann and Kraakman, 2004). In the US, the qualifications of CEOs are decided by the law and the company’s charter (Le, 2008). Under the Corporations Act 2001 of Australia, a CEO must be a natural person of at least 18 years old, not be disqualified and give consent in writing (Le, 2008), when the qualifications of a CEO in Vietnam are strictly and complexly stipulated by the LOE 05 and CGC 12. In addition, unlike in developed economies, in Vietnam, only a shareholders’ meeting has the powers to appoint a board member, and Vietnamese courts have no power to appoint a CEO to a firm. Further, in Australia, a person must give a company a signed consent to act as a director before being appointed while in Vietnam a written consent from a CEO is not legally required, so a person can effectively be appointed without his/her consent (Le, 2008).

An office term for the CEO is not stipulated in the company law of developed economies; however, the service contract of the CEO is decided by the board of directors (Le, 2008). If a CEO is appointed by contract for a fixed term, then if the company removes the CEO before the term expiry the company can be held liable in damages. However, a CEO who does not have a separate service contract and is appointed under the company’s constitution can be removed at any time and he/she cannot recover any damages (Farrar et al., 1998). In Vietnam, the statutory office-term for a CEO is inconsistently stipulated and lacks flexibility in terms of corporate governance. The circumstances in which the CEO of company can be removed or dismissed are not prescribed. In addition, whether the CEO can be removed with or without a cause is not stated. This raises questions about the removal of the CEO before his/her office-term expires (Le, 2008). The LOE 05 requires the CEO of each company to have a service contract with the company. Such contracts are subject to the LOE

05 and Vietnam. Labour Code 2012 as a term-determined-employment contract. Accordingly, there are very few opportunities for the company to dismiss the CEO before the expiration of the service contract (Le, 2008).

CEO compensation is a significant issue in corporate governance. In US firms, unless the company's constitution or the law provides otherwise, the board of directors may decide on the CEO compensation (Le, 2008). In Germany, the CEO compensation must be approved by shareholders and must be reasonable and in conformity with the financial situation of a company (Bradley et al., 1999). In France, the CEO compensation is decided by annual shareholders' meeting; nevertheless, the board of directors may also decide to compensate CEOs for any special tasks or assignment given to them (Le Gall and Morel, 1992). In Vietnam, although the compensation of a CEO in a listed firm is decided by the boarb (LOE 05), the compensation of a CEO in an equitized listed firm is not more than the maximum level set out by the government in Vietnam. Decree 205/2004.

The Vietnamese government plays a crucial role in forming the market and is a key player in the market. Two stock exchanges for listed firms were formed in Vietnam in 2000 and 2005, with a third exchange for unlisted public corporations formed in 2009. These exchanges have sharply boosted the number of listings and contributed greatly to the development and growth of public companies across the country. During this development process, the equitisation of state-owned enterprises is the principal mechanism to create joint stock public corporations, including listed firms. The Vietnamese government has actively developed an enhanced and more complete corporate governance framework, and international institutions in the country have strongly supported these developments, but the passive attitude and nature of the firms themselves is slowing down the embedding of improved corporate governance practices (Tran and Holloway, 2014).

Ownership structures play a central role in determining the extent to which the interests of owners and managers are aligned (Dalton et al., 2003). Unlike in developed economies, foreign ownership and state ownership are important components of the ownership structure in Vietnamese listed firms. In which, the foreign ownership percentage is inversely correlated with the state ownership percentage.

A typical feature of the Vietnamese economy is high state ownership (World Bank, 2011) because the role of the state sector is predominant (World Bank, 2006a; Le and Walker, 2008; Nguyen, 2008). Due to the process of state-owned enterprise (SOE) equitization initiated in Vietnam in 1992, state ownership declined sharply from 100% (World Bank, 2011). The equitization schemes have transformed a significant number of SOEs into joint stock firms including public firms. Thirty firms form the VN30 index baskets of the stock exchange as at April 2013, with each basket containing 16 firms that used to be SOEs that were equitized. In addition, most of the listed firms outside the VN30 baskets were also formed as part of the equitization process (Tran and Holloway, 2014). In 2013 the equitized SOEs account for 22% of the number of listed firms, but their size is 52% of the total market capitalization. Furthermore, the equitized SOEs in general are larger than other listed firms (Duong et al., 2017).

Nevertheless, the state remains a large shareholder and old inefficient management continues to dominate in almost all equitized state-owned firms (Sjoholm, 2006; Hakkala and Kokko, 2007; World Bank 2006b). In such equitized firms, directors do not hold many shares. Therefore, they act as managers rather than owners of capital; and the CEO is also the chairman of the director board (Gainsborough, 2009). This suggests that Vietnamese listed firms with state ownership have weak corporate governance. From the perspective of agency conflict of interest, managers in Vietnamese listed firms with state ownership are unlikely to act in the broader shareholders' best interest (Pham, 2012). In addition, the state involvement in the operations of the listed company with state ownership has been deep. For instance, CEO compensation has been regulated by the government in Vietnam. Decree 205/2004. CEO compensation has not been more than the maximum level set out by the government. CEO compensation level has been identified based on the firm size and performance, but not depending on the sector the CEO is operating in. If the CEO is also the chairman of the director board, he or she will receive the compensation level of the chairman position, which has always been less than 105% of the CEO compensation level.

2.2.3. Careers

Subject to the disciplinary approach and the audience, career definitions vary in content and focus and for different objectives in different contexts (Collin, 2006). The below overview of nature of traditional and contemporary careers is discussed in an effort to determine the most suitable definition of career for this research.

2.2.3.1. Working definition of career

Greenhaus et al. (2010) presented a definition of career that accommodates new career realities without carrying forward the division between "old" and "new" careers. He defined career as "the pattern of work-related experiences that span the course of a person's life" (p. 10).

This definition implies that some aspects of career are objective, while others are subjective. In this definition, work-related experiences are broadly construed to include (a) objective events or situations such as job positions, job duties or activities, and work-related decisions and (b) subjective interpretations of work-related events such as work aspirations, expectations, values, needs, and feelings about particular work experiences (Greenhaus et al., 2010).

In addition, the above-mentioned definition of career is broad. It does not require that a person's work be professional in nature, be stable within a single occupation or organisation, or be characterised by upward mobility. Indeed, anyone engaging in work-related activities is, in effect, pursuing a career. This definition also fits nicely with the changes in the work world discussed earlier in the part of new career realities. (Greenhaus et al., 2010).

2.2.3.2. Traditional careers

According to Sullivan and Baruch (2009), traditional careers have typical characteristics. These careers were normally delineated regarding an individual's relationship to an employing enterprise and portrayed as happening under the circumstances of stable organizational structures (e.g., Levinson, 1978; Super, 1957). Within this, individuals moved on the firm's hierarchy pursuing to gain greater extrinsic rewards (Rosenbaum, 1979). While these models of careers, popularised during the period of time from 1950 to 1970, were supported by economic and workplace conditions typified by the introduction and development of new technologies as well as social norms and structures which tended to support the male-as-breadwinner family structure (Sullivan and Crocitto, 2007), the industrial relationship was distinguished by an exchange of worker loyalty for the company's implicit promise of job security (Rousseau, 1989).

2.2.3.3. New career realities

There have been radical changes in working environments and employees' attitudes and behaviours over the last few decades. Such environmental changes as increased globalisation, accelerated advancements in technologies, increased diversity in workforce, and expanding use of outsourcing and temporary employees have altered traditional organisational structures, employer-employee relationships, and work context, producing changes in how individuals pursue and execute their career (e.g. Sullivan and Baruch, 2009). Together with environmental changes, individuals are also adjusting their career attitudes and behaviours in response to many factors, including increasing life spans and hence work lives, changing family structures, and the growing quantity of individuals who search to satisfy needs for personal learning and development (e.g., Hall, 2004).

The contextual changes led to what Kidd (1996) described as 'new career realities' which often do not support the traditional bureaucratic career anymore (Donohue and Patton, 1998); rather, they have been depicted as "distinctively different phenomenon from the traditional career models" (Sullivan, 1999, p. 459).

2.2.3.4. Contemporary careers

As a result of the developments with regard to new career realities or changing world of careers described in section 2.2.2.3, an academic debate evolved as to whether the notion of careers was still applicable. Existing career concepts, which reflected the prototypical bureaucratic career – assuming stable, relatively predictable organizational structures and increasing hierarchical progress of an individual over the course of their lifetime (e.g. Levinson, et al., 1978;

Table 2.2. Key assumptions of traditional and contemporary career concepts

	Assumptions	
	"Traditional" career concepts	**"Contemporary" career concepts**
Career environment	Stable, predictable, high levels of security	Unstable, unpredictable, low levels of security
Employment relationship	Job security for loyalty	Employability for performance and flexibility
Career trajectory	Vertical, mainly in one or two firms	Multidirectional, mostly in multiple firms
Basic attitudes	Organisational commitment	Professional commitment
Skills required	Firm-specific	Transferable
Training	Long-term; formal programmes	Short-term; on-the-job learning
Responsibility for career management	Organization	Individual
Milestones	Age-related	Learning-related
Success criteria	Objective career success	Subjective career success

Source: Adapted from Gubler, 2011.

Schein, 1978; Super, 1957) – no longer seemed satisfactorily to reflect many individuals' career experiences. Several researchers claimed that such traditional, bureaucratic, or organizational careers were "dead" (Cappelli, 1999; Gray, 2001; Hall and Associates, 1996). It seemed as if new, contemporary (e.g. Hall, 1996; Arthur and Rousseau, 1996) career models needed to be developed to account for some of the observed changes more adequately. However, Hirsh et al. (1995) highlighted early on the importance of traditional forms of careers even in such new circumstances.

The decline of the traditional career requires new ways of viewing careers (Briscoe et al., 2006). Over the last two decades, more than a dozen "new" or "contemporary" career concepts have been introduced and presented in the careers literature. In response to wider economic, societal, and technological developments, these concepts generally assume that individuals are, or should be, increasingly mobile and self-directed in their careers. They have mainly been construed as opposites of what is variously called the "old," "traditional," "bureaucratic" or "organizational" career, for which hierarchical advancement, organizational career management, and low mobility are characteristic (see Table 2.2).

However, despite the multitude of models seeking to explain contemporary careers (see Table 2.3), only the protean (Hall, 1996) and boundaryless (Arthur and Rousseau, 1996) career concepts/models have become widely acknowledged (Gubler et al., 2014).

There have been some concerns regarding contemporary career concepts. After reviewing more than 50 studies in the period of time between 1996 and 2011, Gubler (2011) argues that there are 9 types of concerns with regard to contemporary career concepts in general, and protean and boundaryless career concepts in particular. Each of them is discussed more deeply in its dimension(s).

Table 2.3. Contemporary career labels

Contemporary career label	Authors
Authentic career	Svejenova (2005)
Boundaryless career	Arthur and Rousseau (1996)
Career entrepreneurship	Korotov et al. (2011)
Career resilience	London (1983); Waterman et al. (1994)
Chaotic career	Peterson and Anand (2002)
Chronically flexible career	Iellatchitch et al. (2003)
Customized career	Valcour, Bailyn, and Quijada (2007)
Disengaged and independent career	Guest and Conway (2004)
Hybrid career	Bailyn (1991)
Intelligent career	Arthur et al. (1995)
Kaleidoscope career	Mainiero and Sullivan (2005)
Multidirectional career	Baruch (2004)
Nomad career	Cadin et al. (2000)
Post-corporate career	Peiperl and Baruch (1997)
Protean career	Hall (1976)
Responsible career	Tams and Marshall (2011)
Spiral career	Brousseau et al. (1996)
Sustainable career	Newman (2011)

Source: Adapted from Gubler (2011) and Baruch and Vardi (2016)

2.2.2.5. Objective and subjective careers

Overview. From a sociological perspective, careers fuss the objective and subjective (Barley, 1989). For Hughes and his students, the critical property of a career was its ontological duality. Career was a Janus-like concept that oriented attention simultaneously in two directions (e.g. Hughes, 1937). On one hand, careers pointed to those institutional forms of participation characteristic of some social world: a stream or more or less identifiable positions, offices, statuses, and situations that served as landmarks for gauging a person's movement through the social milieu. These constituted the "objective" face of the career, its structural or public aspect, which could be studied in terms of career lines whose branchings hinged on the turning points and contingencies that members of social world routinely confronted (Barley, 1989).

On the other hand, Barley (1989) argued that the notion pointed away from the career's structure toward the individual's experience of the career's unfolding. This, the so-called subjective face of the career, consisted of the meanings individuals attributed to the careers, the sense they made of their becoming (Stebbins, 1970). Subjective career involved accounts (Scott and Lyman, 1968) or definition of the situation (McHugh, 1968) that enabled individuals to align themselves with the

events of their biographies. Subjective careers evidenced themselves in the tales people told to lend coherence to the strands of their life. But most importantly, subjective careers changed with time as individuals shifted their social footing and reconstrued their past and future in order to come with their present (Strauss, 1959; Faulkner, 1974).

The objective career and the subjective career. Khapova et al. (2007) defined the objective career as "parallel interpretation of any career provided by society and its institutions" (p. 115) while the subjective career is defined as "the individual's own interpretation of his or her career situation at any given time" (Khapova et al., 2007, p.115).

Drawing on their earlier review of contemporary career research (Arthur et al., 2005), Khapova et al. (2007) submitted that the subjective career entails four important properties. The first property is concerned with the inherent duality between the subjective and objective careers. This means that there are always two sides to a career: a public observable (or objective) side and an intrinsic (or subjective) side. Although both sides of the career exist together, they do not necessarily correspond to each other. For example, managers who are successful according to the objective criteria of pay and promotions may report less subjective career satisfaction than objectively less successful colleagues (Judge et al., 1995).

The second property concerns interdependence. Interdependence means that the two sides of the career not only coexist but also influence one another. That is, the objective career provides the work experiences that a theory may hypothesise to influence the person's subjective view of his or her career situation. Conversely, the attitudes and motivation of the subjective career may be hypothesised to influence a person's objective career as it is seen by others.

The third property of the subjective career concerns on a perspective on time. Time complicates the nature of the interdependence between the subjective and objective careers and take us beyond any simple notion of subjective-objective career multicollinearity. Time is intrinsic to, for example, employment stability, skills and experience gained, relationships developed, and opportunities encountered (e.g., Washington and Zajac, 2005).

The fourth property of the subjective career is that we can anticipate that the subjective career involves multiple dimensions. This dimension will reflect different aspects of people's subjective careers – for example, pursuing a professional calling, accumulating new learning, and finding time for families (e.g., Hall, 2002).

The above-mentioned classification and its related knowledge may provide useful foundations to make sense of career success.

2.2.4. Career success

2.2.4.1. Definition

Career success is often defined as "the accomplishment of desirable work-related outcomes at any point in a person's work experiences over time" (Arthur et al., 2005, p.179). It also refer to "the real or perceived achievements individuals have accumulated as a result of their work experiences" (Judge and Kammeyer-Mueller, 2007, p. 60). While the second definition seems to include only positive career outcomes, the first one implies both those outcomes and paths or progresses to achieve them. However, the second one are more suitable for this research because objectives of the present study are to empirically examine what predicts career success, but not to concern the different ways of construing career success. Accordingly, the second one is selected as the working definition of career success of this research.

2.2.4.2. Conceptualising and measuring career success

Career scholars tend to distinguish between objective/extrinsic and subjective/intrinsic career success (Seibert and Kraimer, 2001).

Objective career success (OCS). Objective career success refers to objectively observable career achievements of individuals (Seibert et al., 2001b). Salary, salary growth, status, and promotions are the most widely used indicators of objective career success, because they can be directly measured and verified (Heslin 2005; Judge et al. 1995; Ng et al. 2005; Abele and Spurk, 2009; Abele et al., 2011; Spurk and Abele, 2011), and they can be both externally assessed by for example work records and by asking the employees. Furthermore, pay, status, and promotions are important to individuals on a very basic level of need fulfillment (Nicholson and de Waal-Andrews 2005). They reflect societal norms regarding the "success" of a career, and they are "objective" in the sense of being socially shared. Finally, objective attainments like pay or hierarchical status are proxies for performance (Abele et al., 2011). Scholars and practitioners are interested in finding determinants that are valid for predicting an individual's career success also with respect to the gains the organization he or she is working in will have from this employee. The analysis of the determinants of pay and pay development allows some conclusions on the determinants of performance over time.

However, these indicators have also been criticized for several reasons. First, indicators of objective career success have to be adapted to changing organizational and labor market conditions. The hierarchical career with clear-cut career steps and easily identifiable hierarchical positions is not the most frequent model any more and objective indicators such as status and promotions have to be reconsidered. Second, salary is differentially suited as an indicator of objective success in different fields of employment. It can, for instance, barely be negotiated in state employments. Third, salary depends on the employer. The same occupational performance may be paid differently by different employers. Fourth, objective career success criteria have often been developed with respect to employees with high potential like professionals, managers, and so called "white- collar" workers. Objective success criteria with respect to less educated "blue-collar" workers are less well developed. These might relate to, for instance, being employed or not, being paid such that one can live on it or not, having the chance to leave a temporary employment in favor of a permanent employment, etc. Finally, it may be generally questioned whether salary is an indicator of objective success or whether performance-related achievements are more suited as measures of objective success.

Subjective career success (SCS). Subjective career success can be seen as individuals' subjective feelings of accomplishment and satisfaction with their careers (Seibert et al., 2001b). Ng and Feldman (2014) argue on subjective career success in terms of affect vs. cognition, scope and dimension, and self-referent vs. other-referent. Researchers often make a distinction between affect-based and cognition-based attitudes (See et al., 2008), and SCS has been operationalized in both ways. Affect-based SCS refers to employees' feelings about, emotional reactions to, and satisfaction with, their career success (Nicholson and De Waal-Andrews, 2005). In contrast, cognition-based SCS refers to employees' beliefs and perceptions about their career success (e.g., individuals' perceptions of whether they are advancing as far and as fast as they would like). Most of the studies included in the current meta-analysis measure affect-based SCS and the findings reflect that perspective.

The construct of SCS has a broad scope (Gunz and Heslin, 2005; Dries et al., 2008). For instance, Gattiker and Larwood (1986) argue that SCS is multidimensional in nature and propose that it encompasses perceptions of job success, interpersonal success, financial success, hierarchical (promotion-related) success, and life success. Other research has identified additional components of the construct (Clark and Arnold, 2008; Dyke and Murphy, 2006; Heslin, 2005; Sturges, 1999). Indeed, the facets included in the operationalization of SCS have varied considerably from study to study.

Individuals use different referents for assessing SCS. In self-referent comparisons, individuals compare their current success to their personal aspirations, their past achievements, and their future goals and expectations (e.g., Abele and Spurk, 2009; Greenhaus et al., 1990). In other-referent comparisons, individuals assess their career success in terms of some external standard, such as the achievements of their co-workers, supervisors, mentors, or family members (Clark and Arnold, 2008). A large majority of the studies in the meta-analysis operationalize SCS in the self-referent form and the meta-analysis results reflect that perspective.

In previous studies, subjective career success has often been operationalized as job satisfaction and career satisfaction (Judge et al., 1995; Arthur et al., 2005; Heslin, 2005; Ng et al., 2005). Instinctively, one might agree with Arthur et al. (2005) that job satisfaction is an inadequate measure of subjective career success, because it refers to the current job rather than the cumulative sequence so far. However, Heslin (2005) suggests that people tend to think of their experiences at work in one of three ways: as a job, a career or a calling. Although there are many other measures of SCS (see Arthur et al., 2005), job satisfaction and career satisfaction are the most commonly ones (Heslin, 2005). For those in the first category, job satisfaction may be an appropriate construct for assessing subjective career success.

Relationship between objective and subjective career success. This subjective-objective career success duality has yet not been acknowledged by all career success researchers (Arthur et al., 2005). Especially in the past, a large body of research focused solely on objective extrinsic criteria, reflecting the prevalent bureaucratic career theory of the time. The continuous effect of this approach is reflected in the attitudes of professional staff in large organisations that still often see career success strictly in objective terms, such as climbing the organisational ladder and speed of progression, which sometimes becomes an obsession (Callanan, 2003).

However, as demonstrated above, focusing solely on career success in terms of an individual's position or attained promotions does not reflect the new career realities, where the personal meaning of career success has become more important (Arthur and Rousseau, 1996). Parker and Arthur (2000) take this argument further, stating that how individuals feel about their career accomplishments is more important than external indicators such as salary or promotion. This perspective is based on findings that individuals with high SCS feel happier and more successful about their careers relative to their own internal standards (Peluchette, 1993). However, acknowledging the importance of a holistic approach, various authors conclude that is it imperative to incorporate both OCS and SCS, to give a complete account of individual career outcomes and gain an in-depth understanding of career success (e.g. Arthur et al., 2005; Peluchette, 1993).

Even though the two sides of career success have been demonstrated to be empirically distinct entities, they are seen to be not independent from each other (e.g. Seibert and Kraimer, 2001; Turban and Dougherty, 1994). Interdependence between objective and subjective sides of career success should be examined both theoretically and empirically.

Theretically, there have been at least three frameworks/theories which can be employed to explain how subjective and objective success relate to each other. Here, we make explicit the rationales for this relationship that have not been fully articulated in previous research. Firstly, Hall's notion of the psychological success model (Hall and Nougaim, 1968; Hall, 2002) has been used to consider how objective achievements lead to subjective feelings of success, which in turn feed back into willingness to take on challenging tasks which, if accomplished, lead to objective success and so on. This model portrays objective success as a precursor to subjective success more than vice versa.

Second, according to attribution theory initially developed by Heider (1958) and outstanded by Weiner (1985) and Johns (1999), people have the tendency to attribute successes to internal causes and failures to external factors. In addition, outcome is thought to produce outcome evaluation, which in turn is expected to lead to feeling or satisfaction. As such, one's objective career success is likely to engender positive self-perceptions, which in turn should lead to greater subjective career success.

Third, social comparison theory (Festinger, 1954) leads to a similar prediction. According to this theory, people have the tendency to compare themselves with others. Indicatiors of objective career success such as compensation level and the number of promotions are important and convenient means of such comparisons. Obtaining a higher compensation level and more promotions relative to others is likely to enhance one's perceptions of success. Because wealth and social standing are valued in society, tangible/real career achievements may lead to feelings of greater career satisfaction. In other words, more objective career success may lead to greater subjective career success.

Arthur et al. (2005) found that published studies of objective and subjective success tended to be based on the premise of the psychological success model, though some caution is needed here because Arthur et al. seem to have used a very liberal interpretation of what counts as a measure of subjective career success (e.g. having been mentored and having received social support). Hall and Chandler (2005) offer an interesting discussion of when the psychological success model might break down (for example, when the cost of succeeding at work tasks is failure or neglect of personal life), and how there may be reciprocal relationships between the two forms of success. Whereas, other studies like judge et al. (1995), Ng et al. (2005), Stumpf (2014) and Stumpf and Tymon Jr. (2012) made their prediction about relationship between the objective and subjective sides based on attribution theory and social comparison theory.

Empirical findings of previous studies regarding interdependence between the objective and subjective sides are controversial. Research demonstrates that the objective and subjective sides of career success are moderately correlated (e.g. Turban and Dougherty, 1994). Hall and Chandler (2005) as well as Spurk and Abele (2014) showed that subjective career success can cause objective career success. Whereas, a number of studies report positive correlations between objective career success and career satisfaction (e.g. Schneer and Reitman 1993, 1997; Richardsen et al. 1997; Wayne et al. 1999; Martins et al. 2002; Raabe et al. 2007; Adele et al., 2011). Some studies show positive correlations between objective success and other-referent subjective career success (Turban and Dougherty 1994; Kirchmeyer 1998; Abele and Wiese 2008; Adele et al., 2011). Ng et al. (2005) meta-analysised 140 articles during the time period 1980-2003 and found positive correlations of objective and subjective career success not higher than 0.30. However, findings on the relationship between objective career success and self-referent subjective career success are equivocal (no relationship: Richardsen et al., 1997; Abele and Spurk, 2009; Stumpf and Tymon Jr., 2012; positive relationship: Judge et al., 1999b; Cable and DeRue, 2002; Adele et al., 2011; Stumpf and Tymon Jr., 2012; Converse et al., 2014; Spurk and Abele, 2014; Stumpf, 2014; mixed relationship: Judge et al., 1995).

What do these positive but relatively small and heterogeneous associations between objective and subjective career success measures mean? On the one hand, they mean that – albeit related – subjective and objective career successes are clearly distinct. On the other hand, they mean that the relationship between subjective and objective career success varies; hence, there are a number of moderators to be taken into account. We are not aware of any research that systematically tested such moderators. Therefore, future research should be concerned with some important variables (e.g. employment context) that may moderate the relationship between subjective and objective career success.

In summary, the author of this thesis has discussed different meanings of career success and have argued that for a comprehensive understanding of career success both objective and subjective components should be measured. The author of this thesis will analyse how these components are empirically related in following chapters, but not test any variables that may moderate the relationship between subjective and objective career success.

2.2.4.3. Predictors of career success

Based on reviewing the relevant literature, especially the articles of Judge et al. (1995) and of Ng et al. (2005), predictors of career success may be grouped in five broad categories.

Individual-related predictors.

Socio-demographic factors - Age, marital status, gender, race, spousal employment, family structure, dependent responsibilities and number of children are included (e.g. Judge et al., 1995; Lyness and Thompson, 2000; Schneer and Reitman, 2002; Eddleston et al., 2004; Ng et al., 2005; Johnson and Eby, 2011).

Stable individual differences - These are the dispositional characteristics reflected in an individual's personality. They encompass neuroticism, extroversion, conscientiousness, open to experience, agreeableness, proactivity, internal/external locus of control, emotional stability, core self-

evaluation, self-monitoring, cognitive ability, general mental ability, tolerance for ambiguity, risk aversion (e.g. Turban and Dougherty, 1994; Judge et al., 1999a,b; Seibert and Kraimer, 2001; Ng et al., 2005; Ng and Feldman, 2014).

Human capital - According to Becker (1964), human capital encompasses an individual's personal, educational and professional experiences that are instrumental in developing one's career (Judge et al., 1995; Wayne et al., 1999). Predictors in this category may include job tenure, organization tenure, work experience, willingness to transfer, international experience, political knowledge and skills, social capital (e.g. weak ties, structural holes, contacts in other functions, contacts at higher levels, informal network, social network size), education level, quantity of education, educational quality, type of education, networking behaviours, computer skills, mentoring relationships and and career tactics (e.g. Judge and Bretz, 1994; Judge et al., 1995; van Eck Peluchette and Jeanquart, 2000; Seibert et al., 2001b; Tymon and Stumpf, 2003; Fenner and Renn, 2004; Ng et al., 2005; Drucker, 2006; Van Emmerik et al., 2006; Johnson and Eby, 2011; Biemann and Braakmann, 2013; Ng and Feldman, 2014).

Motivational factors - Whitely et al. (1991) argued that individual motivational variables are likely to be influential in predicting career success. Ambition, number of hours worked, number of nights worded, hours of work desired, work centrality, self-efficacy, self-esteem, career aspirations, career impatience, organisational commitment, occupational commitment, job involvement, work engagement, are in this type (e.g. Greenhaus et al., 1990; Judge et al., 1995; Baumeister et al., 2003; Callanan, 2003; Eddleston et al., 2004; Ng et al., 2005; Duffy et al., 2006; Maurer and Chapman, 2013; Ng and Feldman, 2014).

Career-related factors – These predictors involve career strategy, career planning, career tactics, career mentoring, psychological mentoring (e.g. Greenhaus et al., 1990; Orpen, 1994; Turban and Dougherty, 1994; Aryee et al., 1996; Allen et al., 2004; Hall et al., 2004; Bakken et al., 2006), protean career (De Vos and Soens, 2008; Baruch, 2014), career transitions, inter-organisational mobility, career boundarylessness, career competencies, career autonomy, career insecurity (Colakoglu, 2011), and creating opportunity, calling work orientation, continuous learning, promotion opportunities, efficacy of mentoring, marketability and willingness to relocate (Eddleston et al., 2004; Park, 2010; Chudzikowski, 2012; Sammarra et al., 2013; Ng and Feldman, 2014).

Group/board-related predictors.

Some of these may include intragroup trust, group effectiveness, group worth and mutual influence which have impact on one's career success or outcomes through mentoring at work (e.g. Kram, 1988; Ragins, 1989; Koberg et al., 1994; Koberg et al., 1998).

Organisation/industry-related predictors.

Organizational sponsorship - According to Ng et al. (2005), sponsorship refers to the special efforts or the initiative taken by the organizations for the individuals; thus, smoothening the career progress of its employees. Career sponsorship, supervisor support, work support for development, development participation, training and skill development opportunities, and organizational resources (e.g. Greenhaus et al., 1990; Ng et al., 2005; Ng and Feldman, 2014).

Organisation size, organisation success, type of organisation, industry sector, region, perceived organizational support, organizational socialization, person-environment fit, job discretion, job performance evaluation (e.g. Greenhaus et al., 1990; Judge et al., 1995; e.g. Rhoades and Eisenberger, 2002; Cooper-Thomas and Anderson, 2005; King et al., 2005; Kristof-Brown et al., 2005; Jawahar and Carr, 2007; Mohd Rasdi, 2011).

Country-related predictors.

Based on the classification of Mayrhofer et al. (2007) and Dries (2011), the factors in this group may include natural culture, ethnicity, gender, class and social origin (e.g. Blau and Duncan, 1967; Cannings, 1988; Tharenou and Conroy, 1994; Tharenou et al., 1994; Niles, 1999; Sagas and Cunningham, 2005).

Global context predictors.

Internationalization and virtualization are included in the global context of the major contextual factors in career research in Mayrhofer et al. (2007). Although influences of those factors on careers, especially global careers, are studied by scholars (e.g. Baruch, 2004; Dickmann and Baruch, 2011), their impacts on career success have been indirectly mentioned in theoretical models such as Peiperl and Jonsen's model (2007). In addition, Dries (2011) argues that large-scale cross-cultural studies like World Values Survey are needed to examine how globalization, religion, spirituality and societal ideology influence the definitions of career success of people around the world.

In summary, there are some points which should be discussed here. First, the classification as above-mentioned is necessary but have potential overlaps (Ng et al., 2005). Second, the increasing importance of interrelationships between various factors becomes apparent (Mayrhofer et al., 2007). Third, the careers literature, in general, has been criticised for overemphasising individual agency while neglecting contextual issues (Evetts, 1992; Brown, 2002). Within the contextual issues, country-related and global context predictors have not attracted a lot of scholars' attention, except gender, and class and social origin. On the subject of national cultures, the careers literature, which has seriously underestimated the weight of cross-cultural differences in describing and explaining career phenomena (Chudzikowski et al., 2009), is mostly based on Western career concepts and measures especially developed in the USA (Stead, 2004) and projects American values onto career actors from other parts of the world, may be problematic (Schwartz, 2006; Kats et al., 2010). Therefore, more studies of the impacts of other national cultures on career success are necessary and significant.

2.3. Theoretical perspectives

2.3.1. Psychological success model

One term used to describe this subjective view of success is psychological success (Hall, 1971, 1976). The nature of psychological cess derives from Lewin's (1936) early work on the psychology of success and failure, through experiments on aspiration levels and goal-setting. The concept was introduced to the organizational behavior literature by Argyris in his early writings (e.g., Personality and Organization, Argyris, 1957) on the inherent conflict between the needs of the healthy individual and the economic of organizations.

In the context of careers, psychological success develops in a cyclical fashion as a result setting and attaining challenging goals. This success cycle was first observed in a longitudinal study of AT&T managers, which traced the causes and effects of early job challenge and success (Hall and Nougaim, 1968; Howard and Bray, 1988; Hall, 2002). A sense of psychological success likely be achieved when the person independently sets and exerts effort toward a challenging, personally meaningful goal and then goes on to succeed in attaining that goal (Lewin, 1936; Locke and Latham, 1990; Locke, 1991).

Hall (1971) proposed a psychological success cycle which links self-esteem to involvement and goal commitment, indicating that a high self-esteem leads the person to choose more difficult goals than her low self esteem counterpart. Hall (1976), expanding upon the goal setting literature, proposed a psychological success model of job performance which focuses on the consequences of effective performance (goal attainnment). Figure 2.1 presents the major variables in Hall's model. According to Hall (1976), individuals who set their own goals and work autonomously toward the completion of a challenging goal will experience a feeling of psychological success following the attainment of the goal.

Because the attainment of the goal reinforces feelings of competence and self-confidence, task specific self-esteem rises. Hall argues that this increase in self-esteem will generalize by association to a sense of satisfaction with the task in question. This is expected to lead to greater involvement and commitment to future goals. The argument made by Hall bears a strong resemblence to that made by Hackman and Lawler (1971). Commenting on the characteristics of motivating jobs, Hackman and Lawler said "only if what is accomplished is seen as one's own can an individual experience a feeling of personal success and a gain in self-esteem"(p. 263). In making this statement, Hackman and Lawler were emphasizing the need for autonomy on the job.

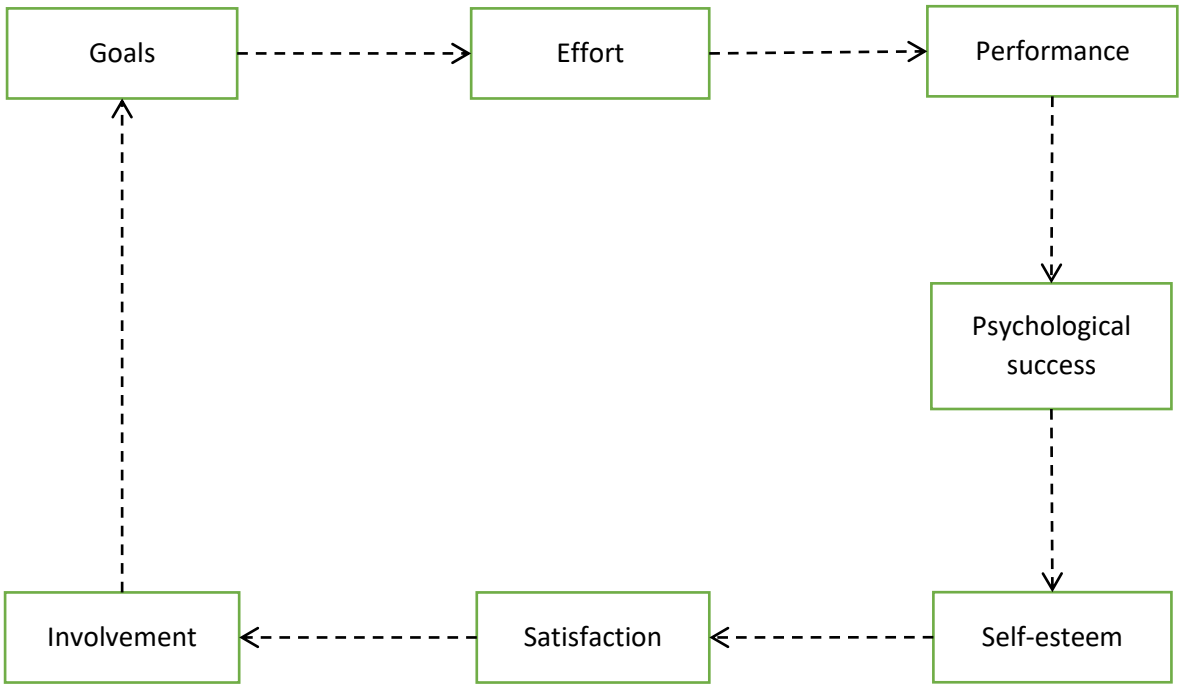


Figure 2.1. A psychological success cycle of job performance
Source: Hall, 1976

Hall (1976) defines psychological success as a person's feelings of success as opposed to some external measure of success. The term psychological success, however, conveys more than mere acknowledgement of success by the individual. It seems to have an affective connotation as well. Hall implies as much in his description of a little girl learning to swim:

> "..for a 5 year-old who is just learning to swim, being able to swim 5 yards unaided in the deep end of the pool results in a great flush of psychological success; some other 5 year-olds, old hands at swimming may tolerate her glee but would not define her feat as an objective success". (p. 124).

The words "great flush of psychological success" graphically characterize an affective reaction to success. Lewin (1936) spoke in similar descriptive terms of a discus thrower's thrill after throwing a discus 50 yards for a new record. Based on this discourse it would seem that there is a substantial affective component to psychological success.

It should be emphasized that psychological success is the focal point of Hall's success cycle. Hall (1976) argues that psychological success is likely to occur when the following conditions are present:

1) The goal represents a challenging but attainable level of aspiration.

2) The goal is defined by the person.

3) The goal is central to the person's self concept.

4) The person works independently to achieve the goal.

According to Hall (1976), a challenging goal pushes the individual to attain a new level of competence. If the individual has been afforded the opportunity to set the goal and work independently toward the attainment of the goal, he/she is likely to feel personally responsible for the outcome. Since the goal represents a new level of competence and the individual feels personally responsible for the outcome he/she is likely to experience psychological success.

Although a number of research programs bear on this issue, the direct importance of these task characteristics on both goal attainment and psychological success has never been investigated. One major goal of the present study is to assess the impact of two task characteristics (autonomy and

challenge) on feelings of psychological success. It was decided to study challenge and autonomy because it is believed that these two characteristics play the major role in determining psychological success.

Although the impact of task characteristics on psychological success has literally gone untested, portions of the success cycle have been examined. Hall and Foster (1977) designed a study to test the success cycle described by Hall (1976) using college students particpating in a business simulation game spanning two time periods. They predicted the following sets of relationships: Goals-> Effort-> Performance-> Psychological Success-> Self-Esteem-> Involvement-> Goals (see Figure 2.2).

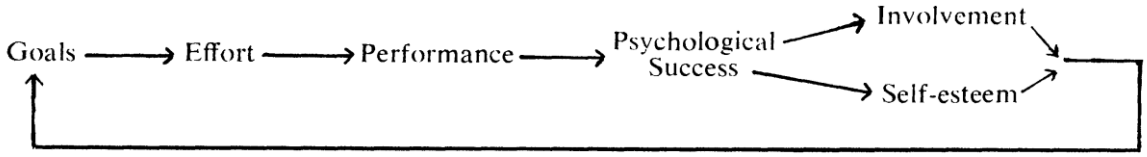


Figure 2.2. Revised psychological success cycle of goal setting

Source: Hall and Foster, 1977, p.289

The results of their study were in general agreement with the proposed success cycle although, contrary to prediction effort was not related to performance. This is surprising in view of the literature on goal setting which consistently points to a positive goal setting/performance relationship. Close examination of Hall and Foster's methodology reveals that the students participating in the study were not asked to set specific goals.

In point of fact no goal setting procedure was used at all in the Hall and Foster study. The authors simply measured intentions to perform well. This more closely resembles a measure of goal commitment than goal setting. Assuming for a moment that intentions to perform well are related to effort, as Hall and Foster found, there is little reason to expect effort in this instance to be related to performance given the findings that performance is enhanced by specific goals.

Since vague goals ("do your best") may fail to focus attention and effort on the desired end result, performance may suffer. The apparent vagueness of the word "well" may account for the failure to find an effort/performance relationship in the Hall and Foster study.

Aside from the failure to find an effort/performance relationship, Hall and Foster supported much of their success cycle. It should be emphasized, however, that Hall and Foster neither measured nor manipulated autonomy or challenge (i.e., no goal setting procedure was used). In addition their measure of psychological success was imbalanced. Only one item tapped affective reactions to success. The remaining six items tapped self-perceptions of success. Considering these weaknesses, Hall and Foster's findings must be tempered somewhat.

Hall also went on to hypothesize that success would lead to an increase in the person's level of esteem, a more competent identity, and increased involvement in that area of career work. A simplified version of the 'psychological success cycle' is shown in Figure 2.3. Various studies over the years generally shown support for this success cycle (Hall and Schneider, 1973; Hall and Hall, 1976; Foster, 1977; Hall, 2002). A similar goal-setting-performance cycle is reported by Austin and Klein (1996), based upon their review of the literature.

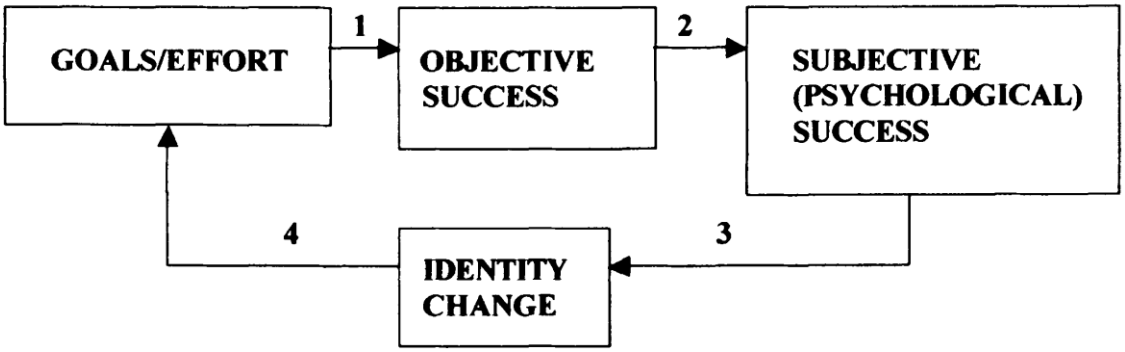


Figure 2.3. A simplified version of the psychological success model

Source: Hall and Chandler, 2005, p.158

2.3.2. Human capital theory

The key contents of human capital theory is summarised by the author of this thesis in Table 2.2. Besides mentioning main related works, research question, key concepts and recent debates, the key contents mainly focus on four parts: assumptions, key ideas, predictions and main findings since these components of the theory provide solid theoretical and empirical foundations for applying it in this thesis.

History. The human capital theory was first proposed by Schultz (1961) and later advanced by Becker (1964). This theory stems from labour economics and has been developed in 1960s due to the realization that the growth of physical capital has only small part of growth in the growth of income (Becker, 1964).

Overview. Overview of human capital theory is summarised by the author of this thesis in Figure 2.4. It suggests that education or training raises the productivity of workers by imparting useful knowledge and skills, hence raising workers' future income by increasing their lifetime earnings (Becker, 1964). It suggests that expenditure on training and education is costly, and should be considered as an investment since it is undertaken with a view to increase personal incomes. The human capital approach is often used to explain occupational wage differentials, including directors.

Assumption. Human capital theory rests on three major assumptions. First, human capital theory was grounded in a neoclassical economic framework with an assumption that labour market is perfectly competitive (Becker, 1964, 1993a). Inside capitalist enterprises supply and demand took place in perfectly competitive markets (Baptiste, 2001). Job seekers have perfect information and are perfectly mobile (Becker, 1964, 1993a). The labour market treats all potential labour equally based on their skills (e.g. Block, 1990).

Second, in this model, individuals are assumed to seek to maximize their own well-being as they accumulate human capital over their lifetime (Becker, 1964, 1993a). For example, individuals invest in education and training in the hope of getting a higher income in the future. These investments, as Blaug (1992) put it, are not only "for the sake of present enjoyments but for the sake of pecuniary and non-pecuniary returns in the future" (p. 207). Human capital formation and accumulation are typically undertaken primarily by those individuals who seek to maximize their interests (Blaug, 1992).

Last, individuals make rational decisions about education solely on the basis of utility (return on investment), free of society and culture (McLean and Kuo, 2014). Individuals decide on their education, training, medical care, and other additions to knowledge and health by weighing the benefits and costs (Becker, 1993b). "Benefits include cultural and other non-monetary gains along with improvement in earnings and occupations, while costs usually depend mainly on the foregone value of time spent on these investments" (Becker, 1992, p. 43).

Key idea. Becker (2002) defined human capital as “the knowledge, information, ideas, skills, and health of individuals” (p.3) (see Appendix 2). In general terms, human capital can be viewed as the ability to read and write, or in specific terms, such as the acquisition of a particular skill with a limited industrial application. According to Becker (1964), human capital is similar to "physical means of production", e.g., factories and machines: one can invest in human capital (via education, training, medical treatment) and one's outputs depend partly on the rate of return on the human capital one owns. Thus, human capital is a means of production, into which additional investment yields additional output. Human capital is substitutable, but not transferable like land, labour, or fixed capital (Becker, 1964).

Economists view expenditures on education, training, medical care, and so on as investments in human capital (Becker, 2008). The human capital theory (Becker 1962; Mincer, 1962) proposes that an individual's decision to invest in training is based upon an examination of the net present value of the costs and benefits of such an investment. Individuals are assumed to invest in training during an initial period and receive returns to the investment in subsequent periods. Workers pay for training by receiving a wage which is lower than what could be received elsewhere while being trained. Since training is thought to make workers more productive, workers collect the returns from their investment in later periods through higher marginal products and higher wages.

Human capital theory usually decomposes training into specific training, which increases productivity in only one firm, and general training, which increases productivity in more than one firm. Purely general training is financed by workers, and the workers receive all of the returns to this training. In contrast, employees and employers will share in the costs and returns of specific training. Despite these differences between general and specific training, the model predicts that both forms of training lower the starting wage and increase wage growth.

Becker (1964) made a distinction between general and specific human capital. General human capital can be easily transferred across organisations while specific human capital is defined as only being useful in a particular organisation (Becker, 1964). Building on these definitions, Ployhart and Moliterno (2011) distinguished between context-generic and context-specific human capital. Human capital is considered to be context-generic when it is tied to a broad domain and context-specific when it is tied to a narrow domain. For example, Ployhart and Moliterno (2011) state that knowledge of accounting principles is context-generic, while knowledge of a client’s specific accounting situation is context-specific.

The human capital theory of corporate leadership was sketched in the context of job rotation by Gibbons and Waldman (2004) and developed formally by Lazear (2005, 2012). Gibbons and Waldman (2004) use their task-specific human capital theory and provide an economic explanation of the practice of job rotation. Candidates for managerial positions acquire a broad set of task-specific human capital through extensive job rotation rather than becoming an expert on one specific task, for such a broad set of task-specific human capital (breadth) proves to be more useful for managers in general (not only top management but also lower-level management) than a mastering of one specific task (depth). Lazear (2005) develops a formal human capital theory of entrepreneurs and explained why generalists as opposed to specialists are more likely to become entrepreneurs. Later the theory is extended to the case of corporate leaders (Lazear, 2012). The essence of the theory is that leaders (corporate leaders or entrepreneurs) need to solve diverse problems which require diverse skills. Under the assumption that the probability of solving a problem successfully will rise with the level of skill but at a decreasing rate, generalists with a full set of competent skills are better suited for such leadership tasks than specialists with a limited set of extraordinarily high skills. Hence, individuals who have experienced more roles in the labour market are more likely to become successful leaders and as such they have higher probabilities of being assigned to leadership positions – a prediction for which Lazear (2012) provides supporting evidence by analysing a sample of Stanford MBAs.

Prediction. Human capital theory posits that the better educated a person is, the more productive they are likely to be, for which they will earn a higher income (Becker 1962, 2006; Mincer 1958;

Table 2.4. Key contents of human capital theory

Conceptual foundations	Mincer (1958), Fabricant (1959), Schultz (1961), Becker (1960, 1964, 1993a, 2002)
Research question	How and why do employees' education and training as human capital increase their career outcomes?
Key concepts	Human capital, investment in human capital, productivity and earnings
Assumptions	- Labour market is perfectly competitive (Becker, 1964, 1993a) - Individuals are assumed to seek to maximize their own well-being as they accumulate human capital over their lifetime (Becker, 1964, 1993a) - Individuals make rational decisions about education solely on the basis of utility, free of society and culture (McLean and Kuo, 2014)
Key ideas	- Investment in human capital + Each person produces his own human capital by using some of his time and goods to attend school, receive on-the- job training, etc. (Becker, 1993a). + At any given time, an individual's decision on whether or not to invest in human capital is a function of non-pecuniary aspects of education; efficiency in absorbing education; anticipated lifetime earnings; and their 'discount rate' (Preston, 1997). + Human capital may be acquired formally in school and other learning institution, or, informally, through on-the-job training. Typically, investments in human capital involve a combination of both (Becker, 1993a). + Most people continues their investment, albeit at a diminishing rate, once they enter the workforce. This diminishing sequence of investments gives rise to a typical (concave) earnings profile, where earnings rise at a decreasing rate in the early stages of a person's working life, reaching a peak or plateau later (Becker, 1993a). - Return on investment + An increase in human capital directly only changes the productivity of time in the marketplace (Becker, 1993a). + Schooling raises earnings and productivity mainly by providing knowledge, skills, and a way of analysing problems (Becker, 2009).
Predictions	- Investments in education, by either the individual or organization, lead to increased productivity, pay and job status, and ultimately upward mobility (Becker, 1993a). - Work experience lead to increased productivity, pay and job status, and ultimately upward mobility (Becker, 1993a). - On-the-job training lead to increased productivity, pay and job status, and ultimately upward mobility (Becker, 1993a).
Main findings	- More educated persons tend to be rewarded with higher incomes (e.g. Psacharopoulos and Hinchliffe, 1973; Psacharopoulos, 1985, 1994; Vaillancourt, 1995; Venniker, 2000; García-Mainar and Montuenga-Gómez, 2005; Leigh and Ryan, 2008) - There is a positive relationship between organizational tenure and career success (e.g., Nkomo and Cox, 1990; Cox and Harquail, 1991; Stroh et al., 1992; Hurley and Sonnenfeld, 1998; Boudreau et al., 2001) - There is a negative relationship between job tenure and number of promotions (e.g., Judge et al., 1995); however, there is no relationship between job tenure and cash compensation or job satisfaction or career satisfaction (e.g., Judge et al., 1995) - Breadth of work history is positively linked to career success (e.g. Johnson and Eby, 2011) - Participation in training (i.e., vocational, technical, and formal company training, as well as informal on-the-job training) positively relates to promotion (e.g. Cobb-Clark and Dunlop, 1999; Johnson and Eby, 2011). - Geographic mobility (i.e., domestic and international relocation) offers the opportunity for employees to achieve promotions (Pinder and Walter, 1984; Feldman, 1988; Johnson and Eby, 2011). - International experience is positively linked to employees' promotion (e.g. Hamori and Koyuncu, 2011)
Recent debate	Organisational human capital; conceptual issues regarding human capital construct such as individual versus collective, specific versus general, skills versus motivation versus behaviour, ownership of capital (e.g. Molloy and Barney, 2015; Wright and McMahan, 2011); unit-level human capital resource (e.g. Ployhart and Moliterno, 2011), strategic human capital (Crocker and Eckardt, 2014; Kryscynski and Ulrich, 2015; Wright et al., 2014), collective human capital (Aryee et al., 2016), collective human capital flow (Makarius and Stevens, 2017), firm-specific human capital (Coff and Raffiee, 2015; Crocker and Eckardt, 2014; Mahoney and Kor, 2015; Molloy and Barney, 2015; Ployhart et al., 2011), human capital resources (Ployhart et al., 2011; Ployhart et al., 2014), director human capital (Khanna et al., 2014), co-specialized human capital (Molloy and Barney, 2015)

Source: Author

Schultz 1961). Increases in human capital translate into greater pay through increased job performance. Human capital improves one's work skills and the capacity to be productive (Becker, 1964; Strober, 1990). The human capitalists argue that an educated individual is a productive individual (Schultz, 1971; Sakamota and Powers, 1995). Knowledge and skills embodied in humans directly raise productivity (de La Fuente, 2011). Earned income reflects the productivity of workers (Becker, 1964; Benson, 1978; Strober, 1990). Investments in human capital is argued lead to increased performance and to greater pay. The human capital theorists also suggest the combined impact of human capital and performance on objective career success (Parboteeah and Cullen, 2003). In short, investment in human capital and human capital lead to increased productivity, pay and job status, and ultimately upward mobility (Becker, 1993a).

Human capital investments develops not only knowledge and skills but also personal attributes of an individual. First, education helps develop skills of work, that is, improves the capacity of the worker to be productive (Becker, 1964). Formal education is highly instrumental and even necessary to improve the productivity capability of an individual. On-the-job training would logically contribute more to worker productivity than conventional human capital analysis acknowledged (Benson, 1978). Second, beyond improving one's work skill and knowledge, human capital investments also promote the development of desirable personal attributes, which in turn lead to higher productivity and earned income (Ng and Feldman, 2010).

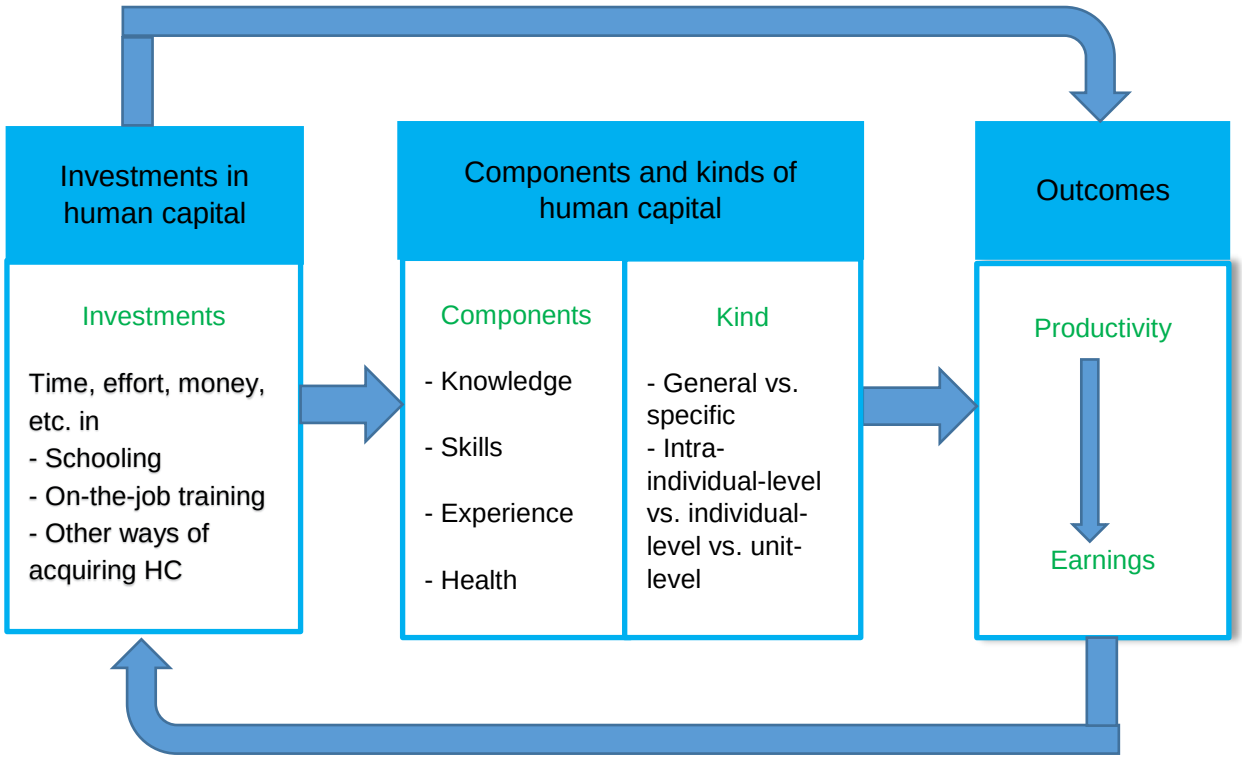


Figure 2.4. Sequential diagram of human capital theory

Source: Author

In summary, as Marginson (1989, 1993) described, the individual acquires knowledge and skills through education and training, that is, human capital. These knowledge and skills will increase his or her productivity in the workplace. This increased productivity will bring a higher salary to the individual since the wage of a person, in the ideal labor market, is determined by the person's productivity. Therefore, people would invest in education up to the point where the private benefits from education are equal to the private costs. In light of this set of reasoning, the logic of HCT becomes clear that education and training increase human capital and this leads to a higher productivity rate, which in turn brings a higher wage for the individual. In addition, investment in human capital directly affect pay and job status, and ultimately upward mobility or objective career success (Becker, 1993a) (see Figure 2.4).

Critical perspective. Tan (2014) reviews and organises the major criticisms of human capital theory from four different perspectives: methodological, empirical, practical and moral. He also notes that the majority of criticisms directed at human capital theory are rather tantalizing. These critiques give the impression that they have a better alternative model for education policies at hand. However, sometimes it is quite noticeable that these criticisms are mostly driven by an ideological zeal with full of resentment just to attack the dominant school of thought with no present alternative at hand. It is true that each criticism is valuable on its own, no matter where it comes from but the ambitious goal, replacing human capital theory, requires much more than that. In addition, there have been huge criticisms but little systematic efforts to understand the origin and impact of human capital theory (Tan, 2014).

Human capital theory in this thesis. The human capital theory plays a crucial role in examining the relationship between CEO human capital and CEO career success in this thesis. This theory provides important concepts with their definitions such as human capital, investment in human capital, productivity, earnings and return of investment. Besides, it brings key ideas and predictions describing relationships between human capital and pay or upward mobility in order to theoretically undergirds/underpins for this study by specifying links between CEO human capital and CEO career success. In addition, knowledge about recent debates, criticisms and findings of the human capital theory assists the author of this thesis in identifying research direction and gaps. For instance, the relationship between human capital and subjective career success remains inconclusive. Moreover, the theory enhances the literature review section by providing research gaps, constructs and their links as firm bases in order to select relevant variables, hypotheses and data with regard to years of education, CEO tenure, and difference between professional and organisational tenures. Furthermore, this theory is a crucial foundation for the discussion section of the thesis to present and analyse the convergence or divergence of ideas from the findings of this study, the findings from the literature reviewed, and from the theory that underlie the relationship under consideration between CEO human capital and CEO career success.

2.3.3. Political skill framework

History. The meta-theoretical framework of the effects of political skill has not had a long history. Although the first building block of this framework may be seen as the early conceptualizations of Pfeffer (1981b) and Mintzberg (1983) on political skill, Ferris et al.'s (2005) and Ferris et al.'s (2007) work on the theoretical foundations and measurement of political skill provided the impetus for a burgeoning research agenda focused on the antecedents, outcomes, and contingencies related to political skill at work. The meta-theoretical framework was firstly proposed by Ferris and colleagues (2007) and then advanced by Munyon et al. (2015). The study of Munyon and colleagues (2015) – a breakthrough one on political skill - is to test and extend the meta-theoretical framework across 130 studies.

Overview. Since the early conceptualizations of Pfeffer (1981b) and Mintzberg (1983), political skill had largely been laid dormant for nearly 2 decades before Ferris and his colleagues conducted a research program that defined the construct (Ferris et al., 2005), developed a measurement instrument (Ferris et al., 2005), differentiated political skill from other related constructs (e.g., Ferris et al., 2002; Semadar et al., 2006), and provided an initial theoretical foundation (Ferris et al., 2007). Ferris et al.'s (2005) and Ferris et al.'s (2007) work on the theoretical foundations and measurement of political skill provided the impetus for a burgeoning research agenda focused on the antecedents, outcomes, and contingencies related to political skill at work (Munyon et al., 2015). Munyon et al. (2015) study – a breakthrough one on political skill - is to test and extend the meta-theoretical framework proposed by Ferris and colleagues (2007) across 130 studies. This investigation also implicitly replicates, validates, and extends the Bing et al. (2011) meta-analytic findings on political skill with regard to task and contextual performance. In addition, the research provides the most comprehensive empirical review of political skill to date and establishes a foundation from which to stimulate future research on this construct.

Assumption. The assumptions of political skill seem not to clear assumptions. It is assumed that although performance, effectiveness, and career success are determined in part by intelligence and hard work, other factors such as social astuteness, positioning, and savvy – later all seen as polical skill - also play important roles (e.g., Luthans et al., 1988; Mintzberg, 1983; Ferris et al. 2007). The four dimensions of political skill (i.e., social astuteness, interpersonal influence, networking ability, and apparent sincerity) are assumed to be related to one another. Although the dimensions are presumed to correlate, they remain distinct constructs (Ferris et al. 2007). Politically skilled individuals can act in such a way that they are viewed favourably owing to their apparent sincerity (Kimura, 2015). At the interpersonal level, a central assumption of political skill is the ability to understand others (Ferris et al., 2005, 2007, 2012).

Key idea. Mintzberg (1983) described political skill as being necessary for effective personal involvement in organizations. While Mintzberg associated political skill with formal power, recent research has regarded it as the ability to be effective in informal interactions (Perrewé et al. 2004). Kimura (2015) argued that consensus has not yet been gained regarding how to define political skill; however, most recent studies base on the definition that regards it as 'the ability to effectively understand others at work, and to use such knowledge to influence others to act in ways that enhance one's personal and/or organizational objectives' (Ahearn et al. 2004, 311; Ferris et al. 2005, 127).

Dimensions of political skill. Until now, there have been three scales used to measure political skill in the literature (Munyon et al., 2015). When the first one is a unidimensional six-item scale developed by Ferris et al. (1999) and referred to as "political skill", the second is a unidimensional seven-item one developed by Ferris et al. (2001), and characterised as "social skill." The third scale is a multidimensional 18-item one developed by Ferris et al. (2005), and labelled as the "Political Skill Inventory." In spite of differences in dimensionality and nomenclature, Ferris and his colleagues (2012) suggested that the measures reflect the same core social effectiveness construct and should be refered as "political skill" to promote consensus and precision in future research. In addition, according to Munyon et al. (2015), the number of studies using the Ferris et al. (1999) unidimensional scale was 14, whereas the Ferris et al. (2001) unidimensional social skill scale accounted for another eight studies. The number of studies reporting the Ferris et al. (2005) multidimensional scale was 103, for a total of 125 studies. The other measures combined totaled five.

Based on Ferris et al. (2005) and Ferris et al. (2007), political skill has been considered to consist of four dimensions: social astuteness, interpersonal influence, networking ability, and apparent sincerity. Social astuteness is the ability to accurately understand social interactions and interpret one's own behaviour as well as that of others, and to be keenly attuned to diverse social situations. Interpersonal influence means the ability to exert a powerful influence on others in a subtle and convincing manner, and to appropriately adapt and calibrate one's own behaviour to each situation in order to elicit particular responses from others. Networking ability is the capability to develop and use diverse networks of people to secure assets that are valuable and necessary for personal and organizational success. Finally, apparent sincerity means the ability to appear to others as possessing high levels of integrity, authenticity, sincerity and genuineness (Ferris et al. 2005).

The scale of these dimensions was first developed by Ferris et al. (1999). Later, Ferris et al. (2005) revised this to an 18-item scale, which they called the Political Skill Inventory (PSI). Subsequent empirical studies supported the construct validity, the criterion-related validity and the cross-cultural generalizability of PSI (Ferris et al. 2008; Lvina et al. 2012; Shi and Chen 2012). However, Ferris et al. (2008) pointed out that, since the scale of apparent sincerity contains only three items, its reliability and validity could be questionable. They further argued that apparent sincerity might not be a separate dimension of political skill, but rather one of its outcomes.

Meta-theoretical framework of the effects of political skill. Munyon et al. (2015) have conceptualized political skill's effects on (a) self-evaluations, (b) situational evaluations, (c) situational responses, (d) appraisals by others, and (e) group and organizational processes. Self-evaluations and situational appraisals focus on political skill's intrapsychic effects. Situational responses involve behavioural processes influenced by political skill, which then affect evaluations by others. Finally, group and organizational processes mainly include multilevel behavioural processes where the political skill of one individual influences others (as in leadership) or compositions (as in groups and teams).

Critical perspective. Although it has strengths, the political skill seems to have some weaknesses/controversies. To date, it has not based on clear and firm assumptions. In addition, too many relationships between political skill and other variables have been considered in the meta-theoretical framework of the effects of political skill developed by Ferris et al. (2007) and Munyon et al. (2015). Besides, there has lacked syntheses and deep explanations regarding these relationships. The framework for future mediating analysis suggested by Kimura (2015) has partly overcome the weaknesses of the meta-theoretical framework; however, it is new and lacks empirical evidence. Moreover, the framework has not had typical concepts, especially concepts describing the relationships, although it consists of concepts portraying its dimensions.

The political skill framework in this thesis. The political skill plays a crucial role in examining the relationship between CEO political skill and CEO career success in this thesis. This framework provides important concepts with their definitions such as social astuteness, interpersonal influence, networking ability, and apparent sincerity. Besides, it brings key ideas and predictions describing relationships between political skill and income or position or career satisfaction in order to theoretically undergirds/underpins for this study by specifying links between CEO political skill and CEO career success. In addition, knowledge about recent debates, criticisms and findings of the political skill assists the author of this thesis in identifying research direction and gaps. For instance, relationships between such a certain individual characteristic as political skill and career success may be moderated by organisational size (Olian and Rynes, 1984; Sonnenfeld and Peiperl, 1988; Judge et al., 1995; Ng et al., 2005; Gallagher and Laird, 2008; Abele et al., 2011; Kimura, 2015) or ownership structure (Sonnenfeld and Peiperl, 1988; Judge et al., 1995; Ng et al., 2005; Michiels et al., 2013).

Moreover, the theory enhances the literature review section by providing research gaps, constructs and their links as firm bases in order to select relevant variables, hypotheses and data with regard to political skill, social astuteness, interpersonal influence, networking ability, and apparent sincerity. Furthermore, this theory is a crucial foundation for the discussion section of the thesis to present and analyse the convergence or divergence of ideas from the findings of this study, the findings from the literature reviewed, and from the theory that underlie the relationship under consideration between CEO political skill and CEO career success.

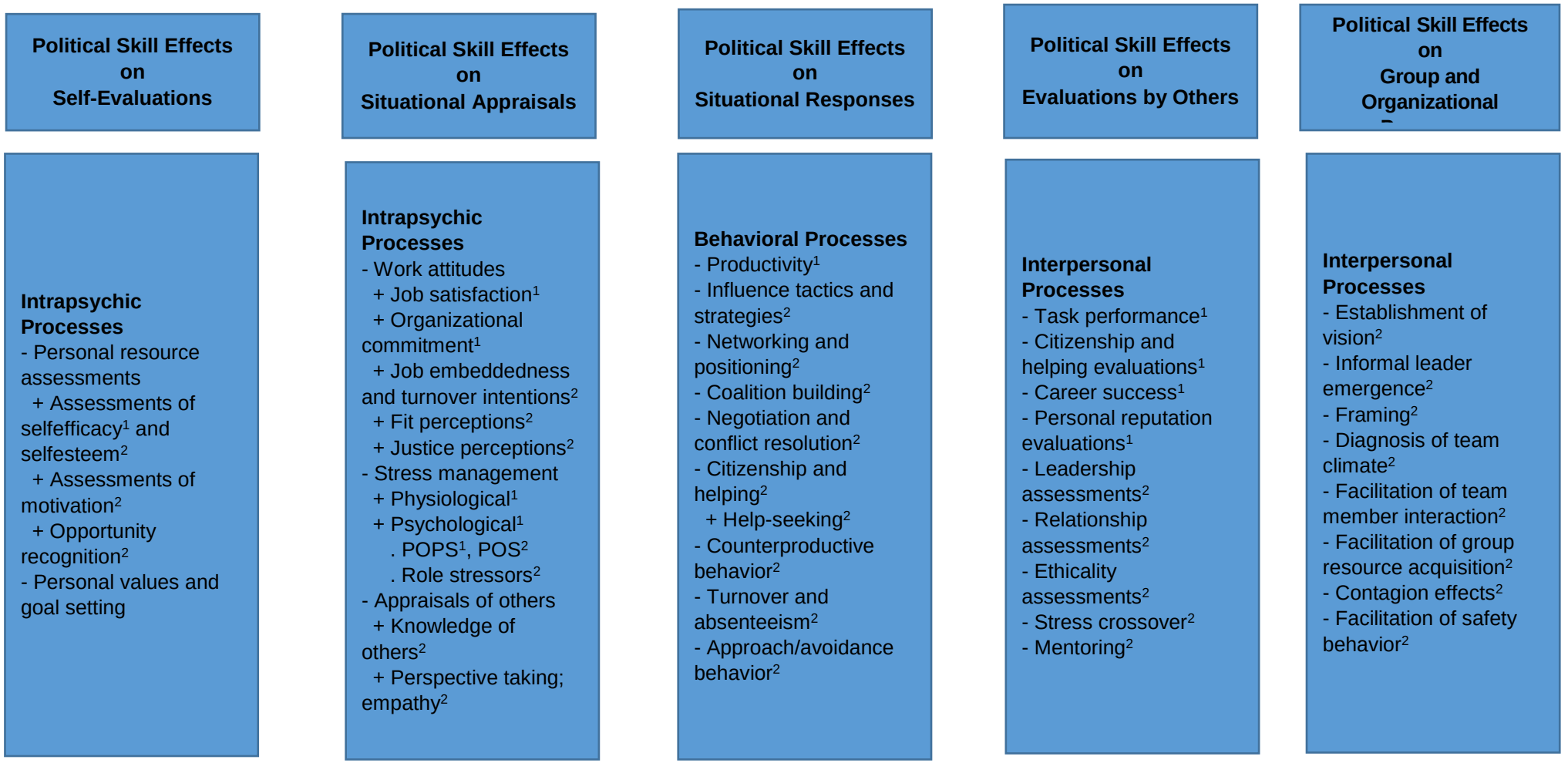


Figure 2.5. Meta-Theoretical Framework of the Effects of Political Skill

Note. POPS = Perceptions of organizational politics; POS = Perceived organizational support. [1]Tested in Munyon et al. (2015); [2]Less than five studies to date or not able to be tested in Munyon et al. (2015).

Source: Munyon et al., 2015, 147.

2.3.4. Five-factor model of personality

History. The five-factor model of personality (Digman, 1990; McCrae and John, 1992) was originally based on a combination of the lexical approach and the statistical approach (Larsen et al., 2013; Maltby et al., 2013). The lexical approach started in the 1930s, with the pioneering work of Allport and Odbert (1936). After that, it was enhanced or advanced through noteworthy contributions from Cattell (1943), Fiske (1949), Tupes and Christal (1961), Norman (1963) and Goldberg (1981) to McCrae and Costa (1985). It reduced from 17,953 trait terms with 4,500 presumably stable traits in Allport and Odbert (1936) to 30 words with 5 traits in McCrae and Costa (1985).

Overview. Traits are fundamental building blocks of personality and refer to stable patterns in the way individuals think, feel, and behave (Pervin et al., 2005). While multiple typologies of personality traits exist, the Five Factor model has gained consensus from scholars as a model describing the most salient aspects of personality traits (Barrick and Mount, 2005). Specifically, in the past two decades, the taxonomy of personality traits that has received the most attention and support from personality researchers has been the five-factor model— variously labelled the five-factor model (FFM), the Big Five, and even in a humorous vei The High Five (Goldberg, 1981; McCrae and John, 1992; Costa and McCrae, 1995; Saucier and Goldberg, 1996). This five-dimensional taxonomy of personality traits has accrued some persuasive advocates (e.g., John, 1990; McCrae and John, 1992; Wiggins, 1996; Saucier and Goldberg, 1998), as well as some strong critics (e.g., Block, 1995; McAdams, 1992).

Assumption. In spite of not having its own assumptions, the Five-Factor Model seems to agree with two key assumptions underlying trait theory. While the first is that personality characteristics are relatively stable over time, the second is that traits show stability across situations (Maltby et al., 2013). Empirical research shows that FFM has been validated across cultures (McCrae and Costa, 1997) as well as over time (Hampson and Goldberg, 2006).

Key idea. The factors in FFM was described by the American personality researchers Costa and McCrae (1992a), arguably the most influential ones in this area, who measured personality with their well-known Neuroticism, Extraversion, Openness Personality Inventory (NEO-PI-R). These factors are Openness, Conscientiousness, Extraversion, Agreeableness and Neuroticism; sometimes called as OCEAN as proposed by Maltby et al. (2013). They also argue that each factor represents a continuum along which individuals can be placed according to their scores, and discuss each of those factors below.

Openness or Openness to Experience as called in McCrae and Costa (1985) – This factor refers to the individual having an openness to new experience. It encompasses the characteristics of demonstrating curiosity, divergent thinking and a willingness to consider new ideas and an active imagination (Maltby et al., 2013). Traits or facets commonly linked to this factor or dimension consist of being imaginative, cultured, curious, original, broad-minded, intelligent and artistically sensitive (Barrick and Mount, 1991). Individuals scoring highly on openness are unconventional and independent thinkers. Individuals with low scores are more conventional and prefer the familiar to the new (e.g. McCrae and Costa, 1985; Maltby et al., 2013).

Conscientiousness – This factor expresses our degree of self-discipline, control and dependability. Traits usually suggested to associate with this dimension include careful, thorough, responsible, organized, planful, hardworking, achievement-oriented and persevering. Individuals scoring highly on this factor are determined, organized and plan for events in their lives, whereas the ones with low scores are apt to be careless, easily distracted from their goals or the tasks that they are carry out, and undependable. If someone looks closely at the trait descriptors involved conscientiousness, he or she will recognize that they are all attributes likely to be apparent in work situations. Because of this reason, they are occasionally referred to as the will to achieve or work dimension (e.g. McCrae and Costa, 1985; Barrick and Mount, 1991; Maltby et al., 2013).

Extraversion – Maltby et al. (2013) argue that this factor is a measure of the individual's sociability. While individuals scoring highly on extraversion and being labelled extraverts are very sociable, energetic, optimistic, friendly and assertive; individuals with low scores labelled introverts are depicted as being reserved and independent rather followers socially and even-paced rather than sluggish in terms of their pace of work (e.g. McCrae and Costa, 1985).

Agreeableness – This factor is linked thoroughly to characteristics the individual that are relevant for social interaction. Individuals with high scores are trusting, good-natured, helpful, soft-headed, sympathetic and cooperative, whereas those with low ones are suspicious, antagonistic, unhelpful, skeptical and uncooperative (e.g. McCrae and Costa, 1985; Maltby et al., 2013).

Neuroticism – This factor measures an individual's emotional stability and personal adjustment. Costa and McCrae (1992a) argue that, though a range of emotions occur, individuals scoring highly on one also rate highly on others. In psychological terms, the various emotional states are strongly correlated. Therefore, individuals with high scores on this dimension experience wide swings in their mood and they are volatile in their emotions. Individuals with low scores on this factor are calm, well adjusted and not prone to extreme maladaptive emotional states (e.g. McCrae and Costa, 1985; Maltby et al., 2013).

Wolff and Kim (2012) sum up that extraversion and and agreeableness refer to the domain of interpersonal behaviour, whereas openness to experience is relevant to individuals' intellectual life or idea-related endeavours. Conscientiousness is relevant to "engagement in task-related endeavours" (Ashton and Lee, 2001, p. 346) and emotional stability refers to individuals' affective experiences or feelings. In addition, although the first four factors are highly replicable across culture and languages, there is uncertainty about the content, naming, and replicability of the fifth factor. Perhaps some individual differences are more relevant to some cultures than to others—intellect in some cultures, conventionality in other cultures, and openness in yet other cultures. Clearly, more extensive cross-cultural studies are needed, particularly in more traditional cultures that are minimally influenced by Western culture (Larsen et al., 2013).

Critical perspective. Maltby et al. (2013) argue that some debates regarding FFM have existed. First of all, some authors (e.g. Fiske, 1949; Norman, 1963) have had different views on how the factors should be labelled. Second, there is still some argument about the number of traits included (e.g. Almagor et al., 1995; McCrae and Costa, 1995; Ashton and Lee, 2001). Third, there has been some controversies over what exactly some of the factors mean (Digman, 1990). Fourth, Briggs (1989) has argued the model for being atheoretical. Fifth, the last one is linked to how the various measures are interpreted and used (e.g. Mischel, 1990). The FFM has been criticized on several grounds, including the assertion that the validities are unimpressive (Schmitt, 2004; Murphy and Dzieweczynski, 2005; Morgeson et al., 2007) or that the traits are too broad (Paunonen and Jackson, 2000; Paunonen and Ashton, 2001; Tett et al., 2003; Hough and Oswald, 2008).

Besides, there has been some criticisms with respect to the five-factor model of personality. FFM has been criticised for not being comprehensive and for being inadequate for understanding underlying psychological process (e.g. Larsen et al., 2013). McAdams (1992) adds more six fierce, widespread criticisms of the model. These are the model's inability to address core constructs of personality functioning beyond the level of traits; limitations with respect to the prediction of specific behaviour and the adequate description of individuals' lives, failure to provide compelling causal explanations for human behaviour and experience, disregard of the contextual and conditional nature of human experience, failure to offer an attractive program for studying personality organisation and integration, and reliance on simple, noncontingent and implicitly comparative statements about persons.

Although the above-mentioned debates and criticisms have occurred, the Five-Factor Model remains heavily endorsed by many personality psychologists and continues to be utilised in a variety of research designs and applied settings (e.g. Larsen et al., 2013).

Five-factor model of personality in this thesis. The five-factor model of personality plays a crucial role in examining the relationship between CEO personality traits and CEO career success in this thesis. This model provides important concepts with their definitions such as openness, conscientiousness, extraversion, agreeableness and neuroticism. Besides, it brings key ideas and predictions describing relationships between personality traits and compensation or promotion or perceived financial success or perceived interpersonal success in order to theoretically undergirds/underpins for this study by specifying links between CEO personality traits and CEO career success. In addition, knowledge about recent debates, criticisms and findings of the five-factor model of personality assists the author of this thesis in identifying research direction and gaps. For instance, the moderation of such occupational context such as employment sector on relationships between agreeableness or openness and career success is under-researched.

Moreover, the model enhances the literature review section by providing research gaps, constructs and their links as firm bases in order to select relevant variables, hypotheses and data with regard to such CEO personality traits as openness, conscientiousness, extraversion, agreeableness and neuroticism. Furthermore, this model is a crucial foundation for the discussion section of the thesis to present and analyse the convergence or divergence of ideas from the findings of this study, the findings from the literature reviewed, and from the model that underlie the relationship under consideration between CEO personality traits and CEO career success.

2.3.5. Protean career theory

Overview. The protean career theory, developed by Hall in the 1970s, describes the shift of focus from the organization to the individual with respect to career choices. It argues that a career can be shaped by the experiences of the individual and can be changed to further self-fulfillment (Hall, 1976). The term *protean* comes from Greek mythology's Proteus, a sea-god able to easily alter his shape and appearance when necessary. In research and practice, the term protean is almost seen as synonymous with flexibility. This focus on flexibility matches today's reality: Young people entering the workforce began to see alignment with personal goals and values as a key factor for career choice, a view vastly different than that of the generations before. In addition, this model emphasizes the meaning of change in the definition of career. It highlights the fact that the traditional view of career as advancement within organisations was no longer accurate. The definition of career has become a series of work experiences throughout a lifetime, with each experience adding to the whole rather than an ultimate end goal of a single high-ranking position. The accumulation of different experiences has become of value and not just the end result (Haber and Bertone, 2015).

Definition. Hall (1976, p. 201) defined protean career as follows:

"The protean person's own personal career choices and search for self-fulfillment are the unifying or integrative elements in his or her life. […] In short, the protean career is shaped more by the individual than by the organization and may be redirected from time to time to meet the needs of the person."

At the individual level, the protean career is a career orientation (sometimes labeled as attitude – see, for example, Briscoe and Finkelstein 2009). In its essence, the protean career is the contract within oneself, rather than between oneself and the organization, leaving much of the career development to people's initiation and proactivity (Seibert et al., 1999; Strauss et al., 2012), and where self-management of careers is paramount (Kossek et al., 1998; Özbilgin et al., 2005; De Vos and Soens, 2008). This alters the relationship between individuals and organizations. Earlier, individuals were mostly led by the organization and employers tended to use a paternalistic approach, whereas nowadays the organization must relate to individuals' needs and plans, especially in western Anglo-Saxon environments. It should be borne in mind, though, that even when people hold a protean career

orientation, certain organizational and contextual boundaries will still exist, with which they have to comply (e.g. Lips-Wiersma and Hall 2007).

Characteristics. The characteristics of the protean career concept can be examined through making comparisons between it and the traditional career (Table 2.5). Comparing with the traditional career concept, the protean career concept have some points of differences. The main goal of the protean career is subjective, psychological success, "[...] the feeling of pride and personal accomplishment that comes from achieving one‟s most important goals in life, be they achievement, family happiness, inner peace, or something else" (Hall, 1996, p. 8). He pointed out that (in theory) there are infinite ways to achieve subjective success in a career, whereas the traditional, objective view of career success only allows for one path, namely the way towards the top of the organization (Hall and Richter, 1990). In 1976, Hall‟s view was in stark contrast with the prevailing notions of career success that featured a strong focus on objective success criteria. Also, according to Hall, responsibility for and ownership of the career shifted. In brief, "[…] if the old contract was with the organization, in the protean career the contract is with the self" (Hall, 2002, p. 23). Referring to Shepard's (1984) metaphor, Hall (1996, p.

Table 2.5. Comparison of characteristics of traditional and protean career concepts

	Protean career	Traditional career
Who is in charge	Person	Organization
Contract with	Self	Organization
Core values	Freedom Growth	Advancement Power
Degree of mobility	High	Low
Important performance dimensions	Psychological success "Path with a heart"	Position level, salary "Path to the top"
What counts is	"Career age"	Chronological age
Development is	Continuous learning Self-directed Relational Found in work challenges Horizontal growth	Formal training Retraining Upward mobility Vertical advancement
Ingredients for success	Learn-how Employability	Know-how Job security
Important attitude dimensions	Work satisfaction Professional commitment	Work satisfaction Organizational commitment
Important identity dimensions	Self-esteem Self-awareness	Esteem from others Organizational awareness
Important adaptability dimensions	Work-related flexibility Current competence	Organization-related flexibility

Source: Gulber, 2011

10) put it this way: “The path to the top has been replaced by the path with a heart”. The traditional view of careers was based on predictable development over one‟s biological age and life stages. A protean career, on the contrary, was said to evolve through a series of short learning cycles (Hall and Mirvis, 1996).

Hall’s (1976) and Hall et al’s (1977) concept of protean careers is largely subjective and underlines the ‘independence and self-directed career behaviour’ (Briscoe and Hall, 2006: 1) of the individual career actor. The protean career orientation is predicated on the individual rather than the organization and therefore, focuses on individually-defined goals involving a holistic, values driven approach to life and giving precedence to ‘psychological success rather than objective success such as pay, rank or power’ (Hall, 2002). Protean careers orientation towards self directed career management and a values driven attitude to careers is symptomatic of ‘a mindset about the career - more specifically an attitude toward(s) the career that reflects freedom, self-direction, and making choices based on one’s personal values’ (Briscoe and Hall, 2006: 6) rather than an exposition on behaviours and specific actions such as job mobility.

Therefore, protean careers can be seen as work experiences underlined by the assumption that ‘a self-directed, or protean career actor is more *likely* to cross career boundaries’ while boundaryless careers focus on *career actions* such that ‘a boundaryless person is more likely to act in protean fashion’ (Briscoe and Hall, 2006: 1). Thus, boundaryless careers and protean careers are inter-related concepts that nevertheless have independent constructs and several studies have been conducted to clarify the relationship between the two career models. Briscoe et al (2006) sought to empirically clarify the two dimensions by constructing scales to measure both protean career attitudes (i.e. self-directed career management and a values driven approach) and boundaryless career attitudes (i.e. the boundaryless mindset and organizational mobility). The study revealed that the protean and boundaryless constructs differed according to an individual’s stage in their career as well as the context, with some employees demonstrating strong protean and boundaryless attitudes but weak inclinations for physical mobility - implying that ‘these are indeed attitudes and not underlying personality traits or related individual differences’ (p. 44).

Protean career concept. According to Gubler et al. (2014), it is important to distinguish clearly between three key terms: the protean career concept and two subsidiary components thereof, namely protean career orientation (sometimes labelled as attitude – see Briscoe and Finkelstein, 2009) and protean career path. The protean career concept refers to the theoretical concept, as defined by Hall (1976, 2002), and is discussed in detail in the previous paragraphs. The PCO refers to (i) an individual’s attitude towards developing his or her own definition of what constitutes a successful career and taking action to achieve those success criteria (DiRenzo and Greenhaus, 2011) and (ii) his or her motivation to adapt to a changing environment (Hall, 2002). Having a strong PCO may, but does not necessarily, translate into corresponding behavior. The PCP refers to an individual’s career path that reflects elements postulated in the PCC. For example, a PCP is driven and managed by an individual, not an organization. It also builds on various distinguishable learning cycles and includes values-driven as well as self-directed career moves (Hall, 1976, 2002). While PCP is not focus of this study, PCO is and will be discussed in detail in terms of its crucial features, measurement and correlates.

To understand more the contents regarding the protean career, a refine conceptualisation of the protean career concept is necessary and significant. The most updated research undertaken to reach this target is Gubler et al. (2014). Their refined conceptualization of the PCC includes the two hitherto missing metacompetencies (“identity” and “adaptability”) in addition to the two protean dimensions (“values-driven” and “self-directed”) suggested by Briscoe and Hall (2006). This allows us to address two crucial aspects of protean careers: the simultaneous existence of stabilizing forces (“identity”) and the capability to adapt easily to changes in the environment (“adaptability”). Not only have these

Table 2.6. Refined conceptualization of the protean career concept

Concept	Dimension	Component	Core aspect	Source of conceptualization	Relevant protean literature	Relevant measurement literature
Protean career concept		1. Being clear on one's needs, motivation, abilities, values, and interests	Identity	Hall (2002) Hall (2004)	Briscoe and Hall (1999) McArdle et al. (2007)	Career identity (e.g., Carson and Bedeian, 1994) Various career competencies (Akkermans et al., 2013; Francis-Smythe et al., 2013; Kuijpers and Scheerens, 2006)
	Values-driven	2. Having personal values that are both the guidance and the measure of success in one's career	Being values-driven	Briscoe and Hall (2006) Hall (1976)	Briscoe et al. (2012) Briscoe et al. (2006) Baruch and Quick (2007) Hall and Chandler (2005)	Career anchors (Schein, 1978) Work orientations (Wrzesniewski et al., 1997)
		3. Being both competent and motivated to learn and to adapt to a changing environment	Adaptability	Briscoe and Hall (2006) Hall (2002)	Briscoe and Hall (1999) Briscoe and Hall (2006) Baruch and Quick (2007) Hall et al. (2002)	Career adapt-abilities (e.g., Porfeli and Savickas, 2012; Savickas and Porfeli, 2012) Career self-management (e.g., Sturges et al., 2005) Various career competencies (Akkermans et al., 2013; Francis-Smythe et al., 2013; Kuijpers and Scheerens, 2006)
	Self-directed	4. Having a feeling of Independence and of being in charge of one's career	Being self-directed	Hall (2004) Hall (1976)	Briscoe et al. (2006) Baruch and Quick (2007)	Proactivity (e.g., Bateman and Crant, 1993)

Source: Gubler et al., 2014, S33.

aspects been repeatedly highlighted in the protean literature (e.g., Briscoe and Hall, 1999; Hall, 2002), but they were also supported by Lifton (1993, p. 9), who labelled proteanism "a balancing act between responsive shapeshifting, on the one hand, and efforts to consolidate and cohere on the other." As a result, our conceptualization captures the PCC more broadly and is conceptually more solidly rooted than previous ones (Table 2.5).

In summary, increased globalization, organization restructuring, technological change, outsourcing, and downsizing in the 1980s and 1990s contributed to new outlooks about careers and work, coined as protean (Hall, 1986) and boundaryless (Arthur and Rousseau, 1996). Both models are motivated by contexts in which individuals cannot depend on the organization they work for to direct their career progress, or to provide lifelong employment. Accordingly, the protean career theory argues that individuals need to take charge of their own career and career progression, rather than the organization (Hall, 1986, 2002). As such, careers should be individually driven by one's personal values rather than organizational rewards. In addition, to enact protean careers, individuals need to be independent in taking action to adapt to the ever changing work environment. Taking together, individuals with a "protean" career orientation are both value-driven in terms of defining their career priorities and identity, and self-directed in terms of being adaptable to changing environmental demands (Briscoe and Hall, 2006). According to the protean career theory, career success is more a matter of how satisfied individuals feel about their work and life, with core values focused on freedom and growth, not how much they make or the number of promotions they have obtained (Wang and Wanberg, 2017).

The protean career orientation.

Feature. Protean career orientation (PCO) reflects the idea that the person, not organisation or any other person, is managing the career (Hall, 1976, 2002). This orientation is in contrast to the 'organization man' career model of the mid-1900s (Whyte and Nocera, 2002), where the employing organisation was the driving force in a person's career and out by rising through the ranks of an organization (Water et al., 2015).

According to Water et al. (2014), a protean career orientation have some certain features. Specifically, Hall (2004) suggests that a protean career orientation is associated with personal qualities such as pro-activity, openness to change, optimism, and adaptability. Briscoe et al., (2006) argue that the two most important features of a protean career orientation are being self-directed and being values-driven. Self-direction expresses the degree to which an individual takes control of, and is in charge of, his/her own career (Mirvis and Hall, 1994). The protean notion of self-direction is highly salient during the experience of unemployment, given that people can no longer rely on the organization to guide their careers, thus making the need for self-direction essential.

The second key characteristic of a protean career orientation is that of being values-driven. Being values-driven makes career decisions closely aligned with one's own personal values, rather than being driven by objective rewards or the values of others (Briscoe et al., 2006). Although values themselves are seen as enduring beliefs (Rokeach, 1973) research has shown that the degree to which we choose to express our values through our words, actions and behaviours can alter over time and situation (Katz and Kahn, 1978). According to Briscoe et al. (2006), people who hold a protean career orientation are highly values-driven and, thus, choose to actively reveal and express their values through their actions and career choices. Briscoe and Hall (2006) submit that one who is both self-directed and values-driven is most fully protean. This contention is also supported by empirical research which shows that the combined factors correlate more strongly with coping and career change/adaptability than either self-direction or values-driven attitudes alone (Judge, 1999; Briscoe et al., 2010). Given the relevance of both facets of the protean career orientation to unemployment/career change, we adopt PCO as the combination of being both self-directed and values driven with respect to one's career.

Critical perspective. The protean career has been facing some criticisms summarised by Gubler (2011). The concept cannot yet be properly measured (Arnold and Cohen, 2008, Cohen et al., 2008; Gerber, 2009). There is a lack of empirical evidence for protean career orientations (Domberger, 2005; Baruch, 2008; Gerber, 2009). The concept of protean career might not be universally accepted – the cultural context matters (Martin and Butler, 2000; Truty, 2003; Gerber, 2009; Hall and Las Heras, 2009). "Values" in the context of protean careers need conceptual clarification (Cohen et al., 2008; Domberger, 2005; Gerber, 2009). In addition, although there has been a growing body of empirical literature on the PCO recently, it has had some major limitations. These limitations include an often imprecise usage of key terms of the concept, a neglect of the protean metacompetencies, a bias towards U.S.-based, managerial samples, and a heavy reliance on Briscoe et al.'s (2006) scale for measuring PCO (e.g. Gubler et al., 2014).

The protean career orientation in this study. This research will continue to validate a new short form of PCO and to test empirically the relationships between PCO-CS of CEOs in a transition economy. Measurement of PCO is discussed in Appendix 3 and in Measurement section in Chapter 3. While testing those relationships will be mentioned in the section of hypothesis development, validating a new form of PCO is discussed in this part. They have been implemented according to the procedure suggested in Churchill Jr (1979). Supeli and Creed's research (2016) suggests the need for more in-depth analysis of the relationship between protean career orientation and subjective versus objective measures of career success. For example, are there any factors that moderate this relationship?

2.3.6. Managerial power theory

History. The managerial power theory which posits that powerful executives can influence the compensation decisions made by the board of directors or the compensation committee seems to be firstly proposed by Finkelstein and Hambrick (1989). The theory was developed substantially by Finkelstein (1992) in terms of the primary types and sources of executive power. This theory was advanced by Bebchuk and Fried (Bebchuk and Fried, 2004a; Bebchuk et al., 2002).

Overview. The overview of managerial power theory (MPT) should be seen in terms of its core assumption, goal and prediction in relationship with agency theory, especially optimal contracting (van Essen et al., 2015). The critical points of MPT are summarised in Table 2.9. MPT directly challenge to the common assumption within agency theory of optimal contracting. Under the optimal contracting approach, the board is assumed to engage in arm's-length transactions with executives over compensation arrangements and such transactions is presumed to assist in mitigating agency problems by creating compensation practices that more closely align the interests of executives and shareholders (e.g., Grossman and Hart, 1983; Hölmstrom, 1979; Holmstrom, 1982; Mirrlees, 1976; Mookherjee, 1984; Ross, 1973; Shavell, 1979).

In contrast, Bebchuk and Fried (2004) and Bebchuk et al. (2002) argue that the board rarely engages in arm's-length transactions because the CEO usually have power over directors. The power may come from specific structural and social-psychological factors, limitations on time, resources and ownership of directors as well as limits of market forces that have an important influence over board-level decision-making processes about executive compensation. These factors create few incentives for or do not prevent board members to challenge compensation arrangements that are more in the interest of executives than shareholders, that is, higher levels of compensation and compensation that is less sensitive to performance. The goal of MPT, however, is not to refute agency theory but to complement and deepen it by arguing that managerial power and its influence on executive compensation cast doubt on the assumption of optimal contracting. It also argues that compensation arrangements are likely to be shaped both by market forces that push toward value-maximizing outcomes, and by managerial

influence, which leads to departures from these outcomes in directions favourable to managers. Thus, MPT simply claims that these departures are substantial and that optimal contracting alone cannot adequately explain compensation practices (Bebchuk and Fried, 2003). According to MPT, managerial power over pay-setting processes results in executive compensation practices that often function not as solutions to agency problems within large publicly listed firms, as agency theorists have argued, but that are in fact manifestations of these problems (van Essen et al., 2015).

Assumptions. The assumptions of MPT have the same three first points as the ones of agency theory. They include: principals/directors are risk neutral, agents/executives are risk-averse; agent and principal have diverging interests; and, agents/executives are rational and opportunistically act in own self-interest. The key different point is situated in the fourth assumptions. While agency theorists assume that there is optimal contracting between boards and executives, managerial power theorists believe/presume that executives tend to abuse their power for their benefits as discussed in the overview section of this theory.

Key ideas. There are five key ideas in managerial power theory that include: managerial power and the extraction of rents, outrage costs and constraints, camouflage, compensation consultants, and designs of stock option plans and practice.

Managerial power and the extraction of rents. Managers with power are able to extract “rents” and managers with more power can extract more rents. All else being equal, the managerial power approach predicts that managers will extract more rents in situations and structures in which they have more power. There are several factors whose presence would tend to make managers more powerful. Other things being equal, managers would tend to have more power when the managers are protected by antitakeover arrangements, the board is relatively weak or ineffectual, the managers have a large ownership stake, there are fewer institutional shareholders, or there is no large outside shareholder (Bebchuk et al., 2002).

“Outrage” costs and constraints. One important building block of the managerial power theory is that of "outrage" costs and constraints. That executives can exert influence on their pay does not imply that there are no constraints on their ability to do so. Although the need for board approval and the presence of market forces cannot be expected to produce compensation arrangements consistent with optimal contracting, they can and commonly do provide some constraints. The tightness of these constraints depends, in part, on the outrage that a particular compensation arrangement is expected to generate among relevant outsiders (Bebchuk and Fried, 2003; Bebchuk et al., 2002).

If this outrage is sufficiently widespread and intense, it limits the extent to which compensation can be increased in a number of ways. First, outrage can affect the ability of the CEO to get the board's approval of his pay package. The more outrage a compensation arrangement is expected to generate, the larger will be the potential economic and social costs, and thus the more reluctant directors will be to approve it and the more hesitant managers will be to propose it in the first place (Bebchuk and Fried, 2005). Second, outrage might produce various social and reputational costs to directors. Final, outrage might affect the market forces that could, in theory, limit executive compensation. (Bebchuk et al., 2002).

Thus, whether a compensation arrangement that is favorable to executives but suboptimal for shareholders is adopted will depend on how the arrangement is perceived by outsiders and, in particular, on how much outrage (if any) it is expected to produce (Bebchuk et al., 2002). In addition, under this theory, compensation schemes are designed with an eye to benefiting

executives while reducing outrage costs by staying within the range of legitimacy and acceptability (Bebchuk et al., 2002). [1].

"Camouflage". The critical role of outsiders' perception of executives' compensation and the significance of outrage costs explain the importance of yet another building block of the managerial power theory: "camouflage." The strong desire to avoid or minimize outside criticism and outrage gives designers of compensation arrangements a substantial incentive to try to obscure and legitimize—or, more generally, to camouflage— rent extraction in terms of both the level and performance-insensitivity of executive compensation (Bebchuk and Fried, 2004a). In detail, excessive compensation will not by itself impose significant outrage costs. A large amount of outrage will occur only if there is widespread recognition that the level of compensation does not result from a contract designed to maximize shareholder value, but rather reflects a large extraction of rents. Thus, outrage costs depend on the extent to which the rent extraction can be easily and distinctly identified. A large extraction of rents will not cause the executives or directors harm if it can be dressed, packaged, or hidden, in short, camouflaged-so that it is not readily apparent as such (Bebchuk et al., 2002).

Bebchuk and Fried (2004a) argue that compensation arrangements have often been designed with an eye to camouflaging rent and minimizing outrage. Firms have systematically taken steps that make less transparent both the total amount of compensation and the extent to which it is decoupled from managers' own performance. Managers' interest in reduced transparency has been served by the design of numerous compensation practices, such as postretirement perks and consulting arrangements, deferred compensation, pension plans, and executive loans. Overall, the camouflage motive turns out to be quite useful in explaining many otherwise puzzling features of the executive compensation landscape (Bebchuk and Fried, 2004a). The more reasonable and defensible a package appears, the more rents managers can enjoy without facing significant outrage. Accordingly, under the managerial power approach, managers will prefer compensation practices that obscure the total amount of compensation, that appear to be more performance based than they actually are, and that package pay in ways that make it easier to justify and defend. (Bebchuk and Fried, 2004a) The greater the ability of plan designers to engage in camouflage, the more they can be expected do so (Bebchuk and Fried, 2004a).

Camouflage thus allows executives to reap benefits at the expense of shareholders. More importantly, attempts to camouflage can lead to the adoption of inefficient compensation structures that harm managers' incentives and, in turn, company performance, imposing even greater costs on shareholders (Bebchuk and Fried, 2004a).

The desire to camouflage might lead to the adoption of inefficient compensation structures that, compared with optimal contracting arrangements, fail to provide desirable incentives, or even supply perverse incentives. In our view, the reduction in shareholder value caused by these inefficiencies, rather than the excess rent captured by managers, might well be the biggest cost

[1] Whether directors and managers are deterred from adopting a given compensation arrangement depends on the extent to which it will be viewed by relevant outsiders as unjustified or even abusive or egregious. Bebchuk and Fried (2004a) have broadly referred to negative reactions by outsiders as "outrage," even though some of them may amount to criticism not reaching the level of outrage, and to the costs that such reactions impose on managers and directors as "outrage costs." "Outrage costs", firstly introduced by Bebchuk et al. (2002), occur when there are economic and social costs to the executives and directors from a public reaction to executive compensation that is perceived as excessively high (Bebchuk and Fried, 2005; Weisbach, 2007). The more widespread and strong these negative reactions are-that is, the greater the outrage-the larger the costs to directors and managers. When the potential outrage costs are large enough, they will deter the adoption of arrangements that managers would otherwise favour. Arrangements that are deterred in this way can be regarded as ones that violate the "outrage constraint" (Bebchuk and Fried, 2004a).

Table 2.7. Key contents of managerial power theory

Conceptual foundations	Finkelstein and Hambrick (1989), Finkelstein (1992), Bebchuk and Fried (2003, 2004a), Bebchuk et al. (2002)
Research question	Why do some CEOs/executives get paid so much more than others? How do CEOs/executives with power use their power to influence the level and structure of their pay?
Key concepts	Principal, agent/executives, managerial power, rent extraction, outrage costs and constraints, camouflage
Assumptions	- Principals/directors are risk neutral, agents/executives are risk-averse; - Agent and principal have diverging interests; - Agents/executives are rational and opportunistically act in own self-interest; - Agents/executives abuse their power for their benefits
Key ideas	- Managerial power and the extraction of rents. Managers with power are able to extract "rents" and managers with more power can extract more rents (Bebchuk et al., 2002). - "Outrage" costs and constraints. Market forces, the need for board approval, and social sanctions do place some constraints on compensation arrangements (Bebchuk and Fried, 2004a). Rent extraction might give rise to outrage on the part of observers about whose views directors and managers care. This outrage can in turn impose costs on directors and managers, thereby discouraging the adoption of some arrangements favourable to managers (Bebchuk et al., 2002). - "Camouflage". The designers of compensation plans can limit outside criticism and outrage by dressing, packaging, or hiding – in short, camouflaging – rent extraction. The more reasonable and defensible a package appears, the more rents managers can enjoy without facing significant outrage (Bebchuk and Fried, 2004a). - Compensation consultants. Compensation consultants might play a role in extracting and camouflaging rents (Bebchuk and Fried, 2004a). - Designs of stock option plans and practice. Managerial power likely play a significant role in the design of option plans and practices (Bebchuk et al., 2002). - Antitakeover protection. The adoption of antitakeover provisions makes CEOs less vulnerable to a hostile takeover (Bebchuk and Fried, 2003).
Predictions	- Strength and independence of boards + CEOs can obtain more favourable pay arrangements when they are more powerful vis-a`-vis the board (Bebchuk and Fried, 2004a). - Ownership characteristics + There is a negative correlation between the presence of a large outside shareholder and pay arrangements that favour executives. + There is a link between CEO pay and the concentration of institutional shareholders, which are more likely to monitor and scrutinise the CEO and the board. - "Outrage" costs and constraints + "Outrage" costs and constraints may affect CEO compensation arrangement. - Camouflage + The more power CEOs have, the more stealth compensation CEOs receive and the less transparent the total amount of CEO compensation is (Bebchuk and Fried, 2004a, 2004b). + Managers will prefer compensation practices that obscure the total amount of compensation, that appear to be more performance based than they actually are, and that package pay in ways that make it easier to justify and defend (Bebchuk and Fried, 2004b). + The greater the ability of plan designers to engage in camouflage, the more they can be expected do so (Bebchuk and Fried, 2004b). - Compensation consultants + The presence of compensation consultants moderates the relationship between CEO power and favourable pay arrangements they receive (Bebchuk et al., 2002; Bebchuk and Fried, 2003). + The presence of compensation consultants seems to make a CEO pay package appear more reasonably and defensibly (Bebchuk et al., 2002; Bebchuk and Fried, 2003). - Designs and practice of stock option plans. + The less likely or popularly a real movement toward reduced-windfall options are designed or applied when CEOs are more powerful vis-a`-vis the board (Bebchuk and Fried, 2003). - Antitakeover protection + The more protected incumbents are from a takeover, the higher and less performance sensitive their compensation is likely to be (Bebchuk and Fried, 2004a).
Findings	Results of numerous studies of the impact of CEOs/executives' power on their pay and pay-performance sensitivity are divergent and conflicting in spite of the strong theoretical foundations linking CEOs/executives' power to their pay and pay-performance sensitivity (O'Reilly and Main, 2010; Van Essen et al., 2015)
Recent debate	Proxies for managerial or director power (Van Essen et al., 2015), different types of power, tenure of the power holder, physiological underpinnings of power, institutional considerations of power (Sturm and Antonakis, 2015), power in different contexts (Shin, 2016; Sturm and Antonakis, 2015), pay at risk, theoretical conceptualisation and measures of board independence (Van Essen et al., 2015)

Source: Author

arising from the influence of managerial power on compensation practices. Thus, improvement in this area may provide considerable benefits to shareholders from better managerial incentives and performance. (Bebchuk et al., 2002)

One might reasonably ask how, if rent extraction is camouflaged, any observer can determine that executives are enjoying rents. In theory, rent extraction could be camouflaged so well that it becomes absolutely undetectable. However, the presence of camouflage does not imply that rent extraction will be unidentifiable to *every* observer. (Bebchuk et al., 2002) In fact, however, camouflage is successful as long as the rent extraction is not apparent to those outside observers whose outrage would be particularly costly for directors and managers, even if other observers are aware that the executives are enjoying large rents. (Bebchuk and Fried, 2004a) Thus, the notion of camouflage is consistent with the possibility that an outsider might identify the hidden rents of a compensation arrangement. Such a conclusion would simply reflect the observer's judgment, not yet widely shared, that the compensation program is distorted in favour of managers. In time, of course, such conclusions might become widely accepted, in which case the rent extraction will no longer be camouflaged. But a given form of rent extraction might continue to be camouflaged long after it has been recognized by some observers. (Bebchuk and Fried, 2004a)

Many other aspects of existing compensation practice can be explained by considerations of camouflage. (Bebchuk et al., 2002) This concept of camouflage will turn out to be quite useful in explaining many of the patterns and puzzles provided by the executive compensation landscape. (Bebchuk et al., 2002)

Predictions. Antitakeover protection compensation consultants designs of stock option plans and practice.

Strength and independence of boards. MPT predicts that the CEO can obtain more favourable pay arrangements when he or she is more powerful vis-à-vis the board (Bebchuk and Fried, 2004a). CEO compensation is higher and pay-performance sensitivity decreases as the size of the board increases. In addition, pay arrangements can be expected to be more favourable to the CEO when outside directors sit on multiple boards. Furthermore, a CEO who is also chair of the board can be expected to obtain more favourable pay arrangements. Besides, the presence of directors who have ties to or feel an obligation to the CEO may make the CEO gain more favourable compensation arrangements. Moreover, the longer the CEO's term, the less sensitive is the CEO's pay to firm performance. The managerial power theory also suggests that CEO pay increases and pay-performance sensitivity decreases when a board contains interlocking directors. The makeup of that committee itself also affects the structure of CEO pay in the way suggested by MPT. The managerial power theory predicts that boards or compensation committees that contain affiliated directors will result in higher levels of executive compensation and poorly structured compensation contracts as viewed from the perspective of shareholders (Bebchuk and Fried, 2004a).

Ownership characteristics. The managerial power theory predicts that the relationship between ownership characteristics and CEO compensation arrangement works two ways. The first way is that there is a negative correlation between the presence of a large outside shareholder and pay arrangements that favour executives. In other words, the presence of a large shareholder will weaken managers' ability to obtain favourable compensation arrangements. It is suggested that there is a negative relationship between the equity ownership of a firm's largest shareholder and the amount of CEO compensation or pay-performance sensitivity. In addition, the existence of a blockholder is predicted to reduce CEO compensation or increase pay-performance sensitivity (Bebchuk and Fried, 2004a).

The second way is that there is a negative link between CEO pay and the concentration of institutional shareholders, which are more likely to monitor and scrutinise the CEO and the board. In detail, a higher concentration of institutional ownership leads not only to lower

executive compensation but also to pay that is more performance-sensitive. As the managerial power theory predicts, CEO pay turns out to be negatively correlated with the presence of pressure-resistant institutional investors and positively correlated with the presence of pressure-sensitive ones (Bebchuk and Fried, 2004a)

“Outrage” costs and constraints. Outrage costs and constraints may affect CEO compensation arrangement. In detail, criticism by outside observers will have an effect on executive compensation. In addition, designers of compensation arrangements will seek to avoid or reduce outrage by designing, packaging, and justifying compensation arrangements in a way that camouflages managers' rents and conceals their magnitude (Bebchuk et al., 2002).

Camouflage. Because perceptions by relevant outsiders are so important, the designers of compensation plans can limit outside criticism and outrage by camouflaging rent extraction. When compensation arrangements and practices deviate from those that are optimal, they tend to do so in a way that minimizes the amount of managerial rents easily visible to outsiders (Bebchuk et al., 2002). In addition, the more reasonable and defensible a package appears, the more rents managers can enjoy without facing significant outrage. (Bebchuk and Fried, 2004a) Therefore, managers will prefer compensation practices that obscure the total amount of compensation, that appear to be more performance based than they actually are, and that package pay in ways that make it easier to justify and defend (Bebchuk and Fried, 2004a). Furthermore, the more power CEOs have, the more stealth compensation CEOs receive and the less transparent the total amount of CEO compensation is (Bebchuk and Fried, 2004a, 2004b). Besides, the greater the ability of plan designers to engage in camouflage, the more they can be expected do so (Bebchuk and Fried, 2004b). Moreover, to camouflage rent extraction, firms can use pay practices that make less transparent the total amount of executive compensation and the extent to which compensation is decoupled from managers' own performance. Among the arrangements used by firms that camouflage the amount and the performance- insensitivity of compensation are pension plans, deferred compensation, post- retirement perks, and consulting contracts (Bebchuk and Fried, 2003).

Critical perspective. Some scholars in finance and economics have, in turn, critiqued MPT, drawing on various types of evidence. First, these critiques have pointed to the simultaneous increase in CEO pay and independence of boards of directors during the 1990s as inconsistent with MPT. If boards were becoming more independent, these critics argue, MPT would predict that CEOs would have actually been less able to influence the pay-setting process and thus less able to realize increasing levels of pay (Conyon, 2006; Hall and Murphy, 2003; Murphy, 2002; Murphy and Zabojnik, 2004). Second, critics of MPT have argued that the increase in both the hiring rate and pay levels of externally hired CEOs relative to internal candidates goes against MPT’s claim that incumbent CEOs have more power than externally hired CEOs (Hall and Murphy, 2003; Murphy, 2002; Murphy and Zabojnik, 2004). Third, challengers to MPT have argued that the low incidence of indexed stock options can be attributed more to their accounting treatment (at least before 2004) than to managers being able to use their power to negotiate for less risky and more accounting-friendly “plain vanilla” stock options (Conyon, 2006). Fourth and finally, recent critiques of MPT have pointed to other trends in executive compensation, such as aggregate-level associations between corporate performance and compensation as well as the shortening of CEO tenures over time, as evidence against MPT (Kaplan, 2008). Critics of MPT have used this evidence to claim that MPT is not supported by the empirical evidence (Murphy, 2002).

Managerial power theory in this thesis/study. The managerial power theory plays a crucial role in examining the relationship between CEO power and CEO career success in this thesis. This theory provides important concepts with their definitions such as CEO power, rent extraction, outrage cost and constraint, and camouflage. Besides, it brings key ideas describing relationships between these concepts and CEO pay, especially link between CEO power and CEO compensation in order to theoretically undergirds/underpins for this study by specifying these

relationships through links between the constructs of these concepts and CEO compensations. In addition, knowledge about recent debates, criticisms and findings of the managerial power theory assists the author of this thesis in identifying research direction and gaps. In addition, the theory enhances the literature review section by providing research gaps, constructs and their links as firm bases in order to select relevant variables, hypotheses and data. Moreover, the theory enhances the literature review section by providing research gaps, constructs and their links as firm bases in order to select relevant variables, hypotheses and data. Moreover, this theory is a crucial foundation for the discussion section of the thesis to present and analyse the convergence or divergence of ideas from the findings of this study, the findings from the literature reviewed, and from the theory that underlie the relationship under consideration between CEO power and CEO career success.

2.4. Studies of CEO career

Research on career seem to be on the rise in prominence and relevance for modern life generally and working life particularly (Inkson and Savickas, 2013). Studies of CEOs' careers within this area have received a growing interest because CEOs may influence not only their own personal performance but also the operations of top management team, board of directors and firm (Koyuncu et al., 2017).

2.4.1. Perspectives

The different dimensions of CEOs' careers have been studied from different perspectives. According to (Koyuncu et al., 2017), there may have three main perspectives to be employed to examine CEOs' careers. Each of them will be argued in terms of its focus, key theories and variables.

Corporate governance

Focus. The studies from this perspective explain how corporate governance mechanism and practices of a firm such as selecting, motivating, monitoring and dismissing directors and executives in general and CEO in particular have an influence on CEOs' behaviours and attitudes, and especially their careers (Koyuncu et al., 2017).

Theories. A variety of corporate governance theories have been utilised as theoretical bases or have been tested and developed in the literatures from the approach (Koyuncu et al., 2017). Among those theories, agency theory (e.g. Jensen and Meckling, 1976) has been the most influential one, due to the fact that many studies from this perspective viewed CEO as an agent of a firm's shareholders. Besides, such theories or approaches as tournament (Lazear and Rosen, 1979), stewardship (Donaldson and Davis, 1991), social network (Belliveau et al., 1996) and managerial power (Finkelstein and Hambrick, 1989) have been included in the literature stream.

Variables. CEOs' performance, effectiveness, pay, dismissal or turnover and selection of retired CEOs as board members are main dependent variables in the research models on which the corporate governance literature has studied. In spite of examining these variables in this stream mainly as indicators for the effectiveness of governance in companies, the outcomes of studies in this group usually explain factors affecting the career outcomes or advancements of a CEO (Koyuncu et al., 2017). The crucial variables largely linked with CEOs' outcomes may include ownership structure (Lau et al., 2007), presence of a large controlling shareholder (Kato and Long, 2006), executive stock ownership (Lau et al., 2007; Connelly et al., 2010; Von Lilienfeld-

Toal and Ruenzi, 2014), independence of the board of directors (Westphal, 1998; Kato and Long, 2006), board composition (Carpenter et al., 2004; Lee, 2011; Hilger et al., 2013), board characteristics (Worrell et al., 1997; Davidson III et al., 2006), CEO duality (Finkelstein and Daveni, 1994; Lau et al., 2007), compensation or incentive mechanisms (Barkema and Gomez-Mejia, 1998), and interactions or relationships between different members of the board, the CEO and the top management team (Park et al., 2011).

Upper echelons/managerial human capital

Focus. According to Koyuncu et al. (2017), comprehending how the differences in CEOs' background characteristics and their superior human capital can contribute to firm outcomes has been the focus of studies in the literature stream. Although company-level variables are utilised as main dependent ones in this kind of research, because such outcomes of a corporation indicate or demonstrate the success of a CEO in his position, acquiring understandings from this perspective is crucial to explore CEOs' careers.

Theories. Koyuncu et al. (2017) argues that upper echelons theory and managerial human capital approach have been mainly theoretical bases in this literature stream. Intellectuals from the perspective have been examining the characteristics and managerial human capital of effective/ineffective CEOs in an effort to understand what kinds of psychological or demographic individual-level features or superior human capital may be linked with what kinds of company outputs (Hambrick and Mason, 1984; Castanias and Helfat, 1991; 2001). Meta-theoretical framework of political skill (Ferris et al. (2007) and five-factor model of personality (Digman, 1990; McCrae and John, 1992) have also been theoretical bases in this literature branch.

Variables. Such firm outcomes studied in this literature stream as firm performance (e.g., Henderson et al., 2006) and the strategic persistence of the firm (e.g., Datta et al., 2003) can be also considered as indicators of a CEO's career success. Besides, compensation, promotions and career satisfaction are widely adopted dependent variables. With those dependent variables, factors varying from CEOs' psychological characteristics (e.g., personality: Papadakis and Barwise, 2002), demographics (e.g., age, gender; Datta et al., 2003; Orser and Leck, 2010) to background characteristics (e.g. CEOs' years of education (Cappelli and Hamori, 2005; Cappelli et al., 2014), functional background (Koyuncu et al., 2010), international experience (Carpenter et al., 2001; Hamori and Koyuncu, 2011), previous experience as a CEO (Hamori and Koyuncu, 2015)) and CEOs' accumulated human capital (Salvato et al., 2012) as well as their social capital (Carpenter et al., 2001; Buchholtz et al., 2003; Sundaramurthy et al., 2014) have been employed as independent variables in mainly predicting their contribution to organisational outcomes.

Human resource development

Focus. Koyuncu et al. (2017) suggested that studies from this perspective usually concentrate on CEO career pattern. Specifically, it focuses on what kinds of executives having more opportunities to be appointed as CEOs and under which circumstances, the performance consequences of different kinds of successors, and the contextual factors affecting the success of a successor in the CEO position. Although succession process, context of succession and selection decision have been the focal points of this literature, its findings are particularly closely associated with the careers of CEOs.

Theories. Resource dependency theory (Pfeffer and Salancik, 1978) and homophily model (Ibarra, 1993) have widely examined and developed in this literature stream.

Variables. The dependent variables commonly examined in this stream are selection to the CEO position, post-succession strategic persistence, and CEO/firm performance. Besides, research

from the perspective has surveyed factors influencing on CEO selection, succession process and its outcomes. They have included the presence of an heir apparent (e.g., Zhang and Rajagopalan, 2003; Savalto et al., 2012), CEO origin (e.g., Ocasio and Kim, 1999; Hadlock et al., 2002; Karaevli, 2007; Boyer and Ortiz-Molina, 2008; Koyuncu et al., 2010), pre-succession performance (e.g., Karaevli, 2007), successor/firm/predecessor characteristics (Huson et al., 2004), successor's general human capital (Hutchinson et al., 2013), top management team turnover (e.g., Shen and Cannella, 2002b; Hilger et al., 2013), environmental and strategic instability (e.g., Zhang and Rajagopalan, 2004; Karaevli, 2007), industry characteristics (e.g., Datta and Rajagopalan, 1998),. Besides, there have been substantial studies of antecedents of successor CEOs' origins or characteristics (e.g., Zhang and Rajagopalan, 2003, 2004), post-succession performance of different kinds of successors (e.g., Shen and Cannella, 2002b; Zhang and Rajagopalan, 2004), and role of contextual factors in predicting successor kinds or successor's performance (e.g., Datta et al., 2003; Karaevli, 2007).

Perspectives in this thesis. Although there are three above-mentioned perspectives to be employed to examine CEOs' careers (Koyuncu et al., 2017), only Upper echelons/ managerial human capital and corporate governance perspectives were utilised in this study. These two perspectives have many similar characteristics to the social-psychological and economics perspectives suggested by Khapova and Arthur (2011). The reason is that the two perspectives are relevant to the research problems, research objectives and theoretical framework identified in this research. Specifically, what predict CEO career success is the focus of this research while CEO career pattern and contextual factors affecting the success of a successor in the CEO position are not.

2.4.2. Themes

According to Koyuncu et al. (2017), the most widely cited terms and topics utilised in the studies of CEO career include: CEO compensation, CEO turnover, social capital and CEO, CEO tenure, CEO succession, prior experience and CEO, CEO ownership, CEO performance, CEO duality, CEO dismissal, career success and CEO. Accordingly, CEO career success is one of the most popular topics in CEO career research.

2.5. Studies of CEO career success

Based the research problems, research objectives and theoretical framework identified in sections from 1.2 to 1.4 in Chapter 1, this section is best structured according to the theoretical perspectives. In detail, literature review and hypothesis development regarding CEO career success predictors were grounded on a relevant theory/model. Before that, the relationship between CEO objective and subjective career success was examined.

Research on CEO career success can be classified into two broad strands which are the same as career success research argued by Arnold and Cohen (2008). One concerns the different ways of construing career success, and how they are (or are not) related to each other. The second strand concerns what predicts success.

2.5.1. CEO objective and subjective career success

While corporate governance, Upper echelons/ managerial human capital and human resource development perspectives have kept us supplied with consequential information about CEOs' careers, the focal point of those literatures is not the CEOs' careers. Unlike those research streams discussed above, the literature concentrating on CEOs' career success *per se* has been relatively limited (Koyuncu et al., 2017). CEO career success in the careers literature as mentioned here generally has two components: objective and subjective. These are traditional dimensions that almost researchers have utilised. This is different with seven globally relevant dimensions of career success as suggested by Mayrhofer et al. (2016).

Objective. Koyuncu et al., 2017 argue that the literature that focused on CEOs' career success mostly related CEOs' human capital to their objective career outcomes, such as the time it takes them to reach the CEO position (i.e., time to the top; Cappelli and Hamori, 2005; Hamori and Kakarika, 2009; Hamori and Koyuncu, 2011), compensation (e.g., Carpenter et al., 2001), firm performance (e.g., Koyuncu et al., 2010), and appointment to the CEO position (e.g., Helfat et al., 2006; Salvato et al., 2012; Smith et al., 2013; Fitzsimmons et al., 2014).

Beyond the scope of this study, actual financial attainment (Lau et al., 2007) will be utilised as proxies to measure CEOs' objective career success for some reasons. Actual financial attainment (or compensation or salary usually named by other researchers) is one of the most widely used indicators of objective career success because actual financial attainment can be directly measured and verified (e.g. Judge et al., 1995; Heslin, 2005; Ng et al., 2005; Abele and Spurk, 2009; Abele et al., 2011) and important to individuals on a very basic level of need fulfillment (Nicholson and de Waal-Andrews, 2005) as mentioned in detailed in the section 2.2.3.2. in this chapter. Actual financial attainment will be thoroughly discussed in terms of measurement in the section 3.3.2.1 Chapter 3.

Subjective. When objective career success is usually operationalised by observable constructs or standards such as promotions, pay, and organizational position, subjective career success is more measured by psychological ones such as career satisfaction (Ng et al., 2005). Although CEO subjective career success is occasionally researched as well (e.g., perceived success; Orser and Leck, 2010), due to the difficulty in collecting data on subjective career success with CEOs, studies about this topic are still very small (Koyuncu et al., 2017).

Perceived financial attainment and perceived career achievement have been selected as indicators of CEOs' subjective career success in the present research. One of the reasons to choose them is that they are validated in Chinese context while Vietnam have many the same contextual characteristics such as culture, economic transition and political reform with China. Perceived financial attainment and perceived career achievement be thoroughly discussed in terms of measurement in the section 3.3.2.1 Chapter 3.

The literature often refers to career success in one of two ways. The first way includes objective or extrinsic career success, or those aspects that can be evaluated objectively, such as salary and the number of promotions in one's career (Judge et al., 1995). Whereas, a second way that career success is measured is subjectively or by intrinsic career success measures such as job and career satisfaction (e.g., Judge et al., 1999a,b). Both objective and subjective career success have been considered important (Boudreau et al., 2001; Gattiker and Larwood, 1988; Judge et al., 1995); therefore, both are addressed in the present study.

Relationship between CEOs' objective and subjective career success. This subjective-objective career success duality has yet not been acknowledged by all career success researchers (Arthur et al., 2005). Especially in the past, a large body of research focused solely on objective extrinsic criteria, reflecting the prevalent bureaucratic career theory of the time. The continuous effect

of this approach is reflected in the attitudes of professional staff in large organisations that still often see career success strictly in objective terms, such as climbing the organisational ladder and speed of progression, which sometimes becomes an obsession (Callanan, 2003).

However, as demonstrated above, focusing solely on career success in terms of an individual's position or attained promotions does not reflect the new career realities, where the personal meaning of career success has become more important (Arthur and Rousseau, 1996). Parker and Arthur (2000) take this argument further, stating that how individuals feel about their career accomplishments is more important than external indicators such as salary or promotion. This perspective is based on findings that individuals with high SCS feel happier and more successful about their careers relative to their own internal standards (Peluchette, 1993). However, acknowledging the importance of a holistic approach, various authors conclude that is it imperative to incorporate both OCS and SCS, to give a complete account of individual career outcomes and gain an in-depth understanding of career success (e.g. Arthur et al., 2005; Peluchette, 1993).

Even though the two sides of career success have been demonstrated to be empirically distinct entities, they are seen to be not independent from each other (e.g. Turban and Dougherty, 1994; Seibert and Kraimer, 2001). Interdependence between objective and subjective sides of career success should be examined both theoretically and empirically.

Empirical findings of previous studies regarding interdependence between the objective and subjective sides are controversial. Research demonstrates that the objective and subjective sides of career success are moderately correlated (e.g. Turban and Dougherty, 1994). Hall and Chandler (2005) as well as Spurk and Abele (2014) showed that subjective career success can cause objective career success. Whereas, a number of studies report positive correlations between objective career success and career satisfaction (e.g. Schneer and Reitman 1993, 1997; Richardsen et al. 1997; Wayne et al. 1999; Martins et al. 2002; Raabe et al. 2007; Abele et al., 2011). Some studies show positive correlations between objective success and other-referent subjective career success (Turban and Dougherty 1994; Kirchmeyer 1998; Abele and Wiese 2008; Abele et al., 2011). Ng et al. (2005) meta-analysised 140 articles during the time period 1980-2003 and found positive correlations of objective and subjective career success not higher than 0.30. However, findings on the relationship between objective career success and self-referent subjective career success are equivocal (no relationship: Richardsen et al. 1997; Abele and Spurk, 2009; Stumpf and Tymon Jr., 2012; positive relationship: Judge et al., 1999b; Cable and DeRue, 2002; Ng et al., 2005; Adele et al., 2011; Stumpf and Tymon Jr., 2012; Converse et al., 2014; Spurk and Abele, 2014; Stumpf, 2014; mixed relationship: Judge et al., 1995).

From the theoretical perspective, three theories share a similar prediction. Attribution theory (Heider, 1958; Johns, 1999; Weiner, 1985) argues that one's promotions and salary increases are attributed to internal causes engendering positive self perceptions. Social comparison theory (Festinger, 1954) further suggests that promotions and salary level relative to others may enhance one's self perception of success and lead to greater feelings of career satisfaction. Psychological success model (Hall, 2002) predicts that a sense of psychological (subjective) career success likely be achieved when the person independently sets and exerts effort toward a challenging, personally meaningful goal and then goes on to succeed in attaining that goal (or gains objective career success). All of the three theories consider the objective career success change as a cause of subjective career success.

Although relationship between objective and subjective career success has attracted attention from a certain quantity of scholars, there have been three main limitations. First, empirical findings on this relationship is equivocal (e.g. Judge et al., 1995, 1999b; Richardsen et al., 1997). While findings on the relationship between objective career success and subjective (self-referent) career success are controversial (Judge et al., 1995; Abele et al., 2011), there was no

relationship in the study of Richardsen et al. (1997) and the positive relationship was found in the one of Judge et al. (1999b).

Second, there is virgin territory regarding participants in the samples. Employees, professionals, managers, executives and entrepreneurs have been included (e.g. Judge et al., 1995; Ng et al., 2005; Lau et al., 2007; Abele and Spuck, 2009; Stumpf and Tymon Jr., 2012); however, CEOs per se seem to be rarely included.

Third, there has been limited research on both objective and subjective sides of CEO career success combined in one study like Orser and Leck (2010) because of the difficulty in collecting data on subjective career success with CEOs (Koyuncu et al., 2017). Moreover, research on CEO career success seem not to examine the relationship between CEO objective and subjective career success because studies of CEO career success have only concentrated on its predictors and career paths (Orser and Leck, 2010; Hamori and Koyuncu, 2011; Salvato et al., 2012). Thus, we propose the following hypothesis.

H1 A CEO's actual financial attainment is positively associated with his perceived financial attainment (H1a) and perceived career achievement (H1b).

2.5.2. Factors predicting CEO career success

Koyuncu et al. (2017) summarise the main themes or relationships which have been studied by this literature. They include the career paths of CEOs and the attributes of those people who made it to the CEO position (Cappelli and Hamori, 2005; Cappelli et al., 2014), the institutionalized preferences for executives with specific functional backgrounds for the selection to the CEO position (Ocasio and Kim, 1999; Koyuncu et al., 2010), the international experience and career advancement of CEOs (Hamori and Koyuncu, 2011), and international experience and CEO pay and performance (Carpenter et al., 2001). In addition, they encompass career moves across employers and time to the top (Hamori and Kakarika, 2009), gender and attainment of the CEO position (Fitzsimmons et al., 2014; Smith et al., 2013), the accumulation of managerial experiences and appointment to the CEO position (Salvato et al., 2012), and gender influences on objective and subjective career outcomes (Orser and Leck, 2010).

Although there are many ways to classify the antecedents of CEO career success, the current research utilised two ways to do this. Firstly, based on the two perspectives of the present investigation, the antecedents were grouped into two large categories: upper echelons/ managerial human capital and corporate governance. Secondly, based on the theories/models employed as the theoretical bases for this research, the antecedents were grouped into five small categories: human capital, political skill, personality, protean career orientation, and managerial power. When the first four theories/models belonged to the Upper echelons/ managerial human capital perspective, the last one was included in the corporate governance perspective. From this chapter to the final one, the predictors are presented according to the theory/model.

2.5.2.1. Human capital predictors

From the upper echelons/managerial human capital perspective in the research into CEO careers (Koyuncu et al., 2017), as mentioned in the section entitled "Studies of CEO career", research on CEO's human capital and his or her career success is one of the literature branches (Koyuncu et al., 2017) because individuals' human capital can enhance their career success (e.g., Ng et al., 2005).

The existing literature suggests that the relationships between human capital and two aspects of career success have been complex. Individuals' human capital has been shown to be robustly and consistently related to objective career success (e.g. Lazear, 1981; Howard, 1986; Sicherman and Galor, 1990; Cappelli, 2000; Ng et al., 2005). However, evidence about the relationship between human capital and subjective career success remains inconclusive. This relationship is either partially, or not, supported by the empirical results, such as: partially supported (Judge et al., 1995, with 1,388 executives in the sample; Ng et al., 2005, based on 140 articles; Ng and Feldman, 2014, with a meta-analytic review based on 191 empirical articles; Orser and Leck, 2010; Park, 2010;) or not supported (Mohd Rasdi et al., 2011; Pfeffer and Fong, 2002). In other words, the findings regarding the relationship between human capital and subjective career success have been inconsistent.

Human capital theory has been most frequently used to predict career success (e.g., Judge et al., 1995; Wayne et al., 1999; Ng et al., 2005). A major tenet of human capital theory is that the acquisition of human capital promotes greater career success by increasing individuals' knowledge and skills, which in turn are valued and rewarded handsomely in the labour market (Becker, 1964; Strober, 1990). Human capital theory (Becker, 1964) predicts that the labor market rewards investments that individuals make in themselves and that such investments can result in increased opportunities (Becker et al., 1990; Judge et al., 1995). Additionally, human capital theory indicates that individuals with higher levels of human capital are difficult to locate and acquire (*e.g.* Gomez-Mejia and Wiseman, 1997; Devers *et al*., 2007), and are thus highly valued by organisations (*e.g.* Harris and Helfat, 1997; Combs and Skill, 2003). In short, human capital investment and human capital are argued to be posively related to objective career success. Therefore, when human capital theory is extended in career success research, investment in human capital and human capital can be predicted to be posively related to objective career success.

Many predictors have been used to measure human capital investment and human capital. They may include job tenure, organization tenure, work experience, willingness to transfer, international experience, political knowledge and skills, social capital, educational level, quantity of education, educational quality, type of education, networking behaviours, computer skills (e.g. Judge et al., 1995; Seibert et al., 2001b; Tymon and Stumpf, 2003; Fenner and Renn, 2004; Ng et al., 2005; Drucker, 2006; Van Emmerik et al., 2006; Johnson and Eby, 2011; Biemann and Braakmann, 2013; Ng and Feldman, 2014).

For both theoretical and practical reasons, the current study focused on two predictors of human capital investment and human capital in particular, namely, educational attainment and job tenure. Of the many human capital factors, education and experience have been found to be the strongest predictors of career progression (Tharenou et al., 1994; Judge etal., 1995; Kirchmeyer, 1998). Formal education is likely to provide a more in-depth, analytical knowledge of a subject area than job tenure does, whereas job tenure is likely to provide more practical knowledge and hands-on skills less frequently provided by formal education. An additional reason for focusing on these two variables is that they are the two forms of human capital investment and human capital which individuals are most likely to acquire during their careers (Myers et al., 2004; Singer and Bruhns, 1991; Strober, 1990). Further, practically speaking, most previous studies in this area have measured these variables as proxies for human capital investment and human capital. Thus, focusing on education and job tenure allowed the research to have considerably more empirical studies to make comparison with than would be the case if it had focused on other variables.

Educational attainment, or the highest level of schooling an individual has successfully completed, has commonly been linked with social advantage (Albrecht and Albrecht, 2011). Ng and Feldman (2009) conceptualized education as a form of human capital investment that involves acquiring a deeper and more detailed understanding of a subject area. Individuals who strive for high educational attainment should be better prepared to attain higher complexity

jobs. Additionally, human capital theory suggests that organizations may be more likely to invest in individuals with higher educational achievement (e.g. Ng and Feldman, 2009; Strober, 1990), which is expected to relate to career success. Organizations may provide more resources, such as training or certification, leading to a greater sense of accomplishment (intrinsic or subjective career success). All in all, the author of this research, therefore, expected that educational attainment would enhance a CEO's subjective career success.

H2 CEO educational attainment (human capital investment predictor) is positively associated with his subjective career success (perceived financial attainment (H2a) and perceived career achievement (H2b)).

Tenure is one of the most frequently used operationalizations of work experience (McDaniel, Schmidt, and Hunter, 1988; Quinones, Ford, and Teachout, 1995; Sturman, 2003). Those with more years of service are generally familiar with a broader set of work processes within a career and are often skilful in performing multiple tasks within the career. It is this type of implicit knowledge, acquired from accumulated experience on multiple tasks in a career, which is seen as such an important determinant of career success (Bird, 1996; Eby, Butts, and Lockwood, 2003). Job tenure is a specific form of human capital because it generates maximum returns for individuals only if they remain with their particular employers for longer periods of time.

However, evidence from the existing literature suggests that there is no relationship between job tenure and subjective career success (job satisfaction or career satisfaction) (e.g., Judge et al., 1995; Ng et al., 2005). With this premise in mind, an individual's working experience might give rise to career success (Becker, 1993a). Therefore, it was hypothesised that:

H3 CEO tenure (human capital predictor) is positively associated with his subjective career success (perceived financial attainment (H3a) and perceived career achievement (H3b)).

2.5.2.2. Political skill predictors

Political skill has usually been studied in relation to stress management, individual performance, and leadership effectiveness. In this research, political skill was considered in relation to career success. Ferris et al. (2008) revealed that political skill has positive effects on hierarchical position and job satisfaction but that it does not affect yearly gross income. Gentry et al. (2012) reported a positive relationship between individuals' political skill and their other-rated promotability. A meta-analysis conducted by Munyon et al. (2015) confirmed the positive relationship between political skill and various aspects of career success (i.e. overall career success, income, position, and career satisfaction). Through dimensional analysis, Todd et al. (2009) revealed that networking ability is the strongest predictor of career success (total compensation, total promotion, career satisfaction, life satisfaction and perceived marketability). In addition, Huang et al. (2013) revealed that being perceived as politically skilled has a positive effect on being recommended for managerial positions and receiving entrepreneur funding. These above-mentioned findings suggest that the importance of political skill for career success may be widely recognized in business society. However, the results of empirical research indicate an inconclusive PS-CS relationship. In addition, the meta-theoretical framework of political skill was firstly proposed by Ferris and colleagues (2007) and then advanced by Munyon et al. (2015); therefore, it lacks empirical evidence. Taken together, these arguments suggest the hypothesis given below:

H4 CEO political skill is positively associated with measures of his career success (actual financial attainment (H4a), perceived financial attainment (H4b) and perceived career achievement (H4c)).

Empirical studies have also examined moderators. Given a series of studies examining the specific effects of either an individual's or organisational characteristics on career success, a developing literature suggests that the interactive effects between environmental and individual characteristics are just as important to study. Specifically, the relationship between certain individual characteristics (e.g., political skill) and career success may be moderated by organisational size (as suggested by Olian and Rynes, 1984; Sonnenfeld and Peiperl, 1988; Judge et al., 1995; Ng et al., 2005; Gallagher and Laird, 2008; Abele et al., 2011; Kimura, 2015), or ownership structure (as recommended by Sonnenfeld and Peiperl, 1988; Judge et al., 1995; Ng et al., 2005; Michiels et al., 2013). Based on this reasoning, the researcher hypothesised:

H5 Firm size moderates the relationship between CEO political skill and measures of his career success (actual financial attainment (H5a), perceived financial attainment (H5b) and perceived career achievement (H5c)).

H6 Ownership structure moderates the relationship between CEO political skill and measures of his career success (actual financial attainment (H6a), perceived financial attainment (H6b) and perceived career achievement (H6c)).

2.5.2.3. Personality trait predictors

The FFM personality dimensions may relate to measures of career success (Judge et al., 1999a). Objective measures of career success in this relationship include annual salary (e.g. Spurk and Abele, 2011), annual income (e.g. Sutin, 2009), income range (Bergner et al., 2010), pay (e.g. Ganzach and Pazy, 2015), lifetime income and wealth (Duckworth et al., 2012), promotion (e.g. Wu et al., 2008), promotion rate (Bergner et al., 2010), occupational prestige (e.g. Sutin, 2009), occupational status (e.g. Ganzach and Pazy, 2015), and organisational grade (Bozionelos, 2004). The subjective measures of career success encompass perceived job success (e.g. Smithikrai, 2007), career satisfaction (e.g. Wu et al., 2008), job satisfaction (e.g. Judge et al., 2002; Bozionelos, 2004; Sutin, 2009; Bergner et al., 2010), perceived hierarchical success, perceived financial success and perceived interpersonal success (Bozionelos, 2004), life satisfaction (Bozionelos, 2004; Duckworth et al., 2012), supervisor ratings on contextual and task performance (Bergner et al., 2010), and positive and negative effects (Duckworth et al., 2012).

In spite of the relationship between the FFM personality dimensions and career success examined in many studies (e.g. Boudreau and Boswell, 2001; Ng et al., 2005; Wu et al., 2008; Sutin et al., 2009; Bergner et al., 2010; Viinikainen et al., 2010; Spurk and Abele, 2011; Ville et al., 2013; Ganzach and Pazy, 2015), its moderators have identified some areas for future analysis (Judge and Kammeyer-Mueller, 2007). The influence of agreeableness and openness on career success may be moderated by the specific occupational context, such as the employment sector called by Baum and Locke (2004), Seibert and Kraimer (2001) and Spurk and Abele (2011). Unfortunately, these moderation relationships have been an under-researched area in the existing literature (Spurk and Abele, 2011). Therefore, the study proposed the following hypotheses:

H7 The employment sector moderates the relationships between CEO agreeableness and measures of his career success (actual financial attainment (H7a), perceived financial attainment (H7b) and perceived career achievement (H7c)).

H8 The employment sector moderates the relationships between CEO openness and measures of his career success (actual financial attainment (H8a), perceived financial attainment (H8b) and perceived career achievement (H8c)).

2.5.2.4. Protean career orientation predictor

In addition to the fact that there is a lack of empirical evidence for PCO (Domberger, 2005; Baruch, 2008; Gerber, 2009), there are ambiguities in the empirical findings regarding the relationship between PCO and CS. On the one hand, empirical research has predominantly found a positive relationship between PCO and SCS, operationalised by variables such as career satisfaction, job satisfaction and perceptions of career success (e.g. Baruch and Quick, 2007; Enache et al., 2011; Jung and Takeuchi, 2011; Volmer and Spurk, 2011; Grimland et al., 2012; Baruch et al., 2014, 2015; Rodrigues et al. 2015; Zhang et al., 2015; Supeli and Creed, 2016).

On the other hand, the findings with respect to the link between PCO and OCS have been inconclusive. Specifically, with regard to salary, the most common proxy for OCS, the results have been disentangled. Some researchers found a positive relationship between PCO and salary (e.g. Baruch, 2014), while others did not (e.g. Baruch and Quick, 2007; Gasteiger, 2007; Volmer and Spurk, 2011; Baruch et al., 2012). Regarding other proxies of objective career outcomes, the findings have also been ambiguous. A posive relationship between PCO and hierarchical position has been reported (e.g. Jung and Takeuchi, 2011; Grimland et al. 2012; Baruch et al., 2014) when no relationship between PCO and number of promotions was found (e.g. Gasteiger, 2007; Volmer and Spurk, 2011)

Additionally, protean career orientation holds such valuable qualities as identity, value-driven, adaptability and self-diretion, which are very beneficial for an individual's career success, including OCS. Based on the aforementioned reasoning, it was hypothesised:

H9 A CEO's protean career orientation is positively related to his actual financial attainment.

Given a series of studies examining the specific effects of either an individual's or organisational characteristics on career success, a developing literature suggests that the interactive effects between the environmental and an individual's characteristics have been no less important to study. Specifically, the relationship between certain individual characteristics (e.g., protean career orientation) and career success may be moderated by organisational size (Olian and Rynes, 1984; Sonnenfeld and Peiperl, 1988; Judge et al., 1995; Ng et al., 2005; Gallagher and Laird, 2008; Abele et al., 2011; Kimura, 2015), or ownership structure (Sonnenfeld and Peiperl, 1988; Judge et al., 1995; Ng et al., 2005; Michiels et al., 2013). Thus, the study proposed the following hypotheses:

H10 Firm size moderates the relationships between a CEO's protean career orientation and measures of his career success (actual financial attainment (H10a), perceived financial attainment (H10b) and perceived career achievement (H10c)).

H11 Ownership structure moderates the relationships between a CEO protean career orientation and measures of his career success (actual financial attainment (H11a), perceived financial attainment (H11b) and perceived career achievement (H11c)).

2.5.2.5. Managerial power predictors

CEO power has received attention for more than two decades (e.g. Finkelstein, 1992; Westphal and Zajac, 1995; Shen and Cannella, 2002a; van Essen et al., 2015). However, the association between CEO power and CEO career success has not been examined exhaustively. Many studies focus only on the relationship between CEO power and CEO compensation –one of the most

popular indicator of CEO objective career success. In addition, this link has been mostly investigated from strategy and corporate governance perspectives (e.g. Finkelstein and Hambrick, 1989; Core et al., 1999; Bebchuk et al., 2002; Murphy, 2002; Bebchuk and Fried, 2003; Bebchuk et al., 2011; Chen et al., 2011; van Essen et al., 2015; Shin, 2016). Unfortunately, the literature is characterized by divergent and conflicting findings despite the strong theoretical foundations linking CEO power to CEO pay (e.g. O'Reilly and Main, 2010; van Essen et al., 2015). In addition, the relationship between CEO power and CEO subjective career success has been under-researched, although the question 'Can CEO power bring CEO subjective career success?' is of interest to scholars. According to managerial power theory, CEOs with more power can extract more rents (Bebchuk et al., 2002). Based on this premise, this study believed that CEO power can bring both objective and subjective career success.

In order to measure the managerial power of a CEO, three indicators were focused on, namely, CEO duality, CEO tenure, and board size, because they are firm-level characteristics which can enable or constrain the power of CEOs (e.g. Zahra and Pearce, 1989; Finkelstein and D'Aveni, 1994; Tosi et al., 2000; Bebchuk and Fried, 2004).

A key structural governance feature is CEO duality, in which an individual has the roles of both CEO and board chairman. MPT predicts that the concentration of decision-making power in one individual leads to more power, for several possible reasons (Finkelstein and D'Aveni, 1994). Firstly, since the CEO-chairman is responsible for organizing board meetings and setting the agendas of these meetings, the CEO-chairman is able to control the information provided to the board of directors (Bebchuk and Fried, 2004; Pearce and Zahra, 1991). Secondly, CEO duality increases the CEO's influence over the nomination process of new directors (Westphal and Zajac, 1995). Thirdly, the dual role of CEO and chairman can be considered as the highest rank in the corporate hierarchy. This figurehead status, with increased mandate and power, can lead to more influence over the pay setting process (Ungson andSteers, 1984). Therefore, based on the above-mentioned premise, this study believed that CEO power can bring both objective and subjective career success, and hypothesised that:

H12 CEO duality is positively associated with measures of his career success (actual financial attainment (H12a), perceived financial attainment (H12b) and perceived career achievement (H12c)).

The length of a CEO's tenure is also likely to be an important determinant of managerial power. Longer tenured CEOs can be expected to have more influence over board members and their decisions because they have more status and more experience with the company and its board (Bebchuk and Fried, 2003, 2006). The collaboration among board members and bonds of collegiality intensify over time, and CEOs with longer tenure have more time to influence this process (Bebchuk and Fried, 2004; Macey, 2008). CEOs with longer tenure can also be more directly influential over the remuneration committee. Evidence pointing in this direction shows that remuneration committees whose chairs have been installed later than the CEO tend to pay more (Main et al., 1995). Furthermore, other research has found that the relationship between firm performance and CEO pay weakens as tenure increases (Hill and Phan, 1991). CEOs with longer tenure are, therefore, expected to have more power and, based on the above-mentioned premise, the author of this study believed that CEO power can bring both objective and subjective career success, and hypothesised that:

H13 CEO tenure is positively associated with measures of his career success (actual financial attainment (H13a), perceived financial attainment (H13b) and perceived career achievement (H13c)).

The board size in terms of the number of directors is also likely to enable or constrain managerial power. Although monitoring requires capacity, large boards can be ineffective at constraining managerial power because larger boards require more time and effort to build consensus and generate the social cohesion of smaller boards (Zahra and Pearce, 1989). In addition, larger boards can become ineffective because of internal coordination and communication problems (Bebchuk and Fried, 2004). Therefore, the in-group monitoring and collective action problems of larger boards may provide executives with more power over the pay-setting process (Eisenberg, Sundgren, and Wells, 1998; O'Reilly and Main, 2010; Pfeffer, 1972; Yermack, 1996). Moreover, based on the above-mentioned premise, the researcher believed that CEO power can bring both objective and subjective career success, and hypothesised that:

H14 Board size is positively associated with measures of CEO career success (actual financial attainment (H14a), perceived financial attainment (H14b) and perceived career achievement (H14c)).

All of the hypotheses developed and tested in this study are summarised in Table 2.8 below.

Table 2.8. Summary of hypotheses

H1	A CEO's actual financial attainment is positively associated with his perceived financial attainment (H1a) and perceived career achievement (H1b).
H2	CEO ducational attainment (human capital predictor) is positively associated with his subjective career success (perceived financial attainment (H2a) and perceived career achievement (H2b)).
H3	CEO tenure (human capital predictor) is positively associated with his subjective career success (perceived financial attainment (H3a) and perceived career achievement (H3b)).
H4	CEO political skill is positively associated with measures of his career success (actual financial attainment (H4a), perceived financial attainment (H4b) and perceived career achievement (H4c))
H5	Firm size moderates the relationship between CEO political skill and measures of his career success (actual financial attainment (H5a), perceived financial attainment (H5b) and perceived career achievement (H5c)).
H6	Ownership structure moderates the relationship between CEO political skill and measures of his career success (actual financial attainment (H6a), perceived financial attainment (H6b) and perceived career achievement (H6c)).
H7	The employment sector moderates the relationships between CEO openness and measures of his career success (actual financial attainment (H8a), perceived financial attainment (H8b) and perceived career achievement (H8c)).
H8	The employment sector moderates the relationships between CEO agreeableness and measures of his career success (actual financial attainment (H8a), perceived financial attainment (H8b) and perceived career achievement (H8c)).
H9	A CEO's protean career orientation is positively related to his actual financial attainment.
H10	Firm size moderates the relationships between a CEO's protean career orientation and measures of his career success (actual financial attainment (H10a), perceived financial attainment (H10b) and perceived career achievement (H10c)).
H11	Ownership structure moderates the relationships between a CEO's protean career orientation and measures of his career success (actual financial attainment (H11a), perceived financial attainment (H11b) and perceived career achievement (H11c)).
H12	CEO duality is positively associated with measures of his career success (actual financial attainment (H12a), perceived financial attainment (H12b) and perceived career achievement (H12c)).
H13	CEO tenure is positively associated with measures of his career success (actual financial attainment (H13a), perceived financial attainment (H13b) and perceived career achievement (H13c)).
H14	Board size is positively associated with measures of CEO career success (actual financial attainment (H14a), perceived financial attainment (H14b) and perceived career achievement (H14c)).

The SCSTOP_CS research model is presented in Figure 2.6, below, where all of the above-mentioned hypotheses are displayed and examined. The SCSTOP_CS research model is based on six groups of relationships, specifically, objective-subjective career success (O-SCS), human capital – career success (HC-CS), political skill – career success (PS-CS), personality trait - career success (PT-CS), protean career orientation – career success (PCO-CS) and managerial power – career success (MP-CS).

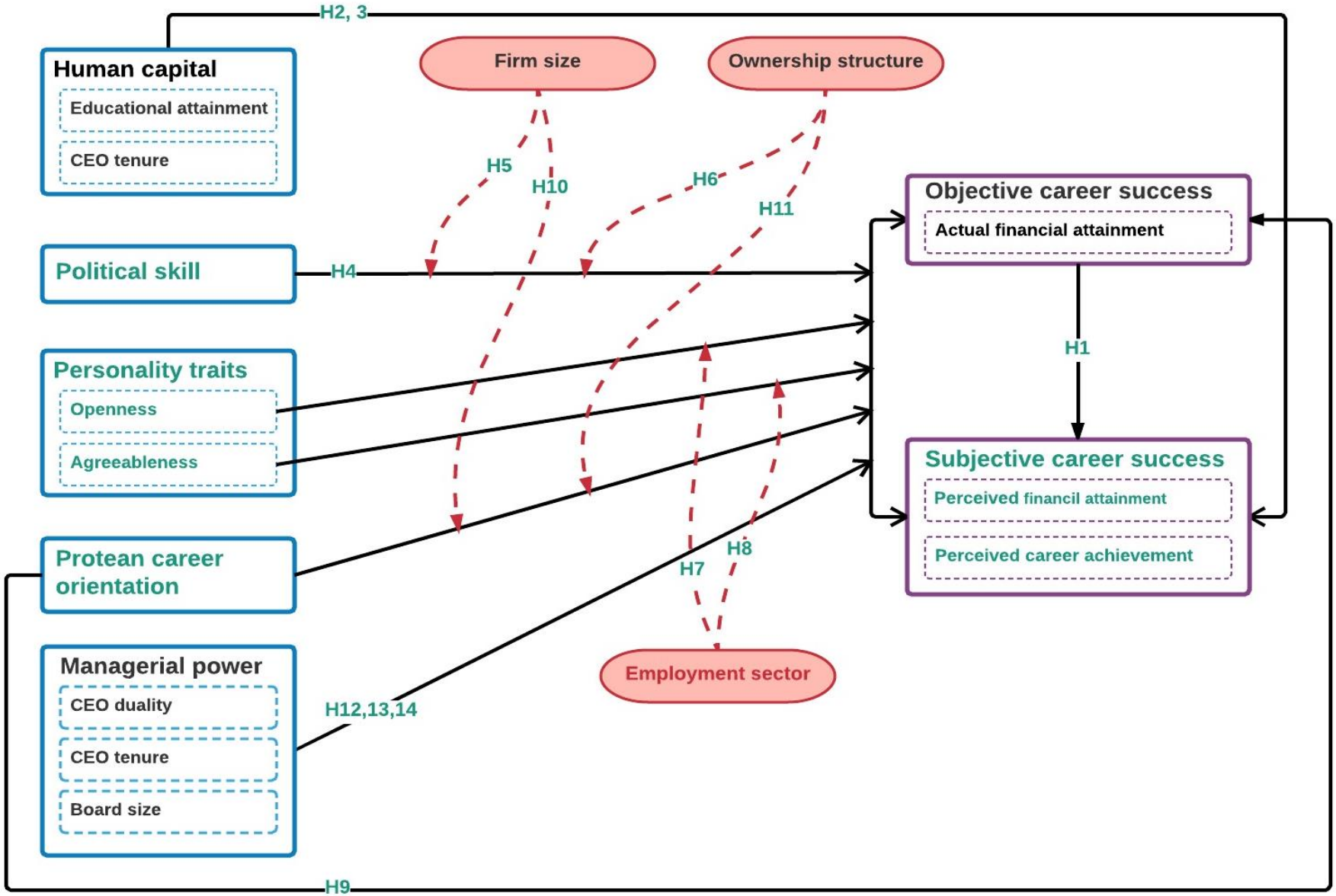


Figure 2.6. The SCSTOP_CS research model

2.6. Summary

This chapter started by presenting the most essential and relevant points regarding CEOs, careers and career success. CEOs, careers, traditional careers, new career realities, contemporary careers, as well as objective and subjective careers, have been defined and characterised. Additionally, defining, conceptualising and measuring career success have been discussed and predictors of career success have been summarised and grouped.

Following this, six theoretical perspectives have been selected and discussed. Merchant et al. (2003) argued that most of the different theories explain a single phenomenon. Thus, by using one theoretical explanation, the research conclusion will be limited and incomplete. It was also noted that most previous studies, except for a few (for instance Judge et al., 1995; Orser and Leck, 2010), had adopted multiple theories to explain executives' career success. In this study, all of the aforementioned theories and models have been used to provide reasons and justification for relationships between two aspects of CEO's career success, as well as between CEO's human capital, political skill, personality trait, protean career orientation and power with his or her career success.

Then, in the section entiled 'Studies of CEO career', perspectives and themes of CEO careers have been considered. The three main perspectives, specifically, corporate governance, upper echelons/ managerial human capital, and human resource development, were employed to examine CEO careers. Each of them was argued in terms of its focus, key theories and variables. In addition, the common topics in the studies of CEO career were mentioned. Examining these perspectives and themes has been beneficial for this study to determine its topic and the perspectives to be researched.

Finally, in the section titled 'Studies of CEO career success', the most relevant research in the existing literature has been reviewed and the hypotheses developed. The next chapter details the methodology employed in conducting the present study on the relationships between two aspects of CEOs' career success, as well as between CEOs' career success and its predictors.

Chapter 3 Research Methodology

3.1. Introduction

This chapter explains the methodology used to achieve the research aims and objectives. The chapter describes the positivistic philosophical approach and quantitative research strategy employed in this thesis. This study followed a correlational research design and used cross-sectional data and structural equation modelling methods to test the hypotheses developed in Chapter 2 To begin with, the positivist perspective and deductive nature of the study are described followed by a portrayal of the research design, which encompasses general points of research design, measures, data and instruments. There follows an explanation of the data collection, which includes target population, sampling and procedure for data collection. Then, the data analysis is explained. This outlines the analysis, justifies the use of CB-SEM with Mplus, presents the data analysis procedure and explains the assessment of the exploratory factor analysis (EFA) as well as the structural equation modelling (SEM). Next, the ethical issues associated with this thesis are discussed.

The research methodology pursued in this study was similar to the vast majority of empirical career success research. Recent studies include Abu Said et al. (2015), Supeli and Creed (2016) in the Southeast Asia and Enache et al. (2012), Cao et al. (2013), Forstenlechner et al (2014), Haines et al. (2014), Direnzo et al. (2015), Ngo and Li (2015), Converse et al. (2016), Guerrero et al. (2016), and Rowley et al. (2016) in other areas. However, the research methods adopted by this research set it apart from the prior literature.

This study contributes to the CEO career success literature with respect to its findings, but also with regard to the following attributes that distinguish it from previous research on this topic.

i) This is the first cross-disciplinary study that combines the perspectives related to economics, psychology, human resource development and corporate governance in order to develop a broader, deeper and unbiased insight into CEO career success, as well as its predictors.

ii) The new data set assisted the researcher to bring new evidence to bear not only on old, but also new, issues. Specifically, the new data set with regard to CEO career success and its predictors (human capital, political skill, personality trait, PCO and managerial power) in a transition country in Southeast Asia provides a fascinating research laboratory for testing and developing theories, as previously mentioned in Chapter1, which discussed the background to the problem.

iii) The data used in this research came from multiple sources to control for common method variance. For instance, the CEO compensation data came from the Taxation Department and directors' reports, while the sources of the data on board ownership were annual reports, directors' reports and websites such as cafef.vn or finance.vietstock.vn.

iv) Primary data on CEO's subjective career success, political skills, personality traits and protean career orientation was collected from 179 CEO-respondents. Because of the difficulty in collecting data on the subjective career success of CEOs (Koyuncu et al., 2017), this was one of novel contributions of this thesis.

v) CEO's compensation (actual financial attainment) was measured as annual cash income from the firm, and was provided by the Vietnamese General Department of Taxation. The data was not the range of income and not self-reported, as was the data in the studies by Mohd Rasdi et al. (2011) and Stumpf and Tymon (2012). Therefore, this measure will improve the quality of the data and related estimations.

vi) This thesis utilised multiple measures for each construct, with the exception of the objective career success. This research improves the quality of measures in comparison with the studies by Judge et al. (1995) and Converse et al. (2016). Accordingly, this study contributes to enhancing the measurement of constructs with regard to the associations between career success and its predictors by reducing the a threat to construct validity from mono-operation bias.

vii) This research employed different methods to measure a construct in order to decrease the threat to construct validity from mono-method bias. For example, human capital was a construct in this research, which was operationalised by two measures (years of education and CEO tenure) and was measured by two methods (survey and hand collection from the annual reports and websites such as cafef.vn and finance.vietstock.vn). In terms of measurement, this study makes advances compared to Maurer and Chapmman (2013) and Ngo and Li (2015).

viii) This research contributes to improving measuring the PCO concept by using a 4-item scale (lower than any other scales). The total of scale items in this study was smaller than the 14 suggested by Briscoe et al. (2006) or the 7 recommended by Baruch (2014) or Porter et al. (2016). In addition, this research tested the scale in a new context (in an emerging nation).

ix) The data on CEO compensation (actual financial attainment), board size, board composition, board ownership and ownership concentration was hand collected from income tax statements, annual reports, directors' reports and the websites to a level of detail not realised in prior research on career success. The distinctive feature of the data was that it incorporated the data on CEO subjective career success, human capital, political skill, personality trait and protean career orientation from the survey. This facilitated analysis of the associations between the five types of predictors and two aspects of CEO career success, which has not previously been possible.

x) The study applied structural equation modelling using Mplus in a study of CEO career success, which has not previously been applied to this topic. This provided the researcher with the flexibility to: (a) model relationships among multiple predictors and criterion variables, (b) construct unobservable latent variables, (c) model errors in the measurement of observed variables, and (d) statistically test a priori substantive/theoretical and measurement assumptions against empirical data (i.e., confirmatory analysis), as suggested by Chin (1998).

3.2. Research philosophy, approach and strategy

3.2.1. Research philosophy

"A*ll research work is based on a certain vision of the world, employs a methodology, and proposes results aimed at predicting, prescribing, understanding, or explaining"* (Girod-Seville and Perret, 2001, p.13). Easterby-Smith et al. (2012) argued that clarification of the philosophical stance is important and helpful to researchers at the outset of every research study. They outlined three main reasons for the need for clarifying philosophical stances which are meant to assist the researcher with the "knowledge of philosophy", "research design", and "researcher abilities". The researcher chose the view of Saunders et al. (2016) regarding philosophical stances, in which the philosophical stances in research are referred to as research philosophies.

Saunders et al. (2016) defined *research philosophy* as "a system of beliefs and assumptions about the development of knowledge" (p.124). Whether you are consciously aware of them or not, at every stage in your research you will make a number of types of assumption (Burrell and Morgan, 1979). These include assumptions about the realities you encounter in your research (ontological assumptions), about human knowledge (epistemological assumptions) and about the extent and ways your own values influence your research process (axiological assumptions).

A well-thought-out and consistent set of assumptions will constitute a credible research philosophy (Saunders et al., 2016).

The research philosophy with relevant ontological, epistemological and axiological assumptions inevitably shapes your research in some ways or aspects. The research philosophy adopted contributes to how you understand your research questions, the methods you use and how you interpret your findings (Crotty, 1998). The research philosophy will underpin your research approach, research strategy, study design and data collection techniques and analysis procedures (Bryman, 2016; Saunders et al., 2016). This will allow you to design a coherent research project, in which all elements of the research fit together. Johnson and Clark (2006) noted that business and management researchers need to be aware of the philosophical commitments they make through their choice of research strategy, since this will have a significant impact on what they do and how they understand what it is they are investigating (Saunders et al., 2016).

Positivism relates to the philosophical stance of the natural scientist and entails working with an observable social reality to produce law-like generalisations. The positivist strongly focuses on strictly scientific empiricist methods designed to yield pure data and facts, uninfluenced by human interpretation or bias. Positivism is discussed below in terms of ontological, epistemological and axiological assumptions (Saunders et al., 2016).

Ontologically, if you were to adopt an extreme positivist position, you would see organisations and other social entities as being real, in the same way as physical objects and natural phenomena are real (Saunders et al., 2016). This view is parallel with the real and true reality which is governed by unchangeable natural law (Guba and Lincoln, 1994). In other words, the nature of social realitiy is assumed to be as ordered. Additionally, positivists believe that reality is universal and granular (Saunders et al., 2016).

The epistemologist focuses on discovering observable and measurable facts and regularities, and only phenomena that can be observed and measured and which would lead to the production of credible and meaningful data (Crotty, 1998). The epistemologist looks for causal relationships in the data to create law-like generalisations, akin to those produced by scientists (Gill and Johnson, 2010). He/she uses these universal rules and laws to help to explain and predict behaviour and events in organisations (Saunders et al., 2016).

Axiologically, as a positivist the researcher would also try to remain neutral and detached from their research and data in order to avoid influencing the findings (Crotty 1998). This means that the researcher undertakes research, as far as possible, in a value-free way. For positivists, this is a plausible position, because of the measurable, quantifiable data that they collect. They claim to be external to the process of data collection, as there is little that can be done to alter the substance of the data collected (Saunders et al., 2016).

For most of its history, understanding of careers has been influenced by the positivist worldview, which emphasises rationality based on an objective value free knowledge, objectivity over subjectivity, facts over feelings. Positivism in career research in particular, and in social research in general, is underpinned by the following core assumptions: that individual behaviour is observable, measurable and linear; that individuals can be studied separately from their environments; and that the contexts within which individuals live and work are of less importance than their actions (Patton and McMahon, 2014).

Alternatively, the rise to prominence of the influence of the constructivist worldview has made a significant impact on the career discourse (McIlveen and Schultheiss, 2012). Constructivists argue against the possibility of absolute truth, asserting that an individual's construction of reality is constructed "from the inside out" through the individual's own thinking and processing. These constructions are based on individual cognitions in interaction with perspectives formed from person-environment interactions. Constructivism views the person as an open system, constantly interacting with the environment, seeking stability through ongoing change. Additionally,

constructivists assert that individuals actively construct their own reality, and are able to actively construct a meaningful position within the work context (Patton and McMahon, 2014).

Within the positivist stance, the early thinking about career focused on the individual as operating quite separately from the context, a reflection of the industrial era ethos of autonomy and choice (Patton and McMahon, 2014). While early theorists began to identify relevant contextual influences (e.g., Super 1957, 1980), it was the development of social cognitive theory (Lent et al., 1994) and developmental contextualism (Vondracek et al., 1986) which introduced the relevance of context to understanding careers. More recently a number of theoretical discussions have embedded the relationship in a discussion of work and life (e.g., psychology of the working paradigm, Blustein, 2006, 2011; relational cultural paradigm, Schultheiss, 2013; career construction and the life design paradigm, Savickas, 2013). Proximal relationships, such as family, peers and mentors, have received some attention in the literature. However, Richardson (2012a, b) and Schultheiss (2013) have emphasised that distal social structures and culture inevitably impact proximal relationships. The relational cultural paradigm emphasises that relationships cannot be understood outside their social and cultural contexts (Schultheiss, 2013).

Based on its developmental history, the research philosophy of career research has been shifting from positivism to constructivism, or a combination of positivism and constructivism. While positivism is mostly a philosophical stance from which to conceptualise careers in industrial societies, constructivism is an alternative one from which to conceptualise careers in post-industrial societies (Patton and McMahon, 2014). Savickas (2000) attributed the influence of constructivism to changes in the structure of work and the emphasis on individuals becoming agents of their own lives and careers, as it provides an alternative perspective from which to conceptualise careers in post-industrial societies.

The econometric relationships between a set of explanatory variables and Vietnamese CEOs' career success were investigated from a positivist perspective. The positivistic nature of the study was initially characterised by the research purpose, which was to examine the associations between a variety of predictors and CEO career success. Positivism relates to the philosophical stance of the natural scientist and entails working with an observable social reality to produce law-like generalisations (Saunders et al., 2016). There are specific research designs and methods, which are typically associated with a positivistic philosophical perspective. Positivists usually adopt a quantitative research design, for example a survey, and may use questionnaires to collect large amounts of data for statistical analysis and hypothesis testing. Here, the relationships between exploratory variables and CEO career success were investigated in a correlational setting using structural equation modelling.

In addition, this research was viewed from a constructivist perspective. The impact of contextual factors (occupational context and ownership structure) on the relationships between its explanatory variables and Vietnamese CEOs' career success were examined. In addition, protean career orientation was selected to investigate the attitudes of the Vietnamese CEOs to their careers.

To sum up, all of the above discussions justify the positivism and constructivism research philosophies as being applicable to this research.

3.2.2. Research approach

Easterby-Smith et al. (2012) suggested three reasons for the importance of the choice of a relevant research approach to conduct a study or to develop a theory. Firstly, it enables th researcher to take a more informed decision about the research design, which is more than just the techniques by which data is collected and procedures by which it is analysed. It is the overall configuration of a piece of research involving questions about what kind of evidence is gathered

and from where, and how such evidence is interpreted in order to provide good answers to the initial research question.

Secondly, it helps the researcher to think about those research strategies and methodological choice that will work and, crucially, those that will not. For example, if the researcher is particularly interested in understanding why something is happening, rather than being able to describe what is happening, it may be more appropriate to undertake the research inductively rather than deductively.

Thirdly, knowledge of the different research traditions enables the researcher to adapt the research design to cater for constraints. These may be practical, involving, say, limited access to data, or they may arise from a lack of prior knowledge of the subject. The researcher simply may not be in a position to frame a hypothesis because he/she has insufficient understanding of the topic to do this.

There are three main research approaches to theory development: deduction, induction and abduction. With deduction, a theory and hypothesis (or hypotheses) are developed and a research strategy is designed to test the hypothesis. With induction, data is collected and a theory is developed as a result of the data analysis. With abduction, data is used to explore a phenomenon, identify themes and explain patterns, to generate a new, or modify an existing, theory which is subsequently tested, often through additional data collection (Saunders et al., 2016).

As the deductive approach is frequently is linked more to positivist research philosophy and related to a quantitative framework, this empirical study was, therefore, based on a deductive framework in which the conceptual structure of the existing theory was studied, testable hypotheses were developed, and the empirical observations were discussed. Scientifically, this approach is also used to move from the general to the particular in an attempt to explain or investigate reality (Crowther and Lancaster, 2008).

Deduction possesses several important characteristics. Firstly, there is the search to explain the causal relationships between concepts and variables. An additional important characteristic of deduction is that concepts need to be operationalised in a way that enables facts to be measured, often quantitatively. The final characteristic of deduction is generalisation. In order to be able to generalise, it is necessary to select the sample carefully and for it to be of sufficient size (Saunders, 2016).

In addition, as discussed in section 3.2.1 in this chapter, positivism seeks causal explanations and fundamental laws (Guba and Lincoln, 1994). A positivist researcher might use existing theory to develop hypotheses. These hypotheses would be tested and confirmed, in whole or part, or refuted, leading to the further development of theory which then may be tested by further research. The hypotheses developed would lead to the gathering of facts that would provide the basis for subsequent hypothesis testing. These discussions imply that positivism is outcome oriented and beholds natural laws and mechanisms, which is at a par with theory-testing or deduction.

Accordingly, the research approach used in this study was deductive. The researcher aimed to explore the prior literature about, and the theoretical background of, CEO career success and its predictors in order to test the developed research hypotheses on these associations by using Vietnamese listed firms. This aim was carried out by the development of a set of hypotheses, deduced from human capital theory, the political skills framework, the five-factor model of personality, the protean career theory and managerial power theory, as well as relevant literature, in order to test the associations between relevant exploratory variables and CEO career success. From the perspectives of these theories, it was hypothesised that the relevant predictors are significantly associated with CEO career success, whilst controlling for CEO age and gender variables. A rejection of the null hypotheses would provide support for the theoretical propositions derived from these theories and models.

On the other hand, the appropriate approach to study, explain, and explore reality is more likely to be inductive than deductive, especially when the theory is not well developed, very hesitant, or outdated. Inductive studies normally start with data collection, move on to the analysis, and end with the results which could lead to the development of an existing theory or the formation of a new theory underpinning the phenomena being examined. Therefore the data would be followed after investigating the theory (Saunders et al., 2016). An inductive research approach seemed to be largely irrelevant to this study.

In summary, the above discussion regarding the types of research approach, especially deduction, and positivism led to a confirmation that deduction was a suitable research approach for this study. The reasons for this reasoned choice were that a deductive approach to the relationship between theory and research owns its characteristics, and were suited to the research philosophy of this study (positivism), as argued in this chapter as well as the research objectives of this study suggested in Chapter 1.

3.2.3. Research strategy

There are three research strategies: quantitative, qualitative and mixed methods. The research philosophy, research approach and characteristics of each research strategy are discussed below.

"Quantitative research can be construed as a research strategy that emphasizes quantification in the collection and analysis of data" (Bryman, 2016, p.35). Quantitative purists (e,g. Ayer, 1959; Popper, 1959; Schrag, 1992; Punch, 1998; Maxwell and Delaney, 2004) articulated assumptions that are consistent with what is commonly called a positivist philosophy. That is to say, quantitative purists believe that social observations should be treated as entities in much the same way that physical scientists treat physical phenomena (e.g. Bryman, 2016). Further, they contend that the observer is separate from the entities that are subject to observation. Quantitative purists maintain that social science inquiry should be objective (e.g. Bryman, 2016; Saunders et al., 2016). That is to say, time- and context-free generalizations (Nagel, 1986) are desirable and possible, and real causes of social scientific outcomes can be determined reliably and validly. According to this school of thought, researchers should eliminate their biases, remain emotionally detached and uninvolved with the objects of study, and test or empirically justify their stated hypotheses (e.g. Johnson and Onwuegbuzie, 2004; Saunders et al., 2016).

Quantitative research usually entails a deductive approach to the relationship between theory and research, where the focus is on using data to test a theory (Bryman, 2016; Saunders et al., 2016). However, it may also incorporate an inductive approach, where data is used to develop a theory (Saunders et al., 2016). The deductive strategy is associated with a quantitative research approach, an inductive strategy of linking data and the theory is typically associated with a qualitative research approach (Bryman, 2016).

A quantitative research strategy has some main characteristics. This research strategy examines the relationships between variables, which are measured numerically and analysed using a range of statistical and graphical techniques. It often incorporates controls to ensure the validity of the data, as in an experimental design. Because data is collected in a standard manner, it is important to ensure that questions are expressed clearly so that they are understood in the same way by each participant. This methodology often uses probability sampling techniques to ensure generalisability. The researcher is seen as being independent from those being researched, who are usually called respondents (Saunders et al., 2016).

"Qualitative research can be construed as a research strategy that usually emphasizes words rather than quantification in the collection and analysis of data" (Bryman, 2016, p36). Qualitative purists (also called constructivists and interpretivists) reject what they call positivism (e.g. Bryman,

2016). They argue for the superiority of constructivism, idealism, relativism, humanism, hermeneutics, and, sometimes, postmodernism (e.g. Guba and Lincoln, 1989; Lincoln et al., 2011; Schwandt, 2000; Smith, 1983, 1984). Qualitative research is often associated with an interpretive philosophy (Denzin and Lincoln, 2011). It is interpretive because researchers need to make sense of the subjective and socially constructed meanings expressed about the phenomenon being studied. These purists contend that multiple-constructed realities abound, that time- and context-free generalizations are neither desirable nor possible, that research is value-bound, that it is impossible to differentiate fully causes and effects, that logic flows from specific to general (e.g., explanations are generated inductively from the data), and that knower and known cannot be separated, because the subjective knower is the only source of reality (Guba, 1990).

Many varieties of qualitative research commence with an inductive approach to theory development, where a naturalistic and emergent research design is used to build a theory or to develop a richer theoretical perspective than already exists in the literature (Saunders et al., 2016).

Quantitative research strategy has some main characteristics. Qualitative research studies participants' meanings and the relationships between them, using a variety of data collection techniques and analytical procedures, to develop a conceptual framework and theoretical contribution (Saunders et al., 2016). Bansal and Corley (2011) point outed that, while qualitative research is characterised by methodological variations, it remains vital, irrespective of the method used, to demonstrate methodological rigour and theoretical contribution.

Data collection is non-standardised so that questions and procedures may alter and emerge during a research process that is both naturalistic and interactive. It is likely to use non-probability sampling techniques. The success of the researcher's role is dependent not only on gaining physical access to participants, but also on building rapport and demonstrating sensitivity to gain cognitive access to their data (Saunders et al., 2016).

"Mixed methods research is defined as the class of research where the researcher mixes or combines quantitative and qualitative research techniques, methods, approaches, concepts or language into a single study" (Johnson and Onwuegbuzie, 2004, p.17). This research strategy is within the philosophical position of realism and, in particular, that of the critical realists. Mixed methods believers argue that while there is an external, objective reality to the world in which we live, the way in which each of us interprets and understands it will be affected by our particular social conditioning. To accommodate this realist ontology and interpretivist epistemology (Tashakkori and Teddlie 2010), researchers may, for example, use quantitative analysis of officially published data, followed by qualitative research methods to explore perceptions.

Mixed methods research strategy is the research strategy that partners the philosophy of pragmatism in one of its forms (left, right, middle) (Johnson et al., 2007). Pragmatists view the exclusive adoption of one philosophical position as being unhelpful and choose instead to see these as either end of a continuum, allowing a choice of whichever position or mixture of positions will help them to undertake their research (Tashakkori and Teddlie, 2010). For pragmatists, the nature of the research question, the research context and likely research consequences are the driving forces determining the most appropriate methodological choice (Nastasi et al. 2010).

A mixed methods research design may use a deductive, inductive or abductive approach to theory development. For example, quantitative or qualitative research may be used to test a theoretical proposition or propositions, followed by further quantitative or qualitative research to develop a richer theoretical understanding. Theory may also be used to provide direction for the research. In this way a particular theory may be used to provide a focus for the research and to limit its scope (Tashakkori and Teddlie, 2010).

Mixed methods research has some major characteristics. Mixed methods research is the research strategy that follows the logic of mixed methods research (including the logic of the fundamental

principle and any other useful logics imported from qualitative or quantitative research that are helpful for producing defensible and usable research findings). This research strategy relies on qualitative and quantitative viewpoints, data collection, analysis, and inference techniques combined according to the logic of mixed methods research to address one's research question(s). Additionally, the mixed methods research strategy is cognizant, appreciative, and inclusive of local and broader socio-political realities, resources, and needs (Johnson et al., 2007). In addition, in mixed methods research quantitative and qualitative techniques are combined in a variety of ways that range from simple, concurrent forms to more complex and sequential forms. The ways in which quantitative and qualitative research may be combined, as well as the extent to which this may occur, have led to the identification of a number of variations of mixed methods research (Creswell and Plano Clark, 2011; Nastasi et al., 2010).

As discussed in previous chapters, based on the relevant literature, this study followed the hypothetical deductive model (Popper, 1959) to formulate and test an integrated theoretical model comprising relationships among variables of CEO career success and their antecedents. All the variables utilized were subjected to being objectively measured and had been successfully measured in previous empirical research (see discussion of each variable in the Chapter 4). The research strategy adopted was to quantitatively investigate a cross-sectional sample of 179 CEOs in the year 2013. The author of this thesis worked with real data, CEO career success data and its relevant predictor data, which existed independently of the researcher. Therefore, a quantitative strategy was considered to be the best approach (Creswell, 2014; Collis and Hussey, 2013). To sum up, the above discussions lead to the confirmation that the research strategy in this study was quantitative.

3.3. Research design

Bryman (2016) and Saunders et al. (2016) argued that a research design is a general plan of how a researcher will go about answering the research question(s). Research design should contain clear objectives derived from the research question(s), specify the sources from which researcher(s) intend to collect data, how it is proposed to collect and analyse it, and to discuss the ethical issues and the constraints the researcher will inevitably encounter. Cooper and Schindler (2014) added that research design is a framework for specifying the relationships among the study's variables. These discussions imply that research design involves setting up a basic plan for the research to collect and analyse data that helps to answer the research questions and to reach the research objectives.

The research design of this research covered its type of research, study design, the extent of research interference, study setting, units of analysis, as well as variable definition, data description and instruments.

3.3.1. General points of research design

The type of research used in this study was explanatory. More specifically, it was testing-out research, nomothetic explanatory research and hypothesis testing research. The researcher tried to find the limits of previously proposed generalizations from previous work and then to improve (by specifying, modifying, clarifying) the generalizations in an effort to make an original contribution to the discipline (Phillips and Pugh, 2010). In addition, this research aimed to derive laws that explained objective phenomena in general and to study classes or cohorts of individuals (Babbie, 2015; Neuman, 2014). In addition, this research engaged in hypothesis testing in order to explain further the nature of inconclusive or new relationships between two

aspects of CEO career success, or between CEO career success and its predictors, as well as to introduce and empirically examine new mediators and moderators of these relationships (Sekaran and Bougie, 2016). This thesis aimed not only to test the predictions of theories and models (discussed in Chapter 2), but also to elaborate and enrich their explanations. These aspects regarding the type of research used in the study should be viewed in relation to such sections as the statement of the problem, the aim and objectives of the study, and the significance and contributions of the study discussed in Chapter 1, as well as the research philosophy, approach and strategy sections in this chapter.

In order to avoid or mitigate common method biases (for example, common method variance early discussed in the work of Campbell and Fiske (1959) and Fiske (1982) or social desirability problems initially investigated in the research by Taylor (1961), Thomas and Kilmann (1975) and Arnold and Feldman (1981)), more than one study design was used (e.g. Podsakoff and Organ, 1986; Podsakoff et al., 2003; Spector, 2006). The study designs employed here were correlational research and cross-sectional survey.

Correlational research was selected as one of the two study designs for this research. A major purpose of correlational research is to clarify understanding of important phenomena by identifying the relationships among variables (Fraenkel, 2011). The correlational study design for this research was designed to mainly test hypotheses regarding the expected relations between CEO career success and its explanatory variables. The outcome of the study design allows the author to describe whether, and to what degree, these variables are related (Ary, 2010; Gay, 2011).

The quantitative methodology applied was a survey. Because the total population of this study was large, only a sample of the whole population was approached with the purpose of testing the theoretical model and generalizing from the sample to the population. For both descriptive and explanatory purposes, especially when several variables were simultaneously analysed in this study, it was essential to have a large number of cases and a survey was the most useful means to make this feasible (Babbie, 2015), because surveys provide efficient and accurate means of assessing information, and are also quick and inexpensive (Zikmund et al., 2013). The researcher collected original data on the perceptions, attitudes and personalities of the CEOs, and there was no treatment of any of the studied variables (no attempt to manipulate the variables) and, therefore, a survey was considered to be the best option (Babbie, 2015; Creswell, 2014).

The nature of the survey in this study was not longitudinal, but cross-sectional, in which the data is collected just once over a short period of time from different contexts of the population (Cooper and Schindler, 2014; Collis and Hussey, 2013). This research met at least five requirements recommended by Rindfleisch et al. (2008) for selecting a cross-sectional survey design. Firstly, the nature of the argument in this research was between subjects, not within subjects, when it examined the relationships between CEO career success and its predictors from multiple perspectives or disciplines. Secondly, the theoretical foundations in this research were well developed. Thirdly, the likelihood of alternative explanations in this study was low because of combining the five theories and models in the research model. Fourthly, the likelihood of response bias in this research was low, since CEOs/informants were highly educated adults. Finally, the measurement format and scales were heterogeneous.

According to Fink (2003), survey methodology has four methods: self-administered questionnaire, interview, structured record review, and structured observation. As stated above, this study collected original data on the perceptions, attitudes and personalities of the CEOs at a single point in time. Interviewing requires a significant amount of time and resources, especially when collecting a medium or large sample. Structured record review and structured observation aimed at visual and recorded data were not appropriate for collecting data about attitudes. A self-administered questionnaire is one of the most common methods of collecting data in social science research (Dillman, 2007; Ziegler, 2006) and satisfied all requirements of the survey.

Therefore, a self-administered questionnaire that consisted of questions about perceptions, attitudes and personality to be completed by individual respondents was considered to be the best approach to conducting the survey in this study (Fink, 2003; Podsakoff and Organ, 1986).

The extent of researcher interference in this research was small because the study design of this research was correlational. According to Sekaran and Bougie (2016), the extent of interference by the researcher with the normal flow of work in the workplace has a direct bearing on whether the study undertaken is causal or correlational. A correlational study is conducted in the natural environment of the organization with minimal interference with the normal flow of work by the researcher. In studies conducted to establish cause-and-effect relationships, the researcher tries to manipulate certain variables so as to study the effects of such manipulation on the dependent variable of interest. In other words, the researcher deliberately changes certain variables in the setting and interferes with the events as they normally occur in the organization (Sekaran and Bougie, 2016).

The study setting of this research was contrived because of the characteristics of the study design employed. Organizational research can be done in the natural environment where work proceeds normally (that is to say, in non-contrived settings) or in artificial, contrived settings. Correlational studies are invariably conducted in non-contrived settings, whereas most rigorous causal studies are done in contrived lab settings (Sekaran and Bougie, 2016).

The unit of analysis refers to what, or whom, is being studied (Babbie, 2015). The aim of this research was to empirically examine certain previously unexplored or inclusive relationships between CEO career success and affecting factors. The researcher was interested in individual CEOs in terms of their career success, human capital, political skill, personality, protean career orientation and managerial power. Therefore, the unit of analysis in this research was the individual. The author looked at the data gathered from each individual CEO and treated each CEO's response in the survey as an individual data source (Sekaran and Bougie, 2016).

3.3.2. Measurement and data

This section provides the justification for adopting particular variables to be used in the empirical analysis in the subsequent analysis chapters, and the measurement of these variables, as well as the relevant data sources.

3.3.2.1. Measurement

Variables in this study were classified into three groups based on the relevant literature: dependent, independent and moderating (see Figure 2.4). Dependent variables were grouped into objective and subjective. They included actual financial attainment, perceived financial attainment, and perceived career achievement. Independent variables were grouped into human capital, political skill, personality traits, protean career orientation and managerial power. The mediating and moderating variables in this research model encompassed firm performance and state/foreign ownership. Table 3.1 provides a summary of all the variables used in this study and their definitions.

Actual financial attainment or annual cash compensation was defined as total annual salary plus bonus (e.g. Shaw and Zhang, 2010). It was excluded stock options or other contingent income (Finkelstein and Hambrick, 1989). As recommended by Finkelstein and Hambrick (1989), a logarithm for actual financial attainment was used to reduce heteroscedasticity.

Table 3.1. Summary of variables, measures and their definitions in this thesis

Variable	Measure/proxy	Definition
Dependent variables		
Actual financial attainment	Annual cash compensation	Salary + Cash bonus
Perceived financial attainment	Perceived financial attainment	Items in the questionnaire
Perceived career achievement	Perceived career achievement	Items in the questionnaire
Independent variables		
Educational attainment	Educational attainment	Total no. of years of schooling
CEO tenure	CEO tenure	No. of years the executive has been CEO
Political skill	Networking ability	Items in the questionnaire
	Interpersonal influence	Items in the questionnaire
	Social astuteness	Items in the questionnaire
	Apparent sincerity	Items in the questionnaire
Openness	Openness to experience	Items in the questionnaire
Agreeableness	Agreeableness	Items in the questionnaire
Protean career orientation	Protean career orientation	Items in the questionnaire
Managerial power	CEO duality	Dummy: 1 when CEO is chair; 0 otherwise
	Board size	Total no. of directors in the board
	CEO tenure	No. of years the executive has been CEO
Moderation variables		
Firm size	Net sales	
Ownership structure	Foreign ownership	Percentage of outstanding shares held by foreign shareholders
Employment sector	Industry	Dummy: 1 when employment sector is industry, 0 otherwise

Source: Author

Educational attainment was measured by the total number of years of schooling (primary and secondary school, as well as any tertiary studies) calculated from the question asked in the questionnaire (Keage et al, 2016).

CEO tenure was operationalized as the number of years the executive had been CEO (e.g., Finkelstein and Hambrick, 1989).

CEO duality was measured as whether the CEO is also the chairman of the board of directors (e.g., Grossman and Cannella, 2006).

Board size was coded as the number of members of the board of directors on the annual meeting date during each fiscal year (Yermack, 1996). Board size refered to the total number of directors serving on the board. It included both executive and nonexecutive directors. While Yermack (1996) used a natural logarithm for the size of the board; Eisenberg et al. (1998) used a log transformation of board size to make the distribution of the board size variable more symmetric. In this study, to ensure a symmetric distribution of variable, a natural logarithm for board size was used to proxy for this variable.

Firm size was measured as net sales (Moss and Stine, 1993). A natural logarithm for net sales was used to control for economies and diseconomies of scale at the corporate level (Hitt et al., 1997).

Ownership structure was measured by foreign ownership, which is measured by the percentage equity held by foreign citizens or foreign institutions in relation to the total equity (all share classes) of the firm (Randøy and Goel, 2003).

Employment sector was measured as whether the firm is in the industry sector.

The important considerations when selecting a variable are its theoretical, substantive/contextual and statistical relevance. The above-mentioned variables and their measures were selected based not only on the theoretical and statistical foundations but also on Vietnam context, including the differences in corporate governance practices in Vietnamese listed firms and in developed economies discussed in Section 2.2.2.3. For instance, these differences in corporate governance practices provided reasonably sound substantive foundations not to select such variables as CEO ownership, director ownership, state ownership and independent or nonexecutive director composition. Instead, CEO duality, foreign ownership and board size were selected. The differences affected how and why CEO's annual cash compensation and employment sector were measured.

There are two main reason why I opted for a dichotomous measure of employment sector in the analysis. The first reason came from the substantive/contextual relevance. Bearing in mind that in a tightly monitored economy with governance at national level limiting to variation across sectors, the differences are not as significant as they are in Western societies. The second reason was related to the statistical relevance. While 179 is a good size for a study, having 11 sectors would mean that on average there are less than 20 in each cluster, which is below the requirements for statistical analyses like structural equation modelling (Kline, 2016).

3.3.2.2. Data

After the research model was designed, primary data was needed for analysing such unobservable variables as perceived financial attainment, perceived career achievement, networking ability, interpersonal influence, social astuteness, apparent sincerity, neuroticism, extroversion, conscientiousness, agreeableness, protean career attitude and CEO power. The concepts involved in the model were operationalized and measured using a 5-point Likert scale (for more detailed, see the section of instrument in this chapter and Appendix 4). All of these primary data was collected via a survey using a questionnaire. Some of the primary data, such as educational attainment, CEO tenure and CEO age was doubly checked by collecting it independently as secondary data.

The secondary data included actual financial attainment (CEO cash compensation), educational attainment, CEO tenure, board size, nonexecutive directors, foreign ownership, firm size, industry and CEO age. The secondary data was collected from a variety of sources, namely the

Vietnamese General Department of Taxation, annual reports, boards' reports, financial reports and websites (cafef.vn, finance.vietstock.vn and company website). Data on CEO's actual financial attainment (cash compensation) was collected from the General Department of Taxation, company annual reports and financial reports. Data on CEO age, educational attainment and CEO tenure was extracted from annual reports and the websites. Data on board size and nonexecutive directors was gathered from boards' reports, annual reports and websites. Data on such types of ownership as foreign ownership was collected from websites and boards' reports. Data on EPS, industry and firm size was extracted from the websites, company financial reports and annual reports.

3.3.3. Instrument

As mentioned above, the type of survey instrument used in this research was a self-administered questionnaire. The questionnaire was constructed and tailored under the instruction of Dillman (1978, 2007, 2014), Fink (2003), De Vaus (2013), and Rea and Parker (2014). This section discusses how the questionnaire was developed, translated and tested in a pilot survey.

3.3.3.1. Questionnaire development

Designing and constructing this questionnaire were carefully carried out following the principles recommended by Dillman (1978, 2007, 2014), De Vaus (2013), and Rea and Parker (2014). Specifically, the 20 principles for implementing a questionnaire design suggested by Dillman (2007) were selectively applied to developing this questionnaire. The questionnaire was designed to achieve two objectives: to reduce nonresponse and to reduce or avoid measurement error (Dillman, 1991, 2007). In addition, the wording of the questions was implemented mainly regarding the demographic questions in both the English and Vietnamese versions, because the other questions in the questionnaire were borrowed from popular English-written scales. Additionally, the researcher tried to avoid the common wording problems suggested by Payne (1951), Dillman (1978) and De Vaus (2013), which may include too vague questions, biased questions or objectionable questions. Furthermore, the other tasks in constructing the questionnaire were cautiously completed. They encompassed ordering the questions, choosing the first question, formatting the pages, deciding the questionnaire length and preparing the covering letter (Dillman, 1978, 2007; De Vaus, 2013; Rea and Parker, 2014).

The development and validation of the questionnaire follows the process suggested by Churchill and lacobucci (2002). Figure 3.1 depicts the nine steps in the process that was followed as a means of constructing an effective questionnaire. The steps aim at following the above-mentioned principles, reaching the two objectives and resolving the difficulties often inherent to questionnaire surveys. Furthermore, owing to the self-completion component of the data collection, it was felt that the questionnaire should possess qualities associated with good questionnaire design. Churchill and lacobucci (2002) highlight that, in practice, following the nine suggested steps inherently involves a degree of iteration and looping between the stages. This proved to be the case in the present study.

Prior to the drafting of the questionnaire, a preliminary investigation was carried out to determine the appropriateness of the research variables and the sample. Based on this exercise, measurement scales were selected for the variables used in this study and presented in the following sections. There were some different response formats among these scales. For example, one measure used a 7-point scale, ranging from 1 (strongly disagree) to 7 (strongly agree), while another measure used a 5-point scale, ranging from 1 (strongly disagree) to 5

(strongly agree). To avoid confusion among the respondents, all measures in this study used a 5-point scale and most of them ranged from 1 (strongly disagree) to 5 (strongly agree). Minor changes to questionnaire response formats do not affect their validity (Matell and Jacoby, 1971) and an odd five number with a neutral position is suggested as an optimal choice (Cox III, 1980; Tang et al., 1999; Preston and Colman, 2000). Therefore, unless otherwise indicated, the response options ranged from *strongly disagree* (1) to *strongly agree* (5).

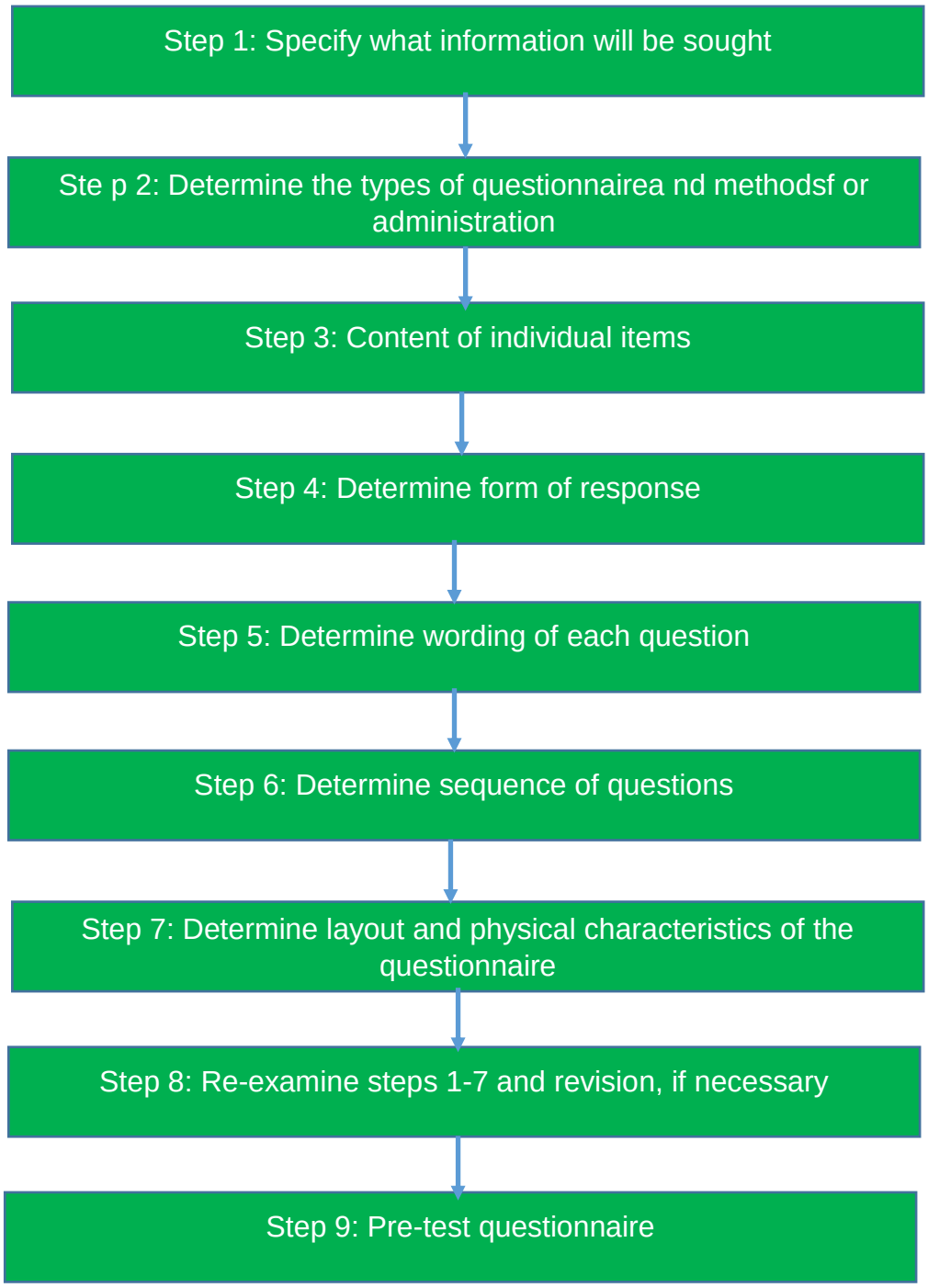


Figure 3.1. Nine-step process of the questionnaire design

(Churchill and Iacobucci 2002, 315)

The survey questionnaire included 54 items, together demographics, and was divided into 4 pages (see Appendix 6). Page 1 contained questions on perceived social reputation, perceived financial attainment, perceived career achievement and protean career orientation. Page 2

consisted of questions related to political skills, which included networking ability, interpersonal influence, social astuteness and apparent sincerity. Page 3 accommodated various questions on the FFM personality traits, including neuroticism, extroversion, open to experience, agreeableness and conscientiousness. Finally, page 4 consisted of several questions on the demographic characteristics.

The constructs in this study are discussed below in detailed.

Perceived financial attainment (PFA). Perceived financial attainment was measured using Lau et al. (2007) five-item scale. A sample item was: "I have earned more money than most of my friends". The alpha reliability for this construct was .88.

Perceived career achievement (PCA). A four-item version of the PCA scale developed by Lau et al. (2007) was used in this study. A sample item was: "I have accomplished something valuable from my career". The scale's alpha reliability was .88.

Protean career orientation (PCO). Protean career orientation was measured using 4 items. The scale in this research was built on Baruch (2014)'s one, by reducing the number of PCO items from seven to four through removing items 1, 3 and 7 and keeping items 2, 4, 5 and 6 in his scale, based on his advice. All items were measured using a 1–5 Likert scale. A sample item was: "I navigate my own career, mostly according to my plans". The scale's alpha reliability was .81.

Political skill. Ferris (2005)'s eighteen-item scale was used in this study to measure political skill. The scale's alpha reliability was .93.

A sample item on networking ability was: "I spend a lot of time and effort at work networking with others". The 6-item networking ability dimension had an alpha reliability of .89.

A sample item on interpersonal influence was: "I am able to make most people feel comfortable and at ease around me". The 4-item interpersonal influence dimension had an alpha reliability of .91.

A sample item on social astuteness was: "I understand people very well". The 5-item social astuteness dimension had an alpha reliability of .88.

A sample item on apparent sincerity was: "When communicating with others, I try to be genuine in what I say and do". The 3-item apparent sincerity dimension had an alpha reliability of .86.

The FFM personality traits. In the application of the Five-Factor Model of Personality to this study of predictors of CEO career success of listed firms, Costa and McCrae (1992b)s' well-known NEO-PI-R with their five factors was used in the short form suggested by Donnelan et al. (2006), because the form retains the advantages of those inventories with high reliability and fewer items. Moreover, the short form with twenty items on one page was more appropriate for CEOs in big firms, who were assumed to be very busy.

The FFM personality traits were assessed with five 4-item scales developed and validated by Donnellan et al. (2006). These items were adopted from the NEO Personality Inventory, the most widely used and extensively validated measure of the five-factor model (Costa and McCrae, 1992b).

A sample item on openness to experience was: "I have a vivid imagination". The openness dimension had an alpha reliability of .89.

A sample item on agreeableness was: "I sympathize with others' feelings". The agreeableness dimension had an alpha reliability of .87.

Although the constructs like perceived social reputation, neuroticism, extraversion and conscientiousness were measured with the items in the questionnaire, their scales' reliabilities were not reported here because these constructs were not employed for further analyses.

In addition, the ethical conduct of research regulated by University of Southampton was complied with. Issues of confidentiality and anonymity were assured in the covering letter of the questionnaire. The participants were told that their answers would be kept confidential and analysed at a group level, to ensure that participation had no adverse consequences for them or their organisations. Moreover, it was made clear in the covering letter that, by completing the questionnaire, consent to participate in the research was assumed. Further information about the nature of the study, as well as about ethical aspects of the research were provided if requested.

A simple yet precise instruction or rules for the format of a questionnaire has been given by Johnson and Christensen (2004), Sarantakos (2012), and Dillman et al. (2014). The researcher developed the questionnaire based on the guidelines for questionnaire format and constructions, as identified by Dillman (1978, 1991), Johnson and Christensen (2004), Sarantakos (2004) and Dillman et al. (2014). In developing the questionnaire, the researcher considered several aspects. These were: understanding the research participants, using simple, natural and familiar language, selecting clear, precise, and relatively short questions, keeping the questionnaire size to the minimum, and giving clear instructions regarding the manner of answering questions. Since the researcher enthusiastically embraced the need for a useful and reliable questionnaire for use in this study, the importance of examining the strengths and weaknesses of a comprehensive self-administered questionnaire was recognised. The purpose of the examination was to counter check and probably decrease the deficiencies or weaknesses that must be expected when using a questionnaire as a survey method.

3.3.3.2. Questionnaire translation procedure

Cross-cultural issues were considered to be an important element when designing the questionnaire because this research was conducted in Vietnam, while the questionnaire was developed in the UK. McGrath (1981) argued that empirical research presents the researcher with a set of dilemmas and that the researcher's mission is to avoid as many of these dilemmas as possible. Cross-cultural research presents additional elements that may provoke problems of interpretation and inference (Singh, 1995). This research instrument was a questionnaire that required translation into equivalent versions that were consistent with the relevant cultures. Equivalence concerns language and the treatment of the various constructs and measures. With respect to constructs, the ideal is to achieve equivalence in terms of function, conception and interpretation (Singh, 1995). Great care was taken to translate the constructs and measures into forms that were equivalent, but it should be noted that, while effective translation was necessary, it was not sufficient to guarantee equivalence (Peng et al., 1991). In cross-cultural research, the translation of questionnaires into the relevant local languages is crucial (Brislin, 1970).

The questionnaire was first prepared in English. To assure equivalence of the measures in Vietnamese and English, a standard translation and back-translation procedure was applied (Brislin, 1970; Sperber et al., 1994). The English questionnaire was carefully translated into Vietnamese by the researcher and three Vietnamese PhD students at University of Southampton (UoS): one from Law, one from Ship Science and one from Modern Languages. The comparisons were made by the researcher. Then, a discussion between the researcher and the translators was conducted on the differences, in order to agree on the Vietnamese questionnaire.

Krosnick (1999), Schwarz (1999) and Fink (2003) suggested that a questionnaire is also a source of information that respondents draw on in the cognitive processes by which they answer questions, so a cognitive pre-test is useful to assess question comprehension. Thus, a pilot cognitive test was conducted for the Vietnamese questionnaire. Six Vietnamese individuals completed the questionnaire and were asked to think aloud while answering it, to identify any

confusion and misunderstandings as well as to suggest improvements. The participants included 1 person who was both CEO and chairman, and 5 managers. Most suggestions were in the wording, grammar and the covering letter.

The survey questionnaire was then translated back into English. Two Vietnamese PhD students studying at UoS, and one person working at the Ministry of Foreign Affairs, Vietnam who were fluent in English were selected and told the purpose of the study. The researcher asked for their help in translation, handed the questionnaire to them, and made an agreement on the procedure and time. There were two copies of the translation. One copy was translated by the person who had worked at the Ministry of Foreign Affairs, Vietnam who had background in international relations. The other copy was translated by two PhD students in accounting and finance at UoS (1st year and 3rd year). After three weeks, the two copies of the back-translation were completed and sent directly to the researcher. They were then compared with the original English version to identify significant differences. The comparison was made by the researcher and mainly by the two supervisors. After that, a discussion between the researcher and the translators was conducted regarding the differences, in order to agree on any changes necessary to the wording of the Vietnamese questionnaire.

Because the back-translation procedure usually, but not necessarily, reflects all major differences (Harkness and Schoua-Glusberg, 1998), conducting a pilot study was deemed necessary to examine the questionnaire further (Neuman, 2014).

3.3.3.3. Pilot testing

In the research process, conducting a pilot study was a crucial step (e.g. Van Teijlingen and Hundley, 2002; Thabane et al., 2010) for the purpose of examining the questionnaire in order to detect any weaknesses in the design and instrumentation (Cooper and Schindler, 2014; Fink, 2003) and to ensure that there would be no problem in answering the questionnaire and recording the data (Saunders et al., 2016). IBM SPSS Statistics 22 software was used to screen the data, check internal consistency reliabilities of the studied scales, and calculate correlations for part of the testing of the hypothesized relationships. Based on this pilot study, some changes were made to the length of the questionnaire, the introductory paragraph, the wording and format of some items.

Description of the pilot study. Determining sample size for the pilot study adhered to the guidelines by Lackey and Wingate (1998), using 10% of the sample required for a full study. The researcher sent questionnaires to 18 persons, and 16 persons returned the questionnaires with their answers and comments. They included 2 pepole who were both CEO and chairman, 1 CEO and 13 managers. In total, 18 questionnaires were delivered and 16 questionnaires were returned (88.89%) and all of them were useable (100%). Completed questionnaires were sent to the researcher in three ways: 3 printed questionnaires were sent by post and 8 were scanned and sent by the Internet; 5 soft questionnaires sent directly to the researcher through the Internet. The whole process took two weeks.

Screening the data of the pilot test was carried out. One of the results of the screening was that there was no missing data in the returned questionnaires. The other results were lessons learned from the pilot study, which are presented below. These lessons benefitted from conducting a focus group to screen the data which came from and the questionnaire used in the pilot test, in which the author and three of respondents had a deep discussion of the process to date.

Checking internal consistency reliabilities. Internal consistency reliabilities (Cronbach's alphas) of the measurement scales used in this pilot study were calculated using IBM SPSS Statistics 22.

All of the Cronbach's alphas met the requirement level recommended by Nunnally (1978), who suggested that reliabilities should equal or exceed .70.

Lessons learned from the pilot study. Based on the statistics results and literature checking, the following lessons were learned and used to construct the final questionnaire.

Wording

- There were no typographical errors and no misspelled words, ensuring that respondents had read exactly what was asked in Vietnamese.

- A number of words were quite academic and some respondents needed a longer time and interpreted them with different meanings. Therefore, these were replaced by more simple words.

- A common error in translating was that, for a number of items, the English literary style was still present after translation. Therefore, revisions were made to make the translation closer to the Vietnamese literary style.

Designing

- One Vietnamese expert suggested that the length of the questionnaire be increased from 2 pages to 3 pages (excluding the introduction paragraph and demographics), by adding 1 page with regard to political skills. Political skills should be included because it is very important for CEOs in unstable and changing business environment with high corruption and nepotism.

- The introduction paragraph was re-written to make it more persuasive.

- 8 items were rewritten and most of them were shorter.

In addition, the researcher conducted a pilot test to evaluate the availability and quality of secondary data regarding CEOs in listed firms in Vietnam, especially their actual financial attainment or income from taxation agencies.

3.4. Data collection

3.4.1 Target population

While accessible population refers to all the individuals, events, or objects which realistically could be included in the sample (Gall et al., 2006), target population "includes all the members of a real or hypothetical set of people, events, or objects to which researchers wish to generalise the results of their research" (Gall et al., 2006, p. 167). Sekaran and Bougie (2016), Ary et al. (2014) and Fraenkel et al. (2014) agree with the definition of target population.

A well-defined target population is crucial for sampling (e.g. Fraenkel et al., 2014). The target population must be defined in sufficient detail so that it is unequivocally clear as to who is, or is not, a member of this target population. Furthermore, at the outset of the sampling process, the target population must be carefully defined so that the proper sources from which the data are to be collected can be identified (Zikmund, 2013).

As indicated earlier in Chapter 1, this study aimed to empirically examine both a link between two aspects, objective and subjective, of CEO career success and the relationships between CEO career success and its affecting factors in a South East Asian emerging country context in order to extend human capital theory, managerial power theory, five-factor model of personality, political skill framework and protean career concept. Based on this aim, the research philosophy, research approach, research strategy and research design of this research, as well as the definitions of Gall et al. (2006), the target population of this research was identified as all CEOs in Vietnam.

3.4.2. Sampling

3.4.2.1. Sample size

The role of sample size is crucial to all statistical analysis. A statistical technique requires an appropriate sample size in order to obtain reliable estimates (Hair et al., 2010). According to Hair et al. (2010) and Tabachnick and Fidell (2013), the more sophisticated the statistical analysis the larger the sample size needed. Therefore, the sample size requirement of this study was based on the selected statistical analysis techniques used: exploratory factor analysis (EFA) and structural equation modelling (SEM). Accordingly, the researcher discusses below the sample size of each of them.

The sample size for EFA should be calculated according to the number of constructs in a survey. Gorsuch (1983) suggested at least 5 participants per construct and not less than 100 individuals per data analysis. It also has been indicated that in most cases a sample size of 150 is sufficient to obtain an accurate solution in EFA, provided that item inter-correlations are reasonably strong (Guadanoli and Velicer, 1988).

Determination of the sample size needed for SEM is complicated. There is no absolute standard with regard to an adequate sample size and no rule of thumb that applies to all situations in SEM (Muthen and Muthen, 2002). In addition to the number of free parameters needed to be estimated (e.g. Hair et al., 2010) and the number of indicators per latent variables (Marsh et al., 1998; Marsh and Hau, 1999), the sample size needed for SEM is also dependent on many other factors which are related to data characteristics and the model being tested, such as the reliability of the observed indicators (e.g. Gerbing and Anderson, 1985; Velicer and Fava, 1998; Hair et al., 2010), study design (e.g. Muthen and Muthen, 2002), degree of data multivariate normality (e.g. West et al., 1995; Anderson, 1996; Hair et al., 2010), handling of missing data (e.g. Brown, 1994; Hair et al., 2010; Kline, 2016), model complexity (e.g. Hair et al., 2010; Kline, 2016), and the model estimators (e.g. Fan et al., 1999).

Although determination of an appropriate sample size is a critical issue in SEM, unfortunately, there is no consensus in the literature regarding what would be the appropriate sample size for SEM. Some evidence exists that simple SEM models could be meaningfully tested even if sample size is quite small (Hoyle, 1999; Hoyle and Kenny, 1999; Marsh and Hau, 1999), but usually, N = 100–150 is considered to be the minimum sample size for conducting SEM (Tinsley and Tinsley, 1987; Anderson and Gerbing, 1988; Ding et al., 1995; Hair et al., 2010; Tabachnick and Fidell, 2013). Some researchers have considered an even larger sample size for SEM, for example, N = 200 (Hoogland and Boomsma, 1998; Boomsma and Hoogland, 2001; Kline, 2016).

Very often attention is given to the ratio of (N:q) of cases/observations (N) with the number of free parameters (q) being estimated in a model for determination of the sample size. A higher N:q ratio is preferred. A rule of thumb is at least 5 cases/observations per free parameters in a model (i.e., N:q = 5) (Bentler and Chou, 1987; Bentler, 1995). With strongly kurtotic data the minimum sample size should be at least 10 times the number of free parameters (i.e., N:q = 10) (Hoogland and Boomsma, 1998). Kline (2016) suggests that the N:q ratio should be in the range of 10, or even 20.

Sample size is often considered in light of the number of observed variables. For normally distributed data, Bentler and Chou (1987) suggested that a ratio as low as 5 cases per variable would be sufficient when latent variables have multiple indicators. A widely accepted rule of thumb is 10 cases/observations per indicator variable when setting a lower bound of an adequate sample size (Nunnally, 1967).

Sample size determination also depends upon the number of indicator variables per latent variable/factor. According to some researchers (Marsh et al., 1998; Marsh and Hau, 1999), more

observed indicators per factor may compensate for small sample size, and a larger sample size may compensate for fewer indicators per factor. It is considered that a sample size of N=50 would be sufficient for a CFA model with 6–12 indicator variables per factor, while sample size should be at least N=100 for a model with 3–4 indicators per factor (Boomsma, 1985; Marsh and Hau, 1999).

The model in this study had some characteristics. This model had not less than 3 indicators per factor. In addition, the number of constructs in each component model (the component models will discussed in the data analysis section) was not more than 12. Furthermore, the data collected was expected to meet the statistical assumptions for CB-SEM and to have a low rate of missing data from the CEO respondents.

In line with the above characteristics and assumptions of this study, as well as the recommendations of Gorsuch (1983), Boomsma (1985), Tinsley and Tinsley (1987), Anderson and Gerbing (1988), Guadanoli and Velicer (1988), Ding et al. (1995), Marsh and Hau (1999), Hair et al. (2010), Tabachnick and Fidell (2013), the main concern of the researcher was to achieve a minimum of 150 usable responses. Assuming a conservative response rate, 317 questionnaires were distributed to the CEO participants in order to get the required sample size. The sample for this study included 179 CEOs in the firms listed in the Hanoi Stock Exchange or in the Hochiminh Stock Exchange in 2013.

3.4.2.2. Sampling strategy

A sampling strategy is selected to reach two main objectives: representativeness and required sample size. A sampling strategy is employed to construct a representative sample. Achieving representative samples is crucial for a statistical generalizability model (Polit and Beck, 2010), whereas, the sample size issue goes beyond being able to estimate a model. The sample size, just as with any other statistical inference, must be adequate to represent the population of interest (Hair et al., 2010).

There are two main types of sampling method: probability sampling and non-probability sampling (e.g. Cochran, 1953, 1977; Bryman, 2016). In probability sampling, each sampling unit in the defined target population has a known, nonzero probability of being selected for the sample. In non-probability sampling, the probability of the selection of each sampling unit is not known and the selection of the sampling unit is based on some type of intuitive judgment, desire, or knowledge of the researcher (Hair *et al*., 2003). There are four main different types of non-probability sampling methods: convenience sampling, judgment sampling, quota sampling and snowball sampling (e.g. Saunders et al., 2016).

Probability sampling was assumed not to be feasible for this research because of its low response rate. The recent survey response rate of CEOs in a random sample has been typically 11% (e.g. Verdú and Gómez-Gras (2009), 12%, and Graham et al. (2013), 11%). It was expected that the response rate from CEOs in listed firms in Vietnam may be lower because of low levels of information transparency and disclosure. Therefore, probability sampling would not provide the required sample size. Accordingly, nonprobability sampling was a reasonable choice in this situation.

It was considered that a quota sampling strategy could be the best choice in order to reach two objectives: representativeness and required sample size. A quota sampling strategy could bring representativeness. Quota sampling is a type of nonprobability sampling in which units are selected into a sample on the basis of pre-specified characteristics, so that the total sample will have the same distribution of characteristics assumed to exist in the population being studied (Babbie, 2013, p. 130). Well-designed quota sampling is an acceptable nonprobability substitute method for producing a quasi-representative sample (Sudman, 1976; Kalton, 1983; Babbie, 2013; Neuman, 2014). In other words, carefully supervised quota sampling may provide a

representative sample of the various subgroups within a population (Zikmund et al., 2013; Saunders et al., 2016). In addition, it was thought that convenience sampling selection for each quota subgroup or category could help the researcher to obtain the required sample size, because this method overcomes the challenges from the difficulty regarding access to the CEO respondents (Saunders et al., 2016).

3.4.2.3. Selection of research participants

In order to select the participants of this study, the researcher followed the steps quota sampling, as suggested by Ary et al. (2014), listed below.

(i) In this study, the industrial sector was identified as a base for stratification, because industry is seen as an important contextual factor for career success (e.g. Judge et al., 1995; Seibert et al., 1999; Seibert et al., 2001b). The industry sector classification came from the popular data provider website for Vietnamese listed firms (cafef.vn). This classification is described in the column for the industry sector in Table 3.

(ii) The industry structure of the listed firms in the two stock exchanges was assumed to reflect approximately the industry structure of firms in Vietnam. Accordingly, the data on the industry structure of listed firms in the two stock exchanges was used to determine the relative size of each segment of the population. The relative size of each segment or each industry sector is portrayed in the column for percentage in Table 3.

(iii) The results of computing the quotas for each segment of the population or each industry sector was depicted in the column for required sample size in Table 3.2.

(iv) Typical cases were selected from each industry sector to fill the quotas. Because the majority of the current listed firms used to be state-own enterprises or subsidiary firms of these enterprises, the researcher contacted with key persons working in the governmental authorities or in the state-own groups and corporations. Most of the key persons were alumni of the National Economics University – the leading university of economics and management in Vietnam, where the researcher had been working as a lecturer. The alumni was an important source to approach the CEOs of the private listed firms. In addition, the author's relatives and friends were also a crucial source to access the CEOs of the listed firms to distribute the questionnaire.

3.4.2.4. Response rate

As indicated earlier, this study employed a self-administered survey to collect the primary data. In total, 185 questionnaires were returned out of the 679 distributed, which represented a response rate of 27.25% of the original sample. However, among those returned questionnaires, 6 responses were discarded because one of them was returned completely blank, three respondents had put the same answers on all the Likert scale items, and two respondents were not CEOs. Therefore, the remaining 179 questionnaires were used for further data analysis. Consequently, the final usable response rate for this study was 26.36% (see Table 3.2).

Table 3.2. Data collection information by industry sector

No.	Industry sector	Listed firms		Required sample size	Number of questionnaires distributed	Usable questionnaires returned		Response rate (%)
		Number	%			Number	%	
1	Estate and construction	255	37.56	56	255	74	41.34	29.02
2	Technology	20	2.95	4	20	2	1.12	10.00
3	Industry	70	10.31	15	70	21	11.73	30.00
4	Services	71	10.46	16	71	14	7.82	19.72
5	Consumer goods	41	6.04	9	41	5	2.79	12.20
6	Energy	44	6.48	10	44	30	16.76	68.18
7	Raw and working material	64	9.43	14	64	9	5.03	14.06
8	Agriculture	52	7.66	11	52	6	3.35	11.54
9	Finance	44	6.48	10	44	15	8.38	34.09
10	Telecommunication	2	0.29	0	2	0	0.00	0.00
11	Health	16	2.36	4	16	3	1.68	18.75
	Sum	**679**	**100**	**150**	**679**	**179**	**100**	**26.36**

3.4.3. Procedures for data collection

There are two procedures carried out to collect the data, which are procedure to collect primary data and procedure to collect the secondary data.

Procedures for the primary data collection via survey. The primary data regarding subjective career success, political skill, personality traits, protean career orientation and demographics was collected by the 12 following steps.

(i) The questionnaires had running numbers from 001 to 400 on the last page. The researcher managed the questionnaires and recorded which numbers were distributed to which firm.

(ii) The researcher made a list of listed firms in the two stock exchanges in Vietnam on 28th February 2014 to track the questionnaires distribution and returns.

(iii) The researcher made a list of potential supporters/helpers who could assist in approaching the CEOs of the listed firms.

iv) The researcher approached the supporters/helpers to make clear the survey's objective, respondents, questions, confidentiality and anonymity.

v) The researcher made a list of CEOs whom each supporter/helper could assist to approach.

vi) The questionnaires were sent to the supporters/helpers.

vii) The questionnaires were sent to the respondents by the supporters/helpers. In some cases, the questionnaires were sent to the respondents by the researcher.

viii) The researcher answered questions from the respondents and the helpers/supporters.

ix) The researcher gave the supporters/helpers continuous follow-up reminders.

x) The researcher evaluated early returns.

xi) The researcher received the returned questionnaires.

xii) The researcher determined who the respondent was and which listed firm the CEO respondent has been working for based on the questionnaire code and demographic information.

The above-mentioned procedure was carried out based on the application of guidelines for implementing mail questionnaires, handling undelivered questionnaires, handling respondent inquiries and evaluating early returns suggested by Dillman (1978) and Dillman et al. (2014). For example, one of the guidelines is to assign an individual ID number to each sample member. Another is to send a postage paid return envelope with the questionnaire.

Procedures for the secondary data collection. The secondary data regarding yearly cash compensation, human capital, managerial power and corporate governance was collected by the following steps.

i) After determining who the respondent was and which listed firm the CEO respondent had been working for, the researcher created some forms for the secondary data collection.

ii) The researcher sent the form to the supporters/helpers at Vietnamese General Department of Taxation to collect the data on the yearly cash compensation of the CEO respondents.

iii) The researcher collected the secondary data from such available sources as company's annual report, board's report, financial statements and relevant websites (company's website, cafef.vn, finance.vietstock.vn).

iv) The researcher gave the supporters/helpers continuous follow-up reminders.

v) The researcher received the data and related documents from the supporters/helpers.

vi) The researcher extracted the data on yearly cash compensation of the CEO respondents from the related document.

vii) The researcher checked all of the secondary data collected.

3.5. Data analysis

3.5.1. Data analysis procedure

Analysis of data usually includes "reducing accumulated data to a manageable size, developing summaries, looking for patterns, and applying statistical techniques" (Cooper and Schindler, 2014, p.86). The main goal of "the statistical techniques are to assist in establishing the plausibility of the theoretical model and to estimate the extent to which the various explanatory factors seem to be influencing the dependent variable" (Coorley, 1978, p.13). The primary purpose of this research study was to empirically examine the proposed hypothesised relationships between CEO career success and its predictors as well as moderating effects. In order to achieve this objective, this study used structural equation modelling (SEM) as a main statistical technique because of the reasons discussed below in section 3.5.2 of this chapter.

SEM is a multivariate statistical analysis method used in measuring the underlying latent constructs identified by factor analysis and assessing the paths of the hypothesized relationships between the constructs (Hair et al., 2010). SEM analysis, as applied in this study, was conducted in five phases: (1) data preparation and screening were carried out to code, clean and evaluate the assumptions for SEM, (2) the instrument was then validated using exploratory factor analysis (EFA), (3) confirmatory factor analysis (CFA) was used to assess the uni-dimensionality of the constructs of the research model and to measure the adequacy of the measurement models associated with each construct, (4) the structural model analysis was conducted to test the hypothesised relationships between endogenous and exogenous variables, as well as the mediating effects, and (5) the moderating effect analysis was implemented to test the hypothesised moderating relationships in the research model (see Figure 3.2).

Brown (2015) recommends that EFA (phase 3) is typically used earlier in the process of construct validation, whereas CFA (phase 4) is used in later phases after the underlying structure has been established on prior empirical and theoretical grounds. As suggested by Anderson and Gerbing (1988) and Hair et al. (2010), construct validity was assessed by running a CFA (phase 4) before testing the hypothesized paths using SEM (phase 5). The research model in this study was tested and validated using SEM through phases 4 and 5.

There were two kinds of computer tools employed in this study. The Statistical Package for Social Sciences (SPSS 22.0) was used for data screening and EFA, which are explained in the following sub-section. Mplus version 7.0 program was used for the measurement model (CFA), structural model and moderating effect analyses to test the proposed hypothesised model explained in Chapter 2. The following sub-sections describe and provide justification for using the statistical software and the techniques mentioned above.

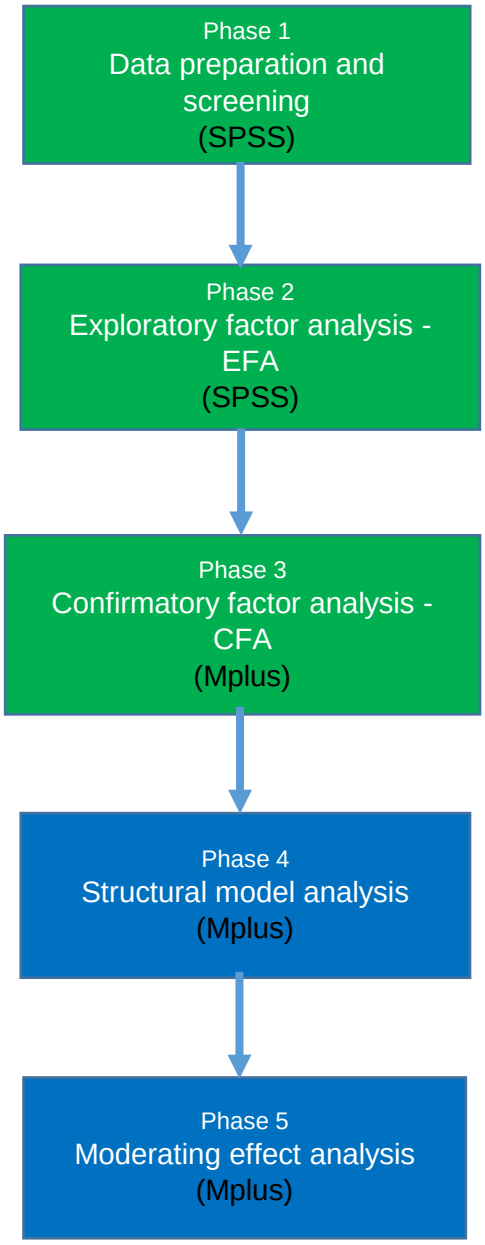


Figure 3.2. Data analysis procedure

3.5.2. Justification for the use of CB-SEM with Mplus

Structural equation modeling (SEM) has seen a dramatic rise in attention and utilization across a variety of scientific disciplines, such as strategic management (Shook et al., 2003), marketing (Chin et al., 2008; Hair et al., 2012) and psychology (MacCallum and Austin, 2000; Wang and Wang, 2012) over the last decade (Hair et al., 2011b). Statistically, SEM represents an advanced version of general linear modelling procedures (e.g., multiple regression analysis), and is used to assess "whether a hypothesized model is consistent with the data collected to reflect [the] theory" (Lei and Wu, 2007, p. 34).

While SEM is a general term encompassing a variety of statistical models, covariance-based SEM (CB-SEM) is the more widely used approach in SEM (e.g. Hair et al., 2014), and many researchers simply refer to CB-SEM as SEM (Astrachan et al., 2014). This reference is naive, however, because partial least squares (PLS) is also a useful and increasingly applied approach to examine structural equation models (Hair et al., 2012). Therefore, the objective of this section is to justify the choices of SEM and CB-SEM as well as the relevant software packages used in this study.

3.5.2.1. Reasons for the use of SEM

SEM, rather than multiple regression, was chosen because of its benefits. While there are many reasons to use SEM in this research, based on Astrachan et al. (2014), the researcher consider the four reasons to be the most relevant. Firstly, this research dealt with many latent independent and dependent variables, such as objective career success, subjective career success, political skills, personality traits and protean career orientation (Hair et al., 2010; Tabachnick and Fidell, 2013; Kline, 2016).

Secondly, this study dealt with the complex research model based on the five theories/models. The process of applying SEM enabled the researcher to more effectively evaluate the measurement models and structural paths, particularly when the structural model involved multiple dependent variables, multi-level dependence relationships, latent constructs based on multi-item indicator variables, and multiple stages/levels of constructs in a structural model (e.g. Jöreskog et al., 2001; Shook et al. 2004, Hair et al., 2010; Tabachnick and Fidell, 2013; Lowry and Gaskin, 2014).

Thirdly, SEM allowed the researcher to facilitate the assessment of direct, indirect and total effects (Preacher and Hayes, 2004; Preacher and Hayes, 2008; Hayes, 2009; Zhao et al., 2010; Wang and Wang, 2012). Direct effects include relationships between independent and dependent variables in the research model. Indirect effects involve relationships between independent and dependent variables that are mediated or moderated by some other variable. Total effects relate to the sum of two or more direct or indirect effects.

Finally, SEM is an approach that leads to more accurate results. In comparison to other statistical procedures, such as regression, SEM enabled the researcher to not only simultaneously assess the relationships between multi-item constructs, but also to reduce the overall error associated with the model. In contrast to multiple regression analysis, which cannot directly deal with the measurement issues of multi-item constructs, SEM is specifically designed to improve multi-item measurement models by directly accounting for error (e.g. Grewal et al., 2004; Hair et al., 2010; Wang and Wang, 2012; Tabachnick and Fidell, 2013).

Chin (1998) argued that when applied correctly, SEM-based procedures have substantial advantages over first-generation techniques such as principal components analysis, factor analysis, discriminant analysis, or multiple regression because of the greater flexibility that a researcher has for the interplay between theory and data. Specifically, SEM provides the researcher with the flexibility to: (a) model relationships among multiple predictor and criterion variables, (b) construct unobservable latent variables, (c) model errors in measurements for observed variables, and (d) statistically test a priori substantive/theoretical and measurement assumptions against empirical data (i.e., confirmatory analysis).

3.5.2.2. Reasons for the use of CB-SEM

The objective of this section is to compare and to evaluate two major approaches to structural modelling - covariance based SEM (CB-SEM) and variance-based SEM (PLS-SEM) (Sarstedt et al., 2014; Sharma and Kim, 2013).

While CB-SEM and PLS-SEM are two different approaches to the same problem, namely, the analysis of "cause-effect relations between latent constructs" (Hair et al., 2011a, p. 139), they differ not only in terms of their basic assumptions and outcomes, but also in terms of their estimation procedures (Hair et al., 2016; Shook et al., 2004). PLS-SEM uses a regression-based ordinary least squares (OLS) estimation method with the goal of explaining the latent constructs' variance by "minimizing the error terms [and maximizing] the R^2 values of the (target) endogenous constructs" (Hair et al., 2016, p. 14). CB-SEM, on the other hand, follows a maximum likelihood (ML) estimation procedure and aims at "reproducing the covariance matrix, without focusing on explained variance" (Hair et al., 2011a, p. 139). In other words, with CB-SEM, the R^2 is a by-product of the overall statistical objective of achieving good model fit (Hair et al., 2016). The comparisons are summarised in Table 3.3.

Based on the arguments of Chin and Newsted (1999), Hair et al. (2011a), and Hair et al. (2016) (see Table 3.), CB-SEM was chosen in this study for the following reasons. Firstly, the aim was to test and extend human capital theory, the political skills framework, the five-factor model of personality, the protean career theory and managerial power theory. Secondly, this study had a sound theoretical foundation, which was built/developed from previous theories and models. Thirdly, the error terms of the model required additional specification. Fourthly, the model in this thesis was non-recursive. Fifthly, the data met the distributional assumption (normally distributed). Sixthly, the sample size with 179 observations was not relatively low. Recommendations regarding the ideal sample size for SEM analysis range from 50 to 200 observations (e.g., Anderson and Gerbing, 1988; Kline, 2005). Finally, this study required a global goodness-of-fit criterion, because global goodness-of-fit criteria that also emphasize theory testing rather than theory building can be used to assess CB-SEM results (Anderson and Gerbing, 1988).

3.5.2.3. Reasons for the use of Mplus

A wide variety of computer programs/software has been developed in the past two decades for SEM. The most popular computer programs include LISREL (Jöreskog and Sörbom, 2006), AMOS (Arbuckle, 2006), EQS (Bentler, 1995), Mplus (Muthen and Muthen, 1998–2012), SAS PROC CALIS and SAS PROC TCALIS (SAS Institute Inc., 2008). Each computer program has its own strengths and weaknesses, and most structural equation models can be estimated with each of the programs. The choice of program is often down to its advantages.

In this research, the computer program Mplus was used for model demonstration because all of the below mentioned features met the data analysis requirements. Mplus was developed on the basis of the computer program LISCOMP (Muthen, 1988). The computer program Mplus offers researchers a wide choice of models, estimators, and algorithms in a program that has an easy-to-use interface and graphical displays of data and analysis results. Mplus allows the analysis of both cross-sectional and longitudinal data, single-level and multilevel data, data that come from different populations with either observed or unobserved heterogeneity, and data that contain missing values. Analyses can be carried out for observed variables that are continuous, censored, binary, ordered categorical (ordinal), unordered categorical (nominal), counts, or combinations of these variable types. In addition, Mplus has extensive capabilities for Monte Carlo simulation studies, where data can be generated and analyzed according to most of the models included in

Table 3.3. Comparison of PLS-SEM and CB-SEM

Criterion	CBSEM	PLS-SEM	References
Research goal	Theory testing, theory confirmation, or the comparison of alternative theories	Predicting key target constructs or identifying key "driver" constructs	Hair et al. (2011a), Hair et al. (2016)
Theoretical foundation	Sound	Early-stage	Ringle et al. (2013), Astrachan et al. (2014), Hair et al. (2016)
Measurement model specification	Error terms require additional specification	Formative constructs are part of the structural model	Chin and Newsted (1999), Hair et al. (2011a), Hair et al. (2016)
Structural model	Model is nonrecursive	Structural model is complex (many constructs and many indicators)	Chin and Newsted (1999), Hair et al. (2011a)
Data characteristics	Normally distributed	Non-normally distributed	Hair et al. (2011a), Hair et al. (2016)
Sample size	Large	Small	Chin and Newsted (1999), Hair et al. (2011a), Hair et al. (2016)
Model evaluation	Research requires a global goodness-of-fit criterion	Research need to use latent variable scores in subsequent analyses	Hair et al. (2011a), Hair et al. (2016)

Source: Adapted from Chin and Newsted (1999:314), Hair et al. (2011a: 144), Hair et al. (2016: 19)

the program. (Muthen, 2002; Muthen and Muthen, 1998-2012). Overall, Mplus is a user-friendly and powerful program that is becoming increasingly popular in SEM (Wang and Wang, 2012).

3.5.3. Data preparation and screening

Aaker et al. (2001) noted that conversion and preparation of the raw data for analysis affects the quality of the statistical analysis and its interpretation. Moreover, Cooper and Schindler (2014) suggested that decisions about how to treat the data prior to data analysis are necessary for reducing the chances of data collection problems and inaccurate findings from the data. Thus, the collected data for this thesis was screened and examined thoroughly for errors and missing values before data entry.

SPSS version 22.0, was used to analyse the quantitative data obtained from the survey questionnaire. This software package is widely accepted and used by researchers in different disciplines, including social sciences, business studies, and information systems research (Zikmund et al., 2013). Therefore, this tool was used to screen the data for this research in terms of data coding, treatment of missing data (i.e., using ANOVA), identification of outliers (i.e., Mahalanobis Distance (D2)) test and find out the data normality (i.e. using kurtosis and skewness statistics). Each of these techniques is explained and discussed in the following sections (see Appendix 7).

Moreover, SPSS was also applied to perform descriptive statistics, such as frequencies, percentages, mean values, standard deviations and. correlation coefficients. These analyses were performed for each variable separately and to summarise the demographic profile of the respondents in order to get preliminary information and the feel of the data (Sekaran and Bougie, 2016).

Furthermore, before applying SEM, SPSS was used to conduct exploratory factor analysis (EFA) for the first stage of data analysis to summarise information from many variables in the proposed research model into a smaller number of factors, which is known as factor/dimension reduction (Hair et al., 2010). EFA is discussed in more detail in Section 3.5.4.

Erroneous data. Tabachnick and Fidell (2013) argued that the best way to ensure the accuracy of a data file is to proofread the original data against the computerized data file in the data window. With a small data file, proofreading is highly recommended, but with a large data file, it may not be possible. In this case, screening for accuracy involved examination of the descriptive statistics and graphic representations of the variables.

The first step with a large data set is to examine univariate descriptive statistics through one of the descriptive programs, such as IBM SPSS FREQUENCIES, or UNIVARIATE. For continuous variables, the researcher must check whether all the values are within range, that the means and standard deviations are plausible, that if there are discrete variables (such as categories of religious affiliation) whether there are any out-of-range numbers, and that the codes have been accurately programmed for missing values.

Missing data. Missing data is a very common problem in all type of survey research because it usually involves a large number of samples (Bryman and Cramer, 2011). Hair et al. (2010) noted that missing data causes two main problems: (a) it minimises the ability of a statistical test to imply a relationship in the data set, and (b) it creates biased parameter estimates. The potential effects of missing data depend on the frequency of occurrence, the pattern of missing observations, and the reasons for the missing value (Tabachnick and Fidell, 2013). Hair et al. (2010) pointed out that if the pattern of missing data is systematic (i.e. non-ignorable or is not missing at random), any technique used to treat this missing data could possibly generate biased results whereas, if the missing data is scattered in a random fashion with no distinct pattern (i.e. missing completely at random = MCAR), any remedy to treat this problem is assumed to yield acceptable results.

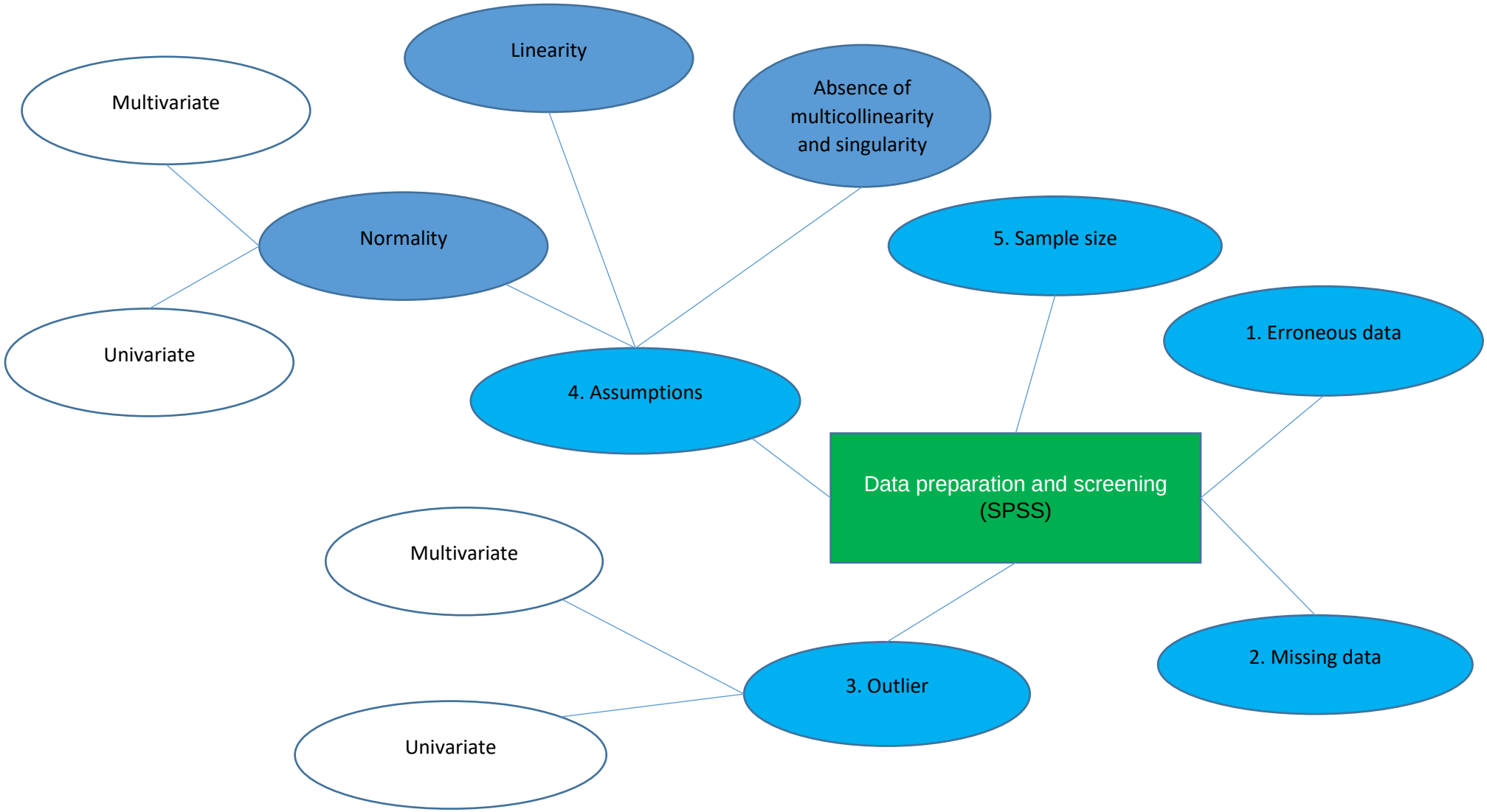


Figure 3.3. Data screening

Although there are no clear set guidelines regarding what constitutes a large amount of missing data, Kline (1998) suggested that missing values should probably constitute less than 10% of the total data. According to Cohen and Cohen (1983), 5% or even 10% of missing data on a particular variable is not large. Olinsky et al. (2003) pointed out that if the percentage of cases with missing observations is less than approximately 5%, and the pattern is ignorable, most simple analyses should yield reliable results.

This study followed the four-step process suggested by Hair et al. (2010) for identifying missing data and applying remedies, which includes: (1) determining the type of missing data, (2) determining the extent of missing data, (3) diagnosing the randomness of the missing data processes, (4) and selecting the imputation method. When implementing each step of this process, recommendations introduced by Little and Rubin (2002) were carefully considered. These four steps are explained in more detail in Appendix 8 and in chapter 4.

Outliers. Hair et al. (2010) and Kline (2016) described outliers as cases with scores that are distinctively different from the rest of the observations in a dataset. Hair et al. (2010) argue that outliers cannot be categorically characterized as either beneficial or problematic but, instead, must be viewed within the context of the analysis and should be evaluated by the types of information they may provide. When beneficial, outliers—although different from the majority of the sample— may be indicative of characteristics of the population that would not be discovered in the normal course of analysis.

In contrast, problematic outliers are not representative of the population, are counter to the objectives of the analysis, and can seriously distort statistical tests (Hair et al., 2010). Outliers can lead to important changes in parameter estimates when researchers use statistical methods that rely on maximum likelihood estimators (Cohen et al., 2003; Hunter and Schmidt, 2004; Kutner et al., 2004). Accordingly, Bollen and Jackman (1990) concluded that how we deal with outliers ‘‘can lead us to false acceptance or rejection of hypotheses’’ (p. 286). In other words, the decisions that researchers make about how to define, identify, and handle outliers have important implications. Specifically, such decisions change substantive conclusions including the presence or absence, direction, and size of an effect or relationship (Aguinis et al., 2013).

There are two main types of outliers i.e. univariate and multivariate outliers. A univariate outlier is the case that has an extreme value on one variable, whereas a multivariate outlier is a case with an unusual combination of values on two or more variables (Tabachnick and Fidell, 2013; Kline, 2016).

Univariate Detection. The univariate identification of outliers examines the distribution of observations for each variable in the analysis and selects as outliers those cases falling at the outer ranges (high or low) of the distribution. The primary issue is establishing the threshold for designation of an outlier. Among dichotomous variables, the typical approach first converts the data values to standard scores, which have a mean of 0 and a standard deviation of 1. Because the values are expressed in a standardized format, comparisons across variables can be made easily.

Among dichotomous variables, the cases on the “wrong” side of a very uneven split are likely univariate outliers. Rummel (1970) suggested deleting dichotomous variables with 90–10 splits between categories, or more, both because the correlation coefficients between these variables and others are truncated, and because the scores for the cases in the small category are more influential than those in the category with numerous cases. Dichotomous variables with extreme splits are easily found in the programs for frequency distributions, such as SPSS used during routine preliminary data screening (Tabachnick and Fidell, 2013).

Researchers should examine all metric variables to identify unique or extreme observations. For small samples (80 or fewer observations), outliers typically are defined as cases with standard scores of 2.5 or greater. For larger sample sizes, the threshold value of standard scores can be

increased up to 4. If standard scores are not used, researchers identify cases falling outside the ranges of 2.5 versus 4 standard deviations, depending on the sample size (Hair et al., 2010).

Multivariate Detection. The presence of multivariate outliers in data can be checked by the Mahalanobis distance (D2) test, which is a measure of distance in standard deviation units between each observation compared with the mean of all observations (e.g. Hair et al., 2010; Field, 2013; Kline, 2016). Given the nature of the statistical tests, it is suggested that conservative levels of significance (e.g., .005 or .001) be used as the threshold value for designation as an outlier. Thus, observations having a D2/df value exceeding 2.5 in small samples and 3 or 4 in large samples can be designated as possible outliers (Hair et al., 2010; Kline, 2016). In this research study, the researcher measured the Mahalanobis distance using SPSS version 22.0 and then compared the critical $\chi 2$ value with the degrees of freedom (df) equal to number of independent variables and the probability of $p < 0.001$.

In addition to univariate and multivariate outliers, another kind of outlier was considered in this research. It was an influential outlier, specifically a model fit outlier. This study applied the recommendations suggested by Aguinis et al. (2013) on defining, identifying and handling model fit outliers in SEM.

Assumptions in SEM. According to Kline (2012), assumptions in structural equation modelling include directionality and data-related ones. Directionality assumptions encompass assumptions of structural models and of measurement models. This research was assumed to meet the five general assumptions of structural models which are five general conditions before one can reasonably infer a causal relation between two variables:

1. The presumed cause (e.g., *X*) must occur before the presumed effect (e.g., *Y*); that is to say, there is temporal precedence.

2. There is an association, or an observed covariation, between *X* and *Y*.

3. There is isolation, which means that there are no other plausible explanations (e.g., extraneous or confounding variables) of the covariation between *X* and *Y*; that is to say, their statistical association holds control for other variables that may also effect *Y*.

4. The form of the distribution of the data is known; that is to say, the observed distributions match those assumed by the method used to estimate associations.

5. The direction of the causal relation is correctly specified; that is to say, *X* indeed causes *Y* rather than the reverse, or *X* and *Y* cause each other in a reciprocal manner.

Additionally, this research was assumed to meet the assumptions of reflective measurement models, yet not those of formative measurement models.

Data-related assumptions, argued by Kline (2012), include distributional and reliability assumptions. Both types of data-related assumptions were carefully considered in this research. The distributional assumptions in SEM are always presented in a variety of SEM or multivariate analysis textbooks by Hair et al. (2010), Tabachnick and Fidel (2013) and Kline, (2016). The distributional assumptions in SEM (normality, linearity and homoscedasticity) are discussed below.

Normality. Normality refers to the "shape of the data distribution for an individual metric variable and its correspondence to the normal distribution, which is the benchmark for statistical methods" (Hair et al., 2010; p. 71). Violation of normality might affect the estimation process or the interpretation of results, especially in SEM analysis. For instance, it may increase the chi-square value and may possibly cause underestimation of fit indices and standard errors of parameter estimates (Hair et al., 2010). One approach to diagnosing normality is through visual check or by graphical analyses, such as the histogram and normal probability plot which compare the observed data values with a distribution approximating the normal distribution. If the

observed data distribution largely follows the diagonal lines, then the distribution is considered as normal (Hair et al., 2006).

In addition to the shape of distribution, normality can also be inspected by two multivariate indexes i.e. skewness and kurtosis. Skewness portrays the symmetry of distribution, whereas kurtosis refers to the measure of the heaviness of the tails in a distribution (also known as peakedness or flatness of the distribution) compared with the normal distribution. In normal distribution, the scores for skewness and kurtosis are zero. Hair et al (2006) point out that skewness scores outside the -1 to +1 range demonstrate substantially skewed distribution. However, West et al. (1995) and Kline (2005) suggest that values of the skew index greater than three (3.0) are indicated as extremely skewed and a score of the kurtosis index from about 8.0 to over 20.0 describe extreme kurtosis.

In this study, the researcher set the maximum acceptable limit of observation values up to ±1 for the skewness and up to ±3 for the kurtosis. In addition, the researcher used the Shapiro-Wilks test and the Kolmogorov-Smirnov test to assess normality with the significance (.05). The results of these two tests, as well as the values of skewness and kurtosis, were always interpreted in conjunction with the histograms and P-P plots recommended by Hair et al. (2010).

Linearity. The assumption of linearity is that there is a straight-line relationship between two variables (where one or both of the variables can be combinations of several variables). Linearity is important in a practical sense because Pearson's *r* only captures the linear relationships among variables; if there are substantial nonlinear relationships among variables, they are ignored (Tabachnick and Fidell, 2013).

There are three approaches to identify nonlinear relationships. The most common way to assess linearity is to examine scatterplots of the variables and to identify any nonlinear patterns in the data. Many scatterplot programs can show the straight line depicting the linear relationship, enabling the researcher to better identify any nonlinear characteristics. An alternative approach is to run a simple regression analysis and to examine the residuals. The residuals reflect the unexplained portion of the dependent variable; thus, any nonlinear portion of the relationship will show up in the residuals. A third approach is to explicitly model a nonlinear relationship by the testing of alternative model specifications (also known as curve fitting) that reflect the nonlinear elements (Hair et al., 2010). In this study, the first and second approach were selected to identify nonlinear relationships.

There are two types of remedies for nonlinearity. If a nonlinear relationship is detected, the most direct approach is to transform one or both variables to achieve linearity. An alternative to data transformation is the creation of new variables to represent the nonlinear portion of the relationship (Hair et al., 2010).

Homoscedasticity. Homoscedasticity refers to "the assumption that dependent variable(s) exhibit equal levels of variance across the range of predictor variable(s)" (Hair et al., 2010, p.74). Homoscedasticity is desirable because *the variance of the dependent variable being explained in the dependence relationship should not be concentrated in only a limited range of the independent values.* In most situations, we have many different values for the dependent variable at each value of the independent variable. For this relationship to be fully captured, the dispersion (variance) of the dependent variable values must be relatively equal at each value of the predictor variable. If this dispersion is unequal across values of the independent variable, the relationship is said to be *heteroscedastic***.** Although the dependent variables must be metric, this concept of an equal spread of variance across independent variables can be applied when the independent variables are either metric or nonmetric (Hair et al., 2010).

Heteroscedasticity, the failure of homoscedasticity, is caused either by non-normality of one of the variables, or by the fact that one variable is related to some transformation of the other.

Another source of heteroscedasticity is a greater error of measurement at some levels of an independent variable (Tabachnick and Fidell, 2013).

Graphical tests of equal variance dispersion. The test of homoscedasticity for two metric variables is best examined graphically. Departures from an equal dispersion are shown by such shapes as cones (small dispersion at one side of the graph, large dispersion at the opposite side) or diamonds (a large number of points at the centre of the distribution). The most common application of graphical tests occurs in multiple regression, based on the dispersion of the dependent variable across the values of either the metric independent variables. Boxplots work well to represent the degree of variation between groups formed by a categorical variable. The length of the box and the whiskers each portray the variation of data within that group. Thus, heteroscedasticity would be portrayed by substantial differences in the length of the boxes and whiskers between groups representing the dispersion of observations in each group (Hair et al., 2010).

Statistical tests for homoscedasticity. The statistical tests for equal variance dispersion assess the equality of variances within groups formed by nonmetric variables. The most common test, the Levene test, is used to assess whether the variances of a single metric variable are equal across any number of groups. If more than one metric variable is being tested, so that the comparison involves the equality of variance/covariance matrices, the Box's M test is applicable. The Box's M test is available in both multivariate analysis of variance and discriminant analysis (Hair et al., 2010).

Remedies for heteroscedasticity. Heteroscedastic variables can be remedied through data transformations similar to those used to achieve normality. As mentioned earlier, frequently heteroscedasticity is the result of the non-normality of one of the variables, and correction of the non-normality also remedies the unequal dispersion of variance. A later section discusses data transformations of the variables to "spread" the variance and make all values have a potentially equal effect in prediction (Hair et al., 2010).

Sample size. Sample size in the data screening is examined in relation to requirements of data analysis techniques and model estimations. The sample sizes for EFA and SEM were discussed in great detail in section 3.4.2.1.

3.5.4. EFA

Factor analysis techniques are used to address the problem of analysing the structure of the correlations among a large number of measurement items (also known as variables) by defining a large set of common underlying dimensions, known as factors. FA takes a large set of variables and summarises or reduces them using a smaller set of variables or components or factors (Hair et al., 2010).

The main purposes of the FA therefore include: (a) understanding the structure of a set of variables, (b) constructing a questionnaire to measure any underlying variables, and (c) reducing a data set to a more manageable level (Field, 2013). Therefore, at first, the researcher identifies latent dimensions of the structure of the data and then determines the degree to which a test item (variable) is explained by each factor. This is then followed by the primary uses of FA: summarisation and data reduction (Hair et al., 2010). This purpose can be achieved by either exploratory factor analysis or confirmatory factor analysis techniques. However, the exploratory factor analysis technique is used to take what the data gives you, whereas the confirmatory factor analysis technique involves combining variables together on a factor or the precise set of factors for testing hypotheses (Hair et al., 2010).

In this study, the researcher first conducted exploratory factor analysis (EFA) to examine the dimensions of each construct (hereafter called a factor) and then confirmatory factor analysis (CFA) was performed for testing and confirming relationships between the observed variables under each hypothesised construct (Hair et al., 2010; Zikmund et al., 2013; Brown, 2015) (see Appendix 7). The following paragraphs explain how EFA is performed by using SPSS version 22.0.

Exploratory factor analysis (EFA) can be defined as "a method of determining the number and nature of unobserved latent variables that can be used to explain the shared variability in a set of observed indicators" (Preacher et al., 2013, p.29). EFA has been widely used to select items from a large pool and to group them in a more manageable form, as well as to examine the relationships among the variables without priori hypotheses (Hair et al, 2010).

There are three main steps in EFA: factor extraction method, number of retained factors and rotation method (see Appendixes 9) (Kline, 2013). The first main step of EFA is to select a factor extraction method. The process of extraction aims to determine the factors underlying a number of variables (Miller et al., 2009). There are various extraction methods available. However the principal component analysis is the most commonly used method.

The second main step of EFA is to determine the number of retained factors. After extraction the researcher must decide how many factors to retain for rotation. Both over-extraction and under-extraction of factors retained for rotation can have deleterious effects on the results. The default in most statistical software packages is to retain all factors with eigenvalues greater than 1.0. The scree test involves examining the graph of the eigenvalues (available in SPSS) and looking for the natural bend or break point in the data where the curve flattens out. The number of datapoints *above* the "break" (i.e., not including the point at which the break occurs) is usually the number of factors to retain, although it can be unclear if there are data points clustered together near the bend (Osborne and Costello, 2009).

The third main step of EFA is to select a rotation method, which is applied to present the pattern of loadings in a manner that is easier to interpret. Tabachnick and Fidell (2013) noted two main approaches to rotation, which include orthogonal and oblique rotation methods. The orthogonal rotations assume that extracted factors are independent (uncorrelated) while the oblique rotations assume that the extracted factors are correlated (Miller et al., 2009, Bryman and Cramer, 2011; Tabachnick and Fidell, 2013).

In this study, the researcher employed principal components analysis (PCA) and an orthogonal model with varimax rotation to perform factor analysis using SPSS (version 22.0). The reason for using the orthogonal rotation was that the results generated from it have a higher generalisability and replicability power compared to oblique rotation, and also because interpretation of orthogonal rotation factors is less complicated because factors are uncorrelated with each other (Tabachnick and Fidell, 2013). After conducting the EFA, the identified dimensions were checked by confirmatory factor analysis using structural equation modelling, as described in the next section. Appendix 6 presents a summary of the statistics used in this research study.

In addition, scale reliability was evaluated using Cronbach's alpha (coefficient alpha) coefficient on SPSS, giving a measure of how well a set of manifest indicators measured the scale (DeVellis, 2016). Nunally (1978) recommends an alpha value of .7, while Robinson et al. (1991) suggest that a value of .6 is acceptable for exploratory research. However, De Vellis (2016) notes that it is not unusual to find scales with lower reliability coefficients.

3.5.5. CFA

Confirmatory factor analysis (CFA) is a type of structural equation modelling (SEM) that deals specifically with measurement models—that is to say, the relationships between observed measures or *indicators* and latent variables or *factors* (Brown, 2015). CFA is a way of testing how well measured variables represent a smaller number of constructs (Hair *et al*., 2010).

CFA can be used for a variety of purposes. CFA is an important analytic tool for psychometric evaluation. Nowadays, CFA is almost always used to examine the latent structure of a test instrument in the process of scale development or to verify the number of underlying dimensions of the instrument (factors) and the pattern of item–factor relationships (factor loadings) or to assist in the determination of how a test should be scored. Additionally, CFA is an analytical tool to detect method effects. In CFA, the specification of correlated errors may be justified on the basis of *method effects* that reflect additional indicator covariation that results from common assessment methods (e.g., observer ratings, questionnaires); reversed or similarly worded test items; or differential susceptibility to other influences, such as response set, demand characteristics, acquiescence, reading difficulty, or social desirability. Moreover, CFA is an indispensable analytic tool for construct validation. The results of CFA can provide compelling evidence of the convergent and discriminant validity of theoretical constructs. In addition, CFA offers a very strong analytic framework for evaluating the equivalence of measurement models across distinct groups (e.g., demographic groups such as sexes, races, or cultures) (Brown and Moore, 2012; Brown, 2015).

There are two main types of analyses based on the common-factor model: exploratory factor analysis (EFA) and CFA (Jöreskog, 1969, 1971). EFA and CFA both aim to reproduce the observed relationships among a group of indicators with a smaller set of latent variables. However, EFA and CFA differ fundamentally by the number and nature of a priori specifications and restrictions made on the latent variable measurement model. EFA is a data-driven approach, such that no specifications are made in regard to the number of common factors (initially) or the pattern of relationships between the common factors and the indicators (i.e., the factor loadings). Rather, the researcher employs EFA as an exploratory or descriptive data technique to determine the appropriate number of common factors, and to ascertain which measured variables are reasonable indicators of the various latent dimensions (e.g., by the size and differential magnitude of the factor loadings) (Brown and Moore, 2012).

Unlike EFA, CFA requires the researcher to pre-specify all aspects of the model. Thus the researcher must have a firm a priori sense, based on past evidence and theory, of the number of factors that exist in the data, of which indicators are related to which factors, and so forth (Brown, 2015). The researcher must specify the number of factors and the pattern of indicator–factor loadings in advance, as well as other parameters, such as those bearing on the independence or covariance of the factors and indicator unique variances. The pre-specified factor solution is evaluated in terms of how well it reproduces the sample covariance matrix of the measured variables (Hair et al., 2010; Brown, 2015). Unlike EFA, a hypothesis-driven approach requires a strong empirical or conceptual foundation to guide the specification and evaluation of the factor model. Accordingly, EFA is often used early in the process of scale development and construct validation, whereas CFA is used in the later phases, when the underlying structure has been established on prior empirical and theoretical grounds (Brown and Moore, 2012; Brown, 2015). In addition, Hair *et al*. (2010) noted the CFA statistics can show how well the specification of the factors matches reality (the actual data); it is a tool that enables researchers to either confirm or reject a preconceived theory.

CFA should be employed as a precursor to structural equation models that specify structural relationships (e.g., regressions) among the latent variables. Structural equation models consist

of two major components: (1) the "measurement model," which specifies the number of factors, how the various indicators are related to the factors, and the relationships among indicator errors (i.e., a CFA model); and (2) the "structural model," which specifies how the various factors are related to one another (e.g., direct or indirect effects, no relationship). CFA should be conducted prior to the specification of a structural equation model (Hair *et al*., 2010; Brown, 2015). When poor model fit is encountered in SEM studies, it is more likely that this is due to misspecifications in the measurement portion of the model than in the structural component Thus, although CFA is not the central analysis in SEM studies, an acceptable measurement model should be established before estimating and interpreting the structural relationships among latent variables (Brown, 2015).

The CFA process includes four main steps: model specification, estimation, evaluation and respecification. To estimate a CFA solution, the measurement model must be identified (Brown and Moore, 2012). A model is identified if it is theoretically possible for the computer to derive a unique estimate of every model parameter. The word "theoretically" emphasizes identification as a property of the model and not of the data. There are two necessary but insufficient requirements for identification: (1) Every factor and error term must be assigned a scale, and (2) the model degrees of freedom must be at least zero ($df_M >= 0$). Additional identification requirements for standard CFA models concern the minimum number of indicators for each factor. A single-factor standard model requires at least three indicators in order to be identified (Kline, 2013).

If a standard CFA model with a single factor has at least three indicators, or has two or more factors where each factor has two or more indicators, then the model is identified. A CFA model is standard when the model has three characteristics: (1) each indicator is continuous with two causes—a single factor that the indicator is supposed to measure and all unique sources of influence represented by the error term; (2) the error terms are independent of each other and of the factors; (3) all associations are linear and the factors co-vary (Kline, 2016).

The objective of CFA is to obtain estimates for each parameter of the measurement model (i.e., factor loadings, factor variances and co-variances, indicator error variances and possibly error co-variances), that produce a predicted variance–covariance matrix (also referred to as the "model-implied variance–covariance matrix") that resembles the sample variance–covariance matrix as closely as possible (Brown and Moore, 2012) (see Appendix 7).

The estimation process in CFA (and SEM, in general) entails a "fitting function," a mathematical operation to minimize the difference between the sample and model-implied variance–covariance matrices. By far, the fitting function most widely used in applied CFA and SEM research is "maximum likelihood" (ML), the default statistical estimator in most latent variable software programs. The underlying principle of ML estimation is to find the model parameter estimates that would maximize the probability of observing the available data if the data were collected from the same population again. In other words, ML aims to find the parameter values that make the observed data most likely (or conversely, maximize the likelihood of the parameters given the data) (Brown and Moore, 2012; Kline, 2013).

It is important to note that ML is only one of several methods that can be used to estimate CFA models. ML has several requirements that render it an unsuitable estimator in some circumstances. Some key assumptions of ML are that (1) the sample size is large (asymptotic); (2) the indicators of the factors have been measured on continuous scales (i.e., approximate interval-level data); and (3) the distribution of the indicators is multivariate normal (Brown and Moore, 2012). This means that it is necessary to carefully screen the raw data and deal with problems, such as extreme outlier scores or severely non-normal univariate distributions that contribute to multivariate non-normality (Kline, 2013).

In the case of non-normal, continuous indicators, it is better to use a different estimator, such as ML with robust standard errors and χ^2 (e.g., Satorra and Bentler, 1994). These robust estimators provide the same parameter estimates as ML, but both the goodness-of-fit statistics (e.g., χ^2) and standard errors of the parameter estimates are corrected for non-normality in large samples. If one or more of the factor indicators is categorical (or non-normality is extreme), normal theory ML should not be used. In this instance, estimators such as mean- and variance-adjusted weighted least squares (e.g., WLSMV; Muthén et al., 1997) and unweighted least squares (ULS) are more appropriate. WLS estimators can also be used for non-normal, continuous data, although robust ML is often preferred given its ability to outperform WLS in small and medium-size samples (Curran et al., 1996; Hu et al., 1992).

Three major aspects of the results should be examined to evaluate the acceptability of the CFA model: (1) overall goodness of fit; (2) the presence or absence of localized areas of strain in the solution (i.e., specific points of ill fit); and (3) the interpretability, size, and statistical significance of the model's parameter estimates (Brown and Moore, 2012; Brown, 2015). Goodness-of-fit indices provide a global descriptive summary of the ability of the model to reproduce the input covariance matrix, but the other two aspects of fit evaluation (localized strain, parameter estimates) provide more specific information about the acceptability and utility of the solution (Brow, 2015).

Goodness of fit pertains to how well the parameter estimates of the CFA solution (i.e., factor loadings, factor correlations, error co-variances) are able to reproduce the relationships that were observed in the sample data. There are a variety of goodness-of-fit statistics that provide a global descriptive summary of the ability of the model to reproduce the input covariance matrix (Brown and Moore, 2012). The classic goodness-of-fit index is χ^2. In addition to c2, the most widely accepted global goodness-of-fit indices are the standardized root mean square residual (SRMR; Bentler, 1995), root mean square error of approximation (RMSEA; Browne and Cudeck, 1993; Steiger and Lind, 1980), the Tucker–Lewis index (TLI; Tucker and Lewis, 1973), and the comparative fit index (CFI; Bentler, 1990).

In practice, it is suggested that each of these fit indices be reported and considered because they provide different information about model fit (i.e., absolute fit, fit adjusting for model parsimony, fit relative to a null model) (Brown and Moore, 2012). Considered together, these indices provide a more conservative and reliable evaluation of the fit of the model. In one of the more comprehensive and widely cited evaluations of cut off criteria, the findings of simulation studies by Hu and Bentler (1999) suggest the following guidelines for acceptable model fit: (1) SRMR values close to .08 or below; (2) RMSEA values close to .06 or below; and (3) CFI and TLI values close to .95 or greater. The other recommendations are presented in Table 3.4, below.

After ensuring that the model has been specified as intended (e.g., verifying model *df* and freely estimated, fixed, and constrained parameters), goodness-of-fit indices are then examined to begin evaluating the acceptability of the model. If these indices are consistent with good model fit, this provides initial (tentative) support for the notion that the model has been properly specified (Brow, 2015).

The second aspect of model evaluation is to determine whether there are specific areas of ill fit in the solution. A limitation of goodness-of-fit statistics (e.g., SRMR, RMSEA, CFI) is that they provide a *global*, descriptive indication of the ability of the model to reproduce the observed relationships among the indicators in the input matrix. However, in some instances, overall goodness-of-fit indices suggest acceptable fit despite the fact that some relationships among indicators in the sample data have not been reproduced adequately (or alternatively, some model-implied relationships may markedly exceed the associations seen in the data). On the other hand, overall goodness-of-fit indices may indicate that a model poorly reproduced the sample matrix. However, these indices do not provide information on the reasons why the

Table 3.4. Summary of model fit indices

Fit index	Description	Acceptable fit
Chi-square (χ^2)	. Test of the null hypothesis that the non significant at estimated variance-covariance matrix least p-value > 0.05 deviate from the sample size. . Greatly affected by sample size; the larger the sample, the most likely it is that the p-value will imply a significant difference between model and data. . It almost always is sig. when you have a large sample!	. Low χ^2 . Non significant with p-value > .05
Normed Fit Chi-quare (χ^2/df)	. Chi-square statistics are only meaningful taking into account the degree of freedom (df). . It is also regarded as a measure of absolute fit and parsimony. . Value close to 1 indicates good fit whereas value less than 1 implies overall fit	< 2
Root Mean Square Error of Approximation (RMSEA)	. Representing how well the fitted model approximates per degree of freedom. . Penalises overly complex models comes with a 90% confidence interval (CI)	$\leqslant$ .08 = 'adequate' $\leqslant$ .06 = 'good'
Standardized Root Mean Square Residual (SRMR)	. Representing the difference between the residuals of the sample covariance matrix and the hypothesised covariance model.	$\leqslant$ .08 = 'adequate' $\leqslant$ .05 = 'good'
Tucker-Lewis Index (TLI)	. Comparative index between proposed and null models adjusted for degrees of freedom. . Able to avoid extreme underestimation and overestimation and is robust against sample size . Penalises overly complex models	$\geqslant$ .95 = 'good' $\geqslant$ .90 = 'adequate'
Comparative Fit Index (CFI)	. Comparative index between proposed null models adjusted for degrees of freedom . Interpreted similarly as Buntler-Bonett Normed Fit Index but may be less affected by sample size	$\geqslant$ .95 = 'good' $\geqslant$ .90 = 'adequate'

Source: Byrne (1998 ; 2012), Diamantopoulos and Siguaw (2000), Hair et al. (2010), Hooper et al. (2008), Hu and Bentler (1999) and Kline (2016)

model fitted the data poorly (e.g., misspecification of indicator–factor relationships, failure to model salient error co-variances) (Brown and Moore, 2012; Brown, 2015).

Two statistics that are frequently used to identify specific areas of misfit in a CFA solution are *standardized residuals* and *modification indices.* A residual reflects the difference between the observed sample value and model-implied estimate for each indicator variance and covariance (e.g., the deviation between the sample covariance and the model-implied covariance of indicators X1 and X2). When standardized, these residuals are analogous to standard scores in a sampling distribution and can be interpreted like z-scores (Brown and Moore, 2012; Brown, 2015).

Modification indices can be computed for each fixed parameter (e.g., parameters that are fixed to zero, such as indicator cross-loadings and error co-variances) and each constrained parameter in the model (e.g., parameter estimates that are constrained to be the same value). The modification index reflects an approximation of how much the overall model χ^2 will decrease if the fixed or constrained parameter is freely estimated. Because the modification index can be conceptualized as a c2 statistic with 1 *df*, indices of 3.84 or greater (i.e., the critical value of c2 at $p < .05$, $df = 1$) suggest that the overall fit of the model could be significantly improved if the fixed or constrained parameter were freely estimated. Since modification indices are also sensitive to sample size, software programs provide expected parameter change (EPC) values for each modification index. As the name implies, EPC values are an estimate of how much the parameter would be expected to change in a positive or negative direction if it were freely estimated in a subsequent analysis (Brown and Moore, 2012; Brown, 2015).

Although standardized residuals and modification indices provide specific information for how the fit of the model can be improved, such revisions should only be pursued if they can be justified on empirical or conceptual grounds (e.g., MacCallum et al., 1992). Atheoretical specification searches (i.e., revising the model solely on the basis of large standardized residuals or modification indices) will often result in further model misspecification and overfitting (e.g., inclusion of unnecessary parameter estimates due to chance associations in the sample data) (Brown and Moore, 2012; Brown, 2015).

The final major aspect of CFA model evaluation pertains to the interpretability, strength, and statistical significance of the parameter estimates. The parameter estimates (e.g., factor loadings and factor correlations) should only be interpreted in the context of a good-fitting solution (see Table 3.5). If the model does not provide a good fit to the data, the parameter estimates are likely to be biased (incorrect). In context of a good-fitting model, the parameter estimates should first be evaluated to ensure that they make statistical and substantive sense. From a substantive standpoint, the parameters should be of a magnitude and direction that is in accord with conceptual or empirical reasoning (e.g., each indicator should be strongly and significantly related to its respective factor, and the size and direction of the factor correlations should be consistent with expectations). Small or statistically nonsignificant estimates may be indicative of unnecessary parameters (e.g., a non-salient error covariance or indicator cross-loading). In addition, such estimates may highlight indicators that are not good measures of the factors (i.e., a small and nonsignificant primary loading may suggest that the indicator should be removed from the measurement model). On the other hand, extremely large parameter estimates may be substantively problematic. For example, if the factor correlations approach 1.0 in a multifactorial solution, there is strong evidence to question whether the latent variables represent distinct constructs (i.e., they have poor discriminant validity). If two factors are highly overlapping, the model could be re-specified by collapsing the dimensions into a single factor. If the fit of the re-specified model is acceptable, it is usually favoured because of its better parsimony (Brown and Moore, 2012; Brown, 2015).

Often a CFA model will need to be revised. Model re-specification is conducted to reach some purposes. The most common reason for re-specification is to improve the fit of the model. In this case, the results of an initial CFA indicate that one or more of the three major criteria used to evaluate the acceptability of the model are not satisfied; that is to say, the model does not fit well on the whole, does not reproduce some indicator relationships well, or does not produce uniformly interpretable parameter estimates. In addition, re-specification is often conducted to improve the parsimony and interpretability of the CFA model. Rarely do these forms of re-specification improve the fit of the solution; in fact, they may worsen overall fit to some degree (Brown and Moore, 2012; Brown, 2015).

Table 3.5. Measurement model estimates

Estimates	Recommended values	References
Factor loading	>0.5 = 'acceptable' >0.7 = 'good'	Churchill, (1979); Holmes-Smith (2002)
Critical ratio (Est./S.E)	>1.96	Brown and Moore (2012)
Standardized residual value	less than |2.5|	Hair et al. (2010), Byrne (1998)

Source: Chandio, 2011, p.117

The sources of CFA model misspecification, and the methods of detecting and rectifying them, are discussed in this section. In a CFA model, the main potential sources of misspecification are the number of factors (too few or too many), the indicators (e.g., selection of indicators, patterning of indicator–factor loadings), and the error theory (e.g., uncorrelated vs. correlated measurement errors). As discussed above, a mis-specified CFA solution may be evidenced by several aspects of the results: (1) overall goodness-of-fit indices that fall below accepted thresholds (e.g., CFI, TLI < .95); (2) large standardized residuals or modification indices; and (3) unexpectedly large or small parameter estimates or *Heywood cases*, which are estimates with out-of-range values. Standardized residuals and modification indices are often useful for determining the particular sources of strain in the solution. However, these statistics are most apt to be helpful when the solution contains minor misspecifications (Brown, 2015). When the initial model is grossly mis-specified, specification searches are not nearly as likely to be successful (MacCallum, 1986). To rectify the sources of ill fit, remedial action is selected based on the specific source of ill fit (Brown, 2015).

In this research, CFA was used to assess the uni-dimensionality of constructs of the research model in this thesis and to measure the adequacy of the measurement models associated with each construct. The above-mentioned CFA process was strictly adhered to. All of the CFA models in this research met the requirements of a standard CFA model suggested by Kline (2016). The results of CFA models are presented in Chapter 4, while the interpretation and discussion of the CFA model results are explained in Chapter 5.

3.5.6. Structural model analysis

As discussed in earlier in this chapter, this research applied a two-step approach in the structural equation modelling analysis. In the first step, measurement model evaluation was achieved by examining the uni-dimensionality, reliability, and validity of latent constructs using CFA. Hence, the structural model can be tested as a next main stage to examine the hypothesised relationships between the latent and/or observed constructs in the proposed models (Hair et al., 2010; Kline, 2016). The structural models (hypothesised models) depict the relationship among the latent and/or observed constructs, as presented in chapter 2. In other words, it aimed to specify which constructs directly / indirectly influenced the values of other constructs in the model (see Appendix 7). According to Schumacker and Lomax (2010), Tabachnick and Fidell (2013) and Kline (2016), the structural model analysis process consists of model specification, estimation, evaluation and re-specification. This process is the same as CFA. Results of structural model testing are presented in chapter 4.

3.5.7. Moderating effect analysis

Moderating effect refers to “an effect of a third variable or construct changing the relationship between two related variables/constructs” (Hair et al., 2010, p. 690). That is to say, the relationship between two variables changes based on the level/amount of a moderator. A moderator is a variable that alters the strength or direction of the relationship between the independent and dependent variables (Baron and Kenny, 1986; Holmbeck, 1997).

It is important to note that moderating variables must be chosen with strong theoretical support. The assumption of causality by the moderator is one that cannot be tested directly and becomes potentially confounded as the moderator becomes correlated with either of the variables in the relationship. Therefore, analysis of moderators is easiest when the moderator has no significant linear relationship with either of the constructs (Cohen and Cohen, 1983; Baron and Kenny, 1986; Gogineni et al., 1995). The lack of a relationship between the moderator and the other constructs helps distinguish moderators from mediators (remember that the mediator must be related to both constructs in the relationship being mediated).

Methods to test hypotheses of moderation should be considered. Compared to the methods available for testing a hypothesis of mediation, the options available to researchers interested in moderation are both more numerous and more complex. This is at least partly attributable to the changing definition of moderation over time and partly due to its conceptual relationship with statistical interaction (Hall and Sammons, 2013). There may have three main methods to test a hypothesis of moderation: sub-group comparisons, statistical interaction terms and random slop effects (e.g. Baron and Kenny, 1986; Hall and Sammons, 2013).

Frazier et al. (2004) provides an excellent guide to testing moderator effects in multiple regression. This guide seems to be advanced from recommendations of Aiken and West (1991), Cohen et al. (2003) and Jaccard and Turrisi (2003). Based on the content of this guide, it may be confirmed that it is very helpful for testing moderation not only in multiple regression but also in SEM. The guide discusses designing a study to test moderation. In which, the authors emphasise importance of theory in choosing a moderator and in identifying the hypothesised nature of the interaction; and they explain power of tests of interactions in relation to choosing predictor, moderator and outcome variables. With regard to analysing the data, they suggest that researchers should represent categorical variables with code variables, center or standardise continuous variables, create product terms and structure the equation. With reference to interpreting the results, Frazier and colleagues (2004) recommend that researchers should interpret the effects of the predictor and moderator variables, test the significance of the moderator effect and interpret significant moderator effects. The author of this thesis followed this guide and applied it when using Mplus.

Estimating and interpreting latent variable interactions using Mplus

Depending on the type of the moderator variable, different statistical analyses are used to measure and test the differential effects (Baron and Kenny, 1986; Holmbeck, 1997). A moderator variable can be metric or nonmetric. Metric, continuous variables can be observed or latent. The strategies presented below are applicable to any research question involving interactions of latent variables, including interactions between a latent variable and an observed variable as well as interactions between latent variables.

Straightforward methods for estimating interactions between latent variables are therefore necessary to enable advancements in areas of research where theory predicts such interactions (Maslowsky et al., 2015). Several methods for estimating and interpreting interactions between latent variables are available (e.g. Kenny and Judd, 1984; Klein and Moosbrugger, 2000; Littleet

al., 2006; Marsh et al., 2007). Of the available methods, the latent moderated structural equations (LMS; Klein and Moosbrugger, 2000) has two notable advantages: statistical efficiency (requiring estimation of only one parameter) and availability in commercial desktop software, Mplus (Muthén and Muthén, 1998–2012). However, the utility of the LMS method has traditionally been limited for several reasons: 1) traditional model fit indices used in structural equation modeling are not available for LMS models, 2) Mplus does not generate standardized coefficients for these models, and 3) Mplus does not produce the percentage of variance explained by the latent interaction, or any other indicator of the size of a latent interaction effect. The limitations of LMS make it difficult to interpret the interaction effect using only the standard output and therefore limit the utility of the method for the average researcher. However, state-of-the-science techniques are currently available for assessing LMS model fit, obtaining standardized coefficients, and determining the size of the latent interaction effect.

The author of this thesis follows a two-step estimation procedure for estimating LMS (as suggested by Klein and Moosbrugger (2000) and advanced by Maslowsky et al. (2015)) using the XWITH command in Mplus software (Muthén and Muthén, 1998–2012). As recommended by Maslowsky et al. (2015), guidelines for assessing model fit, calculating a standardized beta coefficient, determining the effect size of the interaction effect, and interpreting the interaction, are then presented.

Data preparation. There are no LMS-specific data preparation steps that must be completed before estimating the models. It is not necessary to center the indicator variables used to form the latent variables. The XWITH procedure assumes normally distributed variables, and extreme skewness of indicator variables can lead to convergence problems and biased parameter estimates (Cham et al., 2012; Klein and Moosbrugger, 2000).

Model estimation. The researcher will generally estimate a measurement model and ensure its fit prior to estimating structural models. CFI and TLI values greater than .95 and RMSEA values below .08 generally constitute good fit (Brown and Cucdeck, 1992, 1993; Little, 2013), though there remains some disagreement about ideal indices of model fit (Little, 2013). The latent interaction term is estimated in a subsequent step and is not included in the measurement model. The latent interaction term does not have a mean, variance, or a covariance with other parameters and therefore should not affect the fit of the measurement model (Muthén and Asparouhov, 2015). Correlations between factors and between items on the same construct can be specified according to the investigator's hypotheses, as with a standard structural equation model.

After ensuring the fit of the measurement model, structural models are estimated in two steps (Klein and Moosbrugger, 2000; Muthén and Asparouhov, 2015). The first step is to estimate the structural model without the latent interaction term. This model will henceforth be referred to as Model 0. Model 0 will supply model fit indices. The second step is to estimate the structural model with the latent interaction. This model will henceforth be referred to as Model 1. The output of Model 1 will provide the final regression coefficients and indicate whether the latent interaction is significant. If significant, the interaction can be interpreted by graphing as in standard regression models (Aiken and West, 1991).When graphing, regression coefficients for main effects and the latent interaction should be obtained from Model 1. If using standardized coefficients, one should use a graphing technique designed for standardized coefficients (Dawson, 2014).

Assessing model fit. Model fit indices generally used to interpret the fit of structural equation models, such as CFI, TLI, RMSEA, and χ^2, have not been developed for LMS models. Alternatively, a two-step method for assessing the overall fit of each LMS model can be used (Klein and Moosbrugger, 2000; Muthén and Asparouhov, 2015). First, CFI, TLI, RMSEA, and χ^2 values are obtained from Model 0. Second, using a loglikelihood ratio test, the relative fit of Model 0 (null model, where the interaction is not estimated and therefore assumed to be zero) and Model 1 (alternative model, where the interaction is estimated) is compared. The log-likelihood ratio test

is used to determine whether the more parsimonious Model 0 (i.e., model that does not estimate the interaction effect) represents a significant loss in fit relative to the more complex Model 1 (Satorra, 2000; Satorra and Bentler, 2010). If Model 0 fits well and, per the log-likelihood ratio test, Model 0 represents a significant loss in fit relative to Model 1, then the researcher can conclude that Model 1 is also a well-fitted model. If the log-likelihood ratio test is not significant, one can only conclude that Model 0 does not result in a significant loss of fit relative to Model 1. There is no way to assess whether the fit of Model 1 is equal to or worse than that of Model 0.

The test statistic for a log-likelihood ratio test, often denoted as D, is calculated using the following equation:

D = -2[(log-likelihood for Model 0) – (log-likelihood for Model 1)]

The values of D are approximately distributed as χ^2. The degrees of freedom (*df*) to determine the significance of D is calculated by subtracting the number of free parameters in Model 0 from the number of free parameters in Model 1. For example, in the case of modeling one latent interaction, there would be one additional parameter estimated in Model 1, so the difference in free parameters = 1, and the D statistic calculated using the loglikelihoods from Model 0 and Model 1 can be compared to a χ^2 distribution using *df* = 1. In Mplus output, the log-likelihood values needed to perform this calculation are labeled ''H0 Value.'' A recent simulation study indicates that the optimal difference test statistic for comparing LMS models is this raw, uncorrected difference between these two log-likelihood values (Gerhard et al., 2015). The simulation study indicates that this uncorrected difference test, originally proposed by Klein and Moosbrugger (2000), performs better than the robust difference test (Satorra and Bentler, 2001) or the ''strictly positive'' difference value (Satorra and Bentler, 2010), which have been applied in past studies using LMS models.

Standardized coefficients. Psychologists often prefer to present standardized rather than unstandardized regression coefficients in their publications. Standardized regression coefficients are not provided by Mplus for LMS models. However, standardized beta coefficients can be obtained by standardizing the data prior to analysis (e.g. Klein and Moosbrugger, 2000). Standardization is accomplished in Mplus prior to model estimation using the ''standardize'' command, as demonstrated in the Mplus code in the Appendix.

Variance explained by latent interaction and total variance explained. For the dependent variable Y in Model 0, the structural model without an interaction, the R^2_Y may be obtained from the Mplus STANDARDIZED output, or it can be calculated by hand. Coefficients for two ''main'' (first order) effects, β_{X1} and β_{X2}, variances of each latent variable, σ^2_{X1} and σ^2_{X2}, a covariance between the latent variables, σ^2_{X1X2}, and a residual variance for the response, σ^2_{Yres}, are all given in the Mplus output. These coefficients can be used estimate R^2 for the dependent variable with no interaction term:

$$R^2_{Y0} = \frac{\beta^2_{YX1}\sigma^2_{X1} + \beta^2_{YX2}\sigma^2_{X2} + 2\beta_{YX1}\beta_{YX2}}{\beta^2_{YX1}\sigma^2_{X1} + \beta^2_{YX2}\sigma^2_{X2} + 2\beta_{YX1}\beta_{YX2} + \sigma^2_{Yres}} \qquad (3.1)$$

For the dependent variable Y in Model 1, the structural model with an interaction, estimates exist of the same parameters as before, plus a coefficient for the interaction, β_{X1X2}, given in the Mplus output. The LMS estimator of the interaction is constructed to have no covariance with the first order effects when data are normally distributed (Klein and Moosbrugger, 2000), which enables estimation of R^2 for the dependent variable using only these given values:

$$R^2_{Y1} = \frac{\beta^2_{YX1}\sigma^2_{X1} + \beta^2_{YX2}\sigma^2_{X2} + 2\beta_{YX1}\beta_{YX2} + \beta^2_{X1X2}\left(\sigma^2_{X1}\sigma^2_{X2} + \left(\sigma^2_{X1X2}\right)^2\right)}{\beta^2_{YX1}\sigma^2_{X1} + \beta^2_{YX2}\sigma^2_{X2} + 2\beta_{YX1}\beta_{YX2} + \beta^2_{X1X2}\left(\sigma^2_{X1}\sigma^2_{X2} + \left(\sigma^2_{X1X2}\right)^2\right) + \sigma^2_{Yres}} \quad (3.2)$$

Finally, $\Delta R^2_Y = R^2_{Y1} - R^2_{Y0}$, the difference between these two R2 values, yields the portion of R^2 attributable to the interaction term.

In a word, based on the recommendations suggested by Maslowsky et al. (2015), the author of this thesis conducted a 4-step procedure to estimating and interpreting latent interactions:

Step 1: Estimating the measurement model

Step 2: Estimating the structural model without latent interaction term (Model 0)

Step 3: Estimating the structural model with latent interaction term (Model 1) and assessing the output of Model 1 to indicate whether the interaction is significant.

Step 4: Graphing and interpreting if the interaction is significant.

Estimating and interpreting interactions between a continuous predictor and a categorical moderator using Mplus

Nonmetric moderator. Nonmetric, categorical variables often are hypothesised as moderators. These moderators typically are classification variables of some types. One common type of moderator is respondent characteristics, such as gender, age, or other characteristics. Differing situations or contexts are another type of categorical moderator. As has been noted, theory is important in evaluating a moderator because a researcher should find some reason to expect that the moderator changes a relationship. Researchers have any number of ways of dividing the sample into groups, but the section of a moderator should not be based on whether it demonstrates significant moderating effects but, rather, on its theoretical foundation (Hair et al., 2010).

Approaches to test a hypothesis of moderation. A moderator can also be a continuous/metric variable and evaluated using SEM. If the continuous variable can be categorised in a way that makes sense (i.e. is based on theory or logic), then groups can be created and the same procedures used for nonmetric moderators can be applied. Cluster analysis also might be useful to form groups. In addition, it is possible that some fraction (i.e., one-third) of the observations around the median value could be deleted and the remaining observations is used to create groups. Researchers also can model a metric moderator by creating interaction terms, as when using a regression approach. Using regression terminology, the independent variable can be multiplied by the moderator to create an interaction term. However, taking this approach with multiple-item constructs is complicated by numerous factors. Hair et al. (2010) encourage all but the advanced users to apply the nonmetric multi-group approach unless it cannot be justified.

Multi-group SEM is used to test moderating effects when the moderating variable is either nonmetric or a metric moderator has been transformed into a nonmetric variable. Moderation typically involves the testing of structural model estimates. Thus, the process becomes an extension of the multi-group analysis for testing measurement invariance. As an initial step, some form of metric invariance must be established before examining any differences in structural model estimates (Hair et al., 2010).

Procedure to test a hypothesis of moderation. Wang and Wang (2012) recommend a two-stage produre to test a moderation hypothesis using Mplus by testing equality or invariance of path coefficients across groups. In which, researchers examine the moderating effect of a dichotomous or categorical variable on a relationship between two (latent or observed) continuous variables.

In Stage 1, researchers test the baseline model for each group separately.

In Stage 2, researchers test invariance of structural path coefficients across groups by following three below steps.

In Step 1, estimate a configural SEM model using group samples simultaneously. In this step, an unrestrictive H1 model is estimated, and the DIFFTEST option of the SAVEDATA command is used to save the derivatives needed for the χ^2 difference test (the testing information is saved in an output file named like Test_H1.dat).

In Step 2, estimate the restrictive H0 model. In which, the DIFFTEST option of the ANALYSIS command is used to retrieve the testing information saved in a file like Test_H1.dat to conduct the χ^2 difference test.

In Step 3, compare this restricted model with the unrestricted model estimated to conclude whether or not the moderation hypothesis is supported.

Hair et al. (2010) argue that, with measurement invariance established, the structural model estimate is then assessed for moderation by a comparison of group models, much like invariance testing. The first group model is estimated with path estimates calculated separately for each group. A second group model is then estimated where the path estimate of interest is constrained to be equal between the groups. Comparison of the differences between models with a chi-square difference test ($\Delta\chi^2$) indicates if the model fit significantly decreased (i.e., an increase in chi-square) when the estimates were constrained to be equal. A statistically significant difference between models indicates that the path estimates were different (i.e., model fit was significantly better when separate path estimates were made) and that moderation does exist. If the models are not significantly different, then there is no support for moderation (because the path estimates were not different between groups). When testing for moderation, researchers are looking for significant differences in the two models to support the hypothesis of differences in the path estimates. Researchers should also examine the path estimates in question to assess whether the differences in both group models are theoretically consistent.

3.6. Common method variance (CMV)

The influence of Common method variance (CMV) issue has been a widely cited concern in organisational research since researchers argue that it may potentially have serious effects on research findings (Podsakoff et al., 2003; Spector, 2006; Spector and Brannick, 2009). However, it should be noted that scholarly views of CMV differ. While some researchers provide a strongly negative assessment (for example, Campbell, 1982), others argue that the problem may be overstated (for example, Lindell and Whitney, 2001). An exhaustive review of research on CMV in behavioural research reaches a more balanced conclusion, CMV is often a problem and researchers need to do whatever they can to control for it (Podsakoff et al., 2003).

3.6.1. Potential sources for CMV

Podsakoff et al. (2003: 881-885) explore four general sources of CMV: common rater effects, item characteristic effects, item context effects and measurement context effects. Similarly, Spector (2006) noted that the concern for CMV is mostly raised when cross-sectional, selfreported surveys are employed as a main research instrument. Since the current study relied on a self-report survey in which the same rater responds to the items in a single questionnaire at the same point in time, the data collected are likely to be susceptible to CMV (Podsakoff et al., 2003; Spector, 2006). Following the suggestion by Podsakoff et al. (2003), the study identified

several potential sources for CMV including: 1) the use of a common rater; 2) social desirability responding; 3) item social desirability; 4) negative worded items; and 5) the contextual influences (time) used to measure the constructs.

Firstly, as Podsakoff et al. (2003) stated that there is a substantial amount of theory and research suggesting that people try to maintain consistency between their cognitions and attitudes. Thus, when both the measure of predictors and criterion variables are provided by the same respondent, it should not be surprising that people have a desire to appear consistent and rational in their response - thereby producing relationships that would not otherwise exist (Podsakoff et al., 2003: 881; Spector and Brannick, 2009).

Secondly, self-reports are often susceptible to respondents' tendencies to answer in a more socially acceptable way - social-desirability bias (Fisher, 1993; Podsakoff et al., 2003). Social desirability refers to "the need for social approval and acceptance and the belief that it can be attained by means of culturally acceptable and appropriate behaviours" (Crowne and Marlowe, 1964: 109; Nunnally and Bernstein, 1994). Social desirability bias refers to respondents' tendency to present themselves in a favourable position with regard to social norms (Nunnally and Bernstein, 1994). In the current study, for example, it is possible that respondents tended to present themselves in a favourable light regardless of their true feelings about their turnover intentions, or their feelings about how well they perform in their job.

The third and fourth potential bias sources are both to do with item characteristic. Item social desirability, for example, refers to the fact that some items may be written in such a way as to reflect more socially desirable attitudes and behaviours. The effects of negative worded items may also occur because once respondents establish a pattern of responding to a questionnaire, they may fail to attend to the positive-negative wording of the items. Although the current study used negative worded items in the hope to reduce the potential effects of response pattern biases, it is likely that some respondents may fail to recognise that some items are reverse coded.

Finally, according to Podsakoff et al. (2003), since the measures are taken at the same time, they may share systematic covariation because this common measurement context may increase the likelihood that responses to measures of the predictor and criterion variable will co-exist in short-term memory.

3.6.2. Techniques for controlling CMV

Recognising the issue of CMV and its serious consequences on final findings, the present study followed Podsakoff et al.'s (2003) recommended remedies to minimise and control for CMV potential sources, provided that remedy techniques are applicable in this research context. In general, the two primary approaches to control for method biases are through (1) procedural remedies and/or (2) statistical remedies (see Podsakoff et al., 2003: 887-899 for more detail on the two control remedies). The following figure (Figure 6.5) summarise a set of procedures that might be used as a control for method biases in different research contexts (Podsakoff et al., 2003: 898).

According to Figure 3.4, the most straightforward way to control the first source of CMV - the common rater - is to obtain the measures from different sources. However, this solution was not practically possible for the current study. It is argued that many of the employees' attitudinal and behavioural outcomes would not readily be evident to an alternative rating source. For example, Spector (2006) argues that "it is difficult to get accurate information about internal states, such as attitudes or emotions, with anything other than self-reports" (also see Podsakoff et al., 2003; Spector and Brannick, 2009). Take citizenship behaviour as an example. Although multi-rating is advised, it has been suggested that an alternative rater (for example, supervisor and peers) might observe only part of an individual's total citizenship behaviour (Doty and Glick,

1998). As the participant him/herself will be the only person to know how much and which dimensions of citizenship behaviour he/she has actually displayed, a self-report measure may be more appropriate than supervisor or peer ratings. Furthermore, often such alternative sources cannot account for all biases, and the alternative sources might share a bias, especially if there is contact between them (Spector, 2006). Since the `easy route' is ruled out for practical reasons, other sources of CMV are controlled through several procedural remedies related to questionnaire design and statistical techniques. With regard to procedural remedies, several techniques were used in order to minimise the potential CMV.

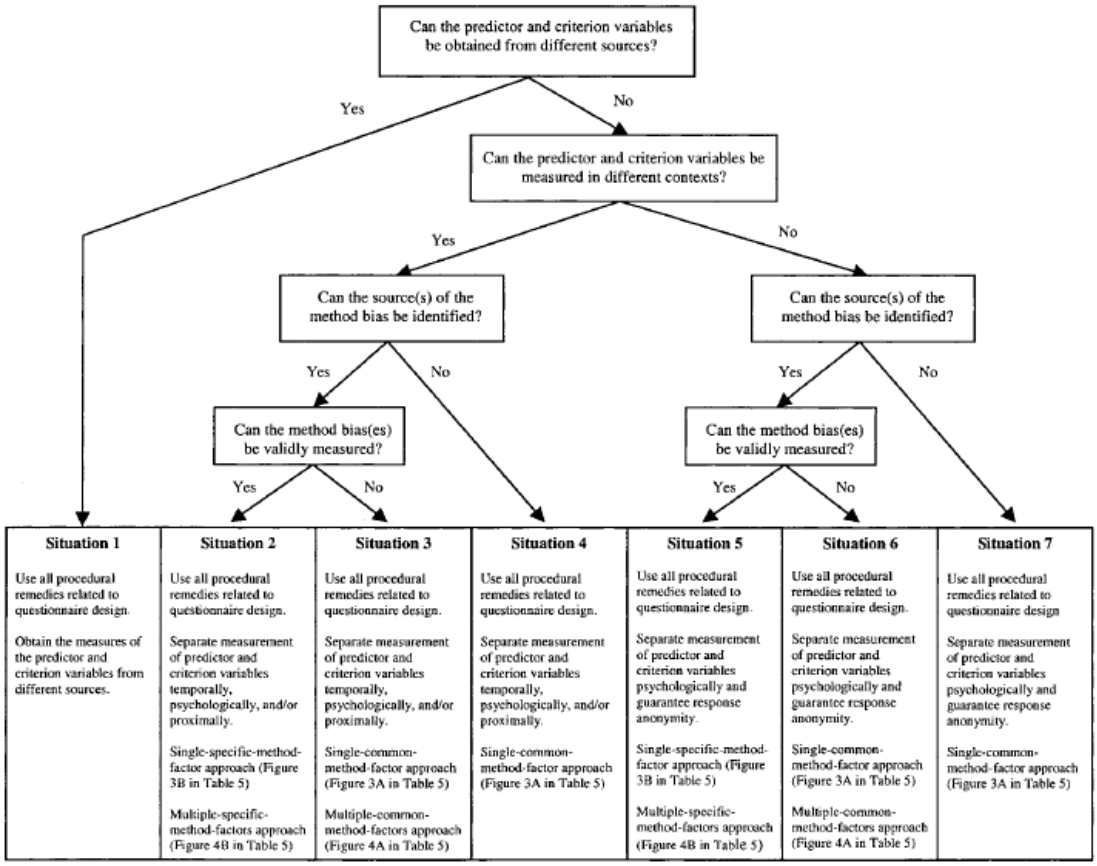


Figure 3.4. Recommendations for controlling common method variance

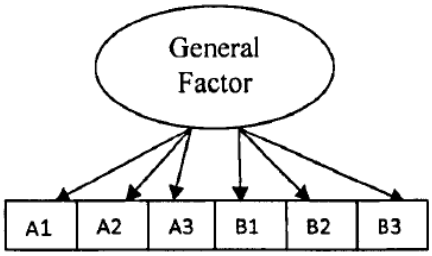
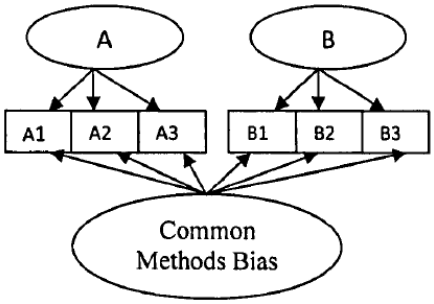
Source: Podsakoff et al., 2003: 898.

First, the questionnaire was developed and validated following the systematic procedures advocated by Churchill and Iacobucci (2002). The nine-step procedure, especially the last step - questionnaire pre-testing - has proved to be invaluable in terms of clarifying and validating the questionnaire. Moreover, respondent anonymity and confidentiality were guaranteed. Each questionnaire was sent out with a cover letter to assure respondents of their anonymity and confidentiality, and encouraging respondents to provide honest answers by assuring them that there are no right or wrong answers. In addition to the procedural remedies, statistical techniques were also used to minimise the issue of CMV.

Traditionally, Harman's single-factor is one of the most widely used techniques for addressing the issue of CMV (Chang et al., 2010; Moalhotra et al., 2006; Podsakoff et al., 2003). The basic assumption of this technique is that if a substantial amount of CMV is present, then either a single factor will emerge from the factor analysis, or one general factor will account for the majority of the covariance among the measures (Podsakoff et al., 2003). This method can provide an initial insight whether CMV would be a problem in the study. Nonetheless, it should be noted that, despite its popularity, Podsakoff et al. (2003) argued that it is unlikely that a one

factor model will fit the data. It is much more likely that multiple factors will emerge from the factor analysis. Recognising the shortcoming of Harman's test, researchers suggest that a recommended solution is to use multiple remedies, not just one remedy, in order to assuage the various concerns about CMV (Chang et al., 2010).

Table 3.6. Types of statistical remedies used to address CMV

Technique	Description of technique	Example of model
Harman's single factor test	Include all items from all of the constructs in the study into a factor analysis to determine whether the majority of the variance can be accounted for by one general factor.	
Controlling for the effects of an unmeasured latent methods factor	Items are allowed to load on their theoretical constructs, as well as on a latent common methods variance factor, and the significant of the structural parameters is examined both with and without the latent common methods variance factor in the model.	

Source: Podsakoff et al. (2003: 890-891)

In the current study, `controlling for the effects of a single unmeasured latent method factor' was also adopted (Podsakoff et al., 2003: 891). This technique allows items to load on their theoretical constructs, as well as on a latent CMV factor, and the significance of the structural parameters is examined both with and without the latent CMV factor in the model (Podsakoff et al., 2003). Such a model has been widely used in organisational research (Bettencourt et al., 2005; MacKenzie et al., 1998). Accordingly, several of the main advantages of this technique is that it does not require the researcher to identify and measure the specific factor responsible for the method effects, and it models the effect of the method factor on the measures rather than on the latent constructs they represent and does not require the effects of the method factor on each measure to be equal (Podsakoff et al., 2003). The guidance is given by Podsakoff et al. (2003), in Table 3.7, and statistical discussion is provided along with structural equation findings in Chappter Four (see Section 4.4).

3.7. Unidimensionality, reliability and validity

The constructs of interests in this study (exclude variables regarding demographic information and secondary data) were mostly collected via multi-item scales. In order to generate findings from these measurements, a central part in the development of any scale is establishing its reliability, validity and unidimensionality (Kline, 2016). The following sections provide a

discussion on relevant scale validation criteria used in the present study. The results of the reliability, validity and unidimensionality indices are presented along with the measurement model evaluation in Chapter 4.

3.7.1. Unidimensionality

Definition. Unidimensionality means that each measurement item reflects one and only one latent variable (construct) [Anderson et al., 1987, Gefen et al., 2000, Segars, 1997]. That is, it means that tests should not reveal that a measurement item significantly reflects more than the latent construct to which it is assigned (Straub et al., 2004). In other words, unidimensionality is defined as the existence of one latent trait underlying the data (Hattie, 1985).

Need for unidimensional measurement. Achieving unidimensional measurement (cf. Anderson and Gerbing, 1982; Hunter and Gerbing, 1982) is a crucial undertaking in theory testing and development. A necessary condition for assigning meaning to estimated constructs is that the measures that are posited as alternate indicators of each construct must be acceptably unidimensional. That is, each set of alternate indicators has only one underlying trait or construct in common (Hattie, 1985; McDonald, 1981). Two criteria, each representing necessary conditions, are used in assessing unidimensionality: internal consistency and external consistency. Because it often occurs in practice that there are less than four indicators of a construct, external consistency then becomes the sole criterion for assessing unidimensionality. The product rules for internal and external consistency, which are used in confirmatory factor analysis, can be used to generate a predicted covariance matrix for any specified model and set of parameter estimates. (Anderson and Gerbing, 1988).

There are at least three important reasons why it is essential that a test be unidimensional. First, it is often vital that a test that purports to measure the level of a certain ability is in reality not significant contaminated by varying levels of one or more other abilities displayed by examinees taking the test. Second, it is essential that a test designed to be used in the measurement of individual differences must in fact measure a unified "trait." Finally, unidimensionality must be (at least approximately) satisfied if much of the standard item response theory methodology is to be trusted as valid (Stout, 1987).

Test or examination. Thissen et al. (1993) outline three fonnal approaches to determining whether a set of items is unidimensional. These involve fitting the item responses to (1) a factor analytic model, (2) an item response theory model and (3) a log-linear model.

Unidimensionality is an important statistical test (Straub et al., 2004). Hattie (1985) summarised the methods to evaluate unidimensionality. According to Gerbing and Anderson (1988), McGartland Rubio et al. (2001) and Garson (2012), there are three main methods of testing unidimensionality, with varying meanings of and stringency for testing for unidimensionality.

Cronbach's alpha. Perhaps the most commonly used test, Cronbach's alpha is a measure of the intercorrelation of items. If alpha is greater than or equal to .80, then the items are considered unidimensional for confirmatory purposes and may be combined in an index or scale. Some researchers use the less stringent cutoff of .70, while onthers consider the .70<=alpha<.80 range to be suitable for exploratory purposes only. The most lenient authors consider the .60<=alpha<.70 range suitable for exploratory purposes while others disparage this practice.

Exploratory factor analysis. Exploratory factor analysis using principal components analysis is performed on all the indicators for all the constructs in the study. Indicators should have higher factor loadings on their own constructs than on other constructs. Some researchers also require the loadings be higher than some absolute cutoff value, such as .30. Some researchers also

require that indicators not crossload on factors not their own (e.g., that all loadings other than their own factor be below some absolute cutoff value, such as .30).

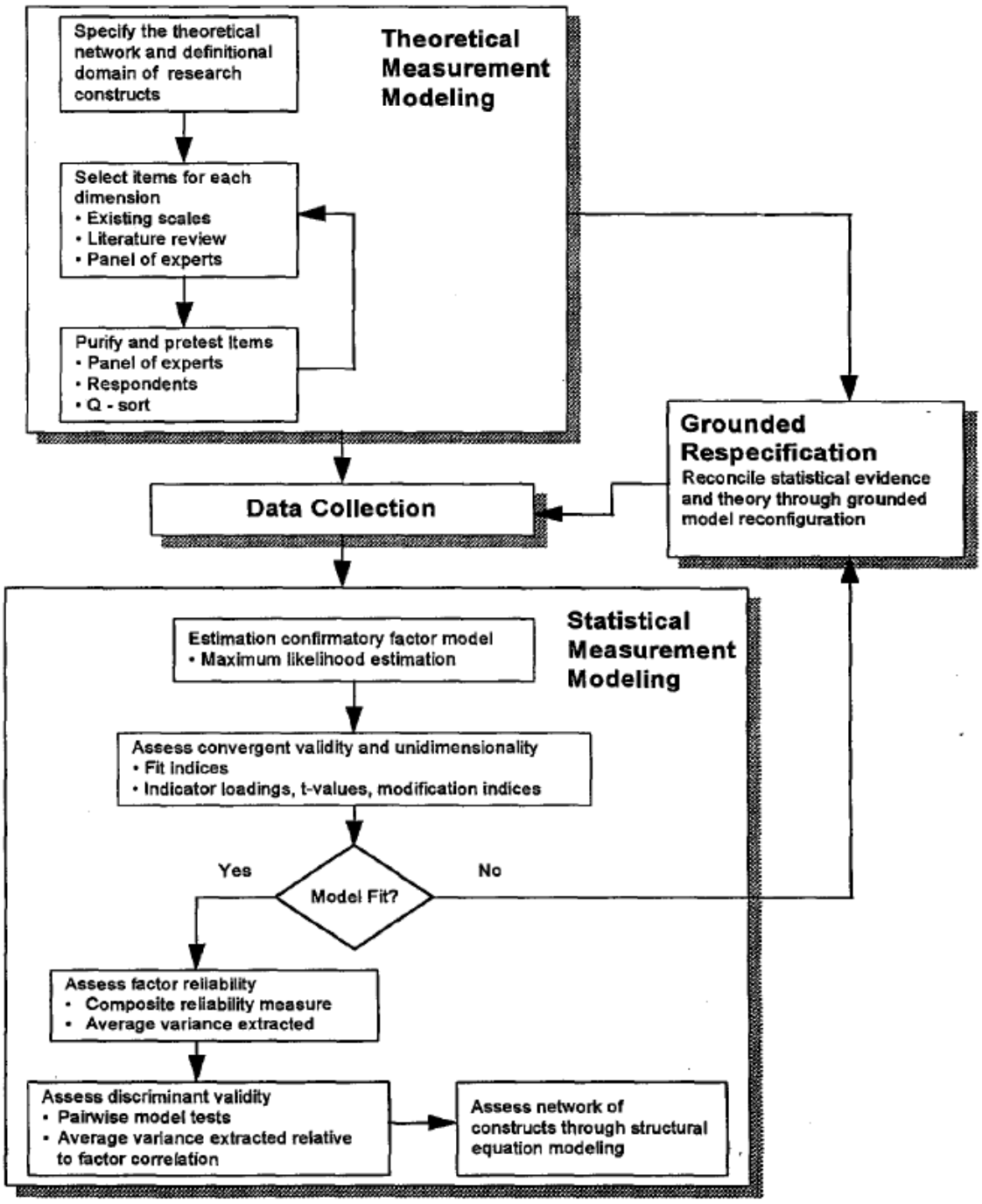


Figure 3.5. A theoretical and statistical paradigm for unidimensional measurement

Source: Segars, 1997, 112

Confirmatory factor analysis. The first step of structural equation modelling is confirmatory factor analysis, where the measurement model is assessed separately from the structural model. If goodness of fit measures for the measurement model are acceptable, the researcher concludes that the indicators adequately measure the intended constructs (Straub et al., 2004).

An explicit evaluation of unidimensionality is accomplished with a factor analysis of the individual measures as specified by a multiple-indicator measurement model. Coefficient alpha

is important in the assessment of reliability, but does not assess dimensionality. Though item-total correlations and exploratory factor analysis can provide use- ful preliminary analyses, particularly in the absence sufficiently detailed theory, they do not directly assess unidimensionality. The reason is that a confirmatory tor analysis makes possible an assessment of the internal consistency and external consistency criteria of unidi- mensionality implied by the multiple-indicator measure- ment model (Gerbing and Anderson, 1988). Segars (1997) suggested that unidimensional measurement should be conducted following the below theoretical and statistical paradigm (see Figure 3.5).

3.7.2. Reliability

Reliability assesses the accuracy of the measuring instrument (Hair et al., 2010). Generally speaking, several different statistical techniques can be used to test construct reliability such as test-retest, split-half method and internal consistency (Hair et al., 2010). The most commonly used measure of reliability is internal consistency, which assesses the consistency among the variables in a summated scale (Hair et al., 2010: 125). In particular, the internal consistency of the questionnaire was first calculated using Cronbach's alpha and the item-total correlation (Pallant, 2007) in the present study (see Section 4.3 in Chappter Four for detail). However, it should be noted that Cronbach's alpha is often criticised for being inflated on a measuring scale that has a large number of items (Pallant, 2007). Thus, following SEM approach, the present research also used CFA method to assess the reliability (see Section 4.5 in Chappter Four). Two reliability measures derived from CFA are the Average Variance Extracted (AVE) and composite reliability (CR). While the AVE value indicates the total amount of variance in the indicators accounted for by the latent variable, the CR value indicates the extent to which a set of latent constructs are consistent in their measurement (Hair et al., 2010, Kline, 2016). The formulas for both indicators are presented below, respectively.

$$\mathrm{AVE} = \frac{\sum_{i=1}^{n} L^2}{n} \tag{3.1}$$

Where L\i\ represents the standardised factor loading and i represents the number of items. So for n items, AVE is computed as the total of all squared standardised factor loadings (squared multiple correlations) divided by the number of items. It is suggested that an AVE of .50 or higher is a good rule of thumb suggesting adequate convergence. An AVE of less than .50 indicates that the validity of the individual items as well as that the construct is questionable (Hair et al., 2010).

$$\mathrm{CR} = \frac{\left(\sum_{i=1}^{n} L_i\right)^2}{\left(\sum_{i=1}^{n} L_i\right)^2 + \left(\sum_{i=1}^{n} e_i\right)^2} \tag{3.2}$$

CR value is computed from the squared sum of factor loadings (L\i\) for each construct and the sum of the error variance terms for a construct (e\i\). It is suggested that a CR value of .7 or higher suggest good reliability (Hair et al., 2010). A CR value between .6 (Bagozzi and Yi, 1988) and .7 may be acceptable provided that other indicators of a model's construct validity are good (Hair et al., 2010).

3.7.3. Validity

Validity is concerned with how well the concept is defined by the measures, whereas reliability relates to the consistency of the measures. Hair et al. (2010) discusses the estimation of validity as a scale or set of measures [that] accurately represents the concept of interest. One of the primary objectives of CFA/SEM is to assess the construct validity of a proposed measurement theory, as

Kline (2005) states that most forms of score validity are subsumed under the concept of construct validity. According to Hair et al. (2010), construct validity deals with the accuracy of measurement, and it addresses the extent to which a set of measured items actually reflects the theoretical latent construct those items are designed to measure. Furthermore, Kline (2005) stresses that there is no single, definitive test of construct validity, nor is it typically established in a single study. The SEM method of confirmatory factor analysis is a valuable tool for evaluating construct validity. Following the advice given by researchers including Hair et al. (2010) and Kline (2005), two components of validity consisting content and construct validity are discussed in this section.

3.7.3.1. Content validity

Content validity refers to a qualitative assessment of the correspondence of the variables to be included in a summated scale and its conceptual definition (Hair et al., 2010), also known as face validity. The objective is to ensure that the selection of scale items extends past just empirical issues to also include theoretical and practical considerations (Hair et al., 2010; Kline, 2000a). According to Hair et al. (2010), face validity must be established prior to any theoretical testing when using CFA and in a very real way, face validity is the most important validity test.

Content validity is typically established through the literature review and through expert assessment, pre-tested with multiple subpopulations (Hair et al., 2010; Robinson et al., 1991). In the present study, although many measurement scales have been applied successfully with adequate reliability and validity in other research, face validity of the scales was still carefully first checked by the researcher's subjective judgment through: 1) extensive literature review; 2) relevant experts' evaluation; and 3) feedback during the questionnaire development stage. It then applied in pre-testing stage to ensure content validity (see Section 4.. for a detailed discussion).

3.7.3.2. Construct validity

Construct validity examines the degree to which a scale measures what it intended to measure (Hair et al., 2010; Tabachnick and Fidell, 2001). Unlike content validity, construct validity is normally assessed quantitatively. It consists of convergent and discriminant validity (Tabachnick and Fidell, 2001). Convergent and discriminant validity involve the evaluation of measures against each other instead of against an external criterion. Kline (2005) suggests that a set of variables presumed to measure the same construct shows convergent validity if their intercorrelations are at least moderate in magnitude. In contrast, a set of variables presumed to measure different constructs shows discriminant validity if their intercorrelations are not too high. In the present study, the relative amount of convergent and discriminant validity among item measures were evaluated as part of CFA.

As recommended by Hair et al. (2010), AVE and CR value were seen as common ways of assessing convergent validity, where an AVE of 0.5 or higher is a good rule of thumb suggesting adequate convergence. With regards to discriminant validity, it was evaluated by three methods in the present study: 1) correlation index among variables is less than 0.85 (Kline, 2016); 2) value of AVE of each construct is higher than 0.5 (Hair et al., 2010); and 3) square root AVE of each construct is higher than inter-construct correlation (correlation between each pair of latent variables) associated with that factor (Hair et al., 2010). Some basic rules for establishing construct validity in terms more appropriate for CFA are given by Hair et al. (2010), in Table 3.6. In line with these guidelines, the CFA was conducted to assess validity of the measures. The results are presented in Chapter 4.

Table 3.7. Rules of thumb for construct validity

. Standardised loading estimates should be .5 or higher, and ideally .7 or higher
. AVE should be .5 or greater to suggest adequate convergent validity
. AVE estimates for two factors also should be greater than the square of the correlation between the two factors to provide evidence of discriminant validity
. Construct reliability should be .7 or higher to indicate adequate convergence or internal consistency

Source: Hair et al. (2010, 695)

3.8. Ethical issues

The researcher attached great emphasis at all stages of the research design and process to minimize all possible ethical issues that may result from this thesis. The researcher assumes ethical integrity and responsibility for the study to be conducted in a professional manner. For more detail, see stage-specific ethical issues in Figure 3.3 below.

According to Saunders et al. (2016), ethics in research are necessary during the whole research process to ensure that the study findings correspond with the relevant situation. Cooper and Schindler (2014) add that the goal of ethics in research is to ensure that no one is harmed or suffers adverse consequences from research activities. . Most professional codes of ethics stress the importance of five ethical responsibilities towards research participants: voluntary participation, informed consent, no harm, confidentiality anonymity, and privacy (De Vaus, 2013; Babbie, 2015; Saunders et al., 2016) The consequential negative effects that research participants must be protected from include physical harm, deception, discomfort, pain, embarrassment, and privacy (Cooper and Schindler, 2014). The ethical considerations are relevant not only to research participants, and the researcher, but also information helpers (e.g. Zikmund et al., 2013; Neuman, 2014).

As such, the researcher followed the aforementioned guidelines in protecting the research participants, the information helpers/providers and the researcher. These are:

1) Participants were presented with clear details about the research topic and the research purpose of the survey.

2) Confidentiality was highlighted to all research participants as was the use of research data for research purposes only.

3) Caution was taken to ask questions only relevant to the research objective.

Informed consent was provided so that respondents were fully informed of the objective, the procedures, the potential benefits and other relevant information of the survey (see Consent form in Appendix 4). The researcher also ensured that respondents take part in the research out of their own free will or voluntarily. When there were questions and concerns regarding the survey, the researcher always provided sufficient information to ensure that respondents understood the nature and objectives of the survey.

The principle of confidentiality and anonymity requires that identifiable individual and company details should not be divulged to anyone who is not involved in the research unless consent is given by the party concerned. It also requires that the use of data and the storage of questionnaires should meet the regulations related to data protection. The principle of confidentiality/anonymity was strictly adhered to.

Regarding the confidentiality issue, the covering letter stated clearly that "the given information on each questionnaire will be confidential and used for no other purposes but scientific research" (see Appendix 5). For anonymity purposes in this study, the participants' names were replaced with codes (running numbers). Since finishing data collection, the notes of these codes were collected and returned to the researcher. Only this researcher knew the link between the name and the code. After the survey, the researcher entered the data and stored the returned questionnaires in a place where no one other than he would have access to them. The ethical issues of confidentiality and anonymity also came to the fore during the reporting stage of this thesis.

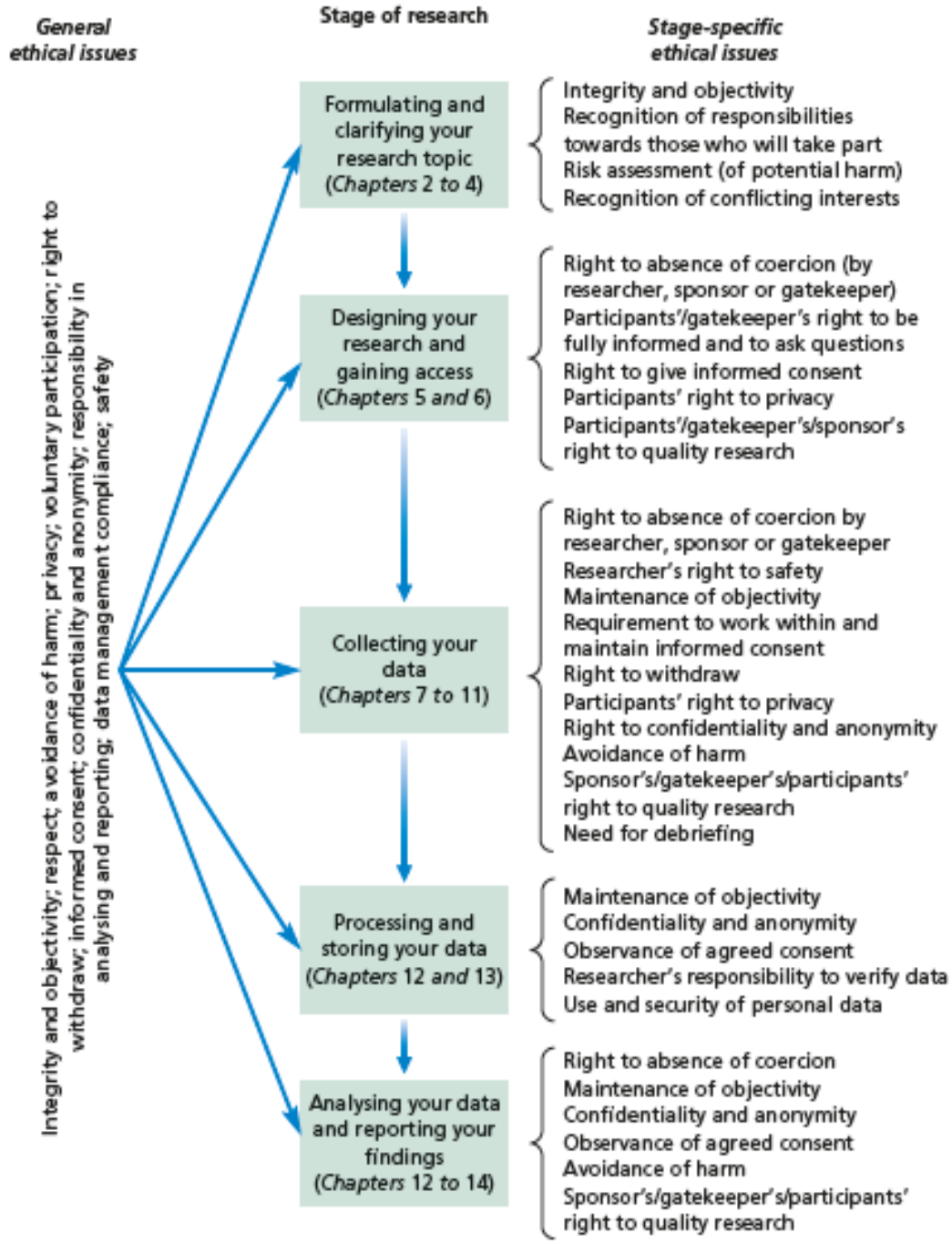


Figure 3.6. Ethical issues at different stages of research

(Source: Saunders et al., 2016, p.250)

3.9. Summary

This chapter describes the methodological aspects of this thesis. The methodological aspects for this thesis were based on the research aims and objectives. The aim of this chapter was to discuss and choose the appropriate methodological options and to discuss statistical techniques used in this study.

The choices of research philosophy, approach and strategy in this study have been discussed. A choice of positivism and constructivism philosophies was made, as appropriate approaches matches with the nature of the research. It was identified that in the domain of methodology, two main research approaches were highly appreciated, namely positivist, and constructivist. The positivist approach is widely known as a scientific approach and it is quantitative in nature, while the constructivist approach is commonly known as an approach to examine the effects of contextual factors on the hypothesised associations. Both of these research philosophies have been discussed in detail with the proper justifications for the selection of a particular research methodology.

In line with the focus of the empirical research strategy, a deductive approach was considered to be the appropriate examination structure to adopt in this study in order to address the research questions and it is usually linked to the positivist research philosophy. The research process of this study started with the theories and models, continued with the hypotheses and observations, and finalised with confirmation.

This study adopted the quantitative strategy, as it was consistent with the topic. In fact, prior research suggested that the normal process under a positivistic approach is to study the literature to establish an appropriate theory and construct hypotheses. Quantitative research usually entails a deductive approach to the relationship between theory and research, where the focus is on using data to test theory.

The research design has been carefully addressed. In this section, the choices regarding the research design, such as research type and study design, were justified. The type of this research was exploratory when its study design was combination between correlational and survey research. This research was cross-sectional. In addition, the unit of analysis in this research is the individual (CEO).

The measurement and data of this research have been presented. The measurement here was implemented using variables as measures. These variables were operationalised based on the previous literature. Additionally, the data relevant to the variables was discussed in terms of data sources.

A questionnaire was used as the research instrument to collect the data. In order to collect the data for this study, a questionnaire was developed. The question items were adopted from prior relevant research. The adapted items were validated, and wording changes were made to tailor the instrument for the purposes of this study. The question items and response categories were better developed to motivate the respondents to participate in the research study. The researcher made the utmost effort to keep the questions quite simple and easy to read and comprehend, so that the respondents should not misunderstand them or they become disinterested in taking part in the study. The questionnaire was then administered to the users personally as well as being sent to the potential participants by post and electronic mail.

Cross-cultural issues were considered to be an important element when designing the questionnaire, because this research was conducted in Vietnam, while the questionnaire was developed in the UK. Thus, the questionnaire was carefully translated. To assure equivalence of the measures in Vietnamese and English, a standard translation and back-translation procedure was applied.

Previous research suggests that a pilot study is an essential part of questionnaire survey design and it must be conducted prior to the initial data collection phase or main survey in order to validate instrument and to ensure that the survey questionnaire is free of errors and ambiguities. Thus, a pilot study was conducted prior to using the final survey questionnaire in the main study. The main purpose of the pilot study was to avoid participants' confusion and misinterpretationas well as to identify and detect any errors and ambiguities. In addition, a pilot study was also used to test the reliability of measurement items used in the questionnaire, most of the items showed adequate reliability.

The components of data collection in this research have been discussed in detail. The target population of this research was identified as all CEOs in Vietnam. In addition, the sample for this study included 679 CEOs in the firms listed in Hanoi Stock Exchange or in the Hochiminh Stock Exchange in 2013. One of the main concerns of the author of this thesis were to reach number that will enable statistical analysis that will be significant. To get this, achieving a minimum of 150 usable responses was crucial. Assuming a conservative response rate, 679 questionnaires were distributed to the CEO participants in order to get the required sample size. The number of usable questionnaires returned was 179, so the response rate was 26.36%, typical to executive populations (Baruch and Holtom, 2008; Cycyota and Harrison, 2006). Moreover, quota sampling strategy was the best choice for this thesis in order to reach two objectives: representativeness and required sample size. This section also provided a description of the selection of research participant and data collection procedure.

The analysis of data in this research was conducted using some statistical techniques and tools. Application of CB-SEM using Mplus for testing the hypothesised model was justified. SPSS 22.0 was used to screen the data of this research study in terms of data coding, treatment of missing data, identification of outliers, to test and find out the data normality. In addition, SPSS was applied to perform descriptive statistics, such as frequencies, percentages, mean values, and standard deviations. Additionally, SPSS was employed to validate the instrument using EFA.

SEM software package Mplus 7.0 was used in this research study to examine the statistical relationships between the test items of each factor and among the factors of independent variables and the dependent variables. This research study applied a two-step approach in the SEM analysis, as suggested by prior research. In the first step, measurement model evaluation was achieved by examining uni-diminsionality, validity, and the reliability of latent constructs, as well as measuring the adequacy of the measurement models associated with each construct using CFA. In the next step, the proposed research models were tested and validated using SEM or structural models.

Ethics in research have been discussed in detail to avoid any possible pitfalls pertaining to this study. The stage-specific ethical issues have been presented. The principles regarding informed consent, confidentiality and anonymity have been discussed thoroughly and applied in this research.

The following chapter sets out more specifically the research methodology adopted and the sequential process by which the quantitative analysis was conducted. It reports the empirics related to the descriptive statistics and correlation analysis, and then proceeds to detail the results from the main empirical approach (SEM) conducted in order to examine the hypothesised association between two aspects of CEO career success as well as the hypothesised relationships between CEO career success and its predictors.

Chapter 4 Results

4.1. Introduction

This chapter of the thesis aims to present the results of the data analysis. The outcomes of the exploratory factor analysis, as well as of the examination of the relationship between a CEO's objective career success and subjective career success, are introduced. The chapter also displays the results of the structural equation modeling analyses used to examine the associations between human capital, political skill, protean career orientation or managerial power and CEO career success for the sample of 179 CEOs in the year of 2013. Results of moderation analyses are also displayed.

The chapter begins with the analysis preparation for SEM where, according to the procedure description of data analysis in the previous chapter, the procedures of data coding and screening are portrayed. Then, the response rate of the survey is presented and discussed in comparison to the average rate in the same field of research. Next, the descriptive statistics, with demographic and other descriptive information, are presented. The results of screening the data for exploratory factor analysis, in which the information about erroneous data, sample size for EFA, missing data, outliers, normality, linearity and homoscedasticity are included, are reported. The main outcomes of EFA follow.

The results of the structural equation modeling are set out in the sections below for the association between the two aspects of CEO career success as well as each of the five dependent variable groups of CEO career success: human capital, political skill, personality trait, protean career orientation and managerial power. In each case the results/findings are reported in 5 sections: the hypothesised model, assessment of the measurement model, assessment of the structural model, the statistical model, and assessment of the common method variance.

The moderating effect assessments have been added when the moderating effecting analyses were implemented in the group of hypothesised relationships. Two types of interaction analyses were conducted and their results are reported. The two types of interaction analyses encompass analyses for latent variable interaction and interactions between a continuous predictor and a categorical moderator.

4.2. Descriptives

Prior to analysis, all of the data with respect to the variables aforementioned in Table 3.1 was examined through the SPSS 22.0 program in order to examine the accuracy of the data entry, missing data, outliers and assumptions of SEM. Information about other descriptives, outliers and assumption checking has been provided in the sections about data screening in the SEM models, when the accuracy of data entry, missing data and demographics of study participants have been mentioned in this section. No data entry errors were found after checking all of the data. Three cases with a single missing value on actual financial attainment were dealt by using regression to estimate missing values. The demographics of the study participants are summarised in Table 4.1, below.

The demographic breakdown of the study participants is as follows. Their average age was 48.3 years; 96 percent were male and 100 percent were married. Almost sixty-four percent had a bachelor's degree as their highest degree attained, nearly 30 percent had a master's degree and 6 percent had a Ph.D. Average tenure in their current organisation was 13.4 years.

Table 4.1. Demographics of study participants

Variable	N	Percent
Total	179	100
Age		
30–39	19	10.6
40–49	70	39.1
50–59	88	49.2
60–69	2	1.1
Gender		
Male	172	96.1
Female	7	3.9
Marital status		
Married	179	100
Others	0	0
Education level		
Doctoral degree	11	6.1
Master degree	53	29.6
Undergraduate degree	114	63.7
Other	1	0.6

4.3. Exploratory factor analysis

Brown (2015) recommends that EFA is typically used earlier in the process of construct validation, whereas CFA is used in later phases after the underlying structure has been established on prior empirical and theoretical grounds. EFA was conducted in this research in order to test for unidimensionality, to assess the instrument's reliability and to achieve data reduction.

Before doing major analyses, data screening and preparation were conducted in order to check the sample size, missing data, the normality and linearity of variables, the facorability of R, multicollinearity, and outliers. EFA was performed through the SPSS 22.0 program on 39 items from the questionnaire on CEO career success in Vietnam with a sample of 179 CEOs. This number of cases met the sample size requirement for EFA (Gorsuch, 1983; Guadanoli and Velicer, 1988; Hair et al., 2010). There was no missing data regarding these 39 varibles.

The results of evaluating the normality of these variables using P-P plot, as well as Skewness and Kurtosis values, provided the evidence to confirm that these variables were normally distributed. In addition, the values of the statistical tests showed that there were no violations of linearity assumptions.

The correlation matrices were factorable because Bartlett's test of sphericity was significant and the Kaiser-Mayer Olkin (KMO) measure of sampling adequacy (.92) was more than .5. In other words, since the KMO was marvelous, it was a good idea to do factor analysis (Kaiser, 1974). Additionally, with Tolerance > .1 and VIF < 5 cutoff level, tests for multicollinearity indicated that a very low level of multicollinearity was present. With α = .001 cutoff level, no CEOs produced scores that identified them as outliers; therefore, no cases was deleted from principal factors extraction.

EFA using SPSS version 22.0 was conducted following the seven-stage factor analysis decision process recommended by Hair et al. (2010) (see Appendix 9), in which the principal components extraction with varimax rotation was selected because they are the most widely used and the research goal was data reduction to a smaller number of variables. The first time, the EFA was implemented with 54 variables. Because three variables were poorly loaded on the factor of perceived social reputation, they were removed the second time of factor analysis. In addition, the twelve variables intended to measure the constructs/factors of neuroticism, extraversion and conscientiousness were deleted, since the factors were not kept in the parsimonious SEM model. Therefore, the second time the EFA was performed with 39 variables.

Loadings of variables on factors, communalities, and percents of variance and covariance are shown in Table 4.2, below. The variables were ordered and grouped by size of loading to facilitate interpretation. Loadings under .40 were suppressed. Interpretive labels have been suggested for each factor in a note. From the information in this table, it can be shown that all of the factor loadings wih a value greater than .50, all of the 39 variables have communalities of greater than .50, and the factors' Cronbach alphas are bigger than .80. On this basis, it may be inferred that the values of factor loading, communalities and factors' reliabilities adhered to the rules of thumb recommended by Hair et al. (2010).

Also, with the nine constructs/factors, because items intended to measure the same construct demonstrated a factor loading of > 0.40, the unidimensionality of the items can be confirmed (Hair et al., 2010).

Table 4.2, below, shows the Cronbach's alpha values for the nine constructs which emerged from the exploratory factor analysis. All constructs exhibited a good or excellent degree of internal consistency, as the Cronbach's alpha values were more than 0.8. It was concluded that the measurement items could be used to measure the constructs with good reliability. Therefore, the instrument's reliability can be seen as good.

Based on the loadings of variables on factors in Table 4.2, below, the nine factors on the career success questionnaire for this group of CEOs were networking ability, perceived financial attainment, social astuteness, openness to experience, agreeableness, interpersonal influence, perceived career achievement, protean career orientation, interpersonal influence, and apparent sincerity. Accordingly, data reduction was achieved by reducing the number of variables from 39 to 9.

In summary, the EFA results showed the instrument's reliability and reduced data. In addition, they provided the evidence to conclude that the items were considered unidimensional for confirmatory purposes.

Table 4.2. VARIMAX-Rotated Component Analysis factor matrix

VARIMAX-rotated factor loadings										
Item	**NetAbi**	**PFA**	**SocAst**	**Openn**	**Agree**	**IntInf**	**PCA**	**PCO**	**AppSin**	**Communality**
NetAbi5	0.76									0.72
NetAbi3	0.76									0.75
NetAbi4	0.74									0.73
NetAbi1	0.72									0.71
NetAbi6	0.71									0.58
NetAbi2	0.68									0.68
PFA1		.81								0.77
PFA2		.80								0.70
PFA4		.77								0.71
PFA5		.77								0.69
PFA3		.70								0.62
SocAst5			0.78							0.76
SocAst1			0.77							0.74
SocAst4			0.74							0.72
SocAst3			0.72							0.75
SocAst2			0.60							0.55
Openn4				0.81						0.79
Openn2				0.80						0.84
Openn1				0.76						0.79
Openn3				0.70						0.66
Agree4					0.80					0.83
Agree2					0.76					0.80
Agree1					0.71					0.69
Agree3					0.68					0.65
IntInf4						0.77				0.80
IntInf2						0.76				0.83
IntInf1						0.71				0.77
IntInf3						0.70				0.76
PCA2							0.78			0.84
PCA3							0.77			0.78
PCA1							0.72			0.75
PCA4							0.70			0.70
PCO2								0.77		0.67
PCO3								0.71		0.67
PCO1								0.69		0.70
PCO4								0.67		0.63
AppSin2									0.83	0.80
AppSin3									0.82	0.85
AppSin1									0.71	0.74
Elgenvalues	**14.19**	**3.80**	**2.21**	**1.82**	**1.48**	**1.35**	**1.29**	**1.24**	**1.13**	
% of variance	**36.39**	**9.73**	**5.65**	**4.66**	**3.78**	**3.46**	**3.32**	**3.18**	**2.90**	
α	**.90**	**.88**	**.88**	**.90**	**.87**	**.91**	**.88**	**.82**	**.86**	
AVE	**0.53**	**0.60**	**0.52**	**0.59**	**0.55**	**0.54**	**0.55**	**0.51**	**0.62**	
SQRT (AVE)	**0.73**	**0.77**	**0.72**	**0.77**	**0.74**	**0.74**	**0.74**	**0.71**	**0.79**	

Note: Factor loadings less than .40 have not been printed and variables have been sorted by loadings on each factor.
Factor labels: 1 Networking ability; 2 Perceived financial attainment; 3 Social astuteness; 4 Openness to experience; 5 Agreeableness; 6 Interpersonal influence; 7 Perceived career achievement; 8 Protean career orientation; 9 Apparent sincerity.
α: Cronbach's alpha value. SQRT (AVE): Square root of AVE.

4.4. Common method variance assessment

As discussed in Section 3.6 in Chapter 3, common method variance (CMV) arises from common respondents, common measurement context, common item context, and characteristics of the measurement items (Podsakoff et al., 2003). Due to the nature of this study, it was not possible to rule out CMV. To test for it, the researrcher employed the Harman's single-factor test, which is a widely used approach for assessing CMV in a single-method research design (Podsakoff and Organ, 1986; Podsakoff et al., 2003; Malhotra et al., 2006). The common method variance was assessed using implementing Harman's single factor test via EFA and CFA.

In this test, all of the measurement items in a study are subject to EFA. Then, CMV is assumed to exist if: (1) a single factor emerges from unrotated factor solutions, or (2) a first factor explains the majority of the variance in the variables (Podsakoff and Organ, 1986; Podsakoff et al., 2003). To examine these, the researcher did two runs. Firstly, principal component analysis without rotation was conducted and it revealed nine distinct factors. Secondly, all 39 measurement items were loaded onto one factor and the unrotated factor solution was examined. It was clear that more than one factor emerged from the unrotated factor solution, and the first factor explained only 36.39 percent of the variance in the 39 items. This reasonably assured that CMV was not a major source of variations in the measurement items, and the data did not indicate evidence of common method variance.

CFA is another alternative that can be used when implementing Harman's single factor test for assessing CMV. In this approach, all measurement items are modeled as the indicators of a single factor that represents common method effects. Method biases are assumed to be substantial if the hypothesized measurement model fits the data (Malhotra et al., 2006). Harman's single-factor test was performed via CFA by specifying a hypothesized common method factor as an underlying driver of all 39 measurement items. The results revealed that the fit of the single-factor model was unsatisfactory (RMSEA = .12; SRMR = .11; CFI = .56, and TLI = .53). Thus, CMV may not be the major concern.

4.5. Unidimensionality, construct reliability and construct validity

Construct reliability, validity and unidimensionality were examined based on the recommendations in Sectioc 3.7 in Chapter 3.

Unidimensionality. Unidimensionality was assessed via Cronbach's alpha values as well as exploratory and confirmatory factor analysis. As can be seen on Table 4.2, above, all of Cronbach's alpha values were greater than .80. Next, exploratory factor analysis (EFA) using principal components analysis was conducted to test for unidimensionality. The results showed that all the 39 measurement items had loadings above .40. Additionally, six confirmatory factor analyses (CFA) were performed. The goodness of fit measures for these measurement models were acceptable. Based on the results regarding Cronbach's alpha values, EFA and CFA, it suggests that the items could be considered unidimensional.

Construct reliability. Table 4.3, below, showed the correlation values and Cronbach's alpha values for the nine constructs which emerged from the exploratory factor analysis. All constructs exhibited a good degree of internal consistency, as the Cronbach's alpha values were $\geqslant$ .80. In addition, the AVE values of these nine constructs were higher than .50. It was concluded that the measurement items could be used to measure the constructs with good reliability.

Table 4.3. Correlations and discriminant validities for the measurement models

Construct	PFA	PCA	PCO	SocAst	IntInf	NetAbi	AppSin	Openn	Agree
PFA	**.88[a]** **.77[b]**								
PCA	.63***	**.88[a]** **.74[b]**							
PCO	.39***	.42***	**.82[a]** **.71[b]**						
SocAst	.37***	.48***	.39***	**.88[a]** **.72[b]**					
IntInf	.37***	.45***	.46***	.57***	**.91[a]** **.74[b]**				
NetAbi	.26***	.37***	.44***	.49***	.60***	**.90[a]** **.73[b]**			
AppSin	.22***	.25***	.46***	.39***	.44***	.49***	**.86[a]** **.79[b]**		
Openn	.30***	.39***	.42***	.55***	.52***	.51***	.41***	**.90[a]** **.77[b]**	
Agree	.24***	.29***	.49***	.39***	.51***	.55***	.53***	.47***	**.87[a]** **.74[b]**

Note: ** p < .05; *** p < .01;
[a] α
[b] SQRT (AVE)

Construct validity. Construct validity was examined via convergent validity and discriminant validity. As recommended by Hair et al. (2010), the AVE value was seen as a common way of assessing convergent validity, where an AVE of 0.5 or higher is a good rule of thumb, suggesting adequate convergence. The AVE values, as indicated in Table 4.2 above, suggested adequate convergent validity.

Discriminant validity was evaluated by three methods in the present study: 1) the correlation index among variables was less than 0.85 (Kline, 2016); 2) the value of the AVE of each construct was higher than 0.5 (Hair et al., 2010); and 3) the square root AVE of each construct was higher than the inter-construct correlation (correlation between each pair of latent variables) associated with that factor (Hair et al., 2010). Table 4.3, above, shows that all of three discriminant validity conditions were satisfied. This indicated no problem with the discriminant validity of the structural models. Thus, construct validity in this study cannot be questionable.

4.6. Analytical results of the SEM models and moderating effect analyses

A total of 37 hypothesised relationships conceptually developed in Chapter 2 were tested at this stage in order to further validate the structural model. The results are presented in Table 4.15, below. As indicated in this table, 24 of the 31 hypothesised relationships were supported, based on the SEM results. The results/findings have been presented according the 6 groups of hypothesised relationships. They included: objective – subjective career success, human capital

– career success (HC_CS), political skill – career success, personality traits – career success, protean career orientation – career success and managerial power – career success.

Based on the recommendations by Anderson and Gerbing (1988), Hoyle and Panter (1995), Schreiber et al. (2006), Hair et al. (2010), Byrne (2012), Tabachnick and Fidell (2013) and Kline (2016), the results/findings of each group of the 6 above-mentioned hypothesised relationships have been presented in 5 sections: a hypothesised model, assessment of the measurement model, assessment of the structural model, a statistical model and assessment of the common method variance, in which the researcher first tested the fit of the measurement model before testing the underlying structural models using Mplus 7.0 (Muthén and Muthén, 1998–2012). A section of moderating effect assessment was added when moderating effecting analyses were implemented in the group of hypothesised relationships. The details of presenting each section are discussed below.

The hypothesised model specified the relations among concepts that were operationalised relevant to each group of the 6 above-mentioned hypothesised relationships. For detail, observed indicators, latent variables, measurement and causal relationships have been mentioned. In addition, a diagram presenting the full system of relations and representing a direct translation of theoretical predictions has been provided.

For the measurement model assessment, data screening, model estimation, fit assessment, parameter estimates, alternative models, additional information about model fit and construct validity have been provided.

The structural model assessment specified the information about data screening, model estimation and fit assessment. In addition, a comparison of the measurement model fit and structural model fit, as well as an examination of the hypothesised dependence relationships have been discussed.

For the statistical model, a path diagram with errors, factor loadings and covariances between factors has been provided.

The moderating effect assessment reported the critical value(s) and its(their) significance, calculated the values of the function, graphed the results and explained the significance. The two last points in this section are optional if the moderating effect test is statistically significant.

4.6.1. Objective – subjective career success

The hypothesised model

The O-SCS hypothesised model the research proposes is displayed in Figure 4.1, below. Circles represent latent variables, and a rectangle represents a measured variable.

The hypothesized model examined the relationship between OCS and SCS. It was hypothesized that AFA positively affects PFA and PCA. When AFA was an observed variable, PFA was a latent one with five indicators, and PCA was measured by four indicators.

Data screening

Data preparation for SEM analysis was carefully conducted using the IBM SPSS 22.0 program. The dataset contained responses from 179 CEOs. No erroneous data regarding the ten observed variables was found. There was no missing data with regard to these variables. Univariate or multivariate outliers were also checked using box-plots and Mahalanobis D^2 distance and no outliers were found.

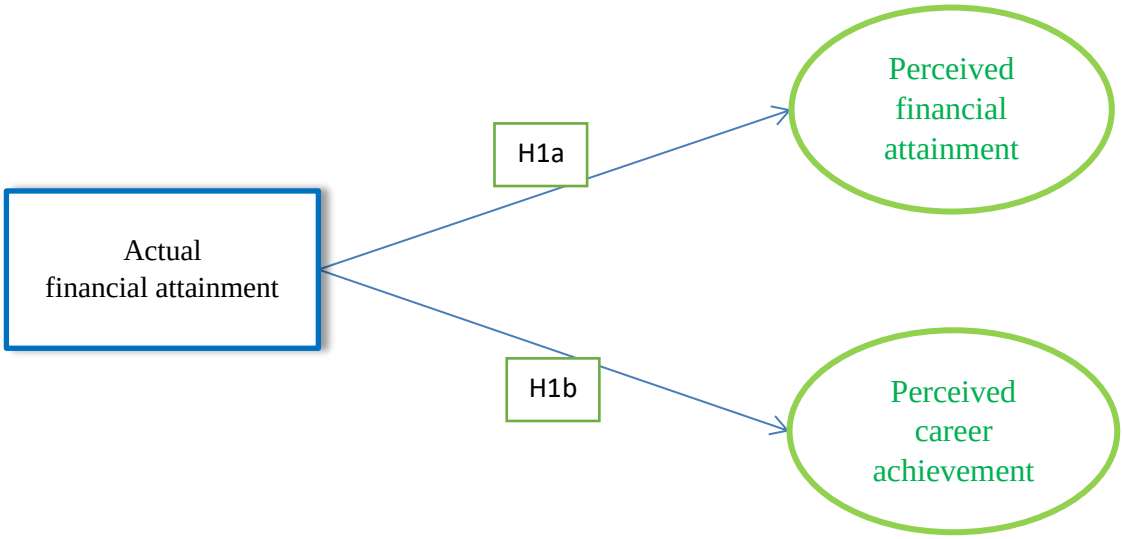


Figure 4.1. Conceptualising framework of the hypothesised relationships between objective and subjective measures of CEO career success

SEM assumptions were tested. Score distributions of all items were examined; skewness and kurtosis were within the acceptable range of −2 to+2 and histograms and P–P plots suggested no major violation of the assumption of normality. However, although the variables, including Lg10AFA and PCA, did not violate the normality assumption, they needed to be analysed with caution. In addition, linearity assumption was evaluated through the bivariate correlations recommended by Meyer et al. (2013) and there was evidence that the linearity assumption was not violated. Furthermore, with Tolerance > .1 and VIF < 5 cutoff level, tests for multicollinearity indicated that the assumption about absence of correlated errors was not violated.

After evaluating the data in terms of erroneous data, missing data, outliers and statistical assumptions, 179 cases were kept for analysis. This number of cases met the sample size requirement for SEM (e.g. Gorsuch, 1983; Anderson and Gerbing, 1988; Hair et al., 2010; Tabachnick and Fidell, 2013).

Table 4.4, below, shows the descriptive statistics, reliability coefficients and correlations among all the variables. The Cronbach alpha coefficients were all above .70 (Nunnally and Bernstein, 1994). All correlations were significant at p = .01.

Table 4.4. Means, standard deviations, and correlations among study variables in the O-SCS model

Variable	M	SD	1	2	3
1. Lg10AFA	8.75	.35	—		
2. PFA	3.75	.68	.74***	**.88**[a] **.77**[b]	
3. PCA	4.05	.49	.58***	.63***	**.88**[a] **.74**[b]

Note: * p < .10; ** p < .05; *** p < .01 [a] Cronbach's alpha value [b] Square root of the AVE

Measurement model assessment

- Model estimation. The researcher used the MPlus 7.0 program to perform a CFA, based on data from 179 CEOs in the listed firms in Vietnam. The maximum likelihood parameter estimation was chosen over other estimation methods (weighted least squares, two-stage least squares, Asymptotically Distribution-Free [ADF]) because the data was distributed normally (Kline, 2005). The other specific information about model esimation is provided in Appendix 10.

- Assessing fit. Model fit was assessed by the Root Mean Square Error of Approximation (RMSEA), the Standardized Root Mean Square Residual (SRMR), the Comparative Fit Index (CFI) and the Tucker Lewis Index (TLI). RMSEA and SRMR values $\leqslant$ .08 indicate an acceptable fit, and values $\leqslant$ .05 a good fit; CFI and TLI values $\geqslant$ .90 signify an acceptable fit and values $\geqslant$ .95 a good fit (Bentler and Bonett, 1980; Hu and Bentler, 1999; Marsh et al., 2004). The analysis yielded a good fit (RMSEA = .03; SRMR = .03; CFI = .99, and TLI = .99). In other words, the model fitted the data well. Post hoc model modifications were not performed in an attempt to develop a better fitting model because no modification indices above the minimum value were reported.

- Path estimates. The plausibility of the parameter estimates was good. There were no Heywood cases with either negative error variances or out-of-range covariances. In addition, all specified parameters were found to be statistically significant. All observed variables had significant loadings on their corresponding latent factors (between .70 and .84). All parameter estimates, including error variances and variances of latent variances, with standard errors, critical ratios and p-values were not reported in this analysis.

- Construct validity. As discussed in Section 3.7.3.2, construct validity should be evaluated through convergent validity and discriminant validity. Table 4.4, above, shows that the AVE estimates of Perceived Financial Attainment (PFA) and Perceived Career Achievement (PCA) were .60 and .55. The AVE estimates all exceeded .50 and the reliability estimates all exceeded .70. In addition, the model fitted well. Accordingly, all the items were retained at this point and adequate evidence of convergent validity was provided.

To assess the discriminant validity, the square root of the AVE for each construct must be greater than the correlations between the construct and all other constructs in the study. Table 4.4, above, shows the square root of the AVE, which satisfied the discriminant validity condition. Therefore, this test indicates that there were no problems with the discriminant validity for the O-SCS measurement model.

The measurement model also supported the discriminant validity because it did not contain any cross-loadings among either the measured variables or the error terms. This measurement model provided a good fit and showed little evidence of substantial cross-loadings. Taken together, these results supported the discriminant validity of the O-SCS measurement model. Accordingly, it was safe to use the measurement items and the proposed constructs in further model testing.

Structural model assessment

The O-SCS hypothesised model was tested against the data remaining after testing the instrument using the EFA and CFA. The O-SCS model was evaluated in terms of model estimation, goodness of fit and hypothesised dependence relationships among constructs.

- Model estimation. The analyses were based on defaulted maximum likelihood estimation and further details are presented in Appendix 11. It is important to mention that although residuals associated with the observed variables and residuals with the dependent latent variables in the model were not seen, these parameters were automatically estimated by default in Mplus (see Muthen and Muthen, 1998-2012).

- Assessing fit. The information in Table 4.5, below, shows the overall fit statistics from testing the Employee Retention model. The χ^2 is 47.22 with 33 degrees of freedom. The model CFI is .99,

and the TLI is .98 with a RMSEA of .05 and a 90% confidence interval of .00 to .08. The SRMR is .03. All of these measures are within a range that would be associated with a good fit. These diagnostics suggest that the model provides a good overall fit. The researcher did not conduct post-hoc modifications because of the good fit of the data to the model and no modification indices were above the minimum value. The model explained 61.1% of variance in perceived financial attainment and 36.3% of variance in perceived career achievement.

Table 4.5. Summary of SEM fit indices of O-SCS model

Fit measure	Measurement model	Structural model	Recommended values
χ^2	30.94	47.22	
Degrees of freedom	26	33	
Comparative fit index (CFI)	.99	.99	⩾ .90
Tucker–Lewis index (TLI)	.99	.98	⩾ .90
Standardized Root Mean Square Residual (SRMR)	.03	.03	⩽ .08
Root mean square error of approximation (RMSEA)	.03	.05	⩽ .08

- Examining the hypothesised dependence relationships among constructs.

Table 4.6, below, shows the unstandardized and standardized structural path estimates as well as the standard error (S.E.), unstandardized parameter estimate/ standard error (Est./S.E.) and two-tailed P-value. All of the two structural path estimates were significant and in the expected direction. Specifically, Hypotheses 1a and 1b positively related actual financial attainment to perceived financial attainment (1a) and perceived career achievement (1b). The statistically significant parameter estimates (b = .78 and .60, respectively; p < .05) indicated **support for Hypotheses 1a and 1b**. Overall, given that the two estimates were consistent with the hypotheses, these results supported the theoretical model. Therefore, **Hypothesis 1 was fully supported.**

Table 4.6. Structural parameter estimates for the O-SCS hypothesised model

Structural relationship	Unstandardized parameter estimate	S.E.	Est./S.E.	Two-tailed P-value	Standardized Parameter estimate
H1a: AFA → PFA	1.57	.13	11.78	0.00	.78
H1a: AFA → PCA	.85	.10	8.26	0.00	.60

The statistical model

The statistical model with unstandardized and standardized coefficients, as well as errors, is shown in Figure 4.2, below. The number of parameters to be estimated were 1 factor covariance, 2 factor variances, 9 factor loadings, 9 observed variable residual variances and 9 observed variable intercepts, which equalled 30.

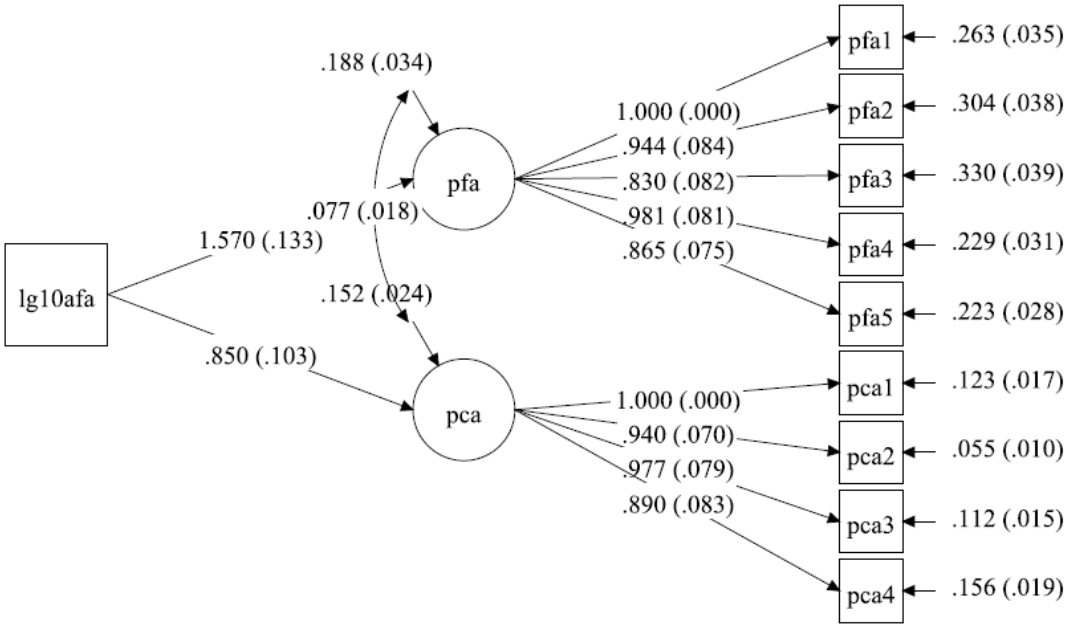


Figure 4.2. Results of full O-CSC research model

4.6.2. Human capital – career success

The HC-CS hypothesised model

The HC-CS hypothesised model the research proposes is displayed in Figure 4.3, below. The hypothesized model examined the relationship between human capital and subjective career success. Specifically, it was hypothesized that a CEO's educational attainment and tenure positively affected his/her perceived financial attainment and perceived career achievement. When educational attainment (EduAtt) and CEO tenure (CEOTen) were observed variables, perceived financial attainment (PFA) was a latent one with five indicators, and perceived career achievement (PCA) was measured by four indicators.

Data screening

Data preparation for SEM analysis was carefully conducted using the IBM SPSS 22.0 program. The dataset contained responses from 179 CEOs. No erroneous data regarding the ten observed variables was found. There was no missing data with regard to these variables. Univariate or multivariate outliers were also checked using box-plots and Mahalanobis D^2 distance and no outliers were found.

SEM assumptions were tested. The score distributions of all the items were examined; skewness and kurtosis were within the acceptable range of -2 to+2 and histograms and P–P plots suggested no major violation of the assumption of normality. However, although the variables, including Lg10AFA, PCA and EduAtt, did not violate the normality assumption, they needed to be analysed with caution. In addition, the linearity assumption was evaluated through the bivariate correlations recommended by Meyer et al. (2013) and there was evidence that the linearity assumption was not violated.

Furthermore, with Tolerance > .1 and VIF < 5 cutoff level, tests for multicollinearity indicated that the assumption about absence of correlated errors was not violated.

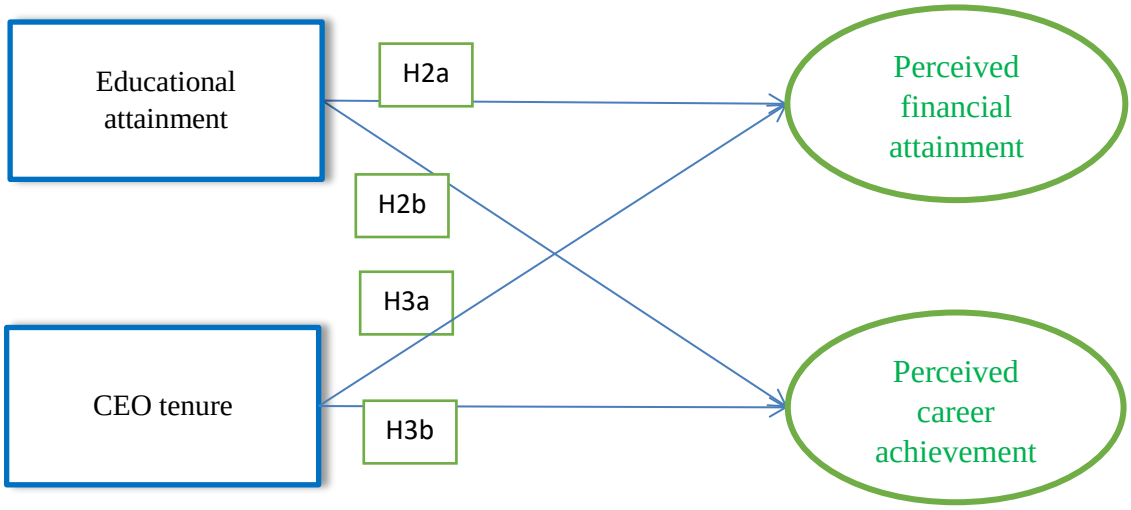


Figure 4.3. Conceptualising framework of the hypothesised relationships between CEO subjective career success and its human capital predictors

After evaluating the data in terms of erroneous data, missing data, outliers and statistical assumptions, 179 cases were kept for analysis. This number of cases met the sample size requirement for SEM (e.g. Gorsuch, 1983; Anderson and Gerbing, 1988; Hair et al., 2010; Tabachnick and Fidell, 2013).

Table 4.7, below, shows the descriptive statistics, reliability coefficients and correlations among all the variables. The Cronbach alpha coefficients were all above .70 (Nunnally and Bernstein, 1994). All correlations were significant at $p < .05$, except the correlation between EduAtt and SQRTCEOTen.

Table 4.7. Means, standard deviations, and correlations among study variables in the HC-CS model

Variable	M	SD	1	2	3	4
1. PFA	3.75	.68	**.88**[a] **.77**[b]			
2. PCA	4.05	.49	.63***	**.88**[a] **.74**[b]		
3. EduAtt	16.89	1.40	.22***	.33***	—	
4. SQRTCEOTen	2.03	1.09	.17**	.20***	.00	—

Note: * p < .10; ** p < .05; *** p < .01 [a] Cronbach's alpha value [b] Square root of the AVE

Measurement model assessment

Because the measurement model of the HC-CS hypothesised model is the same as the O-SCS model, its contents in terms of model estimation, fit assessment, path estimates and construct

validity are exactly the same. The main points should be recalled here before assessing the relevant structural model. Maximum likelihood parameter estimation was chosen. The CFA results suggested that the HC-CS measurement model provided a good fit. Post hoc model modifications were not performed. The plausibility of the parameter estimates was good. The discriminant validity of the O-SCS measurement model was supported.

Structural model assessment

The HC-CS model was tested against the data remaining after testing the instrument using the EFA and CFA. The HC-CS model was evaluated in terms of model estimation, goodness of fit and hypothesised dependence relationships among constructs.

Table 4.8. Summary of SEM fit indices of HC-CS model

Fit measure	Measurement model	Structural model	Recommended values
χ^2	30.94	46.42	
Degrees of freedom	26	40	
Comparative fit index (CFI)	.99	.99	$\geqslant$ .90
Tucker–Lewis index (TLI)	.99	.99	$\geqslant$ .90
Standardized Root Mean Square Residual (SRMR)	.03	.03	$\leqslant$ .08
Root mean square error of approximation (RMSEA)	.03	.03	$\leqslant$ .08

- Model estimation. The analyses were based on defaulted maximum likelihood estimation and further details are presented in Appendix 12. It is important to mention that although the residuals associated with the observed variables and residuals with the dependent latent variables in the model were not seen, these parameters were automatically estimated by default in Mplus (see Muthen and Muthen, 1998-2012).

- Assessing fit. The information in Table 4.8 shows the overall fit statistics from testing the HC-CS model. The $\chi P^2 P$ is 46.42 with 40 degrees of freedom. The model CFI is .99, and the TLI is .99 with a RMSEA of .03 and a 90% confidence interval of .00 to .06. The SRMR is .03. All of these measures are within a range that would be associated with a good fit. These diagnostics suggest that the model provided a good overall fit. Post-hoc modifications were not conducted because of the good fit of the data to the model and no modification indices were above the minimum value. The model explained 9.9% of the variance in perceived financial attainment and 16.1% of the variance in perceived career achievement.

- Examining the hypothesised dependence relationships among constructs.

Table 4.9, below, shows the unstandardized and standardized structural path estimates as well as the standard error (S.E.), unstandardized parameter estimate/ standard error (Est./S.E.) and two-tailed P-value. All of the four structural path estimates were significant and in the expected direction. Specifically, Hypotheses 2a and 2b positively related CEO's educational attainment to perceived financial attainment (2a) and perceived career achievement (2b). The statistically

significant parameter estimates (*b* = .25 and .35, respectively; *p* < .01) indicated **support for Hypotheses 2a and 2b**. Additionally, Hypotheses 3a and 3b positively related CEO tenure to perceived financial attainment (3a) and perceived career achievement (3b). Statistically significant parameter estimates were found for the paths from CEO tenure to perceived financial attainment (b = .19, p < .05) and from this tenure to perceived career achievement (b = .20, p < .01). Thus, **support was indicated for Hypotheses 3a and 3b**. Overall, given that the four estimates were consistent with the hypotheses, these results support the theoretical model. Therefore, **Hypotheses 2 and 3 were fully supported.**

Table 4.9. Structural parameter estimates for the HC-CS hypothesised model

Structural relationship	Unstandardized parameter estimate	S.E.	Est./S.E.	Two-tailed P-value	Standardized Parameter estimate
H2a: EduAtt → PFA	.13	.04	3.25	.001	.25
H2b: EduAtt → PCA	.12	.03	4.63	.000	.35
H3a: CEOTen → PFA	.12	.05	2.49	.013	.19
H3b: CEOTen → PCA	.09	.03	2.74	.006	.20

The statistical model

The statistical model with unstandardized and standardized coefficients as well as errors is shown in Figure 4.4, below. The number of parameters to be estimated were 1 factor covariance, 2 factor variances, 9 factor loadings, 9 observed variable residual variances and 11 observed variable intercepts, which equalled 32.

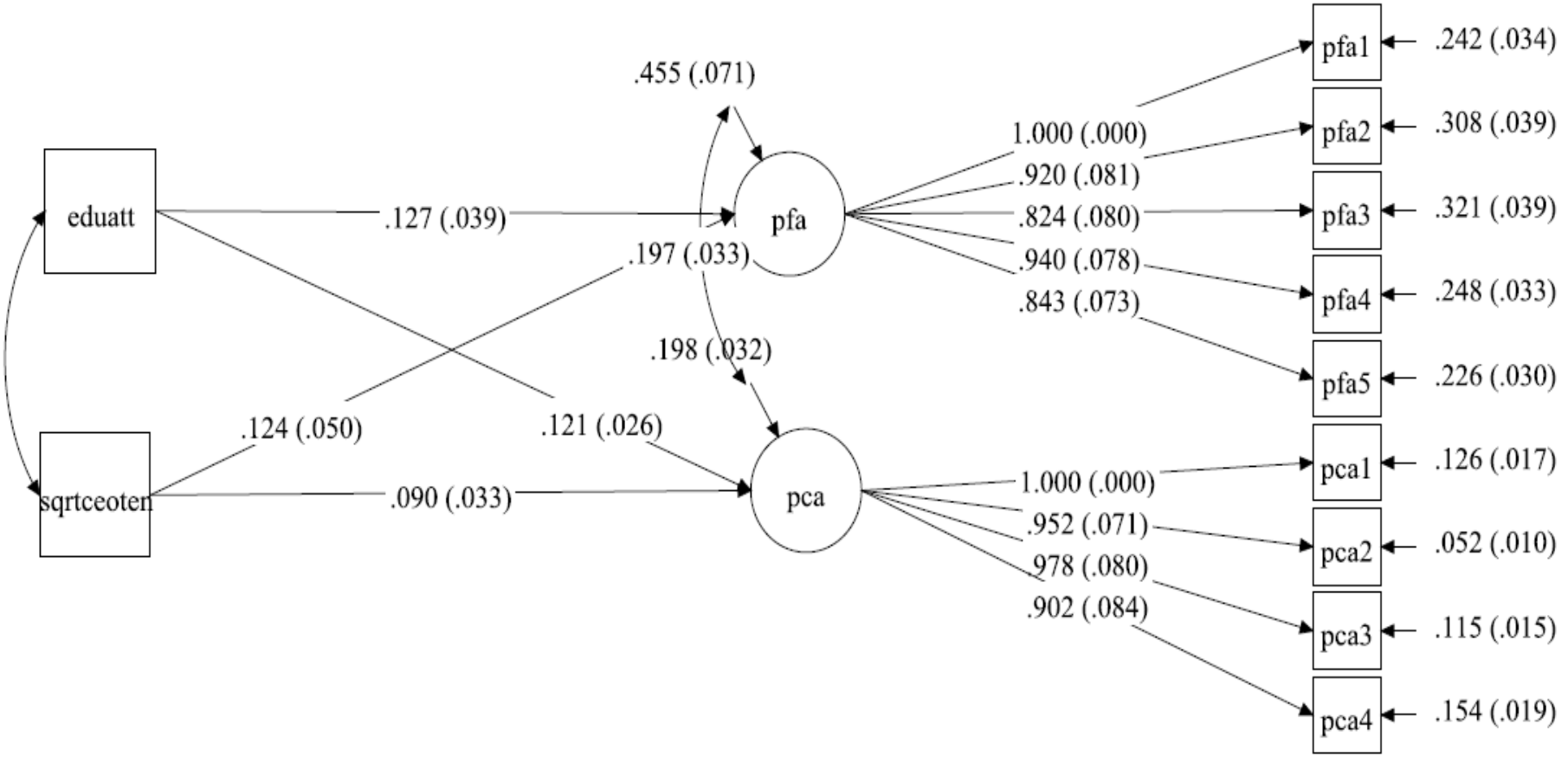


Figure 4.4. Results of full HC-CS research model

4.6.3. Political skill – career success

The hypothesised model

The political skill – career success (PS-CS) hypothesised model is displayed in Figure 4.5, below. Circles represent latent variables, and a rectangle represents a measured variable.

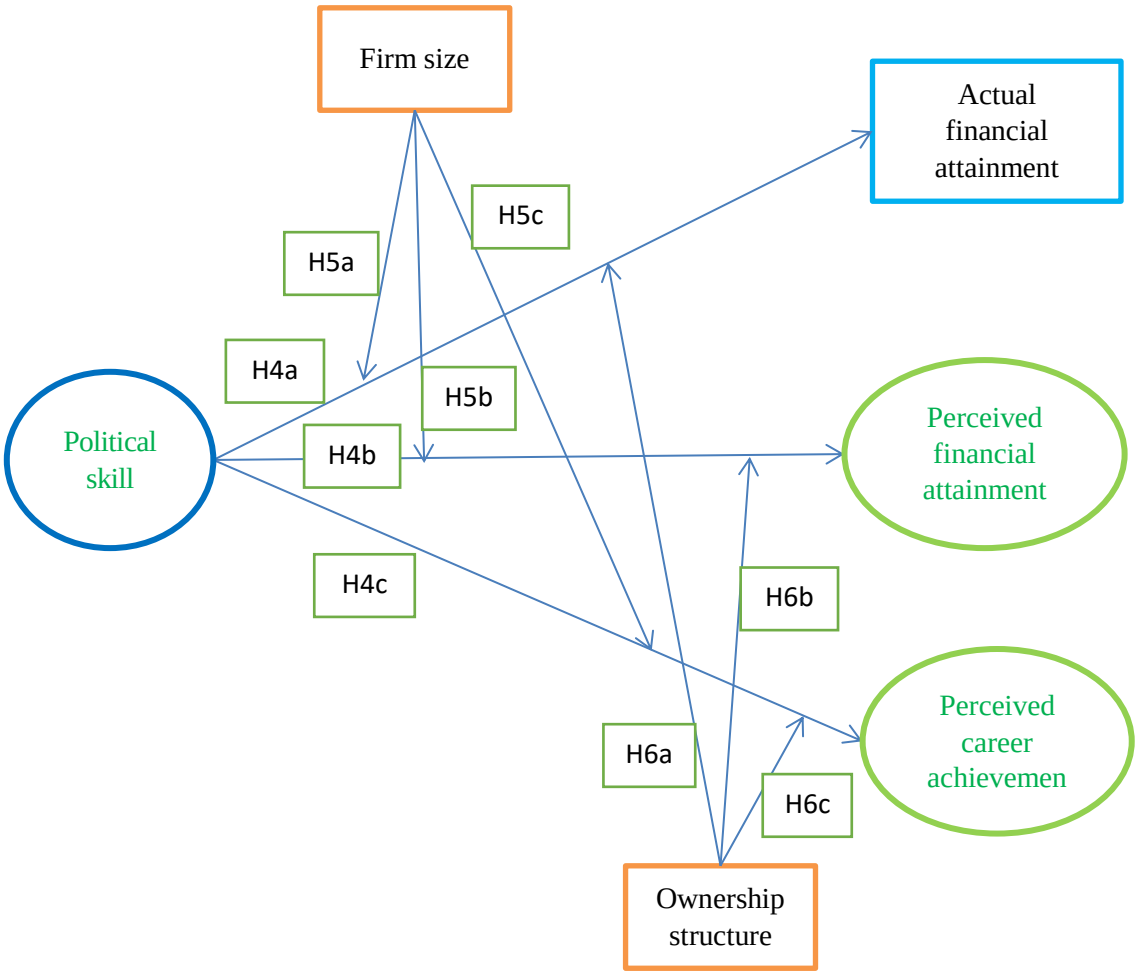


Figure 4.5. Conceptualising framework of the hypothesised relationships between CEO career success and its political skill predictor, with firm size and ownership structure as moderators

The hypothesized model was employed to examine the PS-CS relationship. It was hypothesized that a CEO's political skill positively affected his actual financial attainment, perceived financial attainment and perceived career achievement. Additionally, the researcher explored whether firm size or the ownership structure moderated the political skill – career success relationship. When actual financial attainment (AFA), firm size and ownership structure were observed variables, perceived financial attainment (PFA) was a latent one with five indicators, perceived career achievement (PCA) was measured by four indicators, and political skill (PS) was a second-order latent variable.

Data screening

Data preparation for the SEM analysis was carefully conducted using the IBM SPSS 22.0 program. The dataset contained responses from 179 CEOs. No erroneous data regarding the ten observed variables was found. There was no missing data with regard to these variables. Univariate or multivariate outliers were also checked using box-plots and Mahalanobis D^2 distance and no outliers were found.

The SEM assumptions were tested. The score distributions of all items were examined; skewness and kurtosis were within the acceptable range of -2 to +2 and histograms and P–P plots suggested no major violation of the assumption of normality. However, although the variables, including Lg10AFA and PCA, did not violate the normality assumption, they needed to be analysed with caution. In addition, the linearity assumption was evaluated through the bivariate correlations recommended by Meyer et al. (2013), and there was evidence that the linearity assumption was not violated. Furthermore, with Tolerance > .1 and VIF < 5 cutoff level, tests for multicollinearity indicated that the assumption about absence of correlated errors was not violated.

After evaluating the data in terms of erroneous data, missing data, outlier and statistical assumptions, 179 cases were kept for analysis. This number of cases met the sample size requirement for SEM (e.g. Gorsuch, 1983; Anderson and Gerbing, 1988; Hair et al., 2010; Tabachnick and Fidell, 2013). Table 4.10, below, shows the descriptive statistics, reliability coefficients and correlations among all the variables. The Cronbach alpha coefficients were all above .70 (Nunnally and Bernstein, 1994). All correlations were significant at p= .01.

Table 4.10. Means, standard deviations, and correlations among study variables in the PS-CS model

Variable	M	SD	1	2	3	4
1. Lg10AFA	8.75	.35	—			
2. PFA	3.75	.68	.74***	**.88**[a] **.77**[b]		
3. PCA	4.05	.49	.58***	.63***	**.88**[a] **.74**[b]	
4. PS	3.88	.40	.47***	.40***	.51***	**.89**[a] **.75**[b]

Note: * p < .10; ** p < .05; *** p < .01 [a] Cronbach's alpha value [b] SQRT(AVE)
The values of Cronbach's alpha and SQRT(AVE) regarding PS were calculated by meaning the relevant values of NetAbi, SocAst, IntInf and AppSin.

After screening the data, the researcher undertook the SEM assessment regarding Hypothesis 4 and the moderating effect assessment regarding Hypotheses 5 and 6.

SEM assessment (Hypothesis 4)

Measurement model assessment: The measurement model was evaluated in terms of model estimation, goodness of fit, path estmates and construct validity.

Model estimation. The researcher used the MPlus 7.0 program to perform a CFA, based on data from the 179 CEOs in the listed firms in Vietnam. The maximum likelihood parameter estimation was chosen over other estimation methods (weighted least squares, two-stage least squares, ADF) because the data were distributed normally

(Kline, 2005). Further specific information about model esimation is provided in Appendix 13.

Assessing fit. The analysis yielded a good fit (RMSEA = .03; SRMR = .05; CFI = .98, and TLI = .98). In other words, the model fitted the data well. Post hoc model modifications were not performed in an attempt to develop a better fitting model because no modification indices above the minimum value were reported.

Path estimates. The plausibility of the parameter estimates was good. There were no Heywood cases with either negative error variances or out-of-range covariances. In addition, all specified parameters were found to be statistically significant. All observed variables had significant loadings on their corresponding latent factor (between .60 and .92). No parameter estimates, including error variances and variances of latent variances, with standard errors, critical ratios and p-values were reported.

Construct validity. Construct validity should be evaluated through convergent validity and discriminant validity. Table 4.2, above, shows that the AVE estimates for Perceived Financial Attainment (PFA), and Perceived Career Achievement (PCA) were .60 and .55, respectively, while the AVE estimate for Political Skill (PS) was .55 (calculated based the AVE estimates of its components: NetAbi, SocAst, Intinf and AppSin). The AVE estimates all exceeded .50 and the reliability estimates all exceeded .70. In addition, the model fitted well. Accordingly, all the items were retained at this point and adequate evidence of convergent validity was provided.

To assess the discriminant validity, the square root of the AVE for each construct must be greater than the correlations between the construct and all other constructs in the study. Table 4.10, above, shows the square root of the AVE, which satisfied the discriminant validity condition. Therefore, this test indicated that there were no problems with the discriminant validity of the PS-CS measurement model.

The measurement model also supported the discriminant validity because it did not contain any cross-loadings among either the measured variables or the error terms. This measurement model provided a good fit and showed little evidence of substantial cross-loadings. Taken together, these results supported the discriminant validity of the PS-CS measurement model. Thus, it was safe to use the measurement items and the proposed constructs in further model testing.

Structural model assessment: The PS-CS hypothesised model was tested against the data remaining after testing the instrument using the EFA and CFA. The PS-CS model was evaluated in terms of model estimation, goodness of fit and hypothesised dependence relationships among constructs.

Model estimation. The analyses were based on the defaulted maximum likelihood estimation, and further details are presented in Appendix 14. It is important to mention that although residuals associated with the observed variables and residuals with the dependent latent variables in the model were not seen, these parameters were automatically estimated by default in Mplus (see Muthen and Muthen, 1998-2012).

Assessing fit. The information in Table 4.11, below, shows the overall fit statistics from testing the PS-CS structural model. The χ^2 is 447.21 with 387 degrees of freedom. The model CFI is .98, and the TLI is .98 with a RMSEA of .03 and a 90% confidence interval of .00 to .08. The SRMR is .05. All of these measures were within a range that would be associated with good fit. These diagnostics suggest the model provided a good overall fit. Post-hoc modifications did not need to be conducted because of the good fit of the data to the model and no modification indices were above the minimum value. The model explained 28.4% of the variance in actual financial attainment, 23.1% of the

variance in perceived financial attainment and 36.2% of the variance in perceived career achievement.

Table 4.11. Summary of SEM fit indices of PS-CS model

Fit measure	Measurement model	Structural model	Recommended values
χ^2	370.11	401.66	
Degrees of freedom	315	339	
Comparative fit index (CFI)	.98	.98	⩾ .90
Tucker–Lewis index (TLI)	.98	.98	⩾ .90
Standardized Root Mean Square Residual (SRMR)	.05	.05	⩽ .08
Root mean square error of approximation (RMSEA)	.03	.03	⩽ .08

Examining the hypothesised dependence relationships among constructs: Table 4.12, below, shows the unstandardized and standardized structural path estimates as well as the standard error (S.E.), unstandardized parameter estimate/ standard error (Est./S.E.) and two-tailed P-value. All of the two structural path estimates were significant and in the expected direction. Specifically, Hypotheses 4a, 4b and 4c positively related a CEO's political skill to his actual financial attainment (H4a), perceived financial attainment (4b) and perceived career achievement (4c). The statistically significant parameter estimates (*b* = .53, 48 and .60, respectively; $p < .01$) provided **support for Hypotheses 4a, 4b and 4c**. Therefore, **Hypothesis 4 was fully supported.** Overall, given that the three estimates were consistent with the hypotheses, these results support the theoretical model. These results suggest that CEO respondents who indicated greater political skill reported higher actual financial attainment, more perceived financial attainment and greater perceived career achievement.

Table 4.12. Structural parameter estimates for the PS-CS hypothesised model

Structural relationship	Unstandardized parameter estimate	S.E.	Est./S.E.	Two-tailed P-value	Standardized Parameter estimate
H4a: PS → AFA	.56	.09	5.95	.000	.53
H4b: PS → PFA	1.01	.21	4.99	.000	.48
H4c: PS → PCA	.89	.15	6.01	.000	.60

The statistical model: The statistical model with unstandardized and standardized coefficients as well as errors is shown in Figure 4.6, below.

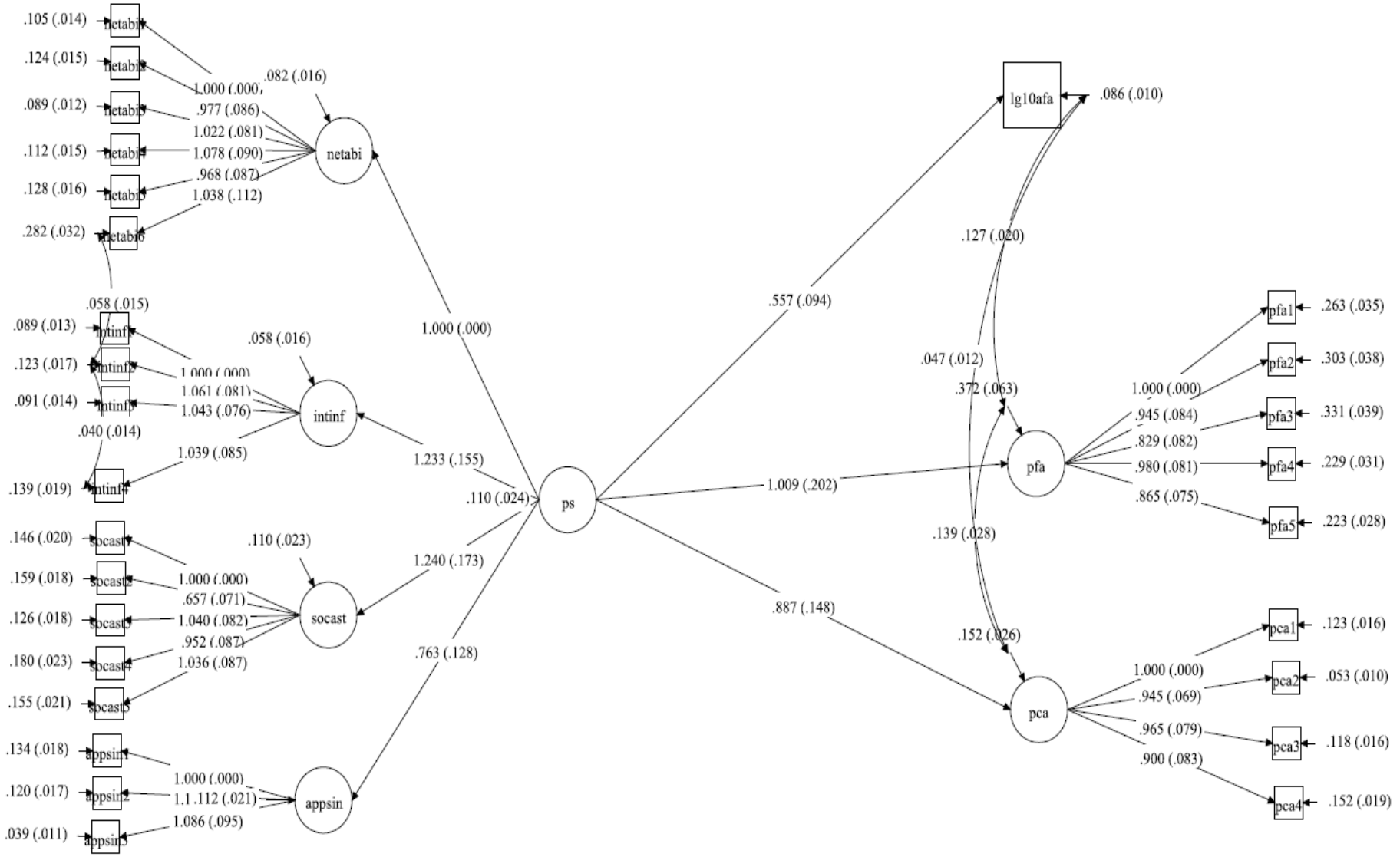


Figure 4.6. Results of full PS-CS model

Moderating effect assessment (Hypotheses 5 and 6)

Assessing the moderating effects of firm size and ownership structure on the PT-CS relationship, hypothesised and displayed in Figure 4.7, below, was conducted following the recommendations discussed in Section 3.5.7 in Chapter 3. Specifically, the section on a guide to testing moderator effects and the section on estimating and interpreting latent interactions using Mplus formed the basis to test and report the results of these moderating effects. The strategies presented in those sections are applicable to any research question involving interactions of latent variables, including interactions between a latent and an observed variable as well as interactions between latent variables.

All analyses were performed via structural equation modelling using Mplus version 7.0 (Muthén and Muthén, 1998–2010). The LMS models were estimated with the XWITH command, using full information maximum likelihood with robust standard errors. Latent variables were scaled by fixing the loading of the first item to 1.0, per Mplus defaults. Previous research has noted that the method of scaling the latent variables can have substantive impacts on the Wald significance test (Gonzalez and Griffin, 2001). The analyses used the likelihood ratio test to determine the significance of the latent variable interaction. Models were estimated according to the sequence described above. The Mplus codes are shown in Appendices 15 to 32.

To assess the moderating effects regarding Hypotheses 5 and 6 (specifically Hypotheses 5a,b,c and 6a,b,c), the researcher implemented the 4-step procedure with three tests specified in the subsection on estimating and interpreting latent interactions using Mplus in Section 3.5.7. These tests included measurement model estimation, structural model estimation without the interaction term (Model 0) and structural model estimation with the interaction term (Model 1). In addition, the results in the Model 1 provided values of β, SE, p and CI which are basis to conclude whether firm size or ownership structure significantly moderated the effect of protean career orientation on career success. The 4-step procedure with three tests was applied to test moderating effects in the protean career orientation – career success hypothesised model hypothesis by hypothesis.

Hypothesis 5a posited that firm size (measured by sales) moderated the relationship between a CEO's political skill (PS) and his actual financial attainment (AFA). Firstly, the fit of the measurement model specified in Appendix 15 was assessed and it yielded a good fit: $\chi^2(128) = 162.09$, RMSEA = .04, SRMR = .04, CFI = .98 and TLI = .98. Next, Model 0, indicated in Appendix 16, was estimated. Model 0 fitted the data well: $\chi^2(163) = 218.25$, RMSEA = .04, SRMR = .05, CFI = .97, TLI = .97. Both a CEO's political skill and sales significantly predicted his actual financial attainment (b = .64, p = .00 < .05 and b = .47, p = .00 < .05, respectively). The model explained 48.4% of variance in actual financial attainment. Model 1, determined in Appendix 17, was then estimated. The relative fit of Model 1 versus Model 0 was determined via a log-likelihood ratio test, comparing the log-likelihood values of Model 0 and Model 1, yielding a log-likelihood difference value of $D = .85$. Based on the number of free parameters of Model 0 (67) and Model 1 (68), the difference in free parameters = 1, which represents the df value to be used for the log-likelihood ratio test. The values of D were approximately distributed as χ^2 (Maslowsky et al., 2015). Using a chi-square distribution, this log-likelihood ratio test proved insignificant (p = .36 > .05). The political skill x sales interaction effect was insignificant (β = .09, SE = .10, p = .39 > .05). Accordingly, **Hypothesis 5a was rejected**. In other words, sales do not significantly moderate the effect of a CEO's political skill on his actual financial attainment.

Hypothesis 5b posited that firm size (measured by sales) moderated the relationship between a CEO's political skill (PS) and his perceived financial attainment (PFA). Firstly, the fit of the measurement model pointed out in Appendix 18 was assessed and it yielded a good fit: $\chi^2(223) = 269.14$, RMSEA = .03, SRMR = .05, CFI = .98 and TLI = .98. Next, Model 0, determined in Appendix 19, was estimated and this model fitted the data well: $\chi^2(244) = 295.59$, RMSEA = .03,

SRMR = .05, CFI = .98, TLI = .98. Both a CEO's political skill and sales significantly predicted his perceived financial attainment (b = .44, p = .00 < .05 and b = .40, p = .00 < .05, respectively). The model explained 44.5% of the variance in perceived financial attainment. Model 1, specified in Appendix 20, was then estimated. The relative fit of Model 1 versus Model 0 was determined via a log-likelihood ratio test, comparing the log-likelihood values of Model 0 and Model 1, yielding a log-likelihood difference value of D = 7.11. Based on the number of free parameters of Model 0 (80) and Model 1 (81), the difference in free parameters = 1, which represents the df value to be used for the log-likelihood ratio test. Using a chi-square distribution, this log-likelihood ratio test proved insignificant (p = .008 < .05), indicating that the null model (Model 0; the model without the interaction effect) represented a significant loss in fit relative to the alternative model (Model 1; the model with the interaction effect). The political skill x sales interaction effect was significant (β = -.26, SE = .10, p = .01 < .05). Accordingly, **Hypothesis 5b was supported**. In other words, sales significantly moderated the effect of a CEO's political skill on his perceived financial attainment. Plotting the interaction to aid in interpretation revealed that the relation between a CEO's political skill and his perceived financial attainment becomes less positive as sales increase (Figure 4.7, below).

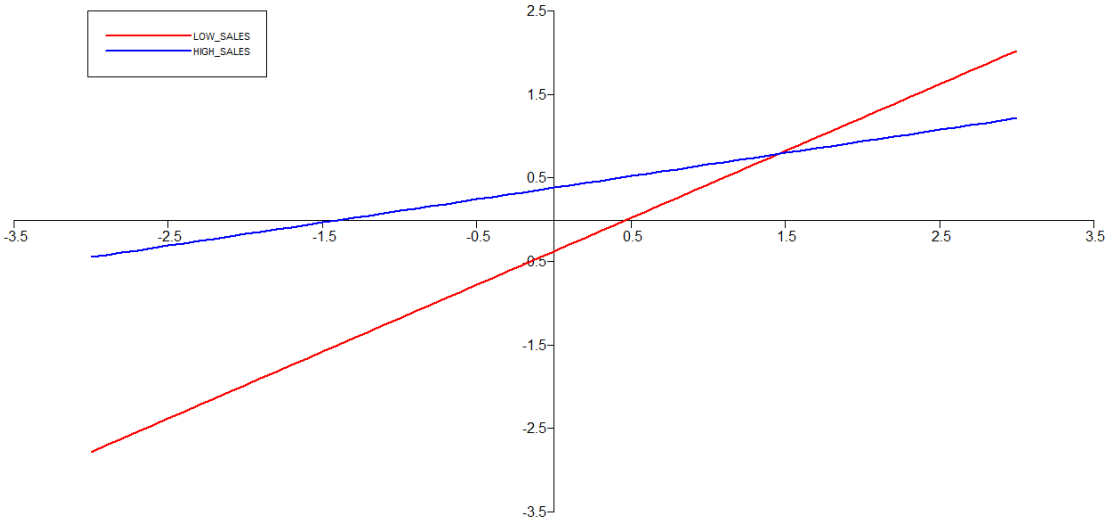


Figure 4.7. Interaction of political skill and sales predicting perceived financial attainment

Hypothesis 5c posited that firm size (measured by sales) moderated the relationship between a CEO's political skill (PS) and his perceived career achievement (PCA). Firstly, the fit of the measurement model determined in Appendix 21 was assessed and it yielded a good fit: $\chi^2(202)$ = 250.23, RMSEA = .04, SRMR = .05, CFI = .98 and TLI = .98. Next, Model 0, specified in Appendix 22, was estimated. Model 0 fitted the data well: $\chi^2(222)$ = 275.93, RMSEA = .04, SRMR = .05, CFI = .98, TLI = .98. Both a CEO's political skill and sales significantly predicted his actual financial attainment (b = .66, p = .00 < .05 and b = .28, p = .00 < .05, respectively). The model explained 46.9% of the variance in perceived career achievement. Model 1, indicated in Appendix 23, was then estimated. The relative fit of Model 1 versus Model 0 was determined via a log-likelihood ratio test comparing the log-likelihood values of Model 0 and Model 1, yielding a log-likelihood difference value of D = 2.95. Based on the number of free parameters of Model 0 (77) and Model 1 (78), the difference in free parameters = 1, which represented the df value to be used for the log-likelihood ratio test. Using a chi-square distribution, this log-likelihood ratio test proved insignificant (p = .09 < .10), indicating that the null model (Model 0; the model without the interaction effect) represented a significant loss in fit relative to the alternative model (Model 1;

the model with the interaction effect). The political skill x sales interaction effect was insignificant (β = -.17, SE = .10, p = .08 < .10). Accordingly, **Hypothesis 5c was supported**. In other words, sales significantly moderated the effect of a CEO's political skill on his perceived career achievement. Plotting the interaction to aid in interpretation revealed that the relation between a CEO's political skill and his perceived career achievement becomes less positive as sales increases (Figure 4.8, below). Therefore, **Hypothesis 5 was partly supported.**

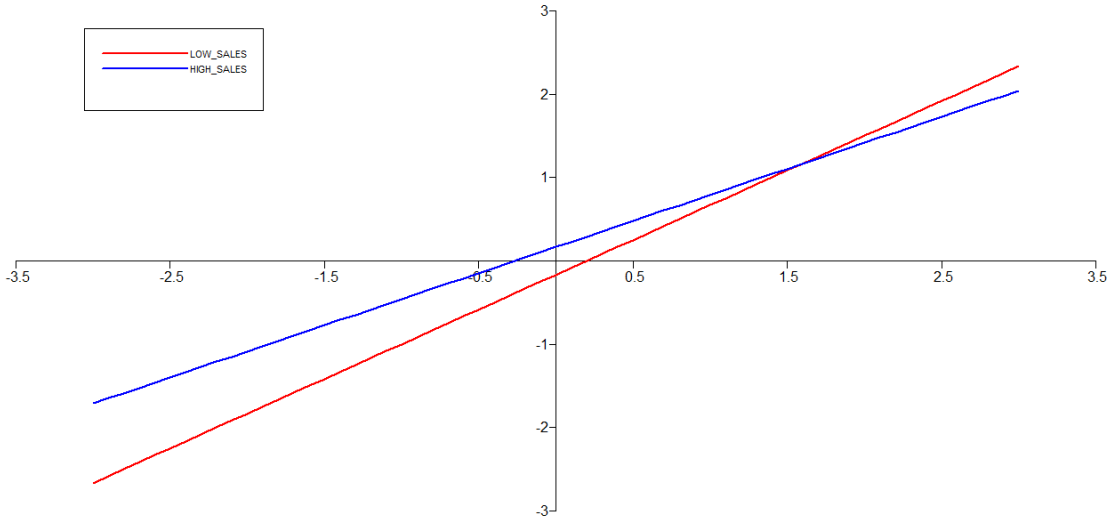


Figure 4.8. Interaction of political skill and sales predicting perceived career achievement

Hypothesis 6a posited that ownership structure (measured by foreign ownership) moderated the relationship between a CEO's political skill (PS) and his actual financial attainment (AFA). Firstly, the fit of the measurement model determined in Appendix 24 was assessed and it yielded a good fit: $\chi^2(128) = 162.09$, RMSEA = .04, SRMR = .04, CFI = .98 and TLI = .98. Next, Model 0, specified in Appendix 25, was estimated. Model 0 fitted the data well: $\chi^2(163) = 210.21$, RMSEA = .04, SRMR = .05, CFI = .98, TLI = .97. Both a CEO's political skill and foreign ownership significantly predicted his actual financial attainment (b = .67, p = .00 < .05 and b = .41, p = .00 < .05, respectively). The model explained 43.3% of the variance in actual financial attainment. Model 1, indicated in Appendix 26, was then estimated. The relative fit of Model 1 versus Model 0 was determined via a log-likelihood ratio test comparing the log-likelihood values of Model 0 and Model 1, yielding a log-likelihood difference value of $D = .41$. Based on the number of free parameters of Model 0 (67) and Model 1 (68), the difference in free parameters = 1, which represented the df value to be used for the log-likelihood ratio test. Using a chi-square distribution, this log-likelihood ratio test proved insignificant (p = .52 > .05). The political skill x foreign ownership interaction effect was insignificant (β = -.06, SE = .09, p = .52 > .05). Accordingly, **Hypothesis 6a was rejected**. In other words, foreign ownership did not significantly moderate the effect of a CEO's political skill on his actual financial attainment (AFA).

Hypothesis 6b posited that ownership structure (measured by foreign ownership) moderates the relationship between a CEO's political skill (PS) and his perceived financial attainment (PFA). Firstly, the fit of the measurement model pointed out in Appendix 27 was assessed and it yielded a good fit: $\chi^2(223) = 269.14$, RMSEA = .03, SRMR = .05, CFI = .98 and TLI = .98. Next, Model 0, determined in Appendix 28, was estimated and this model fitted the data well: $\chi^2(244) = 289.49$, RMSEA = .03, SRMR = .05, CFI = .98, TLI = .98. Both a CEO's political skill and foreign ownership significantly predicted his perceived financial attainment (b = .53, p = .00 < .05 and b = .21, p = .00 < .05, respectively). The model explained 28.5% of the variance in perceived financial attainment. Model 1, specified in Appendix 29, was then estimated. The relative fit of Model 1

versus Model 0 was determined via a log-likelihood ratio test comparing the log-likelihood values of Model 0 and Model 1, yielding a log-likelihood difference value of D = 4.50. Based on the number of free parameters of Model 0 (80) and Model 1 (81), the difference in free parameters = 1, which represented the df value to be used for the log-likelihood ratio test. Using a chi-square distribution, this log-likelihood ratio test proved insignificant (p = .03 < .05), indicating that the null model (Model 0; the model without the interaction effect) represented a significant loss in fit relative to the alternative model (Model 1; the model with the interaction effect). The political skill x foreign ownership interaction effect was significant (β = -.18, SE = .09, p = .04 < .05). Accordingly, **Hypothesis 6b was supported**. In other words, foreign ownership significantly moderates the effect of a CEO's political skill on his perceived financial attainment. Plotting the interaction to aid in interpretation revealed that the relation between a CEO's political skill and his perceived financial attainment becomes less positive as foreign ownership increases (Figure 4.9, below).

Hypothesis 6c posited that ownership structure (measured by foreign ownership) moderated the relationship between a CEO's political skill (PS) and his perceived career achievement (PCA). Firstly, the fit of the measurement model determined in Appendix 30 was assessed and yielded a good fit: $\chi^2(202) = 250.23$, RMSEA = .04, SRMR = .05, CFI = .98 and TLI = .98. Next, Model 0, specified in Appendix 31, was estimated. Model 0 fitted the data well: $\chi^2(222) = 270.36$, RMSEA = .04, SRMR = .05, CFI = .98, TLI = .98. Both a CEO's political skill and foreign ownership significantly predicted his actual financial attainment (b = .73, p = .00 < .05 and b = .13, p = .03 < .05, respectively). The model explained 38.3% of the variance in perceived career achievement. Model 1, indicated in Appendix 32, was then estimated. The relative fit of Model 1 versus Model 0 was determined via

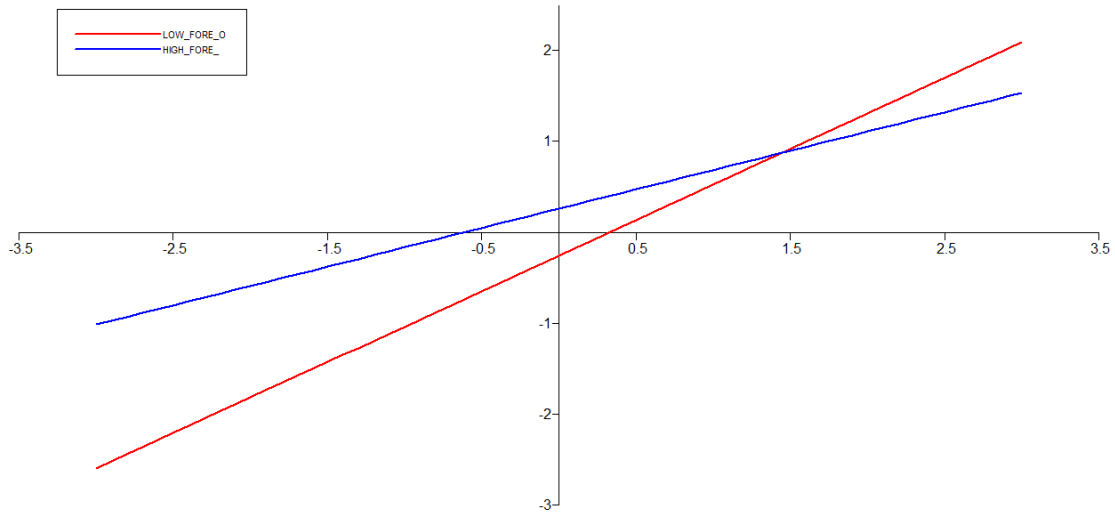


Figure 4.9. Interaction of political skill and foreign ownership predicting perceived financial attainment

a log-likelihood ratio test comparing the log-likelihood values of Model 0 and Model 1, yielding a log-likelihood difference value of D = .35. Based on the number of free parameters of Model 0 (77) and Model 1 (78), the difference in free parameters = 1, which represented the df value to be used for the log-likelihood ratio test. Using a chi-square distribution, this log-likelihood ratio test proved insignificant (p = .55 > .05). The political skill x foreign ownership interaction effect was insignificant (β = -.05, SE = .08, p = .55 > .05). Accordingly, **Hypothesis 6c was rejected**. In other words, foreign ownership did not significantly moderate the effect of a CEO's political skill on his perceived career achievement. Therefore, **Hypothesis 6 was partly supported.**

4.6.4. Personality traits – career success

The hypothesised model

The personality traits – career success (PT-CS) hypothesised model proposed by this research is displayed in Figure 4.10, below. Circles represent latent variables, and rectangles represent observed variables.

The hypothesized model examined whether industry moderated the PT-CS relationship. It was hypothesized whether industry moderated the relationship between a CEO's agreeableness and his actual financial attainment, perceived financial attainment and perceived career achievement. It was also hypothesized whether industry moderated the relationship between a CEO's openness and his actual financial attainment, perceived financial attainment and perceived career achievement. When actual financial attainment was an observed variable, perceived financial attainment was a latent one with five indicators. Perceived career achievement agreeableness and openness were measured by four indicators when industry was a dichotomous observed variable. Industry was a measure of the employment sector.

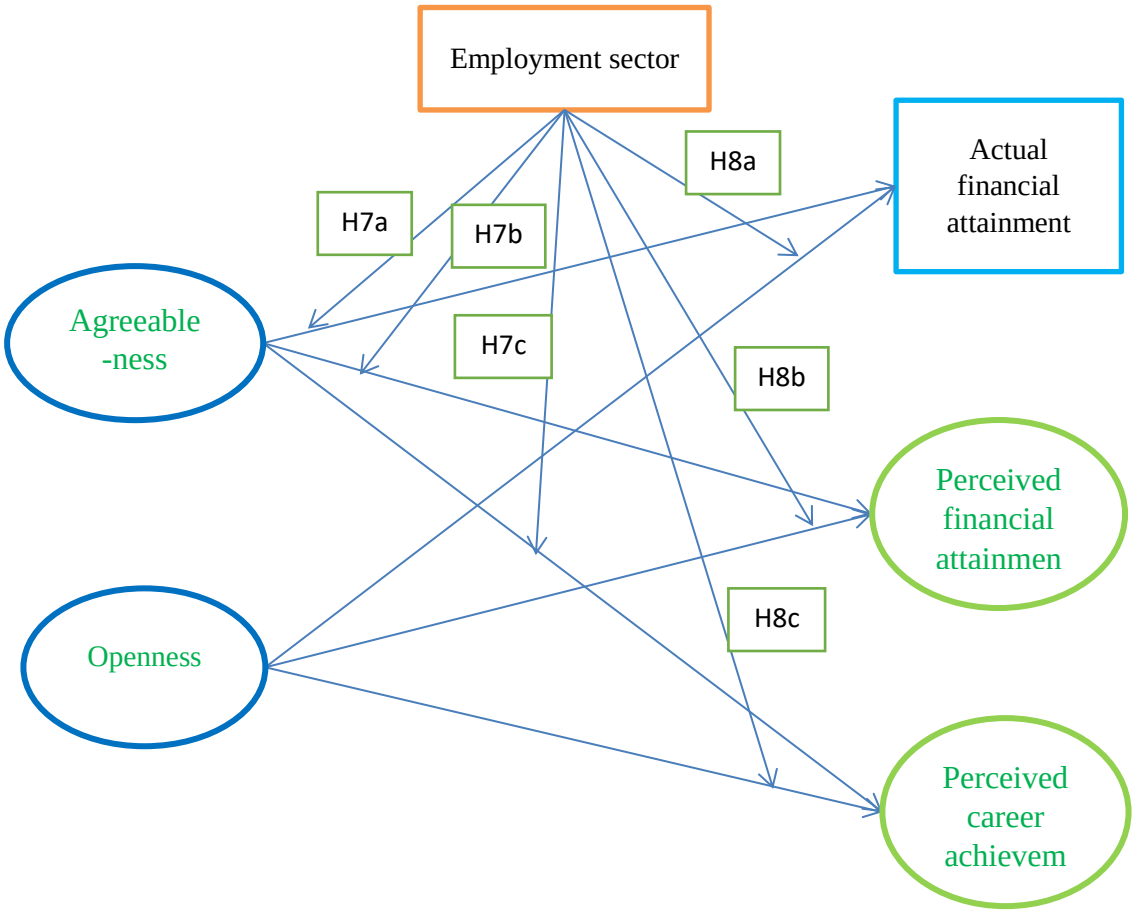


Figure 4.10. Conceptualising framework of the hypothesised relationships between CEO's career success and his personality trait predictors, with employment sector as moderator.

Data screening

Data preparation for the SEM analysis was carefully conducted using the IBM SPSS 22.0 program. The dataset contained responses from 179 CEOs. No erroneous data regarding the ten observed variables was found. There was no missing data with regard to these variables. Univariate or multivariate outliers were also checked using box-plots and Mahalanobis D^2 distance and no outliers were found.

The SEM assumptions were tested. The score distributions of all items were examined; skewness and kurtosis were within the acceptable range of −2 to+2 and histograms and P–P plots suggested no major violation of the assumption of normality. However, although the variables, including Lg10AFA and PCA, did not violate the normality assumption, they needed to be analysed with caution. In addition, the linearity assumption was evaluated through the bivariate correlations recommended by Meyer et al. (2013), and there was evidence that the linearity assumption was not violated. Furthermore, with Tolerance > .1 and VIF < 5 cutoff level, tests for multicollinearity indicated that the assumption about the absence of correlated errors was not violated.

After evaluating the data in terms of erroneous data, missing data, outlier and statistical assumptions, 179 cases were kept for analysis. This number of cases met the sample size requirement for SEM (e.g. Gorsuch, 1983; Anderson and Gerbing, 1988; Hair et al., 2010; Tabachnick and Fidell, 2013).

Table 4.13, below, shows the descriptive statistics, reliability coefficients and correlations among all the variables. The Cronbach alpha coefficients were all above .70 (Nunnally and Bernstein, 1994). All correlations were significant at p= .01.

Table 4.13. Means, standard deviations, and correlations among study variables in the PT-CS model

Variable	M	SD	1	2	3	4	5
1. Lg10AFA	8.75	.35	—				
2. PFA	3.75	.68	.73***	**.88**[a] **.77**[b]			
3. PCA	4.05	.49	.58***	.69***	**.88**[a] **.74**[b]		
4. Agree	4.01	.46	.24***	.23***	.29***	**.87**[a] **.74**[b]	
5. Openn	3.80	.59	.33***	.31***	.39***	.50***	**.90**[a] **.77**[b]

Note: * p < .10; ** p < .05; *** p < .01 [a] Cronbach's alpha value [b] SQRT(AVE)

Moderating effect assessment

Assessing the moderating effects of industry on the PT-CS relationship, hypothesised and displayed in Figure 4.10, above, was conducted following the discussions and recommendations in Section 3.5.7. in Chapter 3. Specifically, the section on a guide to testing moderator effects and the section on estimating and interpreting interactions between a continuous predictor and a dichotomous or categorical moderator using Mplus were the basis used to test and report the results of these moderating effects.

To assess the moderating effects regarding Hypotheses 7 and 8 (specifically Hypotheses 7a,b,c and 8a,b,c), the researcher conducted four tests. Two tests were implemented as baseline models (other sectors and insustry sector). The other two tests were carried out asinvariance models (unrestricted and restricted). In addition, the results in the restricted invariance model provided values of $\Delta\chi^2$, df and p which were the basis to conclude whether the effect of agreeableness or openness on career success remained unchanged across the groups (industry sector or other sectors). In other words, these results were used to confirm whether population membership (industry sector or other sectors) significantly moderated the effect of agreeableness or openness on career success. Assessing the moderating effects was implemented hypothesis by hypothesis.

Hypothesis 7a posited that industry moderated the relationship between a CEO's agreeableness and AFA (his actual financial attainment). As shown in Table 4.14, below, the baseline model wih other sectors specified in Appendix 33 provided an adequate fit to the data: $\chi^2(2) = 2.55$, RMSEA = .08, SRMR = .05, CFI = .99 and TLI = .97. Additionally, the baseline model wih industry sector pointed out in Appendix 34 yielded a good fit: $\chi^2(2) = .95$, RMSEA = .00, SRMR = .01, CFI = 1.00 and TLI = 1.02. Furthermore, the unrestricted invariance model determined in Appendix 35 had a good fit with the data: $\chi^2(8) = 6.45$, RMSEA = .00, SRMR = .05, CFI = 1.00 and TLI = 1.02. Moreover, the results showed that the restricted invariance model indicated in Appendix 36 fitted the data well: $\chi^2(9) = 7.39$, RMSEA = .00, SRMR = .05, CFI = 1.00 and TLI = 1.02. The χ^2 test for difference testing was: $\chi^2(1) = 1.06$, p = .30 > .05, indicating that **Hypothesis 7a was rejected**. In other words, the effect of agreeableness on actual financial attainment remains invariant among CEOs of listed firms in the industry sector and other sectors. Statistically speaking, the industry sector did not significantly moderate the effect of a CEO's agreeableness on his actual financial attainment.

Hypothesis 7b posited that industry moderated the relationship between a CEO's agreeableness and PFA (his perceived financial attainment). As shown in Table 4.14, below, the baseline model wih other sectors pointed out in Appendix 37 provided an adequate fit to the data: $\chi^2(26) = 26.16$, RMSEA = .01, SRMR = .07, CFI = .99 and TLI = .99. Additionally, the baseline model wih the industry sector specified in Appendix 38 yielded a good fit: $\chi^2(26) = 17.14$, RMSEA = .00, SRMR = .03, CFI = 1.00 and TLI = 1.02. Furthermore, the unrestricted invariance model determined in Appendix 39 had an adequate fit to the data: $\chi^2(66) = 57.17$, RMSEA = .00, SRMR = .06, CFI = 1.00 and TLI = 1.02. Moreover, the results showed that the restricted invariance model indicated in Appendix 40 fitted the data adequately: $\chi^2(67) = 56.93$, RMSEA = .00, SRMR = .06, CFI = 1.00 and TLI = 1.02. The χ^2 test for difference testing was: $\chi^2(1) = .00$, p = .99 > .05, indicating that **Hypothesis 7b was rejected**. In other words, the industry sector did not significantly moderate the effect of a CEO's agreeableness on his perceived financial attainment.

Hypothesis 7c posited that industry moderated the relationship between a CEO's agreeableness and PFA (his perceived career achievement). As shown in Table 4.14, below, the baseline model wih other sectors specified in Appendix 41 provided an adequate fit to the data: $\chi^2(19) = 16.28$, RMSEA = .00, SRMR = .06. CFI = 1.00 and TLI = 1.03. Additionally, the baseline model wih the industry sector determined in Appendix 42 yielded a good fit: $\chi^2(19) = 23.27$, RMSEA = .04, SRMR = .03, CFI = .99 and TLI = .99. Furthermore, the unrestricted invariance model indicated in Appendix 43 had a good fit with the data: $\chi^2(50) = 49.37$, RMSEA = .00, SRMR = .05, CFI = .99 and TLI = .99. Moreover, the results showed that the restricted invariance model pointed out in Appendix 44 fitted the data well: $\chi^2(51) = 49.31$, RMSEA = .00, SRMR = .05, CFI = .99 and TLI = .99. The χ^2 test for difference testing was: $\chi^2(1) = 1.19$, p = .28 > .05, indicating that **Hypothesis 7c was rejected**. In other words, the industry sector did not significantly moderate the effect of a CEO's agreeableness on his perceived career achievement. Therefore, **Hypothesis 7 was fully rejected.** This means that the industry sector did not significantly moderate the effect of a CEO's agreeableness on his career success.

Table 4.14. Multi-group SEM model fit indices and chi-quare test statistics for difference testing regarding the moderating effect of industry on agreement – CS relationship

Hypothesis 7			**Agree*Indu ▶ CS**		
Hypotheses 7a,b,c			**Agree*Indu ▶ AFA**	**Agree*Indu ▶ PFA**	**Agree*Indu ▶ PCA**
Baseline model	**Other (no industry)**	χ^2	2.55	26.16	16.28
		df	2	26	19
		CFI	.99	.99	1.00
		TLI	.97	.99	1.03
		SRMR	.05	.07	.06
		RMSEA	.08	.01	.00
	Industry	χ^2	.95	17.14	23.27
		df	2	26	19
		CFI	1.00	1.00	.99
		TLI	1.02	1.02	.99
		SRMR	.01	.03	.03
		RMSEA	.00	.00	.04
Invariance models	**Unrestricted**	χ^2	6.45	57.17	49.37
		df	8	66	50
		CFI	1.00	1.00	1.00
		TLI	1.02	1.02	1.00
		SRMR	.05	.06	.05
		RMSEA	.00	.00	.00
	Restricted	χ^2	7.39	56.93	49.31
		df	9	67	51
		CFI	1.00	1.00	1.00
		TLI	1.02	1.02	1.00
		SRMR	.05	.06	.05
		RMSEA	.00	.00	.00
		$\Delta\chi^2$	**1.06**	**.00**	**1.19**
		df	**1**	**1**	**1**
		p	**.30**	**.99**	**0.28**

Hypothesis 8a posited that industry moderated the relationship between a CEO's openness and AFA (his actual financial attainment). As shown in Table 4.15, below, the baseline model wih other sectors specified in Appendix 45 provided an adequate fit to the data: $\chi^2(5) = 6.10$, RMSEA = .08, SRMR = .03, CFI = .99 and TLI = .98. Additionally, the baseline model wih the industry sector pointed out in Appendix 46 yielded a good fit: $\chi^2(5) = 5.18$, RMSEA = .02, SRMR = .03, CFI = .99 and TLI = .99. Furthermore, the unrestricted invariance model determined in Appendix 47 had a good fit with the data: $\chi^2(16) = 13.27$, RMSEA = .00, SRMR = .04, CFI = .99 and TLI = .99. Moreover,

the results showed that the restricted invariance model indicated in Appendix 48 fitted the data adequately: $\chi^2(17) = 19.06$, RMSEA = .04, SRMR = .08, CFI = .99 and TLI = .99. The χ^2 test for

Table 4.15. Multi-group SEM model fit indices and chi-quare test statistics for difference testing regarding the moderating effect of industry on openness – CS relationship

Hypothesis 8			**Openn*Indu → CS**		
Hypotheses 8a,b,c			**Openn*Indu → AFA**	**Openn*Indu → PFA**	**Openn*Indu → PCA**
Baseline model	**Other (no industry)**	χ^2	6.10	14.09	20.99
		df	5	12	19
		CFI	.99	.99	0.99
		TLI	.98	.97	0.99
		SRMR	.03	.05	.05
		RMSEA	.08	.07	.05
	Industry	χ^2	5.18	13.31	21.21
		df	5	12	19
		CFI	.99	.99	.99
		TLI	.99	.99	.99
		SRMR	.03	.03	.05
		RMSEA	.02	.03	.03
Invariance models	**Unrestricted**	χ^2	13.27	32.13	50.52
		df	16	34	50
		CFI	1.00	1.00	.99
		TLI	1.00	1.00	.99
		SRMR	.04	.05	.06
		RMSEA	.00	.00	.01
	Restricted	χ^2	19.06	46.13	53.93
		df	17	37	51
		CFI	.99	.98	.99
		TLI	.99	.98	.99
		SRMR	.08	.05	.08
		RMSEA	.04	.08	.03
		$\Delta\chi^2$	**8.74**	**16.66**	**4.90**
		df	**1**	**3**	**1**
		p	**.00**	**.00**	**.03**

difference testing was: $\chi^2(1) = 8.74$, p = .00 < .05, indicating that **Hypothesis 8a was supported**. In other words, the industry sector significantly moderated the effect of a CEO's openness on his actual financial attainment.

Hypothesis 8b posited that industry moderated the relationship between a CEO's openness and PFA (his perceived financial attainment). As shown in Table 4.15, below, the baseline model wih other sectors pointed out in Appendix 49 provided an adequate fit to the data: $\chi^2(12) = 14.09$, RMSEA = .07, SRMR = .05, CFI = .99 and TLI = .97. Additionally, the baseline model wih the industry sector specified in Appendix 50 yielded a good fit: $\chi^2(12) = 13.31$, RMSEA = .03, SRMR = .03, CFI = .99 and TLI = .99. Furthermore, the unrestricted invariance model determined in Appendix 51 had an good fit with the data: $\chi^2(34) = 32.13$, RMSEA = .00, SRMR = .05, CFI = .99 and TLI = .99. Moreover, the results showed that the restricted invariance model indicated in Appendix 52 fitted the data adequately: $\chi^2(37) = 46.13$, RMSEA = .08, SRMR = .05, CFI = .98 and TLI = .98. The χ^2 test for difference testing was: $\chi^2(3) = 16.66$, p = .00 < .05, indicating that **Hypothesis 8b was supported**. In other words, the industry sector significantly moderated the effect of a CEO's openness on his perceived financial attainment.

Hypothesis 8c posited that industry moderatesd the relationship between a CEO's openness and PFA (his perceived career achievement). As shown in Table 4.15, below, the baseline model wih other sectors specified in Appendix 53 provided a good fit to the data: $\chi^2(19) = 20.99$, RMSEA = .05, SRMR = .05. CFI = .99 and TLI = .99. Additionally, the baseline model wih industry sector determined in Appendix 54 yielded a good fit: $\chi^2(19) = 21.21$, RMSEA = .03, SRMR = .05, CFI = .99 and TLI = .99. Furthermore, the unrestricted invariance model indicated in Appendix 55 had an adequate fit with the data: $\chi^2(50) = 50.52$, RMSEA = .01, SRMR = .06, CFI = .99 and TLI = .99. Moreover, the results showed that the restricted invariance model pointed out in Appendix 56 fitted the data adequately: $\chi^2(51) = 53.93$, RMSEA = .03, SRMR = .08, CFI = .99 and TLI = .99. The χ^2 test for difference testing was: $\chi^2(1) = 4.90$, p = .03 < .05, indicating that **Hypothesis 8c was supported**. In other words, the industry sector significantly moderated the effect of a CEO's openness on his perceived career achievement. Therefore, **Hypothesis 8 was fully supported.** This means that the industry sector significantly moderated the effect of a CEO's openness on his career success.

4.6.5. Protean career orientation – career success

The hypothesised model

The protean career orientation – career success (PCO-CS) hypothesised model proposed by the research is displayed in Figure 4.11, below. Circles represent latent variables, and a rectangle represents a measured variable.

The hypothesized model was employed to examine the PCO-CS relationship. It was hypothesized that a CEO's protean career orientation positively affected his actual financial attainment. Additionally, the study explored whether firm size or ownership structure moderated the PCO-CS relationship. When actual financial attainment (AFA), firm size and ownership structure were observed variables, perceived financial attainment (PFA) was a latent one with five indicators, perceived career achievement (PCA) was measured by four indicators, and protean career orientation (PCO) was another latent variable with four indicators. The firm size moderator was measured by sales when ownership structure was measured by foreign ownership.

Data screening

Data preparation for the SEM analysis was carefully conducted using the IBM SPSS 22.0 program. The dataset contained responses from 179 CEOs. No erroneous data regarding the ten observed variables was found. There was no missing data with regard to these variables. Univariate or multivariate outliers were also checked using box-plots and Mahalanobis DP^2P distance and no outliers were found.

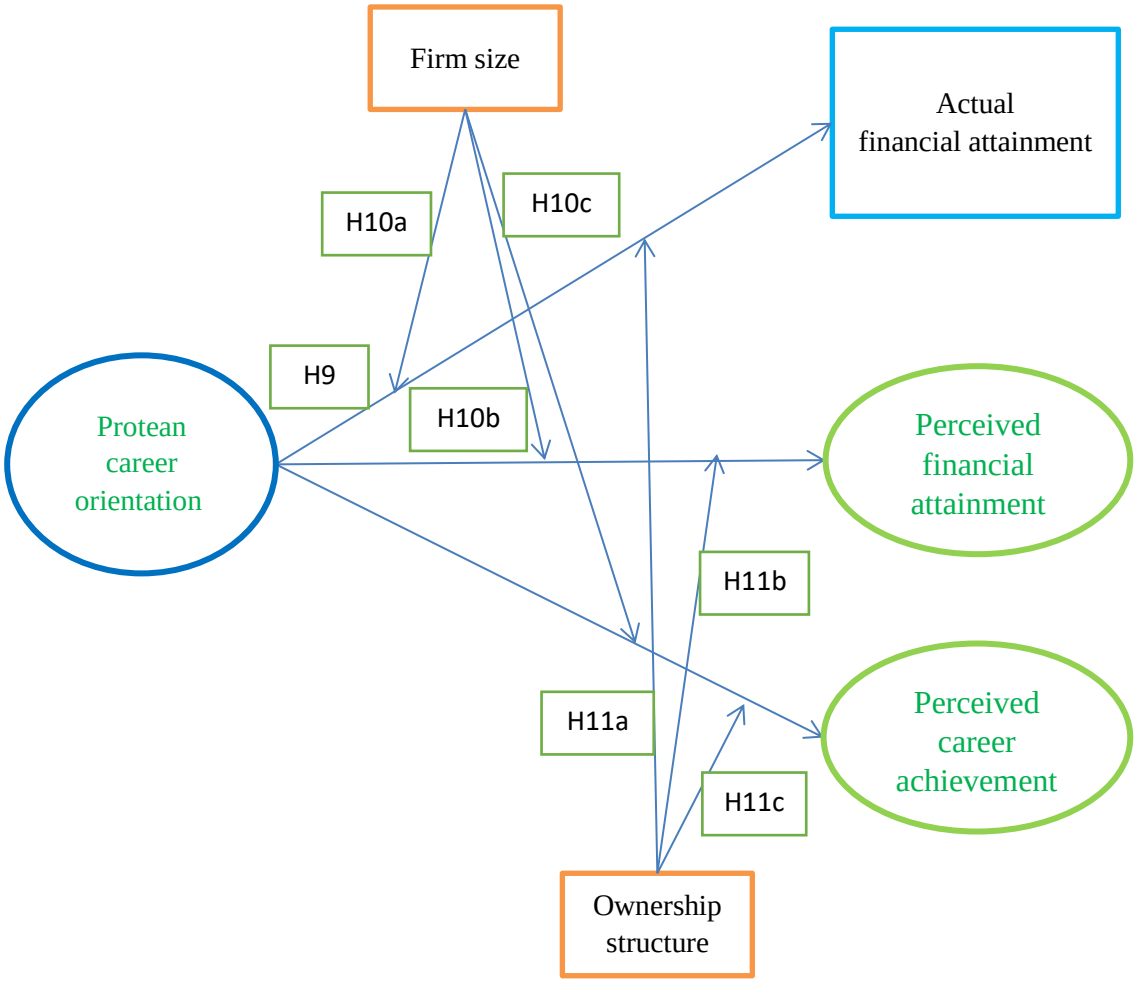


Figure 4.11. Conceptualising framework of the hypothesised relationships between CEO career success and its PCO predictors, with firm size and ownership structure as moderators

The SEM assumptions were tested. The score distributions of all items were examined; skewness and kurtosis were within the acceptable range of −2 to+2 and histograms and P–P plots suggested no major violation of the assumption of normality. However, although the variables, including Lg10AFA and PCA, did not violate the normality assumption, they needed to be analysed with caution. In addition, the linearity assumption was evaluated through the bivariate correlations recommended by Meyer et al. (2013), and there was evidence that the linearity assumption was not violated. Furthermore, with Tolerance > .1 and VIF < 5 cutoff level, tests for multicollinearity indicated that the assumption about the absence of correlated errors was not violated.

After evaluating the data in terms of erroneous data, missing data, outlier and statistical assumptions, 179 cases were kept for analysis. This number of cases met the sample size requirement for SEM (e.g. Gorsuch, 1983; Anderson and Gerbing, 1988; Hair et al., 2010; Tabachnick and Fidell, 2013).

Table 4.16, below, shows the descriptive statistics, reliability coefficients and correlations among all the variables. The Cronbach alpha coefficients were all above .70 (Nunnally and Bernstein, 1994). All correlations were significant at p= .01.

Table 4.16. Means, standard deviations, and correlations among study variables in the PCO-CS model

Variable	M	SD	1	2	3	4
1. Lg10AFA	8.75	.35	—			
2. PFA	3.75	.68	.74***	**.88**[a] **.77**[b]		
3. PCA	4.05	.49	.58***	.63***	**.88**[a] **.74**[b]	
4. PCO	4.20	.46	.44***	.39***	.42***	**.82**[a] **.71**[b]

Note: * p < .10; ** p < .05; *** p < .01 [a] Cronbach's alpha value [b] SQRT(AVE)
The values of Cronbach's alpha and SQRT(AVE) regarding PS were calculated by meaning the relevant values of NetAbi, SocAst, IntInf and AppSin.

After screening the data, the researcher undertook the SEM assessment regarding Hypothesis 9 and the moderating effect assessment regarding Hypotheses 10 and 11.

SEM assessment (Hypothesis 9)

Measurement model assessment: The measurement model was evaluated in terms of model estimation, goodness of fit, path estmates and construct validity.

Model estimation. The researcher used the MPlus 7.0 program to perform a CFA, based on data from 179 CEOs in the listed firms in Vietnam. The maximum likelihood parameter estimation was chosen over other estimation methods (weighted least squares, two-stage least squares, ADF) because the data was distributed normally (Kline, 2005). Further specific information about model esimation is provided in Appendix 57.

Assessing fit. The analysis yielded a good fit (RMSEA = .00; SRMR = .00; CFI = 1.00, and TLI = 1.03). In other words, the model fitted the data well. Post hoc model modifications were not performed in an attempt to develop a better fitting model because no modification indices above the minimum value were reported.

Path estimates. The plausibility of the parameter estimates was good. There were no Heywood cases with either negative error variances or out-of-range covariances. In addition, all specified parameters were found to be statistically significant. All observed variables had significant loadings on their corresponding latent factor (between .65 and .79). No parameter estimates, including error variances and variances of latent variances, with standard errors, critical ratios and p-values were reported.

Construct validity. Construct validity should be evaluated through convergent validity and discriminant validity. Table 4.2, above, shows that the AVE estimates of Perceived Financial Attainment, Perceived Career Achievement and Protean Career Orientation were .60, .55 and .51, respectively. The AVE estimates all exceeded .50 and the reliability estimates all exceeded .70. In addition, the model fitted well. Accordingly, all the items awere retained at this point and adequate evidence of convergent validity was provided.

To assess the discriminant validity, the square root of the AVE for each construct must be greater than the correlations between the construct and all other constructs in the study. Table 4.16,

above, shows the square root of the AVE, which satisfied the discriminant validity condition. Therefore, this test indicated that there were no problems with the discriminant validity for the PCO-CS measurement model.

The measurement model also supported the discriminant validity because it did not contain any cross-loadings among either the measured variables or the error terms. This measurement model provided a good fit and showed little evidence of substantial cross-loadings. Taken together, these results supported the discriminant validity of the PCO-CS measurement model. Accordingly, it was safe testing.

Structural model assessment: The structural model specified in Appendix 58 was tested against the data remaining after testing the instrument using the EFA and CFA. The PCO-CS model was evaluated in terms of model estimation, goodness of fit and hypothesised dependence relationships among constructs.

Model estimation. The analyses were based on the defaulted maximum likelihood estimation, and other details are presented in Appendix 58. It is important to mention that although residuals associated with the observed variables and residuals with the dependent latent variables in the model were not seen, these parameters were automatically estimated by default in Mplus (see Muthen and Muthen, 1998-2012).

Table 4.17. Summary of SEM fit indices of PCO-AFA model

Fit measure	**Measurement model**	**Structural model**	**Recommended values**
χ^2	.03	2.36	
Degrees of freedom	2	5	
Comparative fit index (CFI)	1.00	1.00	⩾ .90
Tucker–Lewis index (TLI)	1.03	1.02	⩾ .90
Standardized Root Mean Square Residual (SRMR)	.00	.02	⩽ .08
Root mean square error of approximation (RMSEA)	.00	.00	⩽ .08

Assessing fit. The information in Table 4.17, above, shows the overall fit statistics from testing the PCO-CS structural model. The χ^2 is 2.36 with 5 degrees of freedom. The model CFI is 1.00, and the TLI is 1.02 with a RMSEA of .00 (90% CI = .00 - .07). The SRMR is .02. All of these measures were within a range that would be associated with a good fit. These diagnostics suggest that the model provided a good overall fit. The researcher did not conduct post-hoc modifications because of the good fit of the data to the model and no modification indices were above the minimum value. The model explained 26.2% of the variance in actual financial attainment.

Examining the hypothesised dependence relationships among constructs: Table 4.18, below, shows the unstandardized and standardized structural path estimates as well as the standard error (S.E.), unstandardized parameter estimate/ standard error (Est./S.E.) and two-tailed P-value. All of the two structural path estimates were significant and in the expected direction.

Specifically, Hypothesis 9 positively related a CEO's protean career orientation to his actual financial attainment. The statistically significant parameter estimates (b = .51; p = .000 < .01) indicated **support for Hypothesis 9**. This means that a CEO's protean career orientation was significantly positively related to his actual financial attainment. Overall, given that one estimate was consistent with the hypothesis, this result supported the theoretical model.

Table 4.18. Structural parameter estimates for the PCO-AFA hypothesised model

Structural relationship	Unstandardized parameter estimate	S.E.	Est./S.E.	Two-tailed P-value	Standardized Parameter estimate
H9: PCO → AFA	.42	.07	6.46	0.000	.51

The statistical model: The statistical model with unstandardized and standardized coefficients as well as errors is in Figure 4.12.

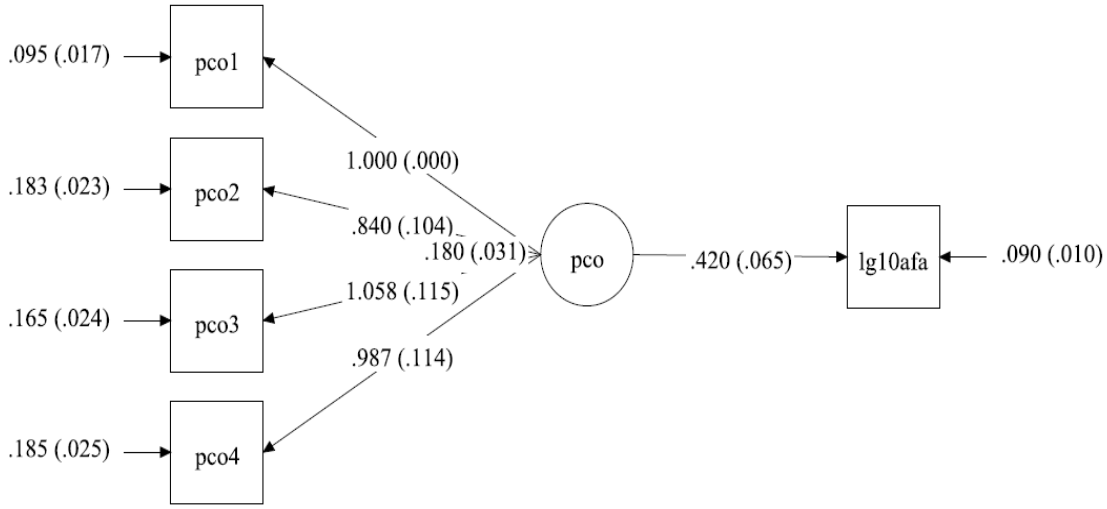


Figure 4.12. Results of full PCO-AFA model

Moderating effect assessment (Hypotheses 10 and 11)

To assess the moderating effects regarding Hypotheses 10 and 11 (specifically Hypotheses 10a,b,c and 11a,b,c), the researcher repeated what had been conducted in Section 4.6.3. Specifically, the author implemented the 4-step procedure with the three tests specified in the subsection on estimating and interpreting latent interactions using Mplus in Section 3.5.7. These tests included measurement model estimation, structural model estimation without the interaction term (Model 0) and structural model estimation with the interaction term (Model 1). In addition, the results from Model 1 provided values for β, SE, p and CI, which formed the basis to conclude whether firm size or ownership structure significantly moderated the effect of protean career orientation on career success. The 4-step procedure with three tests was applied to test modering effects in the protean career orientation – career success hypothesised model hypothesis by hypothesis.

To begin, hypothesis 10a posited that firm size (measured by sales) moderated the relationship between a CEO's protean career orientation (PCO) and his actual financial attainment (AFA). Firstly, the fit of the measurement model specified in Appendix 59 was assessed and it yielded

a good fit: $\chi^2(2) = .03$, RMSEA = .00, SRMR = .00, CFI = 1.00 and TLI = 1.03. Next, Model 0, indicated in Appendix 60, was estimated. Model 0 fitted the data well: $\chi^2(8) = 10.96$, RMSEA = .05, SRMR = .03, CFI = .99, TLI = .98. Both a CEO's protean career orientation and sales significantly predicted his actual financial attainment (b = .40, p = .00 < .05 and b = .45, p = .00 < .05, respectively). The model explained 43.4% of the variance in actual financial attainment. Model 1, determined in Appendix 61, was then estimated. The relative fit of Model 1 versus Model 0 was determined via a log-likelihood ratio test comparing the log-likelihood values of Model 0 and Model 1, yielding a log-likelihood difference value of $D = 1.20$. Based on the number of free parameters of Model 0 (19) and Model 1 (20), the difference in free parameters = 1, which represented the df value to be used for the log-likelihood ratio test. The values of D were approximately distributed as χ^2 (Maslowsky et al., 2015). Using a chi-square distribution, this log-likelihood ratio test proved insignificant (p = .27 > .05). The protean career orientation x sales interaction effect was insignificant (β = .08, SE = .08, p = .27 > .05). Accordingly, **Hypothesis 10a was rejected**. In other words, sales did not significantly moderate the effect of a CEO's protean career orientation on his actual financial attainment.

Hypothesis 10b posited that firm size (measured by sales) moderated the relationship between a CEO's protean career orientation (PCO) and his perceived financial attainment (PFA). Firstly, the fit of the measurement model pointed out in Appendix 62 was assessed and it yielded a good fit: $\chi^2(26) = 26.96$, RMSEA = .02, SRMR = .04, CFI = .99 and TLI = .99. Next, Model 0, determined in Appendix 63, was estimated and this model fitted the data well: $\chi^2(33) = 37.17$, RMSEA = .03, SRMR = .04, CFI = .99, TLI = .99. Both a CEO's protean career orientation and sales significantly predicted his perceived financial attainment (b = .36, p = .00 < .05 and b = .36, p = .00 < .05, respectively). The model explained 44.2% of the variance in perceived financial attainment. Model 1, specified in Appendix 64, was then estimated. The relative fit of Model 1 versus Model 0 was determined via a log-likelihood ratio test comparing the log-likelihood values of Model 0 and Model 1, yielding a log-likelihood difference value of $D = 10.38$. Based on the number of free parameters of Model 0 (32) and Model 1 (33), the difference in free parameters = 1, which represented the df value to be used for the log-likelihood ratio test. Using a chi-square distribution, this log-likelihood ratio test proved insignificant (p = .00 < .05), indicating that the null model (Model 0; the model without the interaction effect) represented a significant loss in fit relative to the alternative model (Model 1; the model with the interaction effect). The protean career orientation x sales interaction effect was significant (β = -.22, SE = .07, p = .00 < .05). Accordingly, **Hypothesis 10b was supported**. In other words, sales significantly moderated the effect of a CEO's protean career orientation on his perceived financial attainment. Plotting the interaction to aid interpretation revealed that the relation between a CEO's protean career orientation and his perceived financial attainment becomes less positive as sales increase (Figure 4.13, below).

Hypothesis 10c posited that firm size (measured by sales) moderated the relationship between a CEO's protean career orientation (PCO) and his perceived career achievement (PCA). Firstly, the fit of the measurement model determined in Appendix 65 was assessed and it yielded a good fit: $\chi^2(19) = 24.86$, RMSEA = .04, SRMR = .04, CFI = .99 and TLI = .99. Next, Model 0, specified in Appendix 66, was estimated. Model 0 fitted the data well: $\chi^2(25) = 36.91$, RMSEA = .05, SRMR = .04, CFI = .98, TLI = .98. Both a CEO's protean career orientation and sales significantly predicted his actual financial attainment (b = .39, p = .00 < .05 and b = .26, p = .00 < .05, respectively). The model explained 37.4% of the variance in actual financial attainment. Model 1, indicated in Appendix 67, was then estimated. The relative fit of Model 1 versus Model 0 was determined via a log-likelihood ratio test comparing the log-likelihood values of Model 0 and Model 1, yielding a log-likelihood difference value of $D = .86$. Based on the number of free parameters of Model 0 (29) and Model 1 (30), the difference in free parameters = 1, which represented the df value to be used for the log-likelihood ratio test. Using a chi-square distribution, this log-likelihood ratio test proved insignificant (p = .35 > .05). The protean career

orientation x sales interaction effect was insignificant (β = .07, SE = .08, p = .36 > .05). Accordingly, **Hypothesis 10c was rejected**. In other words, sales did not significantly moderate the effect of a CEO's protean career orientation on his perceived career achievement. Therefore, **Hypothesis 10 was partly supported.**

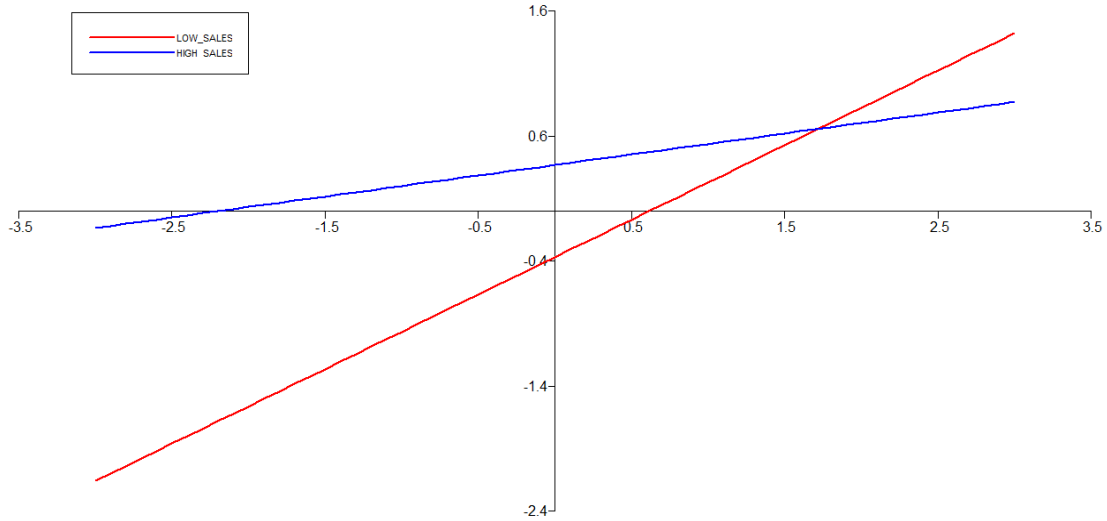


Figure 4.13. Interaction of protean career orientation and sales predicting perceived financial attainment

Hypothesis 11a posited that ownership structure (measured by foreign ownership) moderated the relationship between a CEO's protean career orientation (PCO) and his actual financial attainment (AFA). Firstly, the fit of the measurement model determined in Appendix 68 was assessed and it yielded a good fit: $\chi^2(2) = .03$, RMSEA = .00, SRMR = .00, CFI = 1.00 and TLI = 1.03. Next, Model 0, specified in Appendix 69, was estimated. Model 0 fitted the data well: $\chi^2(8) = 3.30$, RMSEA = .00, SRMR = .02, CFI = 1.00, TLI = 1.03. Both a CEO's protean career orientation and foreign ownership significantly predicted his actual financial attainment (b = .48, p = .00 < .05 and b = .43, p = .00 < .05, respectively). The model explained 43.0% of the variance in actual financial attainment. Model 1 indicated in Appendix 70, was then estimated. The relative fit of Model 1 versus Model 0 was determined via a log-likelihood ratio test comparing the log-likelihood values of Model 0 and Model 1, yielding a log-likelihood difference value of $D = -.002$. Based on the number of free parameters of Model 0 (19) and Model 1 (20), the difference in free parameters = 1, which represented the df value to be used for the log-likelihood ratio test. Using a chi-square distribution, this log-likelihood ratio test proved insignificant (p = .00 < .05), indicating that the null model (Model 0; the model without the interaction effect) represented a significant loss in fit relative to the alternative model (Model 1; the model with the interaction effect). The protean career orientation x foreign ownership interaction effect was insignificant (β = .00, SE = .08, p = .99 > .05). Accordingly, **Hypothesis 11a was rejected**. In other words, foreign ownership does not significantly moderate the effect of a CEO's protean career orientation on his actual financial attainment (AFA).

Hypothesis 11b posited that ownership structure (measured by foreign ownership) moderates the relationship between a CEO's protean career orientation (PCO) and his perceived financial attainment (PFA). Firstly, the fit of the measurement model pointed out in Appendix 71 was assessed and it yielded a good fit: $\chi^2(26) = 26.96$, RMSEA = .02, SRMR = .04, CFI = .99 and TLI = .99. Next, Model 0, determined in Appendix 72, was estimated and this model fitted the data well: $\chi^2(33) = 37.44$, RMSEA = .03, SRMR = .04, CFI = .99, TLI = .99. Both a CEO's protean career orientation and foreign ownership significantly predicted his perceived financial attainment (b = .47, p = .00 < .05 and b = .20, p = .00 < .05, respectively). The model explained 33.6% of the

variance in perceived financial attainment. Model 1, specified in Appendix 73, was then estimated. The relative fit of Model 1 versus Model 0 was determined via a log-likelihood ratio test comparing the log-likelihood values of Model 0 and Model 1, yielding a log-likelihood difference value of *D* = 3.36. Based on the number of free parameters of Model 0 (32) and Model 1 (33), the difference in free parameters = 1, which represented the df value to be used for the log-likelihood ratio test. Using a chi-square distribution, this log-likelihood ratio test proved insignificant (p = .07 < .10), indicating that the null model (Model 0; the model without the interaction effect) represented a significant loss in fit relative to the alternative model (Model 1; the model with the interaction effect). The protean career orientation x foreign ownership interaction effect was significant (β = -.14, SE = .08, p = .07 < .10). Accordingly, **Hypothesis 11b was supported**. In other words, foreign ownership significantly moderated the effect of a CEO's protean career orientation on his perceived financial attainment. Plotting the interaction to aid in interpretation revealed that the relation between a CEO's protean career orientation on his perceived financial attainment becomes less positive as foreign ownership increases (Figure 4.14, below).

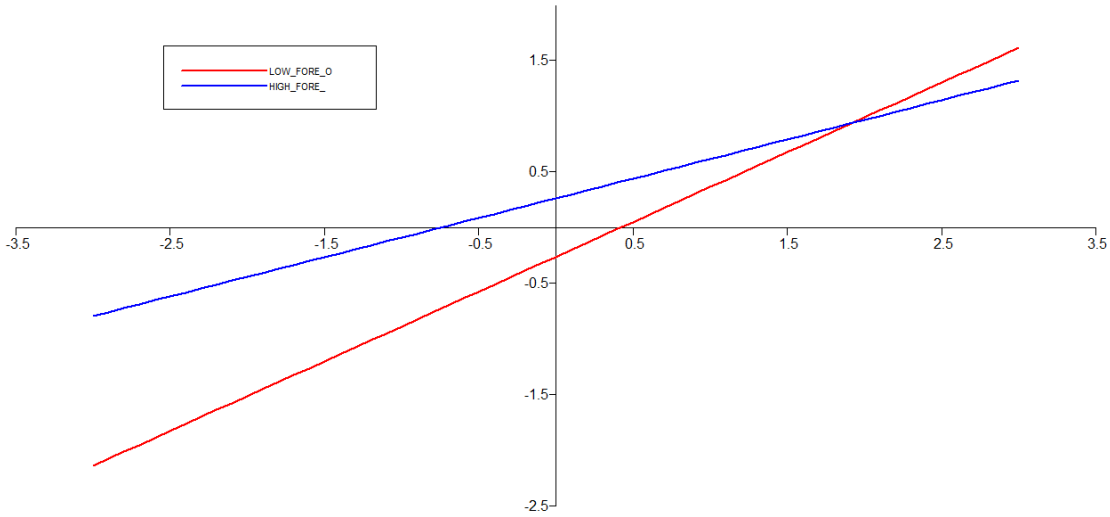


Figure 4.14. Interaction of protean career orientation and foreign ownership predicting perceived career achievement

Hypothesis 11c posited that ownership structure (measured by foreign ownership) moderated the relationship between a CEO's protean career orientation (PCO) and his perceived career achievement (PCA). Firstly, the fit of the measurement model determined in Appendix 74 was assessed and it yielded a good fit: $\chi^2(19) = 24.86$, RMSEA = .04, SRMR = .04, CFI = .99 and TLI = .99. Next, Model 0, specified in Appendix 75, was estimated. Model 0 fitted the data well: $\chi^2(25) = 32.56$, RMSEA = .04, SRMR = .04, CFI = .99, TLI = .98. Both a CEO's protean career orientation and foreign ownership significantly predicted his actual financial attainment (b = .46, p = .00 < .05 and b = .14, p = .00 < .05, respectively). The model explained 31.8% of the variance in actual financial attainment. Model 1, indicated in Appendix 76, was then estimated. The relative fit of Model 1 versus Model 0 was determined via a log-likelihood ratio test comparing the log-likelihood values of Model 0 and Model 1, yielding a log-likelihood difference value of *D* = .17. Based on the number of free parameters of Model 0 (29) and Model 1 (30), the difference in free parameters = 1, which represented the df value to be used for the log-likelihood ratio test. Using a chi-square distribution, this log-likelihood ratio test proved insignificant (p = .68 > .05). The protean career orientation x foreign ownership interaction effect was insignificant (β = .03, SE = .07, p = .68 > .05). Accordingly, **Hypothesis 11c was rejected**. In other words, foreign ownership did not significantly moderate the effect of a CEO's protean career orientation on his perceived career achievement. Therefore, **Hypothesis 11 was partly supported.**

4.6.6. Managerial power – career success

The hypothesised model

The managerial power – career success hypothesised model proposed by this research is displayed in Figure 4.15, below. Circles represent latent variables, and a rectangle represents a measured variable.

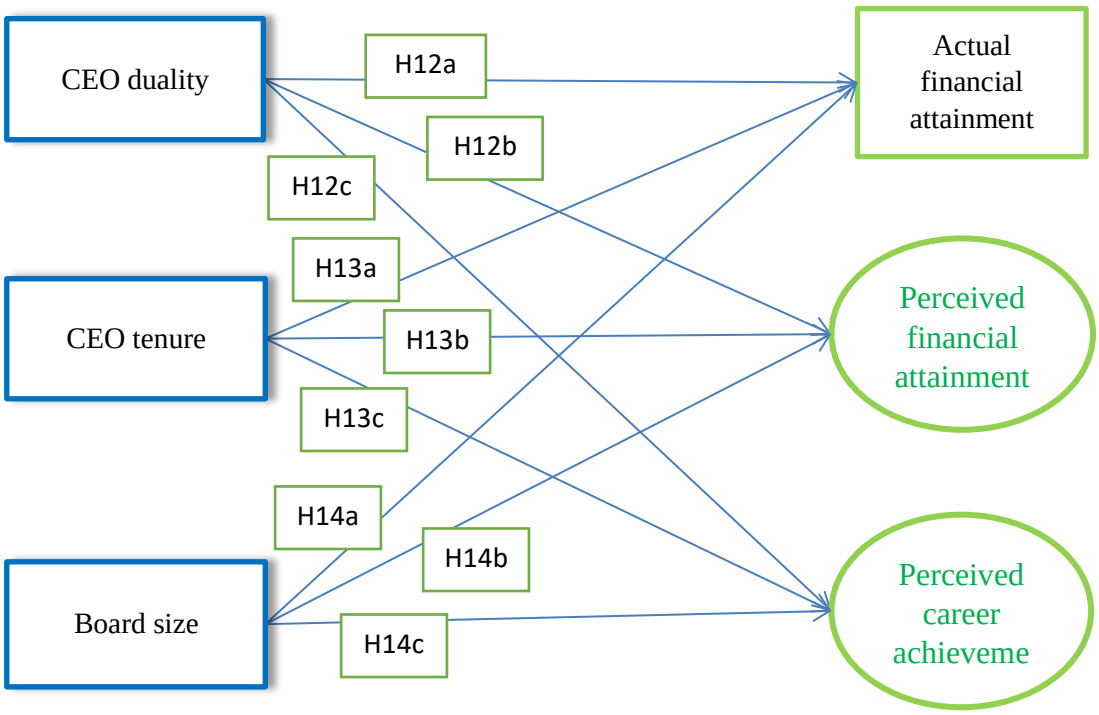


Figure 4.15. Conceptualising framework of the hypothesised relationships between CEO career success and its managerial power predictors

The hypothesized model examined the MP-CS relationship. It was hypothesized that a CEOs' managerial power positively affected their actual financial attainment, perceived financial attainment and perceived career achievement. When actual financial attainment was an observed variable, managerial power was measured by three indicators (CEO duality, CEO tenure and board size), perceived financial attainment was a latent one with five indicators and perceived career achievement was measured by four indicators.

Data screening

Data preparation for the SEM analysis was carefully conducted using the IBM SPSS 22.0 program. The dataset contained responses from 179 CEOs. No erroneous data regarding the ten observed variables was found. There was no missing data with regard to these variables. Univariate or multivariate outliers were also checked using box-plots and Mahalanobis D^2 distance and no outliers were found, except 1 case with z = 4.2442 and this case was kept.

The SEM assumptions were tested. The score distributions of all items were examined; skewness and kurtosis were within the acceptable range of −2 to+2 and histograms and P–P plots suggested no major violation of the assumption of normality except the Dual variable. Although the variables, including Lg10AFA, PCA and B_size, did not violate the normality assumption, they were analysed with caution. In addition, the linearity assumption was evaluated through the

bivariate correlations recommended by Meyer et al. (2013), and there was evidence that the linearity assumption was not violated. Furthermore, with Tolerance > .1 and VIF < 5 cutoff level, tests for multicollinearity indicated that the assumption about the absence of correlated errors was not violated.

After evaluating the data in terms of erroneous data, missing data, outlier and statistical assumptions, 179 cases were kept for analysis. This number of cases met the sample size requirement for SEM (e.g. Gorsuch, 1983; Anderson and Gerbing, 1988; Hair et al., 2010; Tabachnick and Fidell, 2013).

Table 4.19. Means, standard deviations, and correlations among study variables in the MP-CS model

Variable	**M**	**SD**	**1**	**2**	**3**	**4**	**5**	**6**
1. Lg10AFA	8.75	0.35	—					
2. PFA	3.74	0.69	.73***	**.88**[a] **.77**[b]				
3. PCA	4.05	0.49	.58***	.63***	**.88**[a] **.74**[b]			
4. Dual	0.25	0.44	-.09	.02	.02	—		
5. SQRTCEOTen	2.03	1.09	.12	.18**	.20***	.29***	—	
6. B_size	5.45	1.07	.38***	.26**	.35***	-.08	-.08	—

Note: * p < .10; ** p < .05; *** p < .01 [a] Cronbach's alpha value [b] SQRT(AVE)

Table 4.19, above, shows the descriptive statistics, reliability coefficients and correlations among all the variables. The Cronbach alpha coefficients were all above .70 (Nunnally and Bernstein, 1994). Correlations between the Dual and the other variables, between CEOTen and AFA as well as between B_size and Dual or CEOTen were not statistically significant. Correlations between PFA and CEOTen or B_size were significant at p <= .05. The other correlations were significant at p <= .01.

Measurement model assessment

- Model estimation. The researcher used the MPlus 7.0 program to perform a CFA, based on data from 179 CEOs in the listed firms in Vietnam. The maximum likelihood parameter estimation was chosen over other estimation methods (weighted least squares, two-stage least squares, ADF) because the data was distributed normally (Kline, 2005). The other specific information about the model esimation is provided in Appendix 77.

- Assessing fit. The analysis yielded a good fit (RMSEA = .05; SRMR = .04; CFI = .99 and TLI = .98). In other words, the model fitted the data well. Post hoc model modifications were not performed in an attempt to develop a better fitting model because no modification indices above the minimum value were reported.

- Path estimates. The plausibility of the parameter estimates was good. There were no Heywood cases with either negative error variances or out-of-range covariances. In addition, all specified parameters (except the ones regarding CEO duality) were found to be statistically significant. All observed variables had significant loadings on their corresponding latent factors (between .71 and .89). No parameter estimates, including error variances and variances of latent variances, with standard errors, critical ratios and p-values were reported.

- Construct validity. Construct validity should be evaluated through convergent validity and discriminant validity. Table 4.2, above, shows that the AVE estimates of Perceived Financial Attainment and Perceived Career Achievement were .60 and .55. The AVE estimates all exceeded .50 and the reliability estimates all exceeded .70. In addition, the model fitted well. Accordingly, all the items were retained at this point and adequate evidence of convergent validity was provided.

To assess the discriminant validity, the square root of the AVE for each construct must be greater than the correlations between the construct and all other constructs in the study. Table 4.19, above, shows the square root of the AVE on the diagonal, which satisfied the discriminant validity condition. Therefore, this test indicated that there were no problems with discriminant validity for the MP-CS measurement model.

The measurement model also supportedthe discriminant validity because it did not contain any cross-loadings among either the measured variables or the error terms. This measurement model provided a good fit and showed little evidence of substantial cross-loadings. Taken together, these results supported the discriminant validity of the MP-CS measurement model. Accordingly, it was safe to use the measurement items and the proposed constructs in further model testing.

Structural model assessment

The MP-CS hypothesised model was tested against the data remaining after testing the instrument using the EFA and CFA. The MP-CS model was evaluated in terms of model estimation, goodness of fit and hypothesised dependence relationships among constructs.

- Model estimation. The analyses were based on the defaulted maximum likelihood estimation, and other details are presented in Appendix 78. It is important to mention that although residuals associated with the observed variables and residuals with the dependent latent variables in the model were not seen, these parameters were automatically estimated by default in Mplus (see Muthen and Muthen, 1998-2012).

- Assessing fit. The information in Table 4.20, below, shows the overall fit statistics from testing the Employee Retention model. The χ^2 is 71.79 with 54 degrees of freedom. The model CFI is .98 and the TLI is .98 with a RMSEA of .04 and a 90% confidence interval of .00 to .07. The SRMR is .03. All of these measures were within a range that would be associated with a good fit. These diagnostics suggest the the model provided a good overall fit. Post-hoc modifications were not conducted because of the good fit of the data to the model and no modification indices were above the minimum value. The model explained 18.1% of the variance in actual financial attainment, 12.3% of the variance in perceived financial attainment and 19% of thevariance in perceived career achievement.

Table 4.20. Summary of SEM fit indices of MP-CS model

Fit measure	Measurement model	Structural model	Recommended values
χ^2	33.68	71.79	
Degrees of freedom	23	54	
Comparative fit index (CFI)	.99	.98	⩾ .90
Tucker–Lewis index (TLI)	.98	.98	⩾ .90
Standardized Root Mean Square Residual (SRMR)	.04	.03	⩽ .08
Root mean square error of approximation (RMSEA)	.05	.04	⩽ .08

- Examining the hypothesised dependence relationships among constructs.

Table 4.21, below, shows the unstandardized and standardized structural path estimates as well as the standard error (S.E.), unstandardized parameter estimate/ standard error (Est./S.E.) and two-tailed P-value. Hypotheses 12a, 12b and 12c positively related CEO duality to actual financial attainment (12a), perceived financial attainment (12b) and perceived career achievement (12c). **Hypothesis 12a was partly supported**. The parameter estimates were statistically significant (*b* = -.12, *p* < .10), but, in contrast to the predictions of Hypotheses 12a, CEO duality was negatively related to his or her actual financial attainment (12a). The other two structural path estimates with respect to Hypotheses 12b and 12c were not statistically significant. The statistically insignificant parameter estimates (*b* = -.02 and -.02, respectively; *p* > .10) indicated that **Hypotheses 12b and 12c were not supported**. Therefore, **Hypothesis 12 was partly supported.**

All of the three structural path estimates regarding Hypotheses 13a, 13b and 13c were significant and in the expected direction. Specifically, Hypotheses 13a, 13b and 13c positively related a CEO's tenure to his or her actual financial attainment (13a), perceived financial attainment (13b) and perceived career achievement (13c). The statistically significant parameter estimates (*b* = .19, .22 and .24, respectively; *p* < .01) indicated **support for Hypotheses 13a, 13b and 13c**. Overall, given that the three estimates were consistent with the hypotheses, these results supported the theoretical model. Therefore, **Hypothesis 13 was fully supported.**

All of the three structural path estimates regarding Hypotheses 14a, 14b and 14c were significant and in the expected direction. Specifically, Hypotheses 14a, 14b and 14c positively related board size to a CEO's actual financial attainment (14a), perceived financial attainment (14b) and perceived career achievement (14c). The statistically significant parameter estimates (*b* = .39, .29 and .39, respectively; *p* < .01) indicated **support for Hypotheses 14a, 14b and 14c**. Overall, given that the three estimates were consistent with the hypotheses, these results supported the theoretical model. Therefore, **Hypothesis 14 was fully supported.**

Table 4.21. Structural parameter estimates for the MP-CS hypothesised model

Structural relationship	Unstandardized parameter estimate	S.E.	Est./S.E.	Two-tailed P-value	Standardized Parameter estimate
H12a: Dual → AFA	-.09	.06	-1.66	.096	-.12
H12b: Dual → PFA	-.03	.13	-.21	.833	-.02
H12c: Dual → PCA	-.03	.09	-.03	.768	-.02
H13a: CEOTen → AFA	.06	.02	2.67	.008	.19
H13b: CEOTen → PFA	.14	.05	2.76	.006	.22
H13c: CEOTen → PCA	.11	.03	3.14	.002	.24
H14a: B_size → AFA	.13	.02	5.67	.000	.39
H14b: B_size → PFA	.19	.05	3.83	.000	.29
H14c: B_size → PCA	.18	.03	5.15	.000	.39

The statistical model

The statistical model with unstandardized and standardized coefficients as well as errors is shown in Figure 4.16, below.

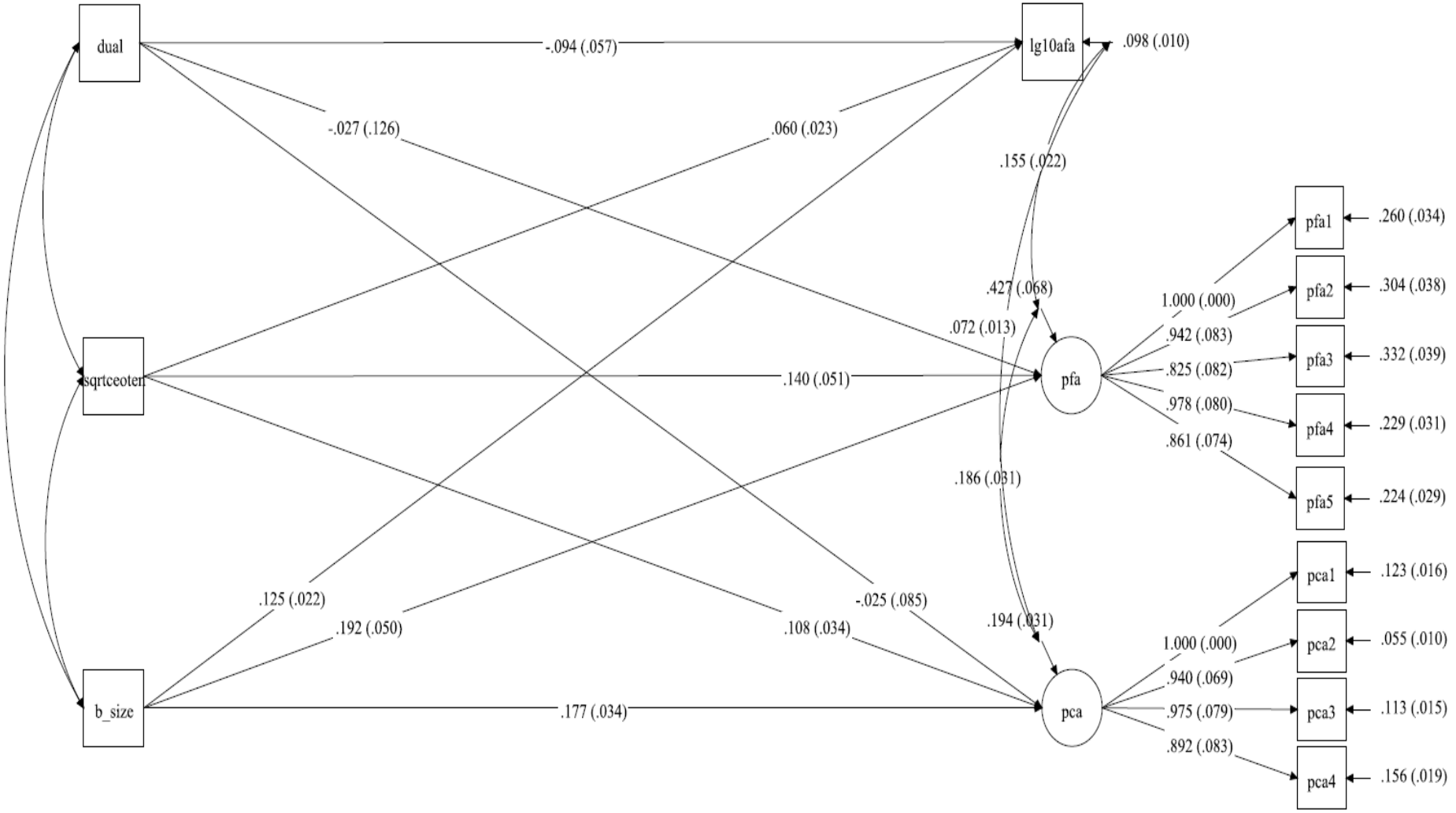


Figure 4.16. Results of full MP-CS model

4.7. Summary

This chapter presented the data analysis results of this research study. These results were derived from data screening, EFA, CMV assessment and SEM.

Several statistical procedures were applied to screen the data to deal with erroneous data, missing data, outliers, normality, linearity and multicollinearity issues. This screening was important before performing the SEM because SEM is very sensitive to such issues. No erroneous data regarding the ten observed variables was found. There was no missing data with regard to these variables. Univariate or multivariate outliers were also checked using box-plots and Mahalanobis D^2 distance. The results revealed that there were very few outliers; it was, however, decided to retain all the cases, as there was insufficient evidence that these outliers were not part of the entire population (Hair et al., 2010). The SEM assumptions were tested. The score distributions of all items were examined; and the results of skewness and kurtosis, histograms and P–P plots evaluation suggested no major violation of the assumption of normality. In addition, there was evidence that the linearity assumption was not violated. Furthermore, tests for multicollinearity indicated that the assumption about the absence of correlated errors was not violated.

Principal components analysis and an orthogonal model with varimax rotation method were applied to perform the EFA, using SPSS version 22.0. The results suggested that three items should be deleted, as they were highly cross loaded on another latent factor. The items deleted were PSR1, PSR2 and PSR3 from the perceived social reputation construct. After removing those items, reliability and factor analysis were run again. It was evident that the unidimensionality of the items was confirmed. In addition, the measurement items could be used to measure the constructs with good reliability; and, the instrument's reliability could be seen as good. In addition, data reduction was achieved by reducing the number of variables from 39 to 9.

Common method variance (CMV) was assessed by implementing Harman's single factor test via EFA and CFA. The results revealed that CMV was not a major concern.

This chapter presented the results for the hypotheses proposed in Chapter 2. Structural equation modelling, using Mplus version 7.0, was chosen to test the measurement and structural model in this study. The SEM analysis was performed in two stages. In the first stage, confirmatory factor analysis (CFA) was employed to assess the fit of the measurement model. Thereafter, the structural model was assessed to test the hypothesised relationships between constructs. The SEM path analysis was conducted to test both direct relationships and moderating effects. The results provided support for 17 of the 19 hypothesised direct relationships and 8 out of 18 of the hypothesised moderating effects (see Table 4.22, below).

The next chapter presents the discussion of the research findings in answering the research questions outlined in Chapter 1. In addition, the implications of these findings for theory and practice, the limitations of the research and directions for future research are discussed in the final chapter.

Table 4.22. Assessment of direct and moderating relationships

Hypothesis		Independent variables	Dependent variables	Moderating variables	Estimates	Results
H1	a (+)	Actual financial attainment	Perceived financial attainment		.78***	Supported
	b (+)		Perceived career achievement		.60***	Supported
H2	a (+)	Educational attainment	Perceived financial attainment		.25***	Supported
	b (+)		Perceived career achievement		.35***	Supported
H3	a (+)	CEO tenure	Perceived financial attainment		.19**	Supported
	b (+)		Perceived career achievement		.20***	Supported
H4	a (+)	Political skill	Actual financial attainment		.53***	Supported
	b (+)		Perceived financial attainment		.48***	Supported
	c (+)		Perceived career achievement		.60***	Supported
H5	a	Political skill	Actual financial attainment	Firm size	.09	Rejected
	b		Perceived financial attainment	Firm size	-.26***	Supported
	c		Perceived career achievement	Firm size	-.17*	Supported
H6	a	Political skill	Actual financial attainment	Ownership structure	-.06	Rejected
	b		Perceived financial attainment	Ownership structure	-.18**	Supported
	c		Perceived career achievement	Ownership structure	-.05	Rejected

Note: * p < .10, ** p < .05, *** p < .01

Table 4.22. Assessment of direct and moderating relationships – continued

Hypothesis		Independent variables	Dependent variables	Moderating variables	Estimates	Results
H7	a	Agreeableness	Actual financial attainment	Employment sector	1.06	Rejected
	b		Perceived financial attainment	Employment sector	.00	Rejected
	c		Perceived career achievement	Employment sector	1.19	Rejected
H8	a	Openness	Actual financial attainment	Employment sector	8.74***	Supported
	b		Perceived financial attainment	Employment sector	16.66***	Supported
	c		Perceived career achievement	Employment sector	4.90**	Supported
H9	(+)	Protean career orientation	Actual financial attainment		.51***	Supported
H10	a	Protean career orientation	Actual financial attainment	Firm size	.08	Rejected
	b		Perceived financial attainment	Firm size	-.22***	Supported
	c		Perceived career achievement	Firm size	.07	Rejected
H11	a	Protean career orientation	Actual financial attainment	Ownership structure	.00	Rejected
	b		Perceived financial attainment	Ownership structure	-.14*	Supported
	c		Perceived career achievement	Ownership structure	.03	Rejected

Note: * p < .10, ** p < .05, *** p < .01

Table 4.22. Assessment of direct and moderating relationships – continued

Hypothesis		Independent variables	Dependent variables	Moderating variables	Estimates	Results
	a (+)		Actual financial attainment		-.12*	Supported
H12	b (+)	CEO duality	Perceived financial attainment		-.02	Rejected
	c (+)		Perceived career achievement		-.02	Rejected
	a (+)		Actual financial attainment		.19***	Supported
H13	b (+)	CEO tenure	Perceived financial attainment		.22***	Supported
	c (+)		Perceived career achievement		.24***	Supported
	a (+)		Actual financial attainment		.39***	Supported
H14	b (+)	Board size	Perceived financial attainment		.29**	Supported
	c (+)		Perceived career achievement		.39***	Supported

Note: * p < .10, ** p < .05, *** p < .01

Chapter 5. Discussions and Conclusions

5.1. Introduction

The purpose of this chapter is to summarise the main findings, to discuss the methodological, theoretical and practical implications of the research, to outline the limitations of the study and to present suggestions for future research. The chapter is organised as follows. It begins with the research problem that prompted the examination of the relationships between CEOs' objective and subjective career success as well as between CEO career success and its predictors being restated. Next, there is a discussion of the main findings derived from the results detailed in Chapter 4. Following this, there is discussion of the methodological and theoretical implications of this research with respect to the relevant existing literature. This is followed by an outline of the practical implications that can be drawn from the research. Finally, the limitations of this study and recommendations for future research are highlighted.

5.2. Overview of the problem

Although the importance of understanding both CEO career success and its predictors has had a significant increase recently (Baruch et al., 2013), there have been ten research gaps in this topic, especially in a transitional economy. Firstly, the area of CEO career success has been understudied (Busenbark et al., 2016; Koyuncu et al., 2017). Secondly, there has been limited research of both the objective and subjective aspects of CEO career success combined in one study, such as that by Orser and Leck (2010). Thirdly, findings on the relationship between objective career success and self-referent subjective career success are controversial (Abele et al., 2011). Fourthly, studies using interdisciplinary approaches to career success have been limited (Ng et al., 2005). Fifthly, to date, examining the moderating effect of organisational factors (such as organisational size or ownership structure) on the relationships between certain individual characteristics (e.g., political skill, personality traits and protean career orientation) and career success appears to be crucial, but has yet to be done (e.g., Ng et al., 2005; Michiels et al., 2013; Kimura, 2015). Sixthly, evidence for the relationship between human capital and subjective career success remains inconclusive. (Judge et al., 1995; Pfeffer and Fong, 2002; Ng et al., 2005; Orser and Leck, 2010; Mohd Rasdi et al., 2011; Ng, and Feldman, 2014). Seventhly, the PS-CS relationship seems to be inconclusive and lacking empirical evidence (Ferris et al. 2008; Gentry et al., 2012; Munyon et al., 2015). Eighthly, examining the moderating effect of occupational context, such as the employment sector, on the relationships between agreeableness or openness and career success has been an under-researched area (Spurk and Abele, 2011). Ninthly, evidence for the link between PCO and objective career outcomes has been inconsistent (e.g. Baruch et al., 2012; Grimland et al., 2012; Jung and Takeuchi, 2011; Volmer and Spurk, 2011). Tenthly, correlation of CEO power with objective career success seems to continue to proliferate (e.g. Bebchuk et al., 2011; Shin, 2016; van Essen et al., 2015), while the role of power on subjective career success appears to be overlooked.

5.3. Interpretation of the key findings

5.3.1. Objective – subjective career success

> Hypothesis 1: A CEO's actual financial attainment is positively associated with his perceived financial attainment (H1a) (*supported*) and perceived career achievement (H1b) (*supported*).

The results of the current investigation strongly suggest the finding that a CEO's objective career success has a positive and significant direct effect on his objective career success. This finding seems to augment the literature about CEO career success in terms of the relationship between its two aspects. To the reseracher's knowledge, no previous attempt has been made to examine the relationship between the objective and subjective aspects of CEO career success within the context of the careers literature. Although Orser and Leck (2010) investigated the two aspects of CEO career success, they did not examine the relationship between them. The present study did this in order to provide a more comprehensive understanding of CEO career success. Furthermore, the current result enhances research on CEO career success by using two new indicators to measure subjective career success. Compared with other such studies of this theme, such as Judge et al., (1995), this research provided a more convincing finding. In addition, the present study indicates that the association between actual financial attainment and perceived financial attainment was stronger that the association between actual financial attainment and perceived career achievement.

The current findings are in complete alignment with Orser and Leck(2010)s' quantitative work in empirically uncovering the association between two aspects of CEO career success, as both studies concluded that these aspects were correlated. The present study differs from Orser and Leck (2010)s' work in four ways. Firstly, while Orser and Leck (2010) found a correlation between a CEO's objective and subjective career success, this study discovered that a CEO's objective career success positively affected his subjective career success. The second difference between the present study and Orser and Leck (2010) is with respect to the measure of a CEO's subjective career success. In the research of Orser and Leck (2010), a CEO's subjective career success was defined using responses to only one five-scale question, whereas the current study employed two measures with nine questions to operationalise this construct. Thirdly, while Orser and Leck (2010) employed multivariable linear regression to test their hypotheses, the present study utilised structural equation modelling. Fourthly, respondents in this study were CEOs, while respondents in Orser and Leck's (2010) work were a mixture of CEOs, executives and managers.

The present study was motivated in part by the study by Judge et al. (1995), although it differed from the previous study in interesting and useful ways. Firstly, one of their findings was that their results were mixed, in that both cash compensation and number of promotions significantly affected career satisfaction; however, they did not significantly affect job satisfaction. The present study found that the measure of objective career success had a significant effect on all of the measures of subjective career success. A second important difference between these two studies is related to measurement. In the study by Judge et al. (1995), objective career success was measured by the total annual cash compensation and number of promotions, while subjective career success was measured by job satisfaction and career satisfaction. In the present study, objective career success was measured by actual financial attainment or total annual cash compensation, whereas subjective career success was measured by perceived financial attainment and perceived career achievement. Perceived financial attainment and perceived career achievement are scales which have been developed in a non-Western context. A third difference is with respect to the respondents. The respondents in Judge et al. (1995)s' study were US executives, while the respondents in the present study were Vietnamese CEOs of listed firms. A fourth important difference to note is that the archival

data about total annual cash compensation in the study of Judge and his colleagues was from the database of an executive search firm, while the data in the present study was from the database of the General Department of Taxation (a governmental agency). This last difference raises an important point, which is that there is a difference between analysing the data using multivariate regression with SPSS and analysing it by using structural equation modelling with MPlus. Judge et al. (1995) utilised multivariate regression with SPSS (1990) to analysis the data, and they might not conduct a careful data preparation and screening. The present study employed structural equation modelling with MPlus 7.0 to analyse the data after using SPSS 22.0 to examine and report erroneous data, missing data, outliers, assumptions, sample size, common method variance, unidimensionality, reliability and validity. The first difference may be explained by the other differences between these two studies.

In addition to answering the first and second research problems, the findings of the present study provided empirical evidence to solve the the third research problem, which is that the findings about the relationship between objective career success and self-referent subjective career success were controversial. These findings are line with the findings of the previous work in this area (Judge et al., 1999b; Cable and DeRue, 2002; Ng et al., 2005; Lau et al., 2007; Adele et al., 2011; Stumpf and Tymon Jr., 2012; Converse et al., 2014; Spurk and Abele, 2014; Stumpf, 2014). However, there is divergence in the findings between the present study and other studies available in the literature, such as Richardsen et al. (1997) and Judge et al. (1995).

In addition to the above-mentioned way of explaining the findings of this study about the relationship between objective and subjective career success, the relationship between objectivity and subjectivity may be considered as an alternative way to achieve this. This is because objective career success can be seen as objectivity, while subjective career success may be viewed as subjectivity.

5.3.2. Human capital – career success

> Hypothesis 2: CEO educational attainment (human capital investment predictor) is positively associated with his subjective career success (perceived financial attainment (H2a) (*supported*) and perceived career achievement (H2b) (*supported*)).

These results strongly suggest that a CEO's educational attainment (human capital investment) has a positive and significant direct effect on his subjective career success. The current study makes several contributions to the existing literature. Firstly, it has been the first research that employed perceived financial attainment and perceived career achievement as measures of subjective career success in the context of studies about the HC-CS association. Secondly, these findings contribute to the careers literature by supplying additional evidence about the controversial relationship between educational attainment and subjective career success. The results of the present study shared some similarities with the findings of previous research (e.g. Judge et al., 1995; Ng et al., 2005; Orser and Leck, 2010; Park, 2010; Ng and Feldman, 2014), which has partly supported a positive association between educational attainment and subjective career success. The current findings appear to be well substantiated by the data.

> Hypothesis 3: CEO tenure (human capital predictor) is positively associated with his subjective career success (perceived financial attainment (H2a) (*supported*) and perceived career achievement (H2b) (*supported*)).

The results indicated that CEO tenure (human capital investment) had a positive and significant direct effect on subjective career success. The findings from this investigation extend the existing

knowledge of CEO career success and careers. Specifically, they expand the knowledge concerning the relationship between CEO tenure and subjective career success. It appears to be the first incidence of a positive and significant relationship between CEO tenure and subjective career success being uncovered. Additionally, these findings expand the knowledge regarding the controversial relationship between job tenure and subjective career success. The results of the present study seem to confirm that individuals' job tenure significantly positively affects their subjective career success. These findings significantly differ from previous results reported in the literature, which have indicated that there was no relationship between job tenure and subjective career success (e.g., Judge et al., 1995; Ng et al., 2005).

At a higher level of generalisation, it can be said that a CEO's human capital investment and human capital have a positive and significant direct effect on his subjective career success. In the analyses given above, the research tested how human capital investment and human capital related to a CEO's subjective career success. The results show that CEOs with a higher level of human capital investment and human capital received a higher level of perception of, or satisfaction with, career success. In fact, the longer the period of time that they spent in formal education and the more human capital they gained, the greater their career satisfaction, financial attainment and career achievement.

In general, this research was more pessimistic regarding the career benefits of human capital investment and human capital than the papers by Judge et al. (1995) or Ng et al. (2005). What may account for the difference in the results is the outcome variables used in this research, namely, perceived financial attainment and perceived career achievement. These outcome variables captured satisfaction with financial attainment and career achievement and were, therefore, slightly different from the measures used by previous studies, which captured satisfaction with job and career. Further, both of the papers by Judge et al. (1995) or Ng et al. (2005) showed a partly significantly positive relationship between human capital investment and subjective career success, but they failed to confirm the relationship between human capital and subjective career success. Evidence from this research suggests significantly positive associations between both human capital investment and human capital with subjective career success. This indicates that the findings of this study provided empirical evidence to solve the fifth research problem.

The findings of this study regarding the relationship between a CEO's human capital and his subjective career success may be considered in the light of alternative explanations. For example, the contest-mobility model of career success (Ng et al., 2005) may be seen as an explanation for the positive association between a CEO's human capital and subjective career success. From this perspective, CEOs compete for career success in an open and fair contest. No one CEO would have pre-existing advantages over the others and, accordingly, winners of favourable career outcomes are those who are the most skilled and most willing to make an effort. A career can therefore be viewed as a tournament in which one has to constantly compete with others by improving oneself if one wants to succeed (Rosenbaum, 1984). Thus, one's human capital should be highly relevant for predicting career success, including both objective and subjective aspects, because human capital is highly rewarded in the labour market (Becker, 1964). In addition, Brown's values-based theory (Brown, 1996, 2002b) is an alternative explanation of the findings. One of his propositions is that occupational success is related to job-related skills acquired in formal and informal educational settings, job-related aptitudes and skills, Senior Executive Service, and participation in the work role (Brown, 2003).

5.3.3. Political skill – career success

> Hypothesis 4: CEO political skill is positively associated with measures of his career success (actual financial attainment (H4a) (*supported*), perceived financial attainment (H4b) (*supported*) and perceived career achievement (H4c) (*supported*)).

These results indicate that CEO respondents who reported higher political skill received higher actual financial attainment and reported greater perceived financial attainment and perceived career achievement. Accordingly, there are positive associations between political skill with objective and subjective career success. The results from this research provide strong empirical evidence to answer the sixth research problem specified in Chapter 1.

To clarify the contribution of this study to the PS literature, it should be considered in relation to other studies in the field. These findings are in alignment with the works by Munyon et al. (2015), Gentry et al. (2012) and Huang *et al*. (2013) in uncovering the PS-CS relationships as all of these studies concluded that PS positively related to measures of CS. However, the current study differs from their works in three ways. Firstly, while they used traditional indicators such as income, position, career satisfaction, overall career success and recommendation for managerial positions to measure CS, this study employed new indicators, such as actual financial attainment, perceived financial attainment and perceived career achievement. The second difference is with respect to the type of PS-CS relationship. While Munyon et al. (2015) focused on the relationship between political skill and various aspects of career success (i.e. overall career success, income, position, and career satisfaction), Gentry et al. (2012) concentrated on the relationship between individuals' political skill and their other-rated promotability. Huang *et al*. (2013) examined the relationship between being perceived as politically skilled and being recommended for managerial positions. The third difference is related to the participants/respondents. This study employed a 179-CEO sample from 179 publicly listed firms while Munyon et al. (2015) undertook a meta-analysis, Gentry et al. (2012) utilised a 262-manager sample from a leadership development program, and Huang et al. (2013) used student samples. The aforementioned differences in our study may thus contribute to the existing literature in a distinctive way when compared to previous work.

Additionally, there is a divergence in findings between this study and the work by Ferris et al. (2008) and Todd et al. (2009). While this study found a positive PS-CS relationship, Ferris et al. (2008) and Todd et al. (2009) revealed a controversial relationship. Specifically, Ferris et al. (2008) discovered that political skill had positive effects on hierarchical position and job satisfaction, but did not affect yearly gross income, while Todd et al. (2009) revealed that PS predicted total promotion, career satisfaction, life satisfaction and perceived marketability, but did not provide total compensation.

There may be four possible alternative explanations of these findings. The first one is human capital theory. If political skill is seen as a skill or as a component of human capital, political skill can be predicted to be positively related to career success. Previous research (e.g., Seibert et al., 2001a) and theoretical discussions (e.g., Ferris et al., 2007; Todd et al., 2009) have both suggested that political skill is a human capital variable that may be likely to exhibit a strong impact on career success.

A second possible alternative explanation is signalling theory (Spence, 1974). Signalling theory assumes that, in order to reduce ambiguity and to influence observers' beliefs, individuals send signals to others as a means of transmitting information about their actions, intentions and abilities (Spence, 1974). Politically skilled individuals signal their effective work performance and

personal character by developing strong relationships with their supervisors. Since such signalling facilitates the establishment of the sender's positive personal reputation, politically skilled people are likely to achieve objective career success more easily than those who are less skilled (Blickle et al., 2011).

The third possible alternative explanation is social exchange theory (Blau, 1964). Social exchange theory focuses on obligations and reciprocity between entities (Blau, 1964). Politically skilled individuals tend to develop high-quality work relationships with their supervisor. Supervisors who benefit from positive behaviour associated with these high-quality relationships will reciprocate by giving subordinates positive personal reputation assessments and favourable objective career outcomes (Blickle et al., 2011). Further studies have reported that political skill is positively related to interaction frequency with a supervisor (Shi et al., 2013), work relationship quality and personal reputation (Harris et al., 2010; Laird et al., 2012).

A fourth possible alternative explanation is social capital theory (Burt 1997; Nahapiet and Ghoshal 1998; Seibert et al., 2001b). The keys to explaining career success using social capital theory are networking and resulting network structures. Fugate et al. (2004) argued that network structures determine the value of information and influence inputs that are critical for career success. Wolff and Moser (2009) showed that networking behaviour leads to career success through the development of social capital. Such networking behaviour is political, in the sense that people strive to use networks in pursuit of their personal career advantage (Inkson, 2004). Of the four above-mentioned alternative explanations, the current research favoured human capital theory, while Kimura (2015) proposed social capital theory, signalling theory and social exchange theory.

> Hypothesis 5: Firm size moderates the relationships between CEO political skill and measures of his career success (actual financial attainment (H5a) (*rejected*), perceived financial attainment (H5b) (*supported*) and perceived career achievement (H5c) (*supported*)).

These results indicate that firm size (measured as sales) significantly moderated the relationships between a CEO's PS and PFA and PCA. However, firm size did not significantly moderate the relationships between a CEO's PS and AFA. Therefore, these findings suggest that firm size moderated the PS-SCS relationship but did not moderate the PS-OCS relationship. Specifically, the relation between a CEO's political skill and his subjective career success becomes less positive as firm size increases. In other words, the positive effect of political skill on subjective career success in a small firm is stronger than its effect in a large firm.

> Hypothesis 6: Ownership structure moderates the relationships between CEO's political skill and measures of his career success (actual financial attainment (H6a) (*rejected*), perceived financial attainment (H6b) (*supported*) and perceived career achievement (H6c) (rejected)).

These results indicate that ownership structure (measured as foreign ownership) significantly moderated the relationships between a CEO's PS and PFA. However, ownership structure did not significantly moderate the relationships between a CEO's PS and AFA or between a CEO's PS and PCA. Therefore, these findings suggest that ownership structure partly moderated the PS-SCS relationship, but did not moderate the PS-OCS relationship. Specifically, the relation

between a CEO's political skill and his subjective career success may become less positive as ownership structure increases. In other words, the positive effect of political skill on subjective career success in a firm with a lower level of foreign ownership seemed to be stronger than in a firm with a higher level of foreign ownership.

This study adds to the existing literature about PS-CS relationships in two intriguing ways. Firstly, the results of this study provide empirical evidence to solve the seventh research problem specified in Section 1.2 that the moderating effect of organisational factors (e.g. organisational size, ownership structure) on the relationships between certain individual characteristics (e.g. political skill) and career success appears to be crucial but not have done yet. Secondly, this study is the first to respond to the calls of Sonnenfeld and Peiperl (1988), Judge et al. (1995), Ng et al. (2005), Gallagher and Laird (2008), Michiels et al. (2013) and Kimura (2015) for researching on the interactive effects between environmental and individual characteristics on career succes. Our study adds to the career literature with this first empirical study of the interactive effects between organisational size and political skill on career success as well as those between ownership structure and political skill on career success. This study may extend the knowledge of how political skill can enhance career success in the context of firm size or ownership structure.

5.3.4. Personality traits – career success

> Hypothesis 7: Employment sector moderates the relationships between CEO openness and measures of his career success (actual financial attainment (H8a) (*supported*), perceived financial attainment (H8b) (*supported*) and perceived career achievement (H8c) (*supported*)).

These results indicate that employment sector (measured as industry) significantly moderated the relationships between the CEO's openness and all measures of his CS. Therefore, these findings strongly suggest that employment sector moderated the openness - career success relationship. Specifically, the positive relation between CEO's openness level on his CS level in the industry sector was different than in other sectors (service and agriculture).

> Hypothesis 8: Employment sector moderates the relationships between CEO agreeableness and measures of his career success (actual financial attainment (H7a) (*rejected*), perceived financial attainment (H7b) (*rejected*) and perceived career achievement (H7c) (*rejected*)).

These results indicate that the employment sector (measured as industry) did not significantly moderate the relationships between the CEO's agreeableness and OCS as well as those between his agreeableness and SCS. The employment sector did not moderate the relationships between CEO agreeableness and measures of his CS.

This study is in alignment with Seibert and Kraimer (2001)s' research in uncovering the moderating effects of occupational context on the relationships between CEO agreeableness and measures of both aspects of his CS. However, this study differs from the research by Seibert and Kraimer (2001) in four ways. Firstly, while Seibert and Kraimer (2001) employed salary, number of promotions and career satisfaction as measures of CS, we used AFA, PFA and PCA as measures of CEO CS. The second difference between this study and that by Seibert and Kraimer (2001) is with respect to the moderator. Seibert and Kraimer (2001) used an occupational type variable with two values (0 = low people activities, 1 = high people activities). This study utilised

industry, which was a dummy variable with two values (0 = other sector, 1 = industry sector). Thirdly, while Seibert and Kraimer (2001) employed an employee – alumni sample from one university, this study utilised a CEO sample from 179 publicly listed firms. A fourth difference is related to the findings. Seibert and Kraimer (2001) found a significant moderating effect of occupational type (occupational context) on the relationship between agreeableness and salary, but did not find significant moderating effects of occupational type on the relationships between agreeableness and the other measures of CS. This research did not find any significant moderating effects of industry (occupational context) on the relationships between agreeableness and the measures of CS. The differences between the findings may be due to the differences in the measures of CS, moderators and the samples.

In addition, the findings of this study suggest that employment sector moderated the openness – career success relationship. Specifically, the positive relation between CEO's openness level on his CS level in the industry sector was different than in other sectors (service and agriculture). This is different from the findings of Seibert and Kraimer (2001). The relationship of openness with career success was examined on an exploratory basis in their research and their findings suggested that individuals who were more open received lower salaries.

This study adds to the existing literature about PT-CS relationships in two compelling ways. Firstly, the results of this study partly provide empirical evidence to answer the eighth overarching research problem, specified in Chapter 1, that the moderating effects of occupational context on the relationships between personality traits and career success appeared to be under-researched. Secondly, this study is the first to respond to the calls of Seibert and Kraimer (2001) and of Spurk and Abele (2011), by investigating interactive effects between employment sector and openness on career success. This study may aid in the understanding of how openness can enhance career success in the context of the employment sector.

However, the findings of this study regarding the moderating effects of employment sector on the relationships between openness and career success as well as between agreeableness and career success need to be referred to the measurement of the construct of employment sector. Employment sector is purely dichotomous in terms of industry and other (service or agriculture) because of the economic structure in Vietnam and corporate governance practices in the listed firms detailed in Sections 2.2.2.1 and 2.2.2.3 as well as the requirements of sample size in this study mentioned in Section 3.4.2.1. In other words, the measurement of the construct of employment sector in this study using a dichotomous variable is strongly related to the particular characteristics of the context of the study. Therefore, the external validity of the related findings may be decreased.

5.3.5. Protean career orientation – career success

> Hypothesis 9: A CEO's protean career orientation is positively related to his actual financial attainment (*supported*)).

The results of the current investigation strongly suggest the finding that a CEOs' PCO had a positive and significant direct effect on his AFA. These results indicate that the CEO respondent who reported higher PCO received higher AFA. Accordingly, there was a positive association between PCO and OCS. The results provided strong empirical evidence to answer the ninth research problem, specified in Chapter 1, that the findings with respect to the link between PCO and OCS have been inconclusive.

To clarify the contribution of this study to the PCO literature, it should be considered in relation to other studies in the field in the context of the PCO-OCS and PCO – compensation relationships.

From the perspective of the PCO-OCS relationship, the current findings are in line with Jung and Takeuchi (2011), Grimland et al. (2012), Baruch (2014) and Baruch et al. (2014) in finding that there was a positive link between PCO and OCS. However, the findings differ from those of Baruch and Quick (2007), Gasteiger (2007) Volmer and Spurk (2011) and Baruch et al. (2012), all of whose research did not find the link. The difference between this study and the other studies is with respect to operationalisation of the OCS construct. This research used AFA, while previous studiest employed salary (e.g. Baruch and Quick, 2007; Gasteiger, 2007; Volmer and Spurk, 2011; Baruch et al., 2012; Baruch, 2014) or hierarchical position (Jung and Takeuchi, 2011; Grimland et al. 2012; Baruch et al., 2014) or the number of promotions (Gasteiger, 2007; Volmer and Spurk, 2011).

From the perspective of the PCO-compensation relationship, comparison between the current findings and the findings of the related research are most crucial because AFA, our proxy to operationalise the OCS construct, was measured as a type of compensation. It is interesting that the current findings are different from most of the related research (with the exception of Baruch's (2014)). While they detected that there was no relationdhip between PCO and compensation, this study, and Baruch (2014), found a positive relationship. Additionally, OCS was operationalised by salary in all of the related research (Baruch and Quick, 2007; Gasteiger, 2007; Volmer and Spurk, 2011; Baruch et al., 2012 cited in Gubler, 2014 and in Water, 2015) whereas it was operationalised by total annual cash compensation in this study. Furthermore, the previous researchers utilised an employee- or executive-respondent sample, while this study employed a CEO-respondent sample.

The current findings are in complete alignment with Baruch (2014)'s work in investigating the PCO-compensation relationship, as both studies concluded that PCO had a positive effect on compensation. However, this study is different from Baruch (2014)'s work in three ways. Firstly, while Baruch (2014) focused on developing and validating a measure for PCO, this study concentrated on the relationship between PCO and OCS. Secondly, although both of these studies employed the measures developed by Baruch and Quick (2007) to operationalise PCO, they utilised a different number of items. While Baruch (2014) used a 7-item measure, this study employed the 4-item measure recommended by Baruch (Baruch and Quick, 2007). A third difference is with respect to the sample. A student sample, which contained business alumni from a university in the USA, was utilised in Baruch (2014)'s work, while a CEO-respondent sample, which included CEOs from 179 publicly listed firms in Vietnam, was employed in this study.

There may has one possible alternative explanation for these findings, more specifically, the relationship between employee attitude, job performance and employee success at work. Employee attitude has an impact on job performance, and job performance which, in turn, has an effect on his or her success at work (Saari and Judge, 2004; Atkinson et al., 2009; Kossek and Lambert, 2012).

> Hypothesis 10: Firm size moderates the relationships between a CEO's protean career orientation and measures of his career success (actual financial attainment (H10a) (*rejected*), perceived financial attainment (H10b) (*supported*) and perceived career achievement (H10c) (*rejected*)).

These results imply that firm size (measured as sales) significantly moderated the relationships between a CEO's PCO and PFA. However, firm size did not significantly moderate the relationships between a CEO's PCO and AFA or between a CEO's PCO and PCA. Therefore, these findings suggest that firm size partly moderated the PCO-SCS relationship but did not moderate the PCO-OCS relationship. Specifically, the relationship between PCO on SCS may become less positive as firm size increases. In other words, the positive effect of PCO on SCS in a small firm seems to be stronger than its effect in a large firm.

Hypothesis 11: Ownership structure moderates the relationships between a CEO's protean career orientation and measures of his career success (actual financial attainment (H11a) (*rejected*), perceived financial attainment (H11b) (*supported*) and perceived career achievement (H11c) (*rejected*)).

These results indicate that ownership structure (measured as foreign ownership) significantly moderated the relationships between a CEO's PCO and PFA. However, ownership structure did not significantly moderate the relationships between a CEO's PCO and AFA or between a CEO's PCO and PCA. Therefore, these findings suggest that ownership structure partly moderated the PCO-SCS relationship but did not moderate the PCO-OCS relationship. Specifically, the relationship between PCO on SCS may become less positive as ownership structure increases. In other words, the positive effect of PCO on SCS in a firm with a lower level of foreign ownership seems to be stronger than in a firm with a higher level of foreign ownership.

This study adds to the existing literature about PCO-CS relationships in two ways. Firstly, the results of this study provide empirical evidence to resolve the seventh research problem, specified in Chapter 1, that the moderating effect of organisational factors such as organisational size or ownership structure) on the relationships between certain individual characteristics (e.g., PCO) and career success appears to be crucial but often overlooked. Secondly, this study is the first to respond to the calls of Sonnenfeld and Peiperl (1988), Judge et al. (1995), Ng et al. (2005), Gallagher and Laird (2008) and Michiels et al. (2013), by investigating the interactive effects between firm size and PCO on career success, as well as between ownership structure and PCO on career success. This study may add to the understanding of how PCO can enhance career success in the context of firm size or ownership structure.

The person-situation interaction perspective may be one alternative explanation for the findings with respect to hypotheses 5,6,8,10,11. The findings were that interactions between environmental factors and individual characteristics significantly affected subjective career success. The findings regarding hypothesis 8 also included a significant interactive effect between environmental factors and individual characteristics on objective career success. In other words, interactions between environmental factors (namely, firm size, ownership structure and employment sector) and individual characteristics (namely, PS, openness and PCO) significantly enhanced career success.

Career theory has been most explicit about the nature of person-situation interaction perspectives. For example, Super (1953)'s concept of a career as a person-occupation synthesis or merger, Holland (1973)'s idea that career choice is a function of self-selecting a match between self and occupational environment, Hall (1971)'s view of career subidentity development as an individual behaviour – organisational responsiveness – reward cycle, and Kristof-Brown et al. (2005)s' concept of job matching as the process of ensuring compatibility between an individual's work-related attributes and the corresponding characteristics of their work environment, all make explicit the person – situation interaction perspectives. Additionally, Holland (1997)'s theory advanced four propositions related to the interaction between people and work environments. In addition, the theory of work adjustment posits that individuals and environments impose requirements on one another, and that successful work relations are the result of adjustments intended to create a state of correspondence between the individual and environmental characteristics (Davis and Lofquist, 1984).

Many researchers have proposed various person-situation fit or congruence models of interaction. Their models focus on the degree of match between a person and a situation and assume that the better the fit, the better the outcome. Often outcome is expressed in terms of performance (e.g., Pervin, 1968; Ghiselli, 1966, 1973; Pearlman et al., 1980; Holland, 1997), but it can also be expressed in terms of personal satisfaction with the situation (Holland, 1997; Rottinghaus and Van Esbroeck, 2011; Trautmann et al., 2011). Congruence, however, has been

extensively studied and research attests to its usefulness as a construct (Betz, 2008) although it has modest predictive power (Nauta, 2010).

These aforementioned reasons may explain the results of this study. Most of interactive effects between an individual's work-related attributes (namely, PS, personality trait and PCO) and characteristics of his or her work environment (namely, firm size, ownership structure and employment sector) on SCS, particularly on PFA, which is close to personal satisfaction with the situation, were significant. This did not happen for OCS. Therefore, the results of this study are modest.

5.3.6. Managerial power – career success

> Hypothesis 12: CEO duality is positively associated with measures of his career success (actual financial attainment (H12a) (*partly supported*), perceived financial attainment (H12b) (*rejected*) and perceived career achievement (H12c) (*rejected*)).

The results showed that a CEO's duality (one measure of CEO's managerial power) had a negative and significant direct effect on his or her actual financial attainment, but did not have significant direct effect on perceived financial attainment and on perceived career achievement. The results indicate that CEO respondents who were also chairmen received lower actual financial attainment. Accordingly, there are a negative association between CEO duality and objective career success, but not between CEO duality and subjective career success. The results from this research supply empirical evidence in order to contribute to answering the tenth research problem, specified in Chapter 1, that the link between managerial power and career success has been an under-researched area.

> Hypothesis 13: CEO tenure is positively associated with measures of his career success (actual financial attainment (H13a) (*supported*), perceived financial attainment (H13b) (*supported*) and perceived career achievement (H13c) (*supported*)).

The most striking finding consistent with our hypotheses was the significant influence of a CEO's tenure (one measure of CEO's managerial power) on each of the career success measures, with the greatest influence being on perceived career achievement, and then on perceived financial attainment, with the weakest effect being on actual financial attainment. These results indicate that CEO respondents who had longer tenure received higher actual financial attainment, perceived financial attainment and perceived career achievement. Accordingly, there were positive associations between CEO tenure and objective career success as well as between CEO tenure and subjective career success. Additionally, the effect of CEO tenure on subjective career success was moderately stronger than on objective career success. The results from this study provide compelling empirical evidence in order to contribute to answering the tenth research problem, specified in Chapter 1, that the link between managerial power and career success has been an under-researched area.

> Hypothesis 14: Board size is positively associated with measures of CEO career success (actual financial attainment (H14a) (*supported*), perceived financial attainment (H14b) (*supported*) and perceived career achievement (H14c) (*supported*)).

The most remarkable result to emerge from the data was the significant influence of board size (one measure of a CEO's managerial power) on each of the career success measures, with the

greatest influence being on actual financial attainment, and then on perceived career achievement, with the weakest effect being on perceived financial attainment. These findings indicate that CEO respondents who had longer tenure received higher actual financial attainment, perceived financial attainment and perceived career achievement. Accordingly, there were positive associations between board size and objective career success as well as between board size and subjective career success. Furthermore, the effect of board size on objective career success was reasonably stronger than on subjective career success, which is opposite to the finding with respect to Hypothesis 13. The results from this study supply striking empirical evidence in order to contribute to answering the tenth research problem, specified in Chapter 1, that the link between managerial power and career success have been an overlooked field.

After stating this study's major findings with regard to hypotheses 12, 13 and 14, the significance of these findings should be explained. In assessing the evidence regarding the relationship between managerial power and the measures of career success, the study found overall support for managerial power theory. Two of the three indicators of CEO power (CEO tenure and board size) were positively associated with objective and subjective career success, suggesting that in most situations where CEOs are expected to have more power over the boards of directors, they have higher levels of objective and subjective career success. The two exceptions to these patterns were that CEO duality was negatively associated with objective career success and that it was not significantly related to subjective career success. Additionally, the findings provide strong empirical evidence to answer the tenth research problem, specified in Chapter 1, that the literature about the managerial power – OCS relationship is characterised by divergent and conflicting findings and that study of the role of managerial power on SCS has been an overlooked area.

When discussing about this study's major findings with regard to the relationships between career success and measures of managerial power, the findings should be referred to the differences in corporate governance between in Vietnam and in developed economies detailed in Section 2.2.2.2 and 2.2.2.3. From the managerial power perspective, the differences in corporate governance practices between in Vietnam and in OECD listed firms seem to affect the relationships between measures of managerial power and a measure of rent (CEO compensation). The more power a CEO has, the more stealth compensation he/she receives (Bebchuk and Fried, 2004a, 2004b). The differences in corporate governance practices regarding the board of directors as well as the board of supervisors are characterised by low percentage of independent directors in the board of directors, the absence of clear legal guidance for the board of supervisors and of sub-committees such as audit, remuneration and nomination committees in Vietnam compared with in developed economies. These practices appear to make the CEO have more power over the board of directors in Vietnam compared with in developed economies. This conclusion probably applies when CEO power was measured by board size and CEO tenure. For instance, the association between board size and CEO compensation is +.39 when the result of a meta-analysis based on 219 primary studies conducted by van Essen et al. (2015) is +.12. However, this above-mentioned conclusion seems not to apply when CEO power was measured by CEO duality. The result of this study regarding the negative association between CEO duality and CEO's total cash compensation is counter-intuitive and challenges the established knowledge that CEOs with more power can extract more rents (e.g. compensation) (Bebchuk et al., 2002). Therefore, is raises an intriguing question: Why does CEO duality have a negative effect on CEO compensation in a listed firm in Vietnam – a transition economy?

The current study should be taken into consideration in relation to other studies in the field of the managerial power – career success relationship. The findings are in alignment with the work by Orpen (1998), McClelland and Burnham (2003) and Parker and Chusmir (1991) in uncovering the power – career success relationships, as both this work and their studies have concluded that

power was positively related to measures of career success. The current study differs from their works in some aspects. This study examined a CEO's managerial power – career success relationship when employing AFA, PFA and PCA as indicators of a CEO's career success and utilising CEO duality, CEO tenure and board size as indicators of CEO power. Additionally, it employed a 179-CEO sample from 179 publicly listed firms in Vietnam and used primary and secondary data together. Orpen (1998)'s work focused on the relationship between power centrality and career success, used salary growth, promotions received and career satisfaction to measure career success and employed a 79-employee sample, comprising the entire work force of a small manufacturing company (apart from the directors), and the self-reported data. McClelland and Burnham (2003) concentrated on the association between managers' need for power and work success, discussed the effect of the need for power on managerial work success and used some U.S. cases to support for their claims. Parker and Chusmir (1991) focused on the relationship between the need for power and measures of life success, using professional fulfilment and status/wealth to measure career success, and employing a student sample of 756 U.S. managerial and nonmanagerial service industry workers and self-reported data from a questionnaire.

Additionally, there is a divergence in findings between thisstudy and those of Judge et al. (1995), Ferguson (2003) and Jenkins (1994). While this study found a positive power – career success relationship, their work revealed a statistically nonsignificant relationship. Specifically, Judge et al. (1995) found that service on an external board of directors did not have a siginificantly positive effect on four measures of career success, namely, cash compensation, number of promotions, job satisfaction and career satisfaction. They employed a sample of 1,388 U.S. executives and used the database of Paul Ray Berndtson. Ferguson (2003) did not find a significant effect of formal power on task success. She utilised appointment power, veto power and budget proposing power to measure formal power when measuring the task success (namely executive leadership success in the legislative arena) by gubernatorial public approval, using public opinion data compiled by Beyle et al. (2002). Ferguson employed a sample of 50 U.S. state governors and secondary data. Jenkins (1994) did not find a significant effect of the need for power on measures of career success, namely, job satisfaction and career progression, with a sample of 118 female college seniors and with only primary data from questionnaires.

5.4. Theoretical contributions

5.4.1. Theoretical contributions according to six relationships

Based on the findings of this study listed in Section 5.3, the theoretical contributions have been categorised into six areas, namely objective – subjective career success, human capital – career success, political skill – career success, personality trait – career success, protean career orientation – career success and managerial power – career success.

With regard to the O-SCS relationship, the findings of the present study add to career success literature in two new ways. Firstly, the present study supplies specific knowledge about the relationship between CEOs' objective and subjective careers in listed firms in Vietnam, a Southeast Asian transition economy. Secondly, this study provides additional evidence regarding the controversial relationship between objective and self-referent subjective career success, as discussed in the sections of statement of the problem in Chapter 1, and of CEO objective and subjective career success in Chapter 2. This result evidently supplies additional support for the literature on empirical distinction between two aspects of career success. The results of the present study support the previous work in this area (e.g. Ng et al., 2005; Adele et al., 2011; Stumpf and Tymon Jr., 2012; Converse et al., 2014; Spurk and Abele, 2014; Stumpf, 2014), which has repeatedly supported a positive association between objective and subjective career success.

The findings of the present study also speak to the psychological success model (Hall and Nougaim, 1968), attribution theory (Heider, 1958) and social comparison theory (Festinger, 1954), which predict that objective career success is positively related to subjective career success. The results of the current study have provided additional evidence that supports one part of the psychological success model. Additionally, this research has extended attributiontheory and social comparison theory by borrowing them and applying them in the career field to both make and test the predictions. Moreover, new evidence is provided by this study employing new measures applied over a new population in a new context. The approach and the new evidence affirms an existing theoretical principle of these three theories.

Additionally, the findings strongly suggest the generalisability of these three theories by testing them with a new career actor in an emerging economy in Southeast Asia. In other words, the results of the present research strongly suggest that, in this investigation, these theories escaped falsification in a test with new measures, with a new population and in a new context. Therefore, the current study has enhanced these three theories by providing researchers with confidence in the utility of these theories as well as the confidence that these theories will hold firm in diverse situations. In addition, the present study has been the first one to undertake this procedure.

With regard to the HC-CS relationship, the findings of the current study have important implications for extending human capital theory. The results support an extention of the propositions of human capital theory, namely, that the more time individuals invest in formal education and the longer tenure they gain, the more objective career success they achieve (Becker, 1993a). In addition, the results are more consistent with the proposition that argues that the more time individuals invest in formal education and the longer tenure they gain, the more subjective career success they achieve. In sum, the more time individuals invest in formal education and the longer tenure they gain, the more career success, both objective and subjective, they achieve.

In addition, the results of this study appear to augment the literature about CEO career success by offering initial crucial empirical evidence for the relationship between a CEO's educational attainment and his subjective career success. To the best of the researcher's knowledge, no previous research (with the exception of Orser and Leck, 2010) has been made to examine this relationship. Additionally, this study is the first to examine the relationships between a CEO's educational attainment and perceived financial attainment or perceived career achievement, as well as CEO tenure and perceived financial attainment or perceived career achievement. The old relationships have been tested using new measures. This makes original contributions in terms of operationalisation of a key dependent variable in the context of the HC-CS relationship. Furthermore, the research tested the HC-CS relationship in another population and in a new context. Specifically, this relation was tested against CEOs in listed firms and in a Southeast Asian transition/emerging country. This research design has provided new evidence about an old relationship and enhanced the generalisation of the findings.

With regard to the PS-CS relationship, the findings of the study have implications for extending the meta-theoretical framework of the effects of political skill, which was suggested by Ferris et al. (2007) and Munyon et al. (2015), in four interesting ways. Firstly, the findings fill the research gap created by the meta-theoretical framework being quite new and lacking empirical evidence. Secondly, the findings supply empirical evidence that affirms the existing theoretical principles of the meta-theoretical framework, which predict that PS is positively related to CS. Thirdly, the findings may alter existing findings regarding PS-CS relationships. While prior research found a controversial relationship, this study has revealed a positive one. Fourthly, this study has been

the first one to use the new measures of career success (AFA, PFA and PCA) to examine the PS-CS relationship with the interactive effect of political skill and firm size on career success.

The study also contributes to the literature about political skill through the moderator of firm size. The study introduced firm size as a new moderator of an existing relationship between political skill and subjective career success. Additionally, the study has provided original evidence that backs this moderating effect. Furthermore, the study found an answer to the 'where' question in theory development, which regards the positive relationship between political skill and subjective career success. Specifically, the findings indicated that the positive effect of political skill on subjective career success depends on the size of the firm. Moreover, the study raises one new challenging question to call for future research about whether firm size only moderates the PS-SCS relationship, and does not moderate the PS-OCS relationship. Examining the new question appears to add to the understanding of the interactive effect of political skill and firm size on career success.

The contribution to the literature about political skill through the moderator of ownership structure (measured as foreign ownership) is not as much as that achieved through the moderator of firm size. The study introduced ownership structure as a new moderator of an existing PS-CS relationship. Additionally, the study has provided initial empirical evidence that backs this moderating effect. However, ownership structure (measured as foreign ownership) only significantly moderated the relationship between PS and PFA (one indicator of SCS). Ownership structure (measured as foreign ownership) did not significantly moderate the relationship between PS and PCA (another indicator of SCS) or the relationship between PS and AFA (indicator of OCS). Furthermore, the study seems to find an insufficient answer to the 'where' question in theory development. Specifically, the findings indicate that the positive effect of PS on PFA may rely upon ownership structure. Moreover, the study has proposed some possible alternative hypotheses about whether ownership structure (measured as foreign ownership) moderates the PS-CS relationships when CS is operationalised as alternative indicator and whether ownership structure (operationalised as an alternative indicator) moderates the PS-CS relationships when CS is operationalised as the same indicators. Testing the aforementioned hypotheses may extend knowledge about the interactive effect of political skill and ownership structure on career success.

With regard to the PT-CS relationship, the study makes new contributions to the career literature regarding the five-factor model of personality. The study introduced the employment sector as a new moderator of the relationship between openness and career success. Additionally, the study has provided original evidence that backs this moderating effect. Furthermore, the findings of this study indicate that the effect of openness on career success depends on the employment sector. Moreover, the study raises a new question for future research about whether the employment sector moderates the relationship between agreeableness and career success.

With regard to the PCO-CS relationship, this study contributes to the literature about PCO in terms of PCO construct measurement, the PCO-CS relationship and moderators of the PCO-CS relationship. Validation of a measure for PCO construct is one of the theoretical contributions of the study. The study has contributed an academically sound, practical and concise measure for the PCO construct, which is in the vanguard of career-theory evolution (Baruch, 2014). There have been two popular measures for PCO construct, namely, Briscoe et al. (2006)s' and Baruch and Quick (2007)s'. Briscoe et al.s' measure included 14 items. On the one hand, many of the items in Briscoe et al. seem to be capturing the true nature of PCO construct. On the other hand, this measure has some limitations. For example, it has been tested mostly by using student

populations. The proposed two-factorial structure of the measure could not always be empirically confirmed because the values-driven scale was problematic in non-US samples (Chan et al. 2012). Additionally, this measure was not concise, due to its length and the ambiguity of the dual dimensionality, as well as the limited nature of its scale validation test (Baruch, 2014). Baruch and Quick (2007)s' measure consisted of one dimension, which agrees with the original presentation of the protean career as a single construct (Hall 1976; Hall and Moss 1998). The version 2014 (Baruch, 2014) of the PCO measureinitially deveveoped by Baruch and Quick (2007) included 7 items, which is much shorter than Briscoe et al. (2006)s'. However, it is still long when it is included in a short questionnaire. Moreover, Baruch and Quick (2007)s' measure may be applicable mostly to managers, professionals, business graduates or people with a specific mindset (Arthur, 2008; Inkson et al., 2012). Therefore, the need to validate a shorter form of Baruch and Quick (2007)s' measure is warranted. Items of the measure were selected and reduced from 7 to 4, based on the recommendation by Baruch. The shorter version of the measure was validated via the CEO population in a non-Western context. EFA with SPSS 22.0 was employed to assess the underlying factor structure and refine the item pool, and then CFA with Mplus 7.0 was used to evaluate the EFA-informed a priori theory about the measure's factor-structure and psychometric properties, such as unidimensionality, reliability and validity. After that, the CFA model was compared with the alternative models.

The findings regarding the PCO-OCS relationship contribute to the protean career theory in some interesting ways. The findings may alter existing findings regarding the PCO-OCS relationship. While most of the prior research has found this to be a controversial relationship, this study revealed a positive one. Moreover, this study is the first one to use the newly shortened form of Baruch and Quick (2007)s' measure for PCO and the new measure of OCS (AFA) to examine the PCO-OCS relationship. Additionally, the findings supply empirical evidence that may raise some new questions with respect to PCO research. In line with Arnold and Cohen (2008) and Gubler et al. (2014), protean career theory is viewed as a useful tool that may help to explain some new career phenomena or realities. Based on this view, some questions should be answered. What are the new career phenomena? What are typical cases of the new career phenomena? The new career phenomenon may be called a boundaryless career (e.g. Arthur and Rousseau, 1996; Sullivan, 1999; Tams and Arthur, 2010; Inkson et al., 2012; Waters et al., 2015). A freelancer may be viewed as a typical example of the new career phenomenon (boundaryless career) (Waters et al., 2015). Accordingly, PCO construct or protean career concept or protean career theory may be the most relevant to explain the career issues (e.g. career success, career development) of that career actor. Thus, freelancers may be the most relevant population for developing protean career theory. In addition, other career actors, such as traditional CEOs with high PCO, should be studied to provide the balanced viewpoint suggested by Baruch (2006) and Inkson et al. (2012). This researcher argues that the dualist viewpoint, using competing hypotheses, may be a most suitable approach to investigate career actors in transition.

The study also has implications for extending protean career theory through the moderator of firm size (measured as sales). The study introduced firm size as a new moderator of an existing PCO-SCS relationship. Additionally, the study has provided initial empirical evidence that supports this moderating effect. However, firm size only significantly moderated the relationship between PCO and PFA, and it did not significantly moderate the relationship between PCO and PCA or the relationship between PCO and AFA. Furthermore, the study seemed not to find a sufficient answer to the 'where question' in theory development. Specifically, the findings indicate that the positive effect of PCO on PFA may rely upon firm size. However, the study also proposes some possible alternative hypotheses. These alternative hypotheses may include whether firm size (measured as sales) moderates the PCO-CS relationships when CS is measured as an alternative indicator, and whether firm size (measured as an alternative indicator) moderates the PCO-CS relationships when CS is measured as the

same indicator. An additional hypothesis is whether firm size moderates the PCO-SCS relationship, but does not moderate the PS-OCS relationship.

The study also has implications for extending the literature about PCO through the moderator of ownership structure (measured as foreign ownership). The study introduced ownership structure as a new moderator of an existing PCO-CS relationship. Additionally, the study provided initial empirical evidence that supported this moderating effect. However, ownership structure (measured as foreign ownership) only significantly moderated the relationship between PCO and PFA, while it did not significantly moderate the relationship between PCO and PCA or the relationship between PCO and AFA. Furthermore, our study seemed not to find a sufficient answer to the 'where' question in theory development. Specifically, the findings indicated that the positive effect of PCO on PFA may rely upon ownership structure. Moreover, the study proposed some possible alternative hypotheses about whether ownership structure (measured as foreign ownership) moderates the PCO-CS relationships when CS is measured as an alternative indicator and whether ownership structure (measured as an alternative indicator) moderates the PCO-CS relationships when CS is measured as the same indicator. Another hypothesis is whether ownership structure moderates the PCO-SCS relationship, but does not moderate the PCO-OCS relationship.

With regard to the MP-CS relationship, the study appears to extend managerial power theory in some compelling ways. Firstly, the study seems to be the first study that has borrowed managerial power theory from the corporate governance discipline and applied it in career research. This theory borrowing may be beneficial for explaining CEOs' power – career success relationship by providing the managerial power concept and the mechanism to make clear the effect of managerial power on career success. Secondly, this study has contributed towards filling the research gap that the literature about CEO's power – compensation association has been characterized by divergent and conflicting findings by suppying empirical evidence for a significantly positive relationship between CEO's power and annual cash compensation. Thirdly, our study has provided empirical evidence that affirms the existing theoretical principles of managerial power theory, which predict that CEOs with more power can extract more rents, or that CEO power is positively related to economic career outcomes. Fourthly, the study appears to have opened up a neglected area, namely, the relationdhip between corporate governance and executive career success. Fifthly, the study also appears to suggest a new proposition and to provide an underlying economic and psychological dynamic that justifies the newly proposed causal relationship between executive power and career success. The underlying economic and psychological dynamic is rent extraction in the context of career success. The study constitutes theoretical contributions with respect to managerial power theory by answering the 'what', 'how' and 'why' questions in theory development in the context of executive career success research. Sixthly, the study supplies empirical evidence that probably affirms the newly proposed causal relationship between executive power and career success. The findings indicate that CEOs with more power seem not only to extract more objective career success, but also to gain or enjoy higher level of subjective or perceived career success. Seventhly, the study seems to create new understandings of an existing issue, which is the relationship between executive career success and some corporate governance concepts, such as CEO duality, CEO tenure and board size.

5.4.2. Theoretical contributions in a nutshell

In addition to extending the original work of Judge et al. (1995), based on the taxonomy of theoretical contributions for empirical studies suggested by Colquitt and Zapata-Phelan (2007), this study makes original contributions to the field of career success research by not only testing

existing theories, but also by building new theories. The study has grounded predictions with the relevant existing theories, conceptual arguments and references to past findings. Further, this study has examined a previously unexplored relationship between CEO managerial power and his career success. Additionally, the study has introduced, as well as empirically tested, the three new moderators of existing relationships, including firm size, employment sector and ownership structure. In addition, this study have constructed a holistic and novel context in Section 2.2.2 for demonstrating how to characterise transitional economies in South East Asia, where our novel approach supported by Chapter 3 invoking multiple disciplines has been applied.

Specifically, seven significant contributions stemmed from this study with regard to *the broader (global) career literature* include:

1. Extending the original work of Judge et al. (1995) explained in Section 1.2 and 2.5;
2. Examining a previously unexplored relationship between CEO managerial power and his career success, as mentioned in Section 1.2 and 2.5.2.5.
3. Empirically classifying the controversial relationships of three predictor types associated with career success as well as between the objective and subjective career success summarised in Section 1.2 and detailed in Section 2.5, 4.6 and 5.3;
4. Considering interdisciplinarity in career research explained in Section 1.2 and 3.2;
5. Bridging the gap between the context of a transition economy described in Section 1.1 as well as 2.2.2 and current knowledge of the career success of Section 2.2;
6. Considering the context under that the CEO is operating, which is detailed in Section 1.2 and 2.4;
7. Systematically reorganised the relevant literature pertaining to human capital and managerial power theories in Section 2.3.

Firstly, this study continues the original work of Judge et al. (1995) explained in Section 1.2 and 2.5 with regard to relationships between objective and subjective career success, and between human capital and career success. Furthermore, the study extends the original work of Judge et al. (1995) by examining the moderating effects of firm size, ownership structure and employment sector; and by adding new independent variables with regard to political skill, personality traits, protean career orientation and managerial power. These additions in the study is to provide a more holistic view of the predictors and of contextual boundaries of the predictor – CEO career success relationships. As a result, this approach enhances the explanatory power of the extended work with regard to the phenomenon of CEO career success.

Secondly, the single most important finding from this study is that it examines a previously unexplored relationship between CEO managerial power and his career success, as mentioned in Section 1.2. The quantitative findings interestingly suggest a newsworthy connection between managerial power and career success, which may lead to a novel application of the existing managerial power theory to career success. The advent of the novel application may alter scholars' existing beliefs when investigating a new subtopic characterising the role of the power of a CEO on his career success. In other words, the theoretical novelty of the study lies in empirically finding this intriguing relationship, so this study can change beliefs about the relationship and serve as the foundation for brand new theory. This significantly alters our understanding of the phenomenon, CEO career success, by reorganising our causal maps.

Thirdly, this study empirically classifies the controversial relationships of three predictor types associated with career success as well as between the objective and subjective career success summarised in Section 1.2 and detailed in Section 2.5, 4.6 and 5.3. The clarification is based on the quantitative findings, which strongly affirmed the existing theoretical principles of the psychological success model, human capital theory, political skill framework and protean career theory. Those principles are sufficient for fully reflecting the predictors of CEO career success and the relationship between the objective and subjective career success.

Fourthly, this study responds to the various calls for more interdisciplinarity in career research (e.g. Van Maanen and Schein, 1977; Arthur, 2008; Khapova and Arthur, 2011) explained in Section 1.2, which aim to promote the development of knowledge through collaboration and the integration of theories and approaches from various disciplines. This study adopts an interdisciplinary approach to CEO career success research, in which CEO career success is simultaneously viewed from the three perspectives as suggested by Khapova and Arthur (2011): economics (human capital theory), psychological (psychological success model, human capital theory, political skill framework, five-factor model of personality and protean career theory) and sociological (managerial power theory and contextual factors). In addition, this study meets four in five touchstones as recommended by Chudzikowski and Mayrhofer (2011) to advance interdisciplinary dialogue on careers, including contextuality, structure and agency, boundaries, and methodology and methods. This interdisciplinary approach of the study contributes to advancing a better understanding of the multidimensional and multilayered nature of CEO career success.

Fifthly, this study bridges the gap between the context of a transition economy described in Section 1.1 as well as 2.2.2 and current knowledge of the career success of Section 2.2. More specifically, this study uses evidence collected from Vietnam to bridging the gap between current knowledge of career success and the context of transitional economies. The study applies Judge et al. (1995)'s model to a CEO population in a new context, which is a Southeast Asian transition economy. The contribution of this study highlights the importance of transition economy context, of CEO population as well as of new dependent variables (AFA, PFA, PCA) and tests the generalisability of Western findings about career success in a non-Western setting. This study is important because, to our knowledge, relatively little research has investigated on the career success of CEOs all over the world, and no prior research has examined CEO career success in Vietnam, a transition economy, using the new dependent variables (AFA, PFA, PCA).

Sixthly, this study adds to the career success literature by addressing calls from Olian and Rynes (1984), Judge et al. (1995), Ng et al. (2005), Abele et al. (2011) Michiels et al. (2013), and Kimura (2015) to take into account the context detailed in Section 2.4 under that the CEO is operating. In particular, firm size, ownership structure and employment sector were used to understand how the contextual factors affect the relationships between CEO career success and its predictors. The findings of the study confirm the importance of context for an in-depth understanding of the relationships by providing empirical evidence to support the hypotheses that the relationships that the predictors exert on CEO career success might depend, to a certain extent, on the organisational environment within which the CEO is operating. The results from this study also strengthen the calls for CEO career research to acknowledge the boundary conditions within which the CEO is operating. It is encouraged that future research into the predictor – CEO career success relationships examine a variety of organisational and industrial constructs to gain a more holistic view of the contextual boundaries of these relationships. In addition, the differences in ownership structure between in Vietnam and in developed economies mentioned in Section 2.2.2.3 suggest that the finding with respect to the moderating effect of foreign ownership may be applicable only to transition economies, but not to developed economies.

Finally, the study has systematically reorganised the relevant literature pertaining to human capital and managerial power theories in Section 2.3, in order to provide solid theoretical frameworks. The reorganisation allows to summarise the key components of each theory and its important literatures in a table. Specifically, this reorganisation covers not only the conceptual foundations, key concepts, assumptions, key ideas and predictions of each theory, but also the research questions, findings and recent debate of its related literatures. The unexplored relationship between CEO managerial power of and his career success is an example of the benefits obtained from the reorganisation.

5.5. Implications for practice

The research results suggest a profile of a successful CEO. The most successful CEO appears to be one who has impressive educational credentials, who is politically skilled, who has high protean career orientation, and who has high managerial power. Additionally, the contribution of openness to the career success of CEOs working for the firms in the industry sector is stronger than in the other sectors. However, the contribution of such factors as political skill and protean career orientation to CEO career success decreases when the firm size or level of foreign ownership increases. Given that the profile of a successful CEO is constructed and career success is a critical construct not only to managerial practitioners in organizations, but also to individuals (Hughes, 1937; Super, 1980; Gunz and Heslin, 2005), this study suggests managerial and educational implications for the selection, succession, retention and development of CEOs.

For managerial implications, the findings suggest that boards of directors that appoint CEOs in Vietnam firms should make and adopt policies on CEO selection, succession and retention that are based on the aforementioned profile of a successful CEO. These policies could potentially contribute to the career success of a CEO and, in turn, probably lead to increasing the CEO effect. In general, the board of directors may seek to influence the likelihood of optimal CEO decision-making in three major ways. Firstly, the board of directors can hire the type of CEO believed to be most likely to affect firm performance favourably. Secondly, the board of directors can choose a successor to the incumbent CEO. This decision process may begin before the incumbent CEO has left the position, and again involves the issue of choosing an insider versus outsider CEO replacement. Thirdly, the board of directors can retain or fire the selected CEO to maximize firm performance (Zajact, 1990). With respect to CEO selection, the successful CEO profile, particularly the successful factors, may imply suitable selection criteria, source and methods, which facilitate the board of directors to select the right person for the CEO position. The successful factors may be supportive in deciding between an insider (promoted from within the firm) or an outsider (brought in from outside the firm) CEO. Additionally, it is important to assess candidates' perceptions of the degrees and value of CEO career success within different facets when the board of directors select a new CEO. With regard to CEO succession planning or management, two of the key steps are identifying and developing CEO succession candidates (Rothwell, 2010). The successful factors suggested by this study may help the board of directors in identifying and developing CEO succession candidates, by defining the core competencies that the potential successor needs to acquire, to develop and to have. This plays a crucial role in establishing the criteria, which will be effective in selecting CEO succession candidates, as well as in providing learning activities for these candidates. With respect to CEO retention or turnover, this study provides the success factors as one base upon which to make a decision about whether the incumbent CEO should be retained. The board of directors should establish retention or dismissal systems that encourage the incumbent CEO to pursue not only the owners' interests, but also the CEO's interests pertaining to the CEO's career success.

The successful CEO profile indicated by the research findings appears to be beneficial to organisations, including domestic corporations and multinational corporations, which operate or wish to operate in Vietnam. The study seems to supply what they need to learn about the issues that influence career progress in Vietnam as well as to provide a better basis for corporate governance and human resource management policies and practices in corporations regarding how to manage the careers of their CEOs in Vietnam. For example, the findings implied that multinational corporations should find a balance between standardisation and differentiation in policies on CEO selection, succession and retention, because CEO career success in Vietnam appears to be both universalistic and contextual. To sum up, employees' career success (including CEO career success) has been demonstrated to contribute to overall organisational success (Ng et al., 2005). From a practical perspective, an understanding of the career success

process should help organisations to design effective career development systems and employees to develop career-enhancing strategies that facilitate their own career success (Ellis and Heneman, 1990)

For educational implications, the findings are probably valuable to future CEOs, executive education institutions, search firms and career counselling organisations. From the perspective of individuals who aspire to be future leaders or top-level managers, the study suggests that they may learn the role and importance of factors (human capital, political skill, protean career orientation, managerial power) to their career success (either objective or subjective). An awareness of the importance of these factors will help individuals to plan and prepare for their future career trajectory within the organization by anticipating and acquiring relevant competencies through formal education and training. For executive education institutions, the findings with respect to the successful CEO profile may assist them in updating the types of core competencies needing to be taught to MBA students as well as in adjusting the curriculum and in selecting instructional techniques or methods which are effective in delivering the new core competencies to higher degree level students. The new core competencies may encompass CEO experience, political skill, protean career orientation and power acquisition and utilisation. For search firms and career counselling organisations, the study's successful CEO profile may attract their attention and encourage them to advance their understanding and systems in order to provide better services for their clients. In other words, it would be beneficial for these organisations to be able to properly advise CEO candidates about their career advancement and to efficiently supply potentially effective CEO candidates to boards of directors.

5.6. Methodological contributions

The originality of the current research applies also to its methodology. Specifically, this study makes three original methodological contributions, specifically, in the research design, the data collection and the data analysis domains.

Firstly, one of the main methodological contributions lies in the research design including study design, measurement and instrumentation. Regarding the study design, the combination between correlational research and cross-sectional survey seems to have contributed to reducing common method variance and social desirability problems. Through this study design combination, the study obtained measures of the predictor and criterion variables from different sources: archival data and survey data. This made it impossible for the mind set of the sources to bias the observed relationship between the predictor and criterion variable, thus eliminating the effects of consistency motifs, implicit theories, social desirability tendencies, dispositional and transient mood states, and any tendencies on the part of the rater to acquiesce or respond in a lenient manner.

Regarding the measurement, this research may add to CEO career success research with regard to measurement as it utilised multiple measures for each construct, with the exception of the objective career success. This research improved the quality of measures in comparison with the studies by Judge et al. (1995) and Converse et al. (2016). Accordingly, this study contributes to enhancing the measurement of constructs with regard to the associations between career success and its predictors by reducing a threat to construct validity from mono-operation bias. Furthermore, the current study enhances research about CEO career success by using two new indicators (perceived financial attainment and perceived career achievement) to measure subjective career success. Compared with other studies of this theme such as Orser and Leck (2010) using one simple indicator with one item, this study probably provided a more convincing finding. What is more, the current study utilised continuous values rather than a range or a point of value from a highly valid source in order to measure a key dependent variable (CEO's actual

financial attainment). Specifically, a CEO's compensation (actual financial attainment) was measured as annual cash income from the firm, and the data was provided by the Vietnamese General Department of Taxation. The data was not the range of income and not self-reported, as was the data in the studies by Mohd Rasdi et al. (2011) and Stumpf and Tymon (2012). Therefore, this measure improved the quality of the data and related estimations. In addition, this research employed different methods to measure a construct in order to decrease the threat to construct validity from mono-method bias. For example, human capital was a construct in this research, which was operationalised by two measures (years of education and CEO tenure) and was measured by two methods (survey and hand collection from the annual reports and websites such as cafef.vn and finance.vietstock.vn). In terms of measurement, this study had made advances upon the work by Maurer and Chapmman (2013) and Ngo and Li (2015).

With regard to the instrumentation, this research has made original contributions in two ways. This research has contributed to improving measuring the PCO concept by using a 4-item scale (lower than any other scales). The total of scale items in this study was smaller than the 14 suggested by Briscoe et al. (2006) or the 7 recommended by Baruch (2014) or Porter et al. (2016). In addition, this research tested the scale in a new context. Specifically, this scale was tested in Vietnam, a Southeast Asian country with a typical culture and a transition economy.

Secondly, another main methodological contribution relates to data collection, specifically the sample and data. Regarding the sample, this research contributes to the existing literature by testing these relationships on a CEO sample that comprised multiple industries and organizations, and enabled examination of important variables at the organization-level and industries that may affect that relationship. This also enhanced the representativeness of the sample. Additionally, this CEO sample came from the population of listed firms in the two stock markets in Vietnam, in which those firms strictly adhere to the highest demand for transparency and accountability; therefore, this CEO sample owns certain advantages.

Regarding the data, there appears to be a strong probability that this research has added to the area of research about CEO career success. Specifically, this study supplies a new data set with regard to CEO career success and its predictors (human capital, political skill, personality trait, protean career orientation and managerial power) in a transition country in Southeast Asia, which provides a fascinating research laboratory for testing and developing theories, as previously mentioned in Chapter 1, when discussing the background to the problem. Additionally, the data used in this research came from multiple sources to control for common method variance. For instance, the CEO compensation data came from the Taxation Department and directors' reports, while the sources of the data about board ownership were annual reports, directors' reports and websites such as cafef.vn or finance.vietstock.vn.

In addition, primary data about CEOs' subjective career success, political skills, personality traits and protean career orientation was collected from the 179 CEO-respondents. Because of the difficulty in collecting data about the subjective career success of CEOs (Koyuncu et al., 2017), this was one of the novel contributions of this study. Furthermore, data about CEOs' actual financial attainment, educational attainment and tenure as well as board size, board composition, foreign ownership, sales and employment sector was hand collected from income tax statements, annual reports, directors' reports and the websites to a level of detail not realised in prior research on career success. Moreover, the distinctive feature of the data was that it incorporated the data about CEO subjective career success, human capital, political skill, personality trait and protean career orientation from the survey. This facilitated analysis of the associations between the five types of predictors and two aspects of CEO career success, which has not previously been possible.

To sum up, the precious raw data characterising the 179 CEOs and their firms was extracted and combined from various distinct sources, from which much of this data was hand-collected.

Importantly, this raw data also included CEOs' annual cash compensation, which were validated from the highly reliable database stored by the General Department of Taxation, which is normally difficult to assess.

Finally, the other domain of main methodological contributions of this research concerns data analysis. The current study adds to the area of research of CEO career success by properly conducting data screening, employing multiple methods/techniques to analyse the data, applying SEM with Mplus and utilising the LMS method to conduct moderating effect analyses. Like any statistical modelling procedure, structural equation modelling carries a set of assumptions and the accuracy of results is vulnerable, not only to violation of these assumptions, but also to disproportionate influence from unusual observations. While the importance of data screening is often ignored or misconstrued in empirical research studies utilizing SEM (Flora et al., 2012), this research carefully and properly conducted the data screening. The collected data was screened and examined thoroughly for errors and missing values before data entry. After that, outliers, assumptions and sample size were examined. These data screening activities were conducted according to the guidelines mentioned in section 3.5.3 in Chapter 3 and their results were reported in sections 4.2 and 4.6 in Chapter 4. These activities contributed to enhancing the impressive results of such analyses as EFA, SEM and moderation effect analysis.

Besides, this study used multiple methods/techniques to analyse the data. For example, EFA and CFA were employed to assess common method variance. This makes original contributions to the reliability of the findings of this research.

In addition, the study applied structural equation modelling, using Mplus in a study of CEO career success, which has not previously been applied to this topic. This provided the researcher with the flexibility to: (a) model relationships among multiple predictors and criterion variables, (b) construct unobservable latent variables, (c) model errors in the measurement of observed variables, and, (d) statistically test a priori substantive/theoretical and measurement assumptions against empirical data (i.e., confirmatory analysis), as suggested by Chin (1998). These advantages played an important role in contributing to the results of the SEM analyses.

Additionally, this study utilised the LMS method to conduct moderating effect analyses for the benefits of latent variable interactions. Unlike more conventional approaches to testing interactions (i.e., ordinary least squares regression), latent variable approaches, such as LMS, produce estimates of interactions that are unattenuated by measurement error, which serves to increase a study's power and reduce the likelihood of biased estimates (Busemeyer and Jones, 1983; Little et al., 2006). The LMS method is also relatively simple to implement, requiring adding just one additional command to an existing syntax file, plus some additional calculations after estimating the model if one wishes to standardize the estimates as described in this article. Finally, the LMS method's third advantage is its efficiency, requiring estimating only one additional parameter in order to estimate the latent variable interaction. These advantages contributed to the results of moderating effect analyses in this research.

To conclude, an innovative statistical analysis solution supported a powerful software package, namely, SEM supported by Mplus package, was properly employed theinvestigation framework. SEM is currently considered to be the most beneficial-and-advanced techniques in the statistical analysis techniques. SEM has substantial advantages over first-generation techniques, namely, over principal components analysis, factor analysis, discriminant analysis, or multiple regression. Additionally, the Mplus package is a user-friendly and powerful program, which has become increasingly popular in solutions employing SEM.

5.7. Limitations and suggestions for future research

While this study contributes to the literature by altering our understanding of the career success and increasing our insights into the CEO career success in Vietnam, it is not without limitations. The first potential limitation of this study is the one-country context of this study. Vietnam context was characterised by its differences in economic structure and corporate governance practices compared with in developed economies as detailed in Section 2.2.2. Therefore, this characterisation may limit the context-dependent generalisation of the findings of the study. As a result, some of these evidence-based findings may apply to Vietnam or to other transition economies, but not to developed economies.

A second potential limitation of this study is the cross-sectional survey design. The data extracted from the survey was cross-sectional, while the design of this study precluded causal conclusions, with some individual-level variables collected at one point in time. However, the survey data was one of the two types of data employed in this study and the other one was the archival data. In addition, this research met at least five requirements recommended by Rindfleisch et al. (2008) for selecting a cross-sectional survey design. The researcher, therefore, had some confidence in the proposed direction of the linkages. Nevertheless, following Podsakoff and his colleagues (2003)s' recommendations, collecting data at different times and aggregating it could be an alternative research design, since this could reflect and yield more accurate ratings. For this reason, it is suggested that future research into CEO career success should consider a longitudinal design that would allow repetitive data collection, providing stronger evidence of the causality between studied constructs.

The third potential limitation of this study is the self-report survey. Although the aforementioned models tested in this study used a multi-source approach to reduce potential common method variance (Podsakoff et al., 2003), the CEO respondents' self-evaluations might not be entirely free from bias. Bias in ratings can result from individual values and contextual factors. Recognizing this potential limitation, the current study employed anonymous questionnaires in its research design. This study also properly employed a covering letter and other techniques to reduce potential CMB. Furthermore, Harman (date)'s single factor test via EFA and CFA for assessing CMV in the study indicated that CMB was unlikely to be a major concern for the study. Nevertheless, future research on CEO career success using a more balanced variety of sources of data would be beneficial.

The fourth potential limitation of this study is that the sampling strategy used was quota sampling, one type of nonprobability sampling techniques. This sample strategy was employed to identify CEO respondents of listed firms in the two exchange stock markets in Vietnam. Probability sampling was assumed not to be feasible for this study because of its low response rate. The recent survey response rate of CEOs in a random sample has been typically 11% (e.g. Verdú and Gómez-Gras (2009), 12%, and Graham et al. (2013), 11%). It was expected that the response rate from CEOs in the listed firms in Vietnam may be lower because of low levels of information transparency and disclosure. Therefore, probability sampling would not have provided the required sample size. Additionally, carefully supervised quota sampling may provide a representative sample of the various subgroups within a population (Zikmund et al., 2013; Saunders et al., 2016). Therefore, nonprobability sampling, specifically quota sampling, was a reasonable choice in this situation in order to reach two objectives: representativeness and required sample size. Nonetheless, probability sampling usually outweighs other types of ampling in enabling researchers to have strong external validity (i.e., generalisations) from the sample being studied of the population of interest. Accordingly, probability sampling is strongly encouraged to be employed in future research on CEO career success.

The final potential limitation of the present study is measurement with one measure for one construct. Multiple indicators for each variable were not always available in the dataset, and some of the measures that were available may have been less than ideal in the current context. The variables, which were measured with one indicator, included objective career success, firm size, ownership structure and employment sector. Under most conditions typically encountered in practical applications, multi-item scales clearly outperform single items in terms of predictive validity (Diamantopoulos et al., 2012). Researchers are much better served with multi-item than single-item measures of their construct (Churchill, 1979). Thus, additional studies could be conducted to examine the extent to which similar results hold with other measures.

In addition to identification of potential limitations, the findings of this study also give rise to suggestions for future research. One important feature of scientific knowledge is that a result needs to be repeatable (Ravetz, 1971). In other words, the reproducibility of research findings is a central feature of the scientific method. Therefore, replicability in research is an important component of cumulative science. The importance of replication to ensure the validity and reliability of research has been well established (e.g. Tsang and Kwan, 1999). Replication serves the fundamental role of protecting against the uncritical acceptance of empirical results. Furthermore, the replication of the study in other contexts and distinctive cultures would be fundamental for confirming or disconfirming the generalizability of the above-mentioned empirical findings of the study. For example, the study invites retesting the hypotheses in the CEO population of Vietnamese firms which is not publicly listed in the two stock exchange markets. Hence, such replication is strongly recommended.

The findings also raise several other questions that need to be answered by future studies. It was found that the encouraging findings with respect to the above-mentioned relationships, partly stipulated by firm size, ownership structure and the employment sector, pivotally contributed to the development of a political skills framework, five-factor model of personality, as well as a protean career theory. At the same time, the research cannot shed light on the mechanisms of how firm size, ownership structure and employment sector moderate the PS-CS, PT-CS and PCO-CS relationships. Moreover, the research has not investigated the moderating effects of these three moderators on the HC-CS and MP-CS relationships. Additionally, the study used a single measure or proxy for measuring each moderator construct. Therefore, future research should retest the hypotheses, which regarded the moderating effects examined by our study, in other populations in order to confirm or disconfirm the generalisability of the aforementioned empirical findings. Future research should deeply examine the mechanisms of the moderating effects examined by this study. Future research should also look at the so far unexplored moderating effects of three existing moderators in the current framework. In addition, future research should shift its dominant focus from current measures for the three existing moderators to new ones. For example, total firm value, earnings before interest and taxes and equity value could be employed to measure the firm size moderator. Investigating more moderating relationships would provide insight into the 'where' questions in the development of related theories.

Additionally, the external validity of the findings regarding the moderating effects of employment sector on the relationships between openness and career success as well agreeableness and career success seems to be limited because of the dichotomous measurement of employment sector construct. The measurement may limit the understanding of sector/industry differences on the relationships between personality traits (e.g., openness and agreeableness) and career success since the sector here is industry or other. Therefore, future research should employ a bigger sample size or industry – focused sample, which targets at such few industries as textile, construction, manufacturing and finance), in order to advance the understanding of sector/industry differences on the relationship between personality and career success.

5.8. Concluding remarks

In conclusion, the literature suggested ten existing research gaps in the area of career success as well as in the relationships between career success and its predictors. The study aimed at bridging these research gaps in order to further develop theories on the area of CEO career success. Specifically, the research findings, firstly, provide newly-quantitative evidence obtained from a customised population in a specific context (CEOs in firms publicly listed in a Southeast Asian dynamic transition economy). The evidence has clarified the relationships between objective career success and subjective career success as well as between career success and its predictors (human capital, political skill and protean career orientation). As a result, the study has fortified the existing theoretical principles of the psychological success model, human capital theory, political skill framework and protean career theory. Secondly, the study has characterised a beneficial MP-CS relationship, which has never been previously explored. The empirical findings associated with the newly-found relationship suggest a new theoretical principle to add to the existing theories in the area of the managerial power. In other words, the empirical findings have formulated an answer to the 'how' question in the development of managerial power related theories. Thirdly, this study has led to the advent of a new set of moderators, namely, firm size, ownership structure and employment sector, which moderate existing relationships, namely, political skill - career success, protean career orientation – career success, and personality traits – career success. The introduction of the new moderators has significantly contributed to the development of theories pertaining to political skill framework, protean career theory and five-factor model of personality. The contribution has answered the 'where' questions in the development of the three theories. Fourthly, the study has further extended the career success model proposed by Judge et al. (1995), whereby it has employed various measures considering additional variables, in order to introduce a versatile model.

The favourable outcomes obtained from this study's new model benefit from the interaction between the context and the fortified theories because of its dual contributions to the career literature. On the one hand, in this study, the theories built in Western societies have been applied to a newly-customised context of a Southeast Asian transition economy, Vietnam's. Hence, the findings have provided revealing insights into the observed phenomena, which is CEO career success and its relations with the corresponding predictors in Vietnam's economy. On the other hand, the study has further generalised these theories by learning from the newly-customised context; hence, the model has covered broader scenarios with regard to career success and its relations with predictors as well as answering the 'how' and 'where' questions in the development of the theories used.

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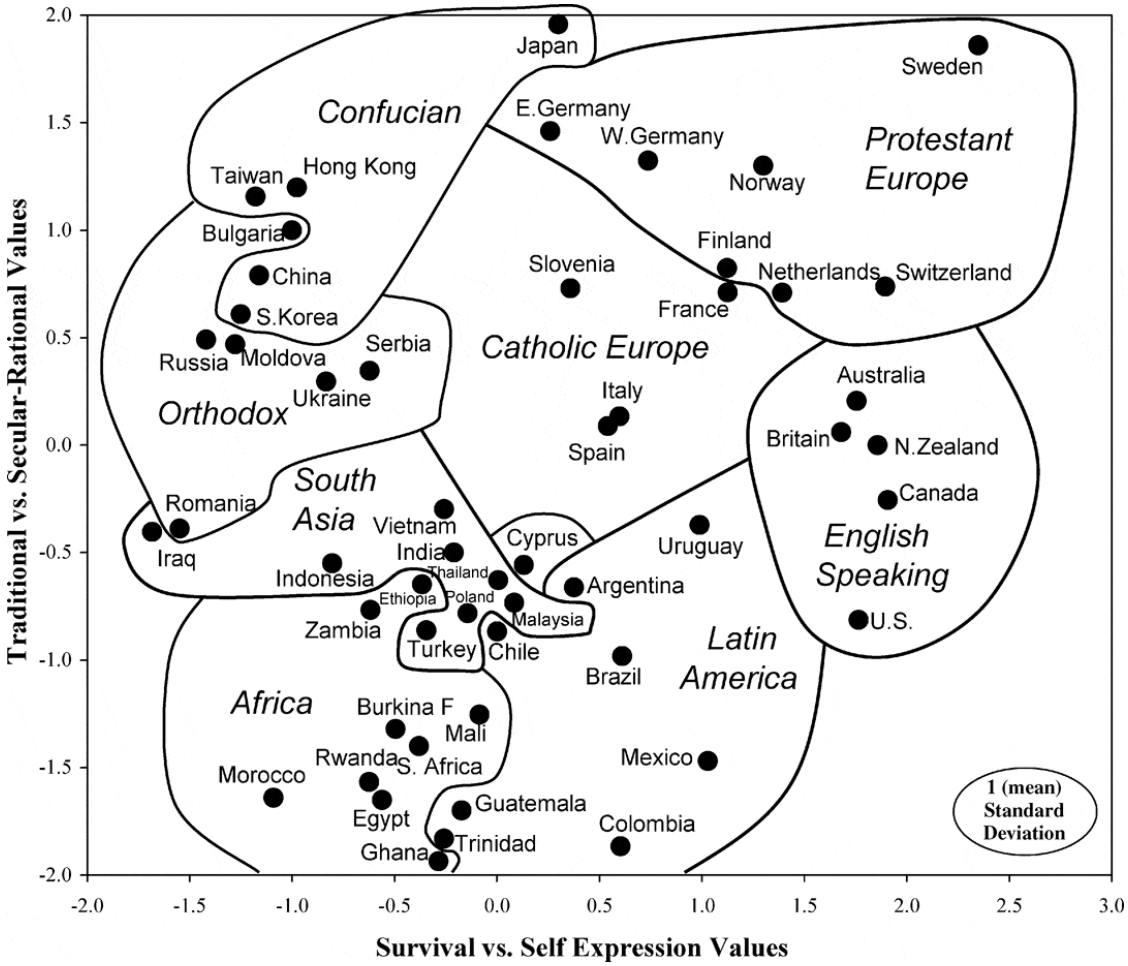
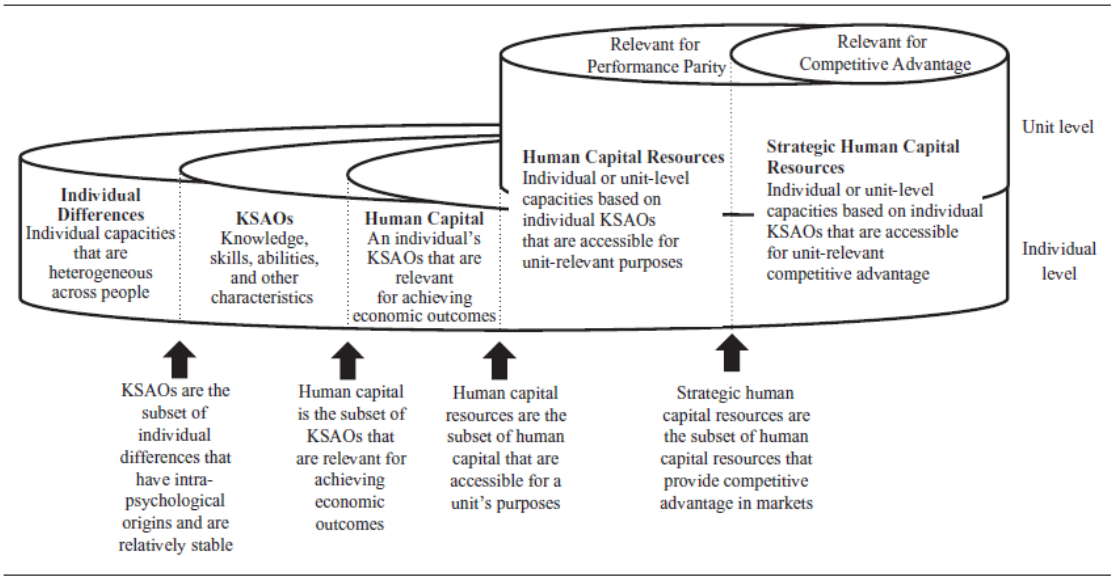
Appendices

Appendix 1. Locations of 53 societies on global cultural map in 2005-2007



Source: Inglehart and Welzel, (2010)

Appendix 2. Distinctions between human capital and the other related concepts



Source: Ployhart et al. (2014)

Appendix 3. Measurement of protean career orientation

Up to now, four attempts have been made to operationalize and measure the protean career orientation. They have included: one from Briscoe and colleagues (Briscoe et al., 2006), one from Baruch and Quick (2007), one from Baruch (2014) and one from Porter et al. (2016).

Gubler (2011) argues that there are two main areas of concern regarding the way the initial concept was operationalised. First, as shown above, Briscoe and Hall (2006) suggested that the protean career orientation should be measured along the two dimensions "values-driven" and "self-directed". They (p. 8) defined the two terms as a career in which the person is:

> *"(1) values-driven in the sense that the person‟s internal values provide the guidance and measure of success for the individual‟s career; and*
>
> *(2) self-directed in personal career management – having the ability to be adaptive in terms of performance and learning demands."*

Based on this definition, Briscoe et al. (2006, p. 45) used the 14-item scale shown in Table a.1 to capture a protean career orientation.

Table a.1. Protean career orientation items from Briscoe et al. (2006)

No.	Item	Dimension
1	When development opportunities have not been offered by my company, I've sought them out on my own.	Self-directed
2	I am responsible for my success or failure in my career.	Self-directed
3	Overall, I have a very independent, self-directed career.	Self-directed
4	Freedom to choose my own career path is one of my most important values.	Self-directed
5	I am in charge of my own career.	Self-directed
6	Ultimately, I depend upon myself to move my career forward.	Self-directed
7	Where my career is concerned, I am very much "my own person".	Self-directed
8	In the past I have relied more on myself than others to find a new job when necessary.	Self-directed
9	I navigate my own career, based on my personal priorities, as opposed to my Employer's priorities.	Values-driven
10	It doesn't matter much to me how other people evaluate the choices I make in my career.	Values-driven
11	What's most important to me is how I feel about my career success, not how other people feel about it.	Values-driven
12	I'll follow my own conscience if my company asks me to do something that goes against my values.	Values-driven
13	What I think about what is right in my career is more important to me than what my company thinks.	Values-driven
14	In the past I have sided with my own values when the company has asked me to do something I don't agree with.	Values-driven

Source: Briscoe et al. (2006)

Gubler (2011) continues to discuss that It strikes as odd that most items of the "values-driven" dimension (items 9-14) imply that personal values have to be opposed to organizational values. They are characterized as opposites that cannot be reconciled. However, Briscoe and Hall‟s own definition (see above) does not justify this dichotomization, it is purely implied by the items. Arnold and Cohen (2008) pointed out that the "path with a heart" does not mean that an

individual necessarily has to have values that contradict those of the organization. Furthermore, some items convey an individualistic overtone (e.g. item 11) that may not be explained by the original definition of the concept. Also, the "self-directed" dimension is rather marginally mirrored in this scale. Only the first item directly addresses developmental aspects as mentioned in the definition above. The other items are much more in line with an earlier definition of "self-directed" as "[…] the extent to which the person feels independent and in charge of his or her career" (Hall, 2004, p. 8).

Second, as mention in Gubler et al. (2014), this operationalization does not make clear reference to the two protean metacompetencies. Yet, Hall has repeatedly argued that adaptability and identity are essential for individuals to navigate their careers actively because they allow "people to learn from their experience and develop any new competencies on their own" (Hall, 2004, p. 6). A new, broader operationalization of the PCO should thus include the two metacompetencies.

In an effort to develop and validate PCO, Baruch and Quick (2007) confirm that the measures for the protean career approach were developed via correspondence with the originator of the protean career concept, Professor D. T. Hall. The protean career measure consisted of eight items, reaching a good reliability (see Table a.2). This scale has not classified the eight items into two groups because those authors have tended to believed that there is uni-dimension in PCO because of the original presentation of the protean career as a single construct (Hall, 1976; Hall and Moss, 1998). However, their scale is still fairly long.

Before presenting the results from a series of five studies in his research to develop and validate a measure for PCO, Baruch (2014) argues a scarcity of scientific manner and a necessity to do that. He claims that Briscoe et al. (2006) have developed a 14-item measure, and tested it mostly via student populations. Their findings suggest that the measure consists of two dimensions, in contrast to the original presentation of the protean career as a single construct (Hall 1976; Hall and Moss 1998). Thus, their resulting two-dimensional subconstructs framework does not necessarily add clarity to the study of protean career. Furthermore, subsequent research could not always confirm the proposed two-factorial structure of the measure because the values-driven scale emerged to be problematic in non-US samples (Chan et al. 2012).

Table a.2. Protean career orientation items from Baruch and Quick (2007)

No.	Item
1	Choosing between two career options, I will prefer the one I haven't tried yet.
2	For me, career success is how I am doing compared to my goals and values.
3	I navigate my own career, according to my plans.
4	If I have to find a new job, it will be easy to do.
5	I make my career choices based primarily on financial considerations (R).
6	My focus is on enhancing my employability rather than on just the tasks in a job.
7	I take responsibility for my own development.
8	I consider a wide variety of possible career moves

Source: Baruch and Quick (2007)

Unidimensionality, a basic assumption in measurement theory, is the degree to which the items represent a single underlying latent variable (Garver and Mentzer 1999), and is a desired feature for newly developed measures for concepts that were not tested empirically via quantitative studies. Furthermore, Briscoe et al.'s (2006) measure is not concise, due to its length and ambiguity of dual dimensionality as well as the limited nature of its scale validation test. On the

positive end, many of the items in Briscoe et al. seem to be capturing the true nature of the protean orientation. With the inundation of employees with surveys, in particular in western societies (Rogelberg et al., 2001; Lyness and Kropf 2007; Rogelberg and Stanton 2007), survey design requires measures that are not only valid and reliable but also concise and practical. Developing newer, more refined measures is of high importance when the measure adds value to an existing one (Kaptein, 2008). Therefor, Baruch stresses that the need for a concise measure of the construct of the protean career is clearly warranted.

Besides, Gubler et al. (2014) add that De Bruin and Buchner (2010) provided a thorough statistical examination of Briscoe et al.'s (2006) measure. Most importantly, they argued that the values-driven subscale splits into two different factors, one of them resembling aspects of self-direction. This finding was confirmed in a recent validation of the scales in a Spanish context (Enache et al., 2012). Surprisingly, to their knowledge, no other study has critically examined these scales, particularly not their construct validity. As a result, research attempting to capture the extent of individuals' PCO may currently be built on imprecise foundations. They emphasise that a thorough evaluation and, if necessary, a revision of the operationalization is key to any future research building on the PCC.

Based on the results of his series of studies, Baruch (2014) suggests that seven items presented in Table a.3 should be utilised to measure PCO.

Table a.3. Protean career orientation items from Baruch (2014)

No.	Item
1	For me, career success is how I am doing against my goals and values
2	I navigate my own career, mostly according to my plans (1)
3	If I have to find a new job, it would be easy (2)
4	I am in charge of my own career
5	I take responsibility for my own development
6	Freedom and autonomy are driving forces in my career
7	For me, career success means having flexibility in my job

Note: 2 – this item represent 'employability', and thus can be dropped if a shorter item is looked for; 1 – this item does not fit for students' populations. *Source: Baruch (2014)*

Porter et al. (2016) move forward through reducing number of items in Briscoe et al.'s (2006) scale by identifying items being candidates for removal and by validating the short form of the scale. As a result, Porter and his colleagues suggest a short form of Briscoe et al.'s (2006) scale with seven items. The self-directed dimension includes items 2, 3, 4 and 7 while the values-driven consists of items from 9 to 11. On the other hand, Porter et al. (2016) provide two reasons why further refinement (or reduction) of these scales may be beneficial. First, the content match between the original scale and the corresponding theoretical construct is somewhat questionable. Second, the scale is fairly long (14 items), which may discourage researchers with limited time and resources from using the scales and/or result in respondent fatigue.

Appendix 4. List of constructs and their relevant items

Construct	No	Item	Literature
1.Perceived social reputation	1	1. I have a good reputation in the business field.	- Lau et al. (2007)'s version - From Shane and Cable (2002) with Cronbach's alpha = 071 1. Someone on the venture team had a reputation for successfully building public firms 2. A third party I respected vouched for the team's ability to start a successful company 3. At least one venture team member is viewed by other investors as giving the venture credibility. The reputation scale was evenly weighted based on individual responses to questions administered on a five-point Likert scale items ranging from 1 = strongly disagree to 5 = strongly agree.
	2	2. In the business field, a lot of people know me.	
	3	3. Most people from my industry think that I am an excellent businessperson.	
2.Perceived financial attainment	4	1. I have earned more money than most of my friends	- Lau et al. (2007)'s version - From Carter et al. (2003) with each item on a 1 to 5 scale: 1, to no extent; 2, little extent; 3, some extent; 4, great extent; 5, to a very great extent.
	5	2. As a businessperson, my income is almost at the highest level in the same industry	
	6	3. What I have earned from my businesses is more than what I actually need	
	7	4. I can be deemed a rich person	
	8	5. I earn a lot of money	
3.Perceived career achievement	9	1. I have accomplished something valuable from my career	- Lau et al. (2007)'s version - - From Dann (1995), respondents scored each of the statements on a five-point scale of agreement ranging from strongly agree to strongly disagree. The scale was tested for both reliability and validity. With a reliability coefficient of 0.73 the scale was considered to be sufficiently internally reliable for use in this research.
	10	2. I have fulfilled something I want to do from my career	
	11	3. I have made some of my dreams come true from my career	
	12	4. I have a sense of achievement from my career	

Appendix 5. List of constructs and their relevant items (cont'l)

Construct	No	Item	Literature
4.Protean career orientation	13	1. I navigate my own career, mostly according to my plans.	- From Baruch and Quick (2007) with α = .75. All items were measured using a 1–7 Likert scale. The measures for the protean and conventional career approaches were developed via correspondence with the originator of the protean career concept, Professor D. T. Hall. - Eight valid items were generated to measure self-directed career attitudes (Briscoe, Hall, and Frautschy DeMuth, 2006) 1. When development opportunities have not been offered by my company, I've sought them out on my own. 2. I am responsible for my success or failure in my career. 3. Overall, I have a very independent, self-directed career. 4. Freedom to choose my own career path is one of my most important values. 5. I am in charge of my own career. 6. Ultimately, I depend upon myself to move my career forward. 7. Where my career is concerned, I am very much "my own person." 8. In the past I have relied more on myself than others to find a new job when necessary. Scoring: Self-Directed Career Management Scale = items 1–8 with α = .81 and De Vos and Soens (2008) with α = .83. Çakmak-Otluoğlu (2012) with α = .84. Briscoe et al. (2006) used the scale: 1 = To little or no extend, 2 = To a limited extent, 3 = To some extent, 4 = To a considerable extent, 5 = To a great extent.
	14	2. I am in charge of my own career	
	15	3. I take responsibility for my own development	
	16	4. Freedom to choose my own career path is one of my most important values.	

Appendix 6. List of constructs and their relevant items (cont'l)

Construct	No	Item	Literature
Political Skill			From Ferris (2005) with α = .93 and the 18 items recorded on 5-point Likert-type scales ranging from 1 (strongly disagree) to 5 (strongly agree). The 6-item networking ability dimension had an alpha reliability of .90, the 4-item interpersonal influence dimension had an alpha reliability of .89, the 5-item social astuteness dimension had an alpha reliability of .87, and the 3-item apparent sincerity dimension had an alpha reliability of .78.
5.Networking ability	17	1. I spend a lot of time and effort at work networking with others.	
	18	2. I am good at building relationships with influential people at work.	
	19	3. I have developed a large network of colleagues and associates at work whom I can call on for support when I really need to get things done.	
	20	4. At work, I know a lot of important people and am well connected.	
	21	5. I spend a lot of time at work developing connections with others.	
	22	6. I am good at using my connections and network to make things happen at work.	
6.Interpersonal influence	23	1. I am able to make most people feel comfortable and at ease around me.	
	24	2. I am able to communicate easily and effectively with others.	
	25	3. It is easy for me to develop good rapport with most people.	
	26	4. I am good at getting people to like me.	
7.Social astuteness	27	1. I understand people very well.	
	28	2. I am particularly good at sensing the motivations and hidden agendas of others.	
	29	3. I have good intuition or savvy about how to present myself to others.	
	30	4. I always seem to instinctively know the right things to say or do to influence others.	
	31	5. I pay close attention to people's facial expressions.	
8.Apparent sincerity	32	1. When communicating with others, I try to be genuine in what I say and do.	
	33	2. It is important that people believe I am sincere in what I say and do.	
	34	3. I try to show a genuine interest in other people.	

Appendix 7. List of constructs and their relevant items (cont'l)

Construct	No	Item	Literature
FFM personality traits			- The FFM traits were measured with NEO Personality Inventory, the most widely used and extensively validated measure of the five-factor model (Costa and McCrae, 1992b). - According to Boudreau et al. (2001), each of the five traits in the NEO-FFI are measured by asking respondents to indicate their agreement with 12 statements (1=strongly disagree to 5=strongly agree). Reliabilities of the NEO scales were as follows (coefficient alpha [α] reliability estimates are provided first for the American sample, followed by the α for the European sample): Neuroticism, α = .82, .74; Extroversion, α = .77, .70; Openness, α = .72, .71; Agreeableness α = .71, .58; Conscientiousness, α = .80, .71. (Executive samples in the US and Europe, respectively) - According to Zacher (2014), the FFM traits were assessed with five 4-item scales developed and validated by Donnellan et al. (2006). Cronbach's alphas for the scale are (reverse scored; extraversion; alpha = .85), (conscientiousness; alpha = .71), (neuroticism; alpha = .79), (agreeableness; alpha = .82), and (openness to experience; alpha = .80). Participants responded to the items on 5-point scales ranging from 1 (strongly disagree) to 5 (strongly agree). From Donnelan et al. (2006) with (R) = Reverse Scored Item. Participants responded to the items on 5-point scales ranging from 1 (strongly disagree) to 5 (strongly agree).
9.Neuroticism	35	1. I have frequent mood swings.	
	36	2. I am relaxed most of the time. (R)	
	37	3. I get upset easily.	
	38	4. I seldom feel blue. (R)	
10.Extroversion	39	1. I am the life of the party.	
	40	2. I don't talk a lot. (R)	
	41	3. I talk to a lot of different people at parties.	
	42	4. I keep in the background. (R)	
11.Openness to experience	43	1. I have a vivid imagination.	
	44	2. I am not interested in abstract ideas. (R)	
	45	3. I have difficulty understanding abstract ideas. (R)	
	46	4. I do not have a good imagination. (R)	
12.Agreeableness	47	1. I sympathize with others' feelings	
	48	2. I am not interested in other people's problems. (R)	
	49	3. I feel others' emotions.	
	50	4. I am not really interested in others. (R)	
13.Conscientiousness	51	1. I get chores done right away	
	52	2. I often forget to put things back in their proper place. (R)	
	53	3. I like order.	
	54	4. I make a mess of things. (R)	

Appendix 8. Consent form

UNIVERSITY OF Southampton

CONSENT FORM

Study title: **Predictors of CEO career success in a transition economy – Evidence from Vietnam**

Researcher name: Kien Duc Nguyen

Ethics reference: 7776

Please initial the box(es) if you agree with the statement(s):

I have read and understood the information sheet (23-09-13/v01) and have had the opportunity to ask questions about the study.	☐
I agree to take part in this research project and agree for my data to be used for the purpose of this study	☐
I understand my participation is voluntary and I may withdraw at any time without my legal rights being affected	☐
I am happy for the interview to be tape-recorded.	☐

Data Protection

I am happy to be contacted regarding other unspecified research projects. I therefore consent to the University retaining my personal details on a database, kept separately from the research data detailed above. The 'validity' of my consent is conditional upon the University complying with the Data Protection Act and I understand that I can request my details be removed from this database at any time.	☐

I understand that information collected about me during my participation in this study will be stored on a password protected computer and that this information will only be used for the purpose of this study. All files containing any personal data will be made anonymous.

Name of participant ……

Signature of participant……..

Date……

Appendix 9. Questionnaire

UNIVERSITY OF Southampton

Questionnaire
CEO career success in Vietnam

Dear Sir or Madam,

We have been carrying out a study on CEOs in Vietnam. This questionnaire is designed to collect useful data on CEOs of listed firms for the research. That you give the best answers based on your situation and understandings is very important and significant for the success of the study. The research group undertakes that the given information on each questionnaire will be confidential and used for no other purposes but scientific research. In return, you will have the full report of the study if required. If you have any questions, please contact Kien Duc Nguyen at 016 8878 7733 or via kdn1c11@soton.ac.uk.

Thanks for your co-operation.

Prof. Yehuda Baruch
Dr. Hong Minh Thi Bui
PhD candidate Kien Duc Nguyen
University of Southampton, UK

Please tell us your level of agreement or disagreement about the following statements by circling the most suitable number.	**Strongly disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly agree**
1. In the business field, a lot of people know me	1	2	3	4	5
2. I have a good reputation in the business field.	1	2	3	4	5
3. Most people from my industry think that I am an excellent CEO.	1	2	3	4	5
4. I earn a lot of money.	1	2	3	4	5
5. What I have earned from my businesses is more than what I actually need.	1	2	3	4	5
6. I have earned more money than most of my friends.	1	2	3	4	5
7. As a CEO, my income is amongst the highest level in my industry.	1	2	3	4	5
8. I can be deemed a wealthy person.	1	2	3	4	5
9. I have fulfilled something I want to do from my career.	1	2	3	4	5
10. I have made some of my dreams come true from my career.	1	2	3	4	5
11. I have accomplished something valuable from my career.	1	2	3	4	5
12. I have a sense of achievement from my career.	1	2	3	4	5
13. I am in charge of my own career.	1	2	3	4	5
14. I navigate my own career, mostly according to my plans.	1	2	3	4	5
15. I take responsibility for my own development.	1	2	3	4	5
16. Freedom to choose my own career path is one of my most important values.	1	2	3	4	5

Please tell us your level of agreement or disagreement about the following statements by circling the most suitable number.	**Strongly disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly agree**
1. I am particularly good at sensing the motivations and hidden agendas of others	1	2	3	4	5
2. I pay close attention to people's facial expressions	1	2	3	4	5
3. I understand people very well	1	2	3	4	5
4. I have good intuition or "savvy" about how to present myself to others	1	2	3	4	5
5. I always seem to instinctively know the right things to say or do to influence others	1	2	3	4	5
6. I am able to communicate easily and effectively with others	1	2	3	4	5
7. I am good at getting people to like me	1	2	3	4	5
8. It is easy for me to develop a good rapport with most people	1	2	3	4	5
9. I am able to make most people feel comfortable and at ease around me	1	2	3	4	5
10. I spend a lot of time and effort at work networking with others	1	2	3	4	5
11. At work, I know a lot of important people and am well connected	1	2	3	4	5
12. I have developed a large network of colleagues and associates at work whom I can call on for support when I really need to get things done	1	2	3	4	5
13. I am good at building relationships with influential people at work	1	2	3	4	5
14. I am good at using my connections and networking to make things happen at work	1	2	3	4	5
15. I spend a lot of time at work developing connections with others	1	2	3	4	5
16. I try to show a genuine interest in other people	1	2	3	4	5
17. It is important that people believe I am sincere in what I say and do	1	2	3	4	5
18. When communicating with others, I try to be genuine in what I say and do	1	2	3	4	5

Please tell us your level of agreement or disagreement about the following statements by circling the most suitable numbe	**Strongly disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly agree**
1. I have frequent mood swings.	1	2	3	4	5
2. I am relaxed most of the time (R).	1	2	3	4	5
3. I get upset easily.	1	2	3	4	5
4. I seldom feel blue (R).	1	2	3	4	5
5. I am the life of the party.	1	2	3	4	5
6. I don't talk a lot (R).	1	2	3	4	5
7. I talk to a lot of different people at parties.	1	2	3	4	5
8. I keep in the background (R).	1	2	3	4	5
9. I have a vivid imagination.	1	2	3	4	5
10. I am not interested in abstract ideas (R).	1	2	3	4	5
11. I have difficulty understanding abstract ideas (R).	1	2	3	4	5
12. I do not have a good imagination (R).	1	2	3	4	5
13. I am not really interested in others (R).	1	2	3	4	5
14. I sympathize with others' feelings.	1	2	3	4	5
15. I feel others' emotions.	1	2	3	4	5
16. I am not interested in other people's problems (R).	1	2	3	4	5
17. I like order.	1	2	3	4	5
18. I often forget to put things back in their proper place (R).	1	2	3	4	5
19. I make a mess of things (R).	1	2	3	4	5
20. I get chores done right away.	1	2	3	4	5

Please tell us kinds of information regarding yourself, your family and job

1. ***Position:*** ☐ CEO ☐ Chairman

2. ***Sex:*** ☐ Male ☐ Female

3. ***Marital status:*** ☐ Married ☐ Unmarried

4. ***Highest educational level:*** ☐ University Degree ☐ Master Degree

☐ PhD Degree ☐ Other

Specify _____

5. Is your spouse employed? ☐ Yes ☐ No

6. Where did you live in the main part of period before mature? (e.g. Hanoi) _____

7. When were you born? (e.g. 1961) _____

8. When did you start your career? _____

9. When did you start to work at current organisation? _____

10. When did you start to be a CEO? _____

Thank you for your time and effort.

Appendix 10. Summary of statistics employed in the data analysis of this thesis

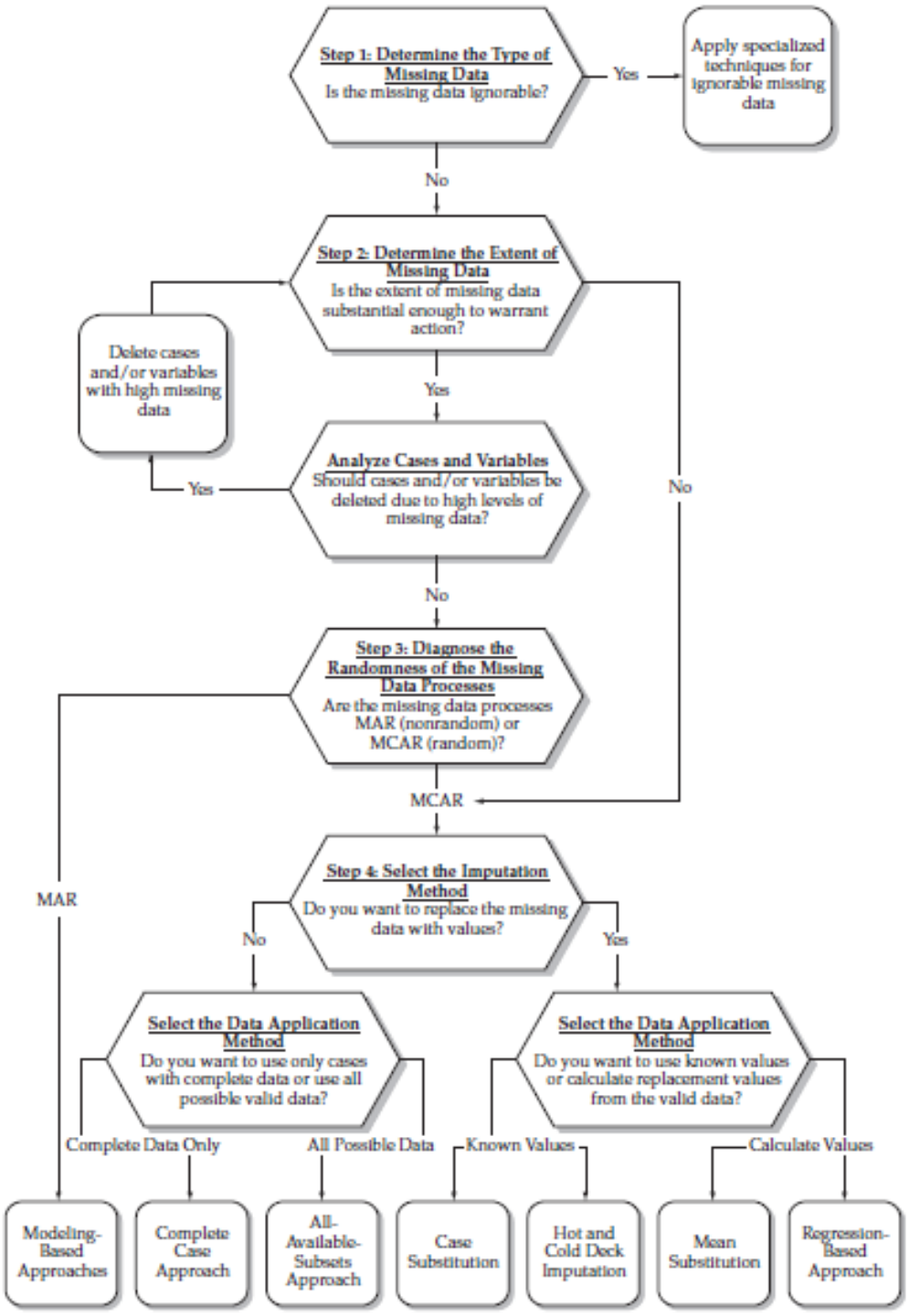
Statistics	Software package	Purpose of use	Remarks	Reference (s)
Analysis of variance (ANOVA)	SPSS 22.0	to estimate the non response bias	the questionnaires received at different point of time of the data collection (i.e. early respondents and late respondents) were used in analysis to assess the non-response bias	Babbie (1990)
Little's chi-square statistics ($\chi 2$)	SPSS 22.0	to diagnose the randomness of missing data	insignificant value of the test suggests that the data may be assumed to be missing completely at random (MCAR)	Little (1988)
Mahalanobis Distance (D2)	SPSS 22.0	to investigate the multivariate outliers	a very conservative statistical significance test such as $p < .001$ was employed to be used with D2 measure	Hair et al. (2010), Kline (2016)
Kurtosis and Skewness	SPSS 22.0	to find out data normality	the maximum acceptable limits of observation values up to ±1 for the skewness and up to ±3 for the kurtosis were used.	West et al. (1995); Hair et al. (2010), Kline (2016)
Descriptive statistics (i.e. frequencies, means, standard deviations, and so on)	SPSS 22.0	to summarize demographic information and items analysis	these analyses were performed for each variable separately and to summarise the demographic profile of the respondents in order to get preliminary information and the feel of the data	Sekaran and Bougie (2016)
Cronbach's Alpha	SPSS 22.0	to examine the internal consistency of each measure	a minimum cut off of 0.7 for Cronbach's alpha reliability coefficients was employed	Nunnaly (1978), Hair et al. (2010)

Appendix 7. Summary of statistics employed in the data analysis of this thesis (cont'l)

Statistics	Software package	Purpose of use	Remarks	Reference(s)
Pearson's Correlations	SPSS 22.0	to obtain preliminary information about relationships between latent factors	correlation vary from no to excellent relationship depending on the r value	Fink (1995)
Levene's test	SPSS 22.0	to test the homogeneity of variance in the data	the p-value of Levene's test greater than some critical value (typically 0.05), suggests homogeneity of the variance in the data	Levene (1960)
Exploratory factor analysis (EFA)	SPSS 22.0	to summarise information from many variables in the proposed research model into a smaller number of factors	principal components analysis (PCA) and orthogonal model with varimax rotation was employed to perform EFA	Bryman and Cramer (2011), Field (2013), Tabachnick and Fidell (2013)
Confirmatory factor analysis (CFA)	SEM using Mplus 7.0	to assess unidiminsionality, reliability and validity of constructs used in the model	The minimum cut off criteria for factors loadings >0.7, AVE >0.5, and reliability >0.7 were used for assessing the convergent validity. Nomological validity was assessed using correlations (estimates). Positive and significant estimates indicated nomological validity. For discriminant validity, the average variance extracted for each construct was compared with the corresponding squared inter construct correlations (SIC); the AVE larger than the SIC indicates discriminant validity	Hair et al. (2010)
Path analysis	SEM using Mplus 7.0	to examine the hypothesised relationships between the latent constructs in the proposed model	critical ratio (CR) estimates value >= 1.96 suggests significance of the causal path between latent constructs	Hair et al.(2010), Kline (2016)

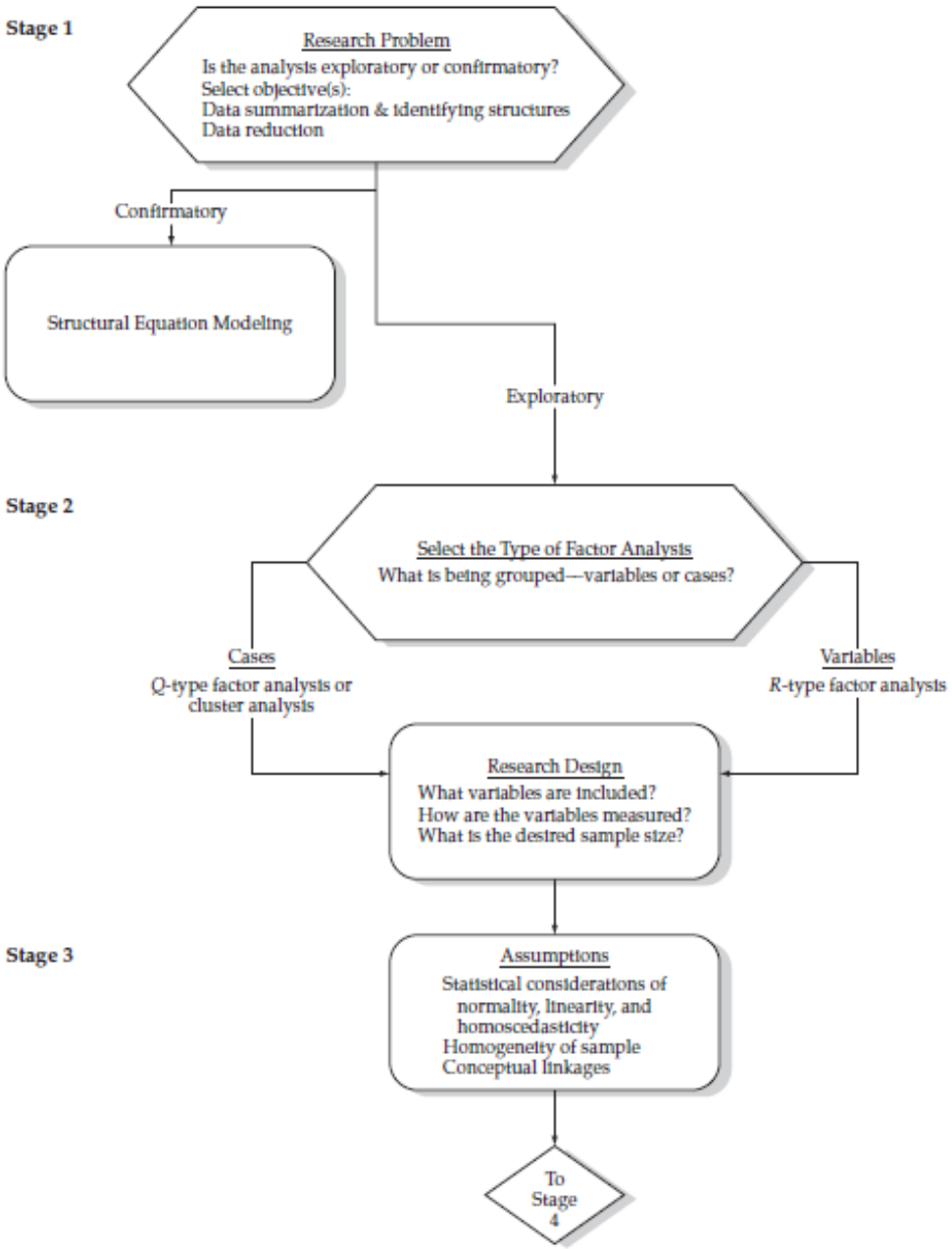
Source: Based on Chandio, 2011

Appendix 8. A four-step process for identifying missing data and applying remedies

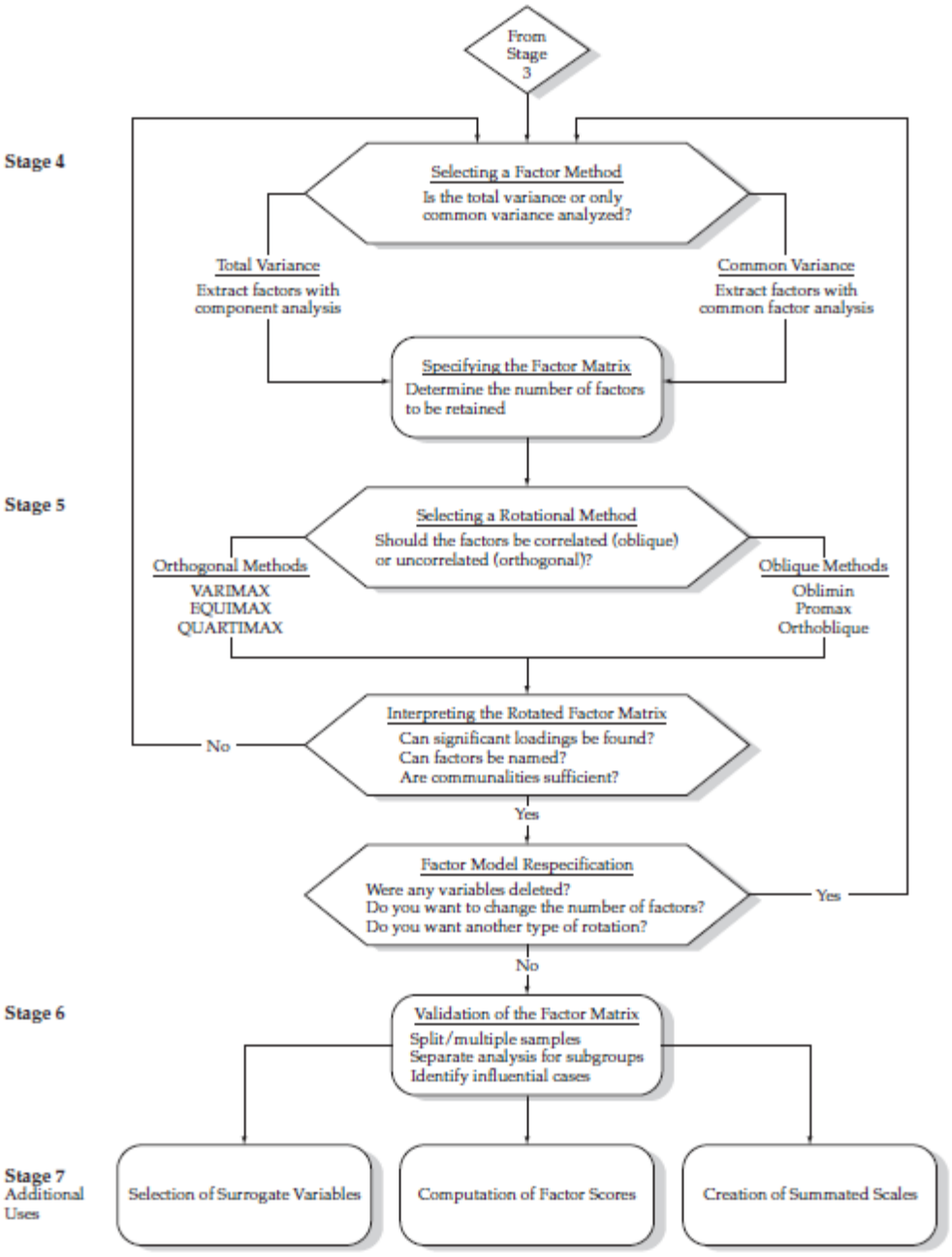


Source: Hair et al. (2010)

Appendix 9. Stages in the Factor Analysis Decision Diagram



Appendix 9. Stages in the Factor Analysis Decision Diagram (cont'l)



Appendix 10. Mplus CFA input file for the O-SCS hypothesised model

```
TITLE:  CFA for the O-SCS hypothesised model
DATA:   FILE IS CS.dat;
VARIABLE:
    NAMES ARE Q_code
              PFA1-PFA5
              PCA1-PCA4
              Lg10AFA;
    MISSING ARE ALL (-99);
    USEVARIABLES ARE PFA1-PFA5
                     PCA1-PCA4;
ANALYSIS:
     ESTIMATOR=ML;
MODEL:
     PFA BY PFA1-PFA5;
     PCA BY PCA1-PCA4;
OUTPUT: STANDARDIZED MODINDICES (ALL);
```

Appendix 11. Mplus full SEM input file for the O-SCS hypothesised model

```
TITLE:  Full SEM for the O-SCS hypothesised model
DATA:   FILE IS CS.dat;
VARIABLE:
   NAMES ARE Q_code
             PFA1-PFA5
             PCA1-PCA4
             Lg10AFA;
   MISSING ARE ALL (-99);
   USEVARIABLES ARE PFA1-PFA5
                    PCA1-PCA4
                    Log10AFA;
ANALYSIS:
   ESTIMATOR=ML;
MODEL:
   PFA BY PFA1-PFA5;
   PCA BY PCA1-PCA4;
   PFA ON Lg10AFA;
   PCA ON Lg10AFA;
OUTPUT: SAMPSTAT RESIDUAL STDYX MODINDICES TECH4;
```

Appendix 12. Mplus full SEM input file for the HC-CS hypothesised model

```
TITLE:     Full SEM for the HC-CS
           Hypothesised model  ! Related file: hc2_full_3_eduatt
DATA:      FILE IS HC2.dat;
VARIABLE: NAMES ARE Q_code
                        PFA1-PFA5  PCA1-PCA4
                        Lg10AFA InverseEduAtt
                        EduAtt SQRTCEOTen
                        Age AreaofGrow
                        Indu AreaofHead
                        Log10absSales FTyear;
        MISSING ARE ALL (-99);
        USEVARIABLES ARE PFA1-PFA5 PCA1-PCA4
                           EduAtt SQRTCEOTen;
ANALYSIS:   ESTIMATOR=ML;
MODEL:     PFA BY PFA1-PFA5;
           PCA BY PCA1-PCA4;
           PFA PCA ON EduAtt;
           PFA PCA ON SQRTCEOTen;
OUTPUT: SAMPSTAT RESIDUAL STDYX MODINDICES TECH4;
```

Appendix 13. Mplus CFA input file for the PS-CS hypothesised model

```
TITLE:  SIX FACTOR MODEL OF PFA PCA NetAbi IntInf SocAst AppSin
         CFA model   ! Related file: ps_cfa_7
DATA:   FILE IS PS1.dat;
VARIABLE:   NAMES ARE Q_code
                PFA1-PFA5 PCA1-PCA4
                NetAbi1-NetAbi6  IntInf1-IntInf4
                SocAst1-SocAst5  AppSin1-AppSin3
                Lg10AFA SQRTabsEPS
                Log10absSales Fore_own;
       USEVARIABLES ARE PFA1-PFA5 PCA1-PCA4
                NetAbi1-NetAbi6 IntInf1-IntInf4
                SocAst1-SocAst5 AppSin1-AppSin3;
ANALYSIS: ESTIMATOR=ML;
MODEL:  PFA BY PFA1-PFA5;
           PCA BY PCA1-PCA4;
           NetAbi BY NetAbi1-NetAbi6;
           IntInf BY IntInf1-IntInf4;
           SocAst BY SocAst1-SocAst5;
           AppSin BY AppSin1-AppSin3;
           PS BY NetAbi IntInf SocAst AppSin;
           INTINF2  WITH NETABI6;
           INTINF4  WITH INTINF2;
OUTPUT: STANDARDIZED MODINDICES (ALL);
```

Appendix 14. Mplus full SEM input file for the PS-CS hypothesised model

```
TITLE:  Full SEM model for the Political Skill - Career Success (PS-CS)
        ! Related file: ps1_full_7
DATA:   FILE IS PS1.dat;
VARIABLE:   NAMES ARE Q_code PFA1-PFA5 PCA1-PCA4
                NetAbi1-NetAbi6 IntInf1-IntInf4
                SocAst1-SocAst5 AppSin1-AppSin3
                Lg10AFA SQRTabsEPS
                Log10absSales Fore_own;
        USEVARIABLES ARE PFA1-PFA5 PCA1-PCA4 Lg10AFA
                NetAbi1-NetAbi6 IntInf1-IntInf4
                SocAst1-SocAst5 AppSin1-AppSin3;
ANALYSIS: ESTIMATOR=ML;
MODEL:  PFA BY PFA1-PFA5;
            PCA BY PCA1-PCA4;
            NetAbi BY NetAbi1-NetAbi6;
            IntInf BY IntInf1-IntInf4;
            SocAst BY SocAst1-SocAst5;
            AppSin BY AppSin1-AppSin3;
            PS BY NetAbi IntInf SocAst AppSin;
            Lg10AFA PFA PCA ON PS;
            INTINF2  WITH NETABI6;
            INTINF4  WITH INTINF2;
OUTPUT: STANDARDIZED MODINDICES (ALL);
```

Appendix 15. Mplus input file of CFA model for assessing the moderating effect of sales on PS-AFA relationship

```
TITLE:  FOUR FACTOR MODEL OF NetAbi IntInf SocAst AppSin
         CFA model  ! Related file: ps1_cfa_afa_7_stand_sales
DATA:   FILE IS PS1.dat;
VARIABLE:   NAMES ARE Q_code PFA1-PFA5 PCA1-PCA4
                NetAbi1-NetAbi6 IntInf1-IntInf4
                SocAst1-SocAst5 AppSin1-AppSin3
                Lg10AFA SQRTabsEPS
                Log10absSales Fore_own;
        USEVARIABLES ARE NetAbi1-NetAbi6 IntInf1-IntInf4
                SocAst1-SocAst5 AppSin1-AppSin3;
ANALYSIS: ESTIMATOR=ML;
MODEL:  NetAbi BY NetAbi1-NetAbi6;
            IntInf BY IntInf1-IntInf4;
            SocAst BY SocAst1-SocAst5;
            AppSin BY AppSin1-AppSin3;
            PS BY NetAbi IntInf SocAst AppSin;
            INTINF2 WITH NETABI6;
            INTINF4 WITH INTINF2;
            SOCAST3 WITH INTINF3;
OUTPUT: STANDARDIZED MODINDICES (ALL);
```

Appendix 16. Mplus input file of full SEM model for assessing the moderating effect of sales on PS-AFA relationship: Model without interaction

```
TITLE:  Moderating effect of sales on PS-AFA
          Model 0, no interaction    ! Related file: ps1_nomod_afa_7_stand_sales
DATA:   FILE IS PS1.dat;
          type is individual;
VARIABLE:   NAMES ARE Q_code PFA1-PFA5 PCA1-PCA4
                  NetAbi1-NetAbi6 IntInf1-IntInf4 SocAst1-SocAst5 AppSin1-AppSin3
                  Lg10AFA SQRTabsEPS Log10absSales Fore_own;
         MISSING ARE ALL (-99);
         USEVARIABLES ARE NetAbi1-NetAbi6 IntInf1-IntInf4 SocAst1-SocAst5
                  AppSin1-AppSin3 Lg10AFA Log10absSales;
ANALYSIS: ESTIMATOR = ML;
DEFINE: standardize NetAbi1-NetAbi6 IntInf1-IntInf4 SocAst1-SocAst5
                  AppSin1-AppSin3 Lg10AFA Log10absSales;
MODEL: NetAbi BY NetAbi1-NetAbi6;
            IntInf BY IntInf1-IntInf4;
            SocAst BY SocAst1-SocAst5;
            AppSin BY AppSin1-AppSin3;
            PS BY NetAbi IntInf SocAst AppSin;
            Log10absSales WITH PS;
            INTINF4 WITH INTINF2;
            INTINF2 WITH NETABI6;
            Lg10AFA ON PS Log10absSales;
            PS;
OUTPUT: SAMPSTAT TECH1 TECH4 residual standardized;
```

Appendix 17. Mplus input file of full SEM model for assessing the moderating effect of sales on PS-AFA relationship: Model with interaction

```
TITLE:  Moderating effect of sales and on PS-AFA
          Model 1, with interaction    ! Related file: ps1_mod_afa_7_stand_sales
DATA:   FILE IS PS1.dat;
           type is individual;
VARIABLE:   NAMES ARE Q_code PFA1-PFA5 PCA1-PCA4
                  NetAbi1-NetAbi6 IntInf1-IntInf4 SocAst1-SocAst5 AppSin1-AppSin3
                  Lg10AFA SQRTabsEPS Log10absSales Fore_own;
         MISSING ARE ALL (-99);
         USEVARIABLES ARE NetAbi1-NetAbi6 IntInf1-IntInf4
                  SocAst1-SocAst5 AppSin1-AppSin3 Lg10AFA Log10absSales;
ANALYSIS: TYPE = RANDOM;
               ESTIMATOR = ML;
               ALGORITHM = INTEGRATION;
DEFINE: standardize NetAbi1-NetAbi6 IntInf1-IntInf4
                  SocAst1-SocAst5 AppSin1-AppSin3 Lg10AFA Log10absSales;
MODEL: NetAbi BY NetAbi1-NetAbi6;
            IntInf BY IntInf1-IntInf4;
            SocAst BY SocAst1-SocAst5;
            AppSin BY AppSin1-AppSin3;
            PS BY NetAbi IntInf SocAst AppSin;
            PSxSales | PS XWITH Log10absSales;
            Log10absSales WITH PS;
            INTINF4 WITH INTINF2;
            INTINF2 WITH NETABI6;
            Lg10AFA ON PS Log10absSales PSxSales;
            PS;
OUTPUT: SAMPSTAT TECH1;
```

Appendix 18. Mplus input file of CFA model for assessing the moderating effect of sales on PS-PFA relationship

```
TITLE:  FIVE FACTOR MODEL OF PFA NetAbi IntInf SocAst AppSin
          CFA model  ! Related file: ps1_cfa_pfa_7_stand_sales
DATA:   FILE IS PS1.dat;
VARIABLE:   NAMES ARE Q_code PFA1-PFA5 PCA1-PCA4 NetAbi1-NetAbi6
                  IntInf1-IntInf4 SocAst1-SocAst5 AppSin1-AppSin3
                  Lg10AFA SQRTabsEPS Log10absSales Fore_own;
         USEVARIABLES ARE PFA1-PFA5 NetAbi1-NetAbi6
                  IntInf1-IntInf4 SocAst1-SocAst5 AppSin1-AppSin3;
ANALYSIS: ESTIMATOR=ML;
MODEL:  NetAbi BY NetAbi1-NetAbi6;
             IntInf BY IntInf1-IntInf4;
             SocAst BY SocAst1-SocAst5;
             AppSin BY AppSin1-AppSin3;
             PS BY NetAbi IntInf SocAst AppSin;
             PFA BY PFA1-PFA5;
             INTINF2 WITH NETABI6;
             INTINF4 WITH INTINF2;
OUTPUT: STANDARDIZED MODINDICES (ALL);
```

Appendix 19. Mplus input file of full SEM model for assessing the moderating effect of sales on PS-PFA relationship: Model without interaction

```
TITLE:  Moderating effect of sales on PS-PFA
          Model 0, no interaction
DATA:   FILE IS PS1.dat;
          type is individual;
VARIABLE:   NAMES ARE Q_code PFA1-PFA5 PCA1-PCA4 NetAbi1-NetAbi6
                              IntInf1-IntInf4 SocAst1-SocAst5 AppSin1-AppSin3
                              Lg10AFA SQRTabsEPS Log10absSales Fore_own;
         MISSING ARE ALL (-99);
         USEVARIABLES ARE NetAbi1-NetAbi6 IntInf1-IntInf4 SocAst1-SocAst5
                               AppSin1-AppSin3 PFA1-PFA5 Log10absSales;
ANALYSIS: ESTIMATOR = ML;
DEFINE: standardize NetAbi1-NetAbi6 IntInf1-IntInf4 SocAst1-SocAst5
                               AppSin1-AppSin3 PFA1-PFA5 Log10absSales;
MODEL: NetAbi BY NetAbi1-NetAbi6;
             IntInf BY IntInf1-IntInf4;
             SocAst BY SocAst1-SocAst5;
             AppSin BY AppSin1-AppSin3;
             PS BY NetAbi IntInf SocAst AppSin;
             PFA BY PFA1-PFA5;
             Log10absSales WITH PS;
             INTINF4 WITH INTINF2;
             INTINF2 WITH NETABI6;
             PFA ON PS Log10absSales;
             PS;
OUTPUT: SAMPSTAT TECH1 TECH4 residual standardized;
```

Appendix 20. Mplus input file of full SEM model for assessing the moderating effect of sales on PS-PFA relationship: Model with interaction

```
TITLE:  Moderating effect of sales and on PS-PFA
      Model 1, with interaction
DATA:   FILE IS PS1.dat;
          type is individual;
VARIABLE:   NAMES ARE Q_code PFA1-PFA5 PCA1-PCA4 NetAbi1-NetAbi6
                              IntInf1-IntInf4 SocAst1-SocAst5 AppSin1-AppSin3
                              Lg10AFA SQRTabsEPS Log10absSales Fore_own;
               MISSING ARE ALL (-99);
               USEVARIABLES ARE NetAbi1-NetAbi6 IntInf1-IntInf4 SocAst1-SocAst5
                              AppSin1-AppSin3 PFA1-PFA5 Log10absSales;
ANALYSIS: TYPE = RANDOM;
              ESTIMATOR = ML;
              ALGORITHM = INTEGRATION;
DEFINE: standardize        NetAbi1-NetAbi6 IntInf1-IntInf4 SocAst1-SocAst5
                              AppSin1-AppSin3 PFA1-PFA5 Log10absSales;
MODEL: NetAbi BY NetAbi1-NetAbi6;
            IntInf BY IntInf1-IntInf4;
            SocAst BY SocAst1-SocAst5;
            AppSin BY AppSin1-AppSin3;
            PS BY NetAbi IntInf SocAst AppSin;
            PFA BY PFA1-PFA5;
            PSxSales | PS XWITH Log10absSales;
            Log10absSales WITH PS;
            INTINF4 WITH INTINF2;
            INTINF2 WITH NETABI6;
            PFA ON PS Log10absSales PSxSales;
            PS;
OUTPUT: SAMPSTAT TECH1;
```

Appendix 21. Mplus input file of CFA model for assessing the moderating effect of sales on PS-PCA relationship

```
TITLE:  FIVE FACTOR MODEL OF PCA NetAbi IntInf SocAst AppSin
          CFA model    ! Related file: ps1_cfa_pca_7_stand_sales
DATA:   FILE IS PS1.dat;
VARIABLE:   NAMES ARE Q_code PFA1-PFA5 PCA1-PCA4 NetAbi1-NetAbi6
                              IntInf1-IntInf4 SocAst1-SocAst5 AppSin1-AppSin3
                              Lg10AFA SQRTabsEPS Log10absSales Fore_own;
         USEVARIABLES ARE PCA1-PCA4 NetAbi1-NetAbi6 IntInf1-IntInf4
                               SocAst1-SocAst5 AppSin1-AppSin3;
ANALYSIS: ESTIMATOR=ML;
MODEL:  NetAbi BY NetAbi1-NetAbi6;
             IntInf BY IntInf1-IntInf4;
             SocAst BY SocAst1-SocAst5;
             AppSin BY AppSin1-AppSin3;
             PS BY NetAbi IntInf SocAst AppSin;
             PCA BY PCA1-PCA4;
              INTINF2 WITH NETABI6;
              INTINF4 WITH INTINF2;
OUTPUT: STANDARDIZED MODINDICES (ALL);
```

Appendix 22. Mplus input file of full SEM model for assessing the moderating effect of sales on PS-PCA relationship: Model without interaction

```
TITLE:  Moderating effect of sales on PS-PCA
          Model 0, no interaction
DATA:   FILE IS PS1.dat;
      type is individual;
VARIABLE:   NAMES ARE Q_code PFA1-PFA5 PCA1-PCA4 NetAbi1-NetAbi6
                              IntInf1-IntInf4 SocAst1-SocAst5 AppSin1-AppSin3
                              Lg10AFA SQRTabsEPS Log10absSales Fore_own;
         MISSING ARE ALL (-99);
         USEVARIABLES ARE NetAbi1-NetAbi6 IntInf1-IntInf4 SocAst1-SocAst5
                AppSin1-AppSin3 PCA1-PCA4 Log10absSales;
ANALYSIS: ESTIMATOR = ML;
DEFINE: standardize NetAbi1-NetAbi6 IntInf1-IntInf4 SocAst1-SocAst5
                AppSin1-AppSin3 PCA1-PCA4 Log10absSales;
MODEL:  NetAbi BY NetAbi1-NetAbi6;
      IntInf BY IntInf1-IntInf4;
      SocAst BY SocAst1-SocAst5;
      AppSin BY AppSin1-AppSin3;
      PS BY NetAbi IntInf SocAst AppSin;
      PCA BY PCA1-PCA4;
      Log10absSales WITH PS;
      INTINF4 WITH INTINF2;
      INTINF2 WITH NETABI6;
      PCA ON PS Log10absSales;
      PS;
OUTPUT: SAMPSTAT TECH1 TECH4 residual standardized;
```

Appendix 23. Mplus input file of full SEM model for assessing the moderating effect of sales on PS-PCA relationship: Model with interaction

```
TITLE:  Moderating effect of sales and on PS-PCA
          Model 1, with interaction
DATA:   FILE IS PS1.dat;
          type is individual;
VARIABLE:   NAMES ARE Q_code PFA1-PFA5 PCA1-PCA4 NetAbi1-NetAbi6
                               IntInf1-IntInf4 SocAst1-SocAst5 AppSin1-AppSin3
                               Lg10AFA SQRTabsEPS Log10absSales Fore_own;
         MISSING ARE ALL (-99);
         USEVARIABLES ARE NetAbi1-NetAbi6 IntInf1-IntInf4 SocAst1-SocAst5
                               AppSin1-AppSin3 PCA1-PCA4 Log10absSales;
ANALYSIS: TYPE = RANDOM;
      ESTIMATOR = ML;
      ALGORITHM = INTEGRATION;
DEFINE: standardize NetAbi1-NetAbi6 IntInf1-IntInf4 SocAst1-SocAst5
                               AppSin1-AppSin3 PCA1-PCA4 Log10absSales;
MODEL:  NetAbi BY NetAbi1-NetAbi6;
      IntInf BY IntInf1-IntInf4;
      SocAst BY SocAst1-SocAst5;
      AppSin BY AppSin1-AppSin3;
      PS BY NetAbi IntInf SocAst AppSin;
      PCA BY PCA1-PCA4;
      PSxSales | PS XWITH Log10absSales;
      Log10absSales WITH PS;
      INTINF4 WITH INTINF2;
      INTINF2 WITH NETABI6;
      PCA ON PS Log10absSales PSxSales;
      PS;
OUTPUT: SAMPSTAT TECH1;
```

Appendix 24. Mplus input file of CFA model for assessing the moderating effect of foreign ownership on PS-AFA relationship

```
TITLE:  FOUR FACTOR MODEL OF NetAbi IntInf SocAst AppSin
      CFA model    ! Related file: ps1_cfa_foreown_afa_9_stand
DATA:   FILE IS PS1.dat;
VARIABLE:   NAMES ARE Q_code PFA1-PFA5 PCA1-PCA4 NetAbi1-NetAbi6
                  IntInf1-IntInf4 SocAst1-SocAst5 AppSin1-AppSin3
                  Lg10AFA SQRTabsEPS Log10absSales Fore_own;
         USEVARIABLES ARE NetAbi1-NetAbi6 IntInf1-IntInf4
                  SocAst1-SocAst5 AppSin1-AppSin3;
ANALYSIS: ESTIMATOR=ML;
MODEL:  NetAbi BY NetAbi1-NetAbi6;
      IntInf BY IntInf1-IntInf4;
      SocAst BY SocAst1-SocAst5;
      AppSin BY AppSin1-AppSin3;
      PS BY NetAbi IntInf SocAst AppSin;
      INTINF2 WITH NETABI6;
      INTINF4 WITH INTINF2;
      SOCAST3 WITH INTINF3;
OUTPUT: STANDARDIZED MODINDICES (ALL);
```

Appendix 25. Mplus input file of full SEM model for assessing the moderating effect of foreign ownership on PS-AFA relationship: Model without interaction

```
TITLE:  Moderating effect of foreign ownership on PS-AFA
      Model 0, no interaction   ! Related file: ps1_nomod_foreown_afa_9_stand_for
DATA:   FILE IS PS1.dat;
      type is individual;
VARIABLE:   NAMES ARE Q_code PFA1-PFA5 PCA1-PCA4 NetAbi1-NetAbi6
                  IntInf1-IntInf4 SocAst1-SocAst5 AppSin1-AppSin3
                  Lg10AFA SQRTabsEPS Log10absSales Fore_own;
         MISSING ARE ALL (-99);
         USEVARIABLES ARE NetAbi1-NetAbi6 IntInf1-IntInf4
                  AppSin1-AppSin3 Lg10AFA Fore_own;
ANALYSIS: ESTIMATOR = ML;
DEFINE: standardize NetAbi1-NetAbi6 IntInf1-IntInf4
                  AppSin1-AppSin3 Lg10AFA Fore_own;
MODEL:  NetAbi BY NetAbi1-NetAbi6;
      IntInf BY IntInf1-IntInf4;
      SocAst BY SocAst1-SocAst5;
      AppSin BY AppSin1-AppSin3;
      PS BY NetAbi IntInf SocAst AppSin;
      INTINF4 WITH INTINF2;
      INTINF2 WITH NETABI6;
      Lg10AFA ON PS Fore_own;
      PS;
OUTPUT: SAMPSTAT TECH1 TECH4 residual standardized;
```

Appendix 26. Mplus input file of full SEM model for assessing the moderating effect of foreign ownership on PS-AFA relationship: Model with interaction

```
TITLE:  Moderating effect of foreign ownership on PS-AFA
          Model 1, with interaction
DATA:   FILE IS PS1.dat;
          type is individual;
VARIABLE:   NAMES ARE Q_code PFA1-PFA5 PCA1-PCA4 NetAbi1-NetAbi6
                              IntInf1-IntInf4 SocAst1-SocAst5 AppSin1-AppSin3
                              Lg10AFA SQRTabsEPS Log10absSales Fore_own;
         MISSING ARE ALL (-99);
         USEVARIABLES ARE NetAbi1-NetAbi6 IntInf1-IntInf4 SocAst1-SocAst5
                             AppSin1-AppSin3 Lg10AFA Fore_own;
ANALYSIS: TYPE = RANDOM;
               ESTIMATOR = ML;
               ALGORITHM = INTEGRATION;
DEFINE: standardize NetAbi1-NetAbi6 IntInf1-IntInf4 SocAst1-SocAst5
                              AppSin1-AppSin3 Lg10AFA Fore_own;
MODEL:  NetAbi BY NetAbi1-NetAbi6;
      IntInf BY IntInf1-IntInf4;
      SocAst BY SocAst1-SocAst5;
      AppSin BY AppSin1-AppSin3;
      PS BY NetAbi IntInf SocAst AppSin;
      PSxFore_own | PS XWITH Fore_own;
      INTINF4 WITH INTINF2;
      INTINF2 WITH NETABI6;
      Lg10AFA ON PS Fore_own PSxFore_own;
      PS;
OUTPUT: SAMPSTAT TECH1;
```

Appendix 27. Mplus input file of CFA model for assessing the moderating effect of foreign ownership on PS-PFA relationship

```
TITLE:  FIVE FACTOR MODEL OF PFA NetAbi IntInf SocAst AppSin
          CFA model     ! Related file: ps1_cfa_pfa_9_stand_foreown
DATA:   FILE IS PS1.dat;
VARIABLE:   NAMES ARE Q_code PFA1-PFA5 PCA1-PCA4 NetAbi1-NetAbi6
                  IntInf1-IntInf4 SocAst1-SocAst5 AppSin1-AppSin3
                  Lg10AFA SQRTabsEPS Log10absSales Fore_own;
         USEVARIABLES ARE PFA1-PFA5 NetAbi1-NetAbi6
                  IntInf1-IntInf4 SocAst1-SocAst5 AppSin1-AppSin3;
ANALYSIS: ESTIMATOR=ML;
MODEL:  NetAbi BY NetAbi1-NetAbi6;
      IntInf BY IntInf1-IntInf4;
      SocAst BY SocAst1-SocAst5;
      AppSin BY AppSin1-AppSin3;
      PS BY NetAbi IntInf SocAst AppSin;
      PFA BY PFA1-PFA5;
      INTINF2 WITH NETABI6;
      INTINF4 WITH INTINF2;
OUTPUT: STANDARDIZED MODINDICES (ALL);
```

Appendix 28. Mplus input file of full SEM model for assessing the moderating effect of foreign ownership on PS-PFA relationship: Model without interaction

```
TITLE:  Moderating effect of foreign ownership on PS-PFA
          Model 0, no interaction
DATA:   FILE IS PS1.dat;
          type is individual;
VARIABLE:   NAMES ARE Q_code PFA1-PFA5 PCA1-PCA4 NetAbi1-NetAbi6
                              IntInf1-IntInf4 SocAst1-SocAst5 AppSin1-AppSin3
                              Lg10AFA SQRTabsEPS Log10absSales Fore_own;
         MISSING ARE ALL (-99);
         USEVARIABLES ARE NetAbi1-NetAbi6 IntInf1-IntInf4 SocAst1-SocAst5
                             AppSin1-AppSin3 PFA1-PFA5 Fore_own;
ANALYSIS: ESTIMATOR = ML;
DEFINE: standardize NetAbi1-NetAbi6 IntInf1-IntInf4 SocAst1-SocAst5
                             AppSin1-AppSin3 PFA1-PFA5 Fore_own;
MODEL:  NetAbi BY NetAbi1-NetAbi6;
      IntInf BY IntInf1-IntInf4;
      SocAst BY SocAst1-SocAst5;
      AppSin BY AppSin1-AppSin3;
      PS BY NetAbi IntInf SocAst AppSin;
      PFA BY PFA1-PFA5;
      INTINF4 WITH INTINF2;
      INTINF2 WITH NETABI6;
      PFA ON PS Fore_own;
      PS; PFA;
OUTPUT: SAMPSTAT TECH1 TECH4 residual standardized;
```

Appendix 29. Mplus input file of full SEM model for assessing the moderating effect of foreign ownership on PS-PFA relationship: Model with interaction

```
TITLE:  Moderating effect of foreign ownership on PS-PFA
          Model 1, with interaction
DATA:   FILE IS PS1.dat;
          type is individual;
VARIABLE:   NAMES ARE Q_code PFA1-PFA5 PCA1-PCA4 NetAbi1-NetAbi6
                              IntInf1-IntInf4 SocAst1-SocAst5 AppSin1-AppSin3
                              Lg10AFA SQRTabsEPS Log10absSales Fore_own;
         MISSING ARE ALL (-99);
         USEVARIABLES ARE NetAbi1-NetAbi6 IntInf1-IntInf4 SocAst1-SocAst5
                             AppSin1-AppSin3 PFA1-PFA5 Fore_own;
ANALYSIS:   TYPE = RANDOM;
               ESTIMATOR = ML;
               ALGORITHM = INTEGRATION;
DEFINE: standardize NetAbi1-NetAbi6 IntInf1-IntInf4 SocAst1-SocAst5
                             AppSin1-AppSin3 PFA1-PFA5 Fore_own;
MODEL: NetAbi BY NetAbi1-NetAbi6;
           IntInf BY IntInf1-IntInf4;
           SocAst BY SocAst1-SocAst5;
           AppSin BY AppSin1-AppSin3;
           PS BY NetAbi IntInf SocAst AppSin;
           PFA BY PFA1-PFA5;
           PSxFore_own | PS XWITH Fore_own;
           INTINF4 WITH INTINF2;
      INTINF2 WITH NETABI6;
      PFA ON PS Fore_own PSxFore_own;
      PS; PFA;
OUTPUT: SAMPSTAT TECH1;
```

Appendix 30. Mplus input file of CFA model for assessing the moderating effect of foreign ownership on PS-PCA relationship

```
TITLE:  FIVE FACTOR MODEL OF PCA NetAbi IntInf SocAst AppSin
          CFA model      ! Related file: ps1_cfa_pca_9_stand_foreown
DATA:   FILE IS PS1.dat;
VARIABLE:   NAMES ARE Q_code PFA1-PFA5 PCA1-PCA4 NetAbi1-NetAbi6
                  IntInf1-IntInf4 SocAst1-SocAst5 AppSin1-AppSin3
                  Lg10AFA SQRTabsEPS Log10absSales Fore_own;
         USEVARIABLES ARE PCA1-PCA4 NetAbi1-NetAbi6 IntInf1-IntInf4
                  SocAst1-SocAst5 AppSin1-AppSin3;
ANALYSIS: ESTIMATOR=ML;
MODEL:  NetAbi BY NetAbi1-NetAbi6;
      IntInf BY IntInf1-IntInf4;
      SocAst BY SocAst1-SocAst5;
      AppSin BY AppSin1-AppSin3;
      PS BY NetAbi IntInf SocAst AppSin;
      PCA BY PCA1-PCA4;
      INTINF2 WITH NETABI6;
      INTINF4 WITH INTINF2;
OUTPUT: STANDARDIZED MODINDICES (ALL);
```

Appendix 31. Mplus input file of full SEM model for assessing the moderating effect of foreign ownership on PS-PCA relationship: Model without interaction

```
TITLE:  Moderating effect of foreign ownership on PS-PCA
          Model 0, no interaction
DATA:   FILE IS PS1.dat;
          type is individual;
VARIABLE:   NAMES ARE Q_code PFA1-PFA5 PCA1-PCA4 NetAbi1-NetAbi6
                              IntInf1-IntInf4 SocAst1-SocAst5 AppSin1-AppSin3
                              Lg10AFA SQRTabsEPS Log10absSales Fore_own;
         MISSING ARE ALL (-99);
         USEVARIABLES ARE NetAbi1-NetAbi6 IntInf1-IntInf4
                               SocAst1-SocAst5 AppSin1-AppSin3
                               PCA1-PCA4 Fore_own;
ANALYSIS: ESTIMATOR = ML;
DEFINE: standardize NetAbi1-NetAbi6
                  IntInf1-IntInf4
                  SocAst1-SocAst5
                  AppSin1-AppSin3
                  PCA1-PCA4
                  Fore_own;
MODEL:  NetAbi BY NetAbi1-NetAbi6;
             IntInf BY IntInf1-IntInf4;
             SocAst BY SocAst1-SocAst5;
             AppSin BY AppSin1-AppSin3;
             PS BY NetAbi IntInf SocAst AppSin;
             PCA BY PCA1-PCA4;
             INTINF4 WITH INTINF2;
             INTINF2 WITH NETABI6;
             PCA ON PS Fore_own;
             PS;
             PCA;
OUTPUT: SAMPSTAT TECH1 TECH4 residual standardized;
```

Appendix 32. Mplus input file of full SEM model for assessing the moderating effect of foreign ownership on PS-PCA relationship: Model with interaction

```
TITLE:  Moderating effect of foreign ownership on PS-PCA
        Model 1, with interaction
DATA:   FILE IS PS1.dat;
        type is individual;
VARIABLE:   NAMES ARE Q_code PFA1-PFA5 PCA1-PCA4 NetAbi1-NetAbi6
                      IntInf1-IntInf4 SocAst1-SocAst5 AppSin1-AppSin3
                      Lg10AFA SQRTabsEPS Log10absSales Fore_own;
            MISSING ARE ALL (-99);
            USEVARIABLES ARE NetAbi1-NetAbi6 IntInf1-IntInf4 SocAst1-SocAst5
                      AppSin1-AppSin3 PCA1-PCA4 Fore_own;
ANALYSIS:   TYPE = RANDOM;
            ESTIMATOR = ML;
            ALGORITHM = INTEGRATION;
DEFINE: standardize NetAbi1-NetAbi6 IntInf1-IntInf4 SocAst1-SocAst5
                      AppSin1-AppSin3 PCA1-PCA4 Fore_own;
MODEL:  NetAbi BY NetAbi1-NetAbi6;
     IntInf BY IntInf1-IntInf4;
     SocAst BY SocAst1-SocAst5;
     AppSin BY AppSin1-AppSin3;
     PS BY NetAbi IntInf SocAst AppSin;
     PCA BY PCA1-PCA4;
     PSxFore_own | PS XWITH Fore_own;
     INTINF4 WITH INTINF2;
     INTINF2 WITH NETABI6;
     PCA ON PS Fore_own PSxFore_own;
     PS;
     PCA;
OUTPUT: SAMPSTAT TECH1;
```

Appendix 33. Mplus multi-group SEM input file for the moderating effect of industry on agreeableness – AFA relationship: Baseline model with no industry (other)

```
TITLE:  Moderating effect of Industry on Agree-AFA
     Baseline model with no industry (other)
DATA:   FILE IS PER1.dat;
VARIABLE:   NAMES ARE Q_code PFA1-PFA5 PCA1-PCA4 Neuro1-Neuro4
            Extro1-Extro4 Openn1-Openn4 Agree1-Agree4 Consc1-Consc4
            Lg10AFA SQRTabsEPS Fore_own Indu
            Log10absSales Age AreaofHead FTyear;
        MISSING ARE ALL (-99);
        USEVARIABLES ARE Agree1 Agree3 Agree4 Lg10AFA;
        USEOBSERVATIONS = Indu EQ 0;
ANALYSIS:   ESTIMATOR = ML;
DEFINE: standardize Agree1 Agree3 Agree4 Lg10AFA;
MODEL:  Agree BY Agree1 Agree3 Agree4;
     Lg10AFA ON Agree;
OUTPUT: TECH1 STDYX;
```

Appendix 34. Mplus multi-group SEM input file for the moderating effect of industry on agreeableness – AFA relationship: Baseline model with industry

```
TITLE:  Moderating effect of Industry on Agree-AFA
          Baseline model with industry
DATA:   FILE IS PER1.dat;
VARIABLE: NAMES ARE Q_code PFA1-PFA5 PCA1-PCA4
                  Neuro1-Neuro4 Extro1-Extro4
                  Openn1-Openn4 Agree1-Agree4 Consc1-Consc4
                  Lg10AFA SQRTabsEPS Fore_own Indu
                  Log10absSales Age AreaofHead FTyear;
         MISSING ARE ALL (-99);
         USEVARIABLES ARE Agree1-Agree4 Lg10AFA;
         USEOBSERVATIONS = Indu EQ 1;
ANALYSIS:   ESTIMATOR = ML;
DEFINE: standardize Agree1-Agree4 Lg10AFA;
MODEL:  Agree BY Agree1-Agree4;
             Lg10AFA ON Agree;
OUTPUT: TECH1 STDYX;
```

Appendix 35. Mplus multi-group SEM input file for the moderating effect of industry on agreeableness – AFA relationship: Invariance model (Step 1 unrestricted)

```
TITLE:  Testing the hypothesis of moderating effect of Industry on Agree-AFA
          Invariance model (Step 1 unrestricted)
DATA:   FILE IS PER1.dat;
       LISTWISE=ON;
VARIABLE:   NAMES ARE Q_code
                  PFA1-PFA5
                  PCA1-PCA4
                  Neuro1-Neuro4
                  Extro1-Extro4
                  Openn1-Openn4
                  Agree1-Agree4
                  Consc1-Consc4
                  Lg10AFA SQRTabsEPS
                  Fore_own Indu
                  Log10absSales
                  Age AreaofHead FTyear;
         MISSING ARE ALL (-99);
         USEVARIABLES ARE  Agree1 Agree3 Agree4
                  Lg10AFA;
         GROUPING = Indu (0=No 1=Yes);
ANALYSIS:   ESTIMATOR = MLMV;
DEFINE: standardize Agree1 Agree3 Agree4 Lg10AFA;
MODEL:  Agree BY Agree1 Agree3 Agree4;
             Lg10AFA ON Agree;
MODEL No:
MODEL Yes:
SAVEDATA: DIFFTEST=Test_H1.DAT; ! Save inf for Chi-square difference test;
```

Appendix 36. Mplus multi-group SEM input file for the moderating effect of industry on agreeableness – AFA relationship: Invariance model (Step 2 restricted)

```
TITLE:  Testing the hypothesis of moderating effect of Industry on Agree-AFA
        Invariance model (Step 2 Restricted)
DATA:   FILE IS PER1.dat;
        LISTWISE=ON;
VARIABLE:   NAMES ARE Q_code
                PFA1-PFA5
                PCA1-PCA4
                Neuro1-Neuro4
                Extro1-Extro4
                Openn1-Openn4
                Agree1-Agree4
                Consc1-Consc4
                Lg10AFA SQRTabsEPS
                Fore_own Indu
                Log10absSales
                Age AreaofHead FTyear;
        MISSING ARE ALL (-99);
        USEVARIABLES ARE Agree1 Agree3 Agree4 Lg10AFA;
        GROUPING = Indu (0=No 1=Yes);
ANALYSIS:   ESTIMATOR = MLMV;
        DIFFTEST=Test_H1.DAT; !Retrieve saved information;
DEFINE: standardize Agree1 Agree3 Agree4 Lg10AFA;
MODEL:  Agree BY Agree1 Agree3 Agree4;
          Lg10AFA ON Agree(1);
MODEL No:
MODEL Yes:
```

Appendix 37. Mplus multi-group SEM input file for the moderating effect of industry on agreeableness – PFA relationship: Baseline model with no industry (other)

```
TITLE:  Moderating effect of Industry on Agree-PFA
        Baseline model with no industry (other)
DATA:   FILE IS PER1.dat;
VARIABLE:   NAMES ARE Q_code
                PFA1-PFA5
                PCA1-PCA4
                Neuro1-Neuro4
                Extro1-Extro4
                Openn1-Openn4
                Agree1-Agree4
                Consc1-Consc4
                Lg10AFA SQRTabsEPS
                Fore_own Indu
                Log10absSales
                Age AreaofHead FTyear;
        MISSING ARE ALL (-99);
        USEVARIABLES ARE  Agree1-Agree4 PFA1-PFA5;
        USEOBSERVATIONS = Indu EQ 0;
ANALYSIS:   ESTIMATOR = ML;
DEFINE: standardize Agree1-Agree4 PFA1-PFA5;
MODEL:  Agree BY Agree1-Agree4;
          PFA BY PFA1-PFA5;
          PFA ON Agree;
OUTPUT: TECH1 STDYX;
```

Appendix 38. Mplus multi-group SEM input file for the moderating effect of industry on agreeableness – PFA relationship: Baseline model with industry

```
TITLE:  Moderating effect of Industry on Agree-PFA
          Baseline model with industry
DATA:   FILE IS PER1.dat;
VARIABLE: NAMES ARE Q_code PFA1-PFA5
                  PCA1-PCA4
                  Neuro1-Neuro4
                  Extro1-Extro4
                  Openn1-Openn4
                  Agree1-Agree4
                  Consc1-Consc4
                  Lg10AFA SQRTabsEPS
                  Fore_own Indu
                  Log10absSales
                  Age AreaofHead FTyear;
         MISSING ARE ALL (-99);
         USEVARIABLES ARE Agree1-Agree4 PFA1-PFA5;
         USEOBSERVATIONS = Indu EQ 1;
ANALYSIS:   ESTIMATOR = ML;
DEFINE: standardize Agree1-Agree4 PFA1-PFA5;
MODEL:  Agree BY Agree1-Agree4;
            PFA BY PFA1-PFA5;
            PFA ON Agree;
OUTPUT: TECH1 STDYX;
```

Appendix 39. Mplus multi-group SEM input file for the moderating effect of industry on agreeableness – PFA relationship: Invariance model (Step 1 unrestricted)

```
TITLE:  Testing the hypothesis of moderating effect of Industry on Agree-PFA
      Invariance model (Step 1 unrestricted)
DATA:   FILE IS PER1.dat;
      LISTWISE=ON;
VARIABLE:   NAMES ARE Q_code PFA1-PFA5
                  PCA1-PCA4
                  Neuro1-Neuro4
                  Extro1-Extro4
                  Openn1-Openn4
                  Agree1-Agree4
                  Consc1-Consc4
                  Lg10AFA SQRTabsEPS
                  Fore_own Indu
                  Log10absSales
                  Age AreaofHead FTyear;
         MISSING ARE ALL (-99);
         USEVARIABLES ARE Agree1-Agree4 PFA1-PFA5;
         GROUPING = Indu (0=No 1=Yes);
ANALYSIS:   ESTIMATOR = MLMV;
DEFINE: standardize Agree1-Agree4 PFA1-PFA5;
MODEL:  Agree BY Agree1-Agree4;
      PFA BY PFA1-PFA5;
      PFA ON Agree;
MODEL No:
MODEL Yes:
SAVEDATA: DIFFTEST=Test_H1.DAT; ! Save inf for Chi-square difference test;
```

Appendix 40. Mplus multi-group SEM input file for the moderating effect of industry on agreeableness – PFA relationship: Invariance model (Step 2 restricted)

```
TITLE:  Testing the hypothesis of moderating effect of Industry on Agree-PFA
      Invariance model (Step 2 Restricted)
DATA:   FILE IS PER1.dat;
      LISTWISE=ON;
VARIABLE:   NAMES ARE Q_code PFA1-PFA5
                  PCA1-PCA4
                  Neuro1-Neuro4
                  Extro1-Extro4
                  Openn1-Openn4
                  Agree1-Agree4
                  Consc1-Consc4
                  Lg10AFA SQRTabsEPS
                  Fore_own Indu
                  Log10absSales
                  Age AreaofHead FTyear;
         MISSING ARE ALL (-99);
         USEVARIABLES ARE Agree1-Agree4 PFA1-PFA5;
         GROUPING = Indu (0=No 1=Yes);
ANALYSIS:   ESTIMATOR = MLMV;
         DIFFTEST=Test_H1.DAT; !Retrieve saved information;
DEFINE: standardize Agree1-Agree4 PFA1-PFA5;
MODEL:  Agree BY Agree1-Agree4;
      PFA BY PFA1-PFA5;
      PFA ON Agree(1);
MODEL No:
MODEL Yes:
```

Appendix 41. Mplus multi-group SEM input file for the moderating effect of industry on agreeableness – PCA relationship: Baseline model with no industry (other)

```
TITLE:  Moderating effect of Industry on Agree-PCA
          Baseline model with no industry (other)
DATA:   FILE IS PER1.dat;
VARIABLE:   NAMES ARE Q_code
                  PFA1-PFA5
                  PCA1-PCA4
                  Neuro1-Neuro4
                  Extro1-Extro4
                  Openn1-Openn4
                  Agree1-Agree4
                  Consc1-Consc4
                  Lg10AFA SQRTabsEPS
                  Fore_own Indu
                  Log10absSales
                  Age AreaofHead FTyear;
         MISSING ARE ALL (-99);
         USEVARIABLES ARE Agree1-Agree4 PCA1-PCA4;
         USEOBSERVATIONS = Indu EQ 0;
ANALYSIS:   ESTIMATOR = ML;
DEFINE: standardize Agree1-Agree4 PCA1-PCA4;
MODEL:  Agree BY Agree1-Agree4;
      PCA BY PCA1-PCA4;
      PCA ON Agree;
OUTPUT: TECH1 STDYX;
```

Appendix 42. Mplus multi-group SEM input file for the moderating effect of industry on agreeableness – PCA relationship: Baseline model with industry

```
TITLE:  Moderating effect of Industry on Agree-PCA
      Baseline model with industry
DATA:   FILE IS PER1.dat;
VARIABLE:   NAMES ARE Q_code PFA1-PFA5
                  PCA1-PCA4
                  Neuro1-Neuro4
                  Extro1-Extro4
                  Openn1-Openn4
                  Agree1-Agree4
                  Consc1-Consc4
                  Lg10AFA SQRTabsEPS
                  Fore_own Indu
                  Log10absSales
                  Age AreaofHead FTyear;
         MISSING ARE ALL (-99);
         USEVARIABLES ARE Agree1-Agree4 PCA1-PCA4;
         USEOBSERVATIONS = Indu EQ 1;
ANALYSIS:   ESTIMATOR = ML;
DEFINE: standardize Agree1-Agree4 PCA1-PCA4;
MODEL:  Agree BY Agree1-Agree4;
      PCA BY PCA1-PCA4;
      PCA ON Agree;
OUTPUT: TECH1 STDYX;
```

Appendix 43. Mplus multi-group SEM input file for the moderating effect of industry on agreeableness – PCA relationship: Invariance model (Step 1 unrestricted)

```
TITLE:  Testing the hypothesis of moderating effect of Industry on Agree-PCA
      Invariance model (Step 1 unrestricted)
DATA:   FILE IS PER1.dat;
      LISTWISE=ON;
VARIABLE:   NAMES ARE Q_code PFA1-PFA5
                  PCA1-PCA4
                  Neuro1-Neuro4
                  Extro1-Extro4
                  Openn1-Openn4
                  Agree1-Agree4
                  Consc1-Consc4
                  Lg10AFA SQRTabsEPS
                  Fore_own Indu
                  Log10absSales
                  Age AreaofHead FTyear;
         MISSING ARE ALL (-99);
         USEVARIABLES ARE Agree1-Agree4 PCA1-PCA4;
         GROUPING = Indu (0=No 1=Yes);
ANALYSIS:   ESTIMATOR = MLMV;
DEFINE: standardize Agree1-Agree4 PCA1-PCA4;
MODEL:  Agree BY Agree1-Agree4;
      PCA BY PCA1-PCA4;
      PCA ON Agree;
MODEL No:
MODEL Yes:
SAVEDATA: DIFFTEST=Test_H1.DAT; ! Save inf for Chi-square difference test;
```

Appendix 44. Mplus multi-group SEM input file for the moderating effect of industry on agreeableness – PCA relationship: Invariance model (Step 2 restricted)

```
TITLE:  Testing the hypothesis of moderating effect of Industry on Agree-PCA
      Invariance model (Step 2 Restricted)
DATA:   FILE IS PER1.dat;
          LISTWISE=ON;
VARIABLE:   NAMES ARE Q_code
                  PFA1-PFA5
                  PCA1-PCA4
                  Neuro1-Neuro4
                  Extro1-Extro4
                  Openn1-Openn4
                  Agree1-Agree4
                  Consc1-Consc4
                  Lg10AFA SQRTabsEPS
                  Fore_own Indu
                  Log10absSales
                  Age AreaofHead FTyear;
        MISSING ARE ALL (-99);
        USEVARIABLES ARE Agree1-Agree4 PCA1-PCA4;
        GROUPING = Indu (0=No 1=Yes);
ANALYSIS:   ESTIMATOR = MLMV;
        DIFFTEST=Test_H1.DAT; !Retrieve saved information;
DEFINE: standardize Agree1-Agree4 PCA1-PCA4;
MODEL:  Agree BY Agree1-Agree4;
      PCA BY PCA1-PCA4;
      PCA ON Agree(1);
MODEL No:
MODEL Yes:
```

Appendix 45. Mplus multi-group SEM input file for the moderating effect of industry on openness - AFA relationship: Baseline model with no industry (other)

```
TITLE:  Moderating effect of Industry on Openn-AFA
      Baseline model with no industry (other)
DATA:   FILE IS PER1.dat;
VARIABLE:   NAMES ARE Q_code
                  PFA1-PFA5
                  PCA1-PCA4
                  Neuro1-Neuro4
                  Extro1-Extro4
                  Openn1-Openn4
                  Agree1-Agree4
                  Consc1-Consc4
                  Lg10AFA SQRTabsEPS
                  Fore_own Indu
                  Log10absSales
                  Age AreaofHead FTyear;
        MISSING ARE ALL (-99);
        USEVARIABLES ARE Openn1-Openn4 Lg10AFA;
        USEOBSERVATIONS = Indu EQ 0;
ANALYSIS:   ESTIMATOR = ML;
DEFINE: standardize Openn1-Openn4 Lg10AFA;
MODEL:  Openn BY Openn1-Openn4;
      Lg10AFA ON Openn;
OUTPUT: TECH1 STDYX;
```

Appendix 46. Mplus multi-group SEM input file for the moderating effect of industry on openness - AFA relationship: Baseline model with industry

```
TITLE:  Moderating effect of Industry on Openn-AFA
     Baseline model with industry
DATA:   FILE IS PER1.dat;
VARIABLE:   NAMES ARE Q_code
                PFA1-PFA5
                PCA1-PCA4
                Neuro1-Neuro4
                Extro1-Extro4
                Openn1-Openn4
                Agree1-Agree4
                Consc1-Consc4
                Lg10AFA SQRTabsEPS
                Fore_own Indu
                Log10absSales
                Age AreaofHead FTyear;
        MISSING ARE ALL (-99);
        USEVARIABLES ARE Openn1-Openn4 Lg10AFA;
        USEOBSERVATIONS = Indu EQ 1;
ANALYSIS:   ESTIMATOR = ML;
DEFINE: standardize Openn1-Openn4 Lg10AFA;
MODEL:  Openn BY Openn1-Openn4;
     Lg10AFA ON Openn;
OUTPUT: TECH1 STDYX;
```

Appendix 47. Mplus multi-group SEM input file for the moderating effect of industry on openness - AFA relationship: Invariance model (Step 1 unrestricted)

```
TITLE:  Testing the hypothesis of moderating effect of Industry on Openn-AFA
     Invariance model (Step 1 unrestricted)
DATA:   FILE IS PER1.dat;
     LISTWISE=ON;
VARIABLE:   NAMES ARE Q_code
                PFA1-PFA5
                PCA1-PCA4
                Neuro1-Neuro4
                Extro1-Extro4
                Openn1-Openn4
                Agree1-Agree4
                Consc1-Consc4
                Lg10AFA SQRTabsEPS
                Fore_own Indu
                Log10absSales
                Age AreaofHead FTyear;
        MISSING ARE ALL (-99);
        USEVARIABLES ARE Openn1-Openn4 Lg10AFA;
        GROUPING = Indu (0=No 1=Yes);
ANALYSIS:   ESTIMATOR = MLMV;
DEFINE: standardize Openn1-Openn4 Lg10AFA;
MODEL:  Openn BY Openn1-Openn4;
     Lg10AFA ON Openn;
MODEL No:
MODEL Yes:
SAVEDATA: DIFFTEST=Test_H1.DAT; ! Save inf for Chi-square difference test;
```

Appendix 48. Mplus multi-group SEM input file for the moderating effect of industry on openness - AFA relationship: Invariance model (Step 2 restricted)

```
TITLE:  Testing the hypothesis of moderating effect of Industry on Openn-AFA
      Invariance model (Step 2 Restricted)
DATA:   FILE IS PER1.dat;
          LISTWISE=ON;
VARIABLE:   NAMES ARE Q_code
                  PFA1-PFA5
                  PCA1-PCA4
                  Neuro1-Neuro4
                  Extro1-Extro4
                  Openn1-Openn4
                  Agree1-Agree4
                  Consc1-Consc4
                  Lg10AFA SQRTabsEPS
                  Fore_own Indu
                  Log10absSales
                  Age AreaofHead FTyear;
         MISSING ARE ALL (-99);
         USEVARIABLES ARE Openn1-Openn4 Lg10AFA;
         GROUPING = Indu (0=No 1=Yes);
ANALYSIS:   ESTIMATOR = MLMV;
         DIFFTEST=Test_H1.DAT; !Retrieve saved information;
DEFINE: standardize Openn1-Openn4 Lg10AFA;
MODEL:  Openn BY Openn1-Openn4;
      Lg10AFA ON Openn(1);
MODEL No:
MODEL Yes:
```

Appendix 49. Mplus multi-group SEM input file for the moderating effect of industry on openness - PFA relationship: Baseline model with no industry (other)

```
TITLE:  Moderating effect of Industry on Openn-PFA
      Baseline model with no industry (other) without PFA2, Openn4
DATA:   FILE IS PER1.dat;
VARIABLE:   NAMES ARE Q_code
                  PFA1-PFA5
                  PCA1-PCA4
                  Neuro1-Neuro4
                  Extro1-Extro4
                  Openn1-Openn4
                  Agree1-Agree4
                  Consc1-Consc4
                  Lg10AFA SQRTabsEPS
                  Fore_own Indu
                  Log10absSales
                  Age AreaofHead FTyear;
         MISSING ARE ALL (-99);
         USEVARIABLES ARE Openn1-Openn3 PFA1 PFA3 PFA4 PFA5;
         USEOBSERVATIONS = Indu EQ 0;
ANALYSIS:   ESTIMATOR = ML;
DEFINE: standardize Openn1-Openn3 PFA1 PFA3 PFA4 PFA5;
MODEL:  Openn BY Openn1-Openn3;
      PFA BY PFA1 PFA3 PFA4 PFA5;
      PFA ON Openn;
      Openn2 WITH Openn1;
OUTPUT: TECH1 STDYX;
```

Appendix 50. Mplus multi-group SEM input file for the moderating effect of industry on openness - PFA relationship: Baseline model with industry

```
TITLE:  Moderating effect of Industry on Openn-PFA
     Baseline model with industry without PFA2, Openn4
DATA:   FILE IS PER1.dat;
VARIABLE:   NAMES ARE Q_code
                PFA1-PFA5
                PCA1-PCA4
                Neuro1-Neuro4
                Extro1-Extro4
                Openn1-Openn4
                Agree1-Agree4
                Consc1-Consc4
                Lg10AFA SQRTabsEPS
                Fore_own Indu
                Log10absSales
                Age AreaofHead FTyear;
        MISSING ARE ALL (-99);
        USEVARIABLES ARE Openn1-Openn3 PFA1 PFA3 PFA4 PFA5;
        USEOBSERVATIONS = Indu EQ 1;
ANALYSIS:   ESTIMATOR = ML;
DEFINE: standardize Openn1-Openn3 PFA1 PFA3 PFA4 PFA5;
MODEL:  Openn BY Openn1-Openn3;
     PFA BY PFA1 PFA3 PFA4 PFA5;
     PFA ON Openn;
     Openn2 WITH Openn1;
OUTPUT: TECH1 STDYX;
```

Appendix 51. Mplus multi-group SEM input file for the moderating effect of industry on openness - PFA relationship: Invariance model (Step 1 unrestricted)

```
TITLE:  Testing the hypothesis of moderating effect of Industry on Openn-PFA
     Invariance model (Step 1 unrestricted) without PFA2, Openn4
DATA:   FILE IS PER1.dat;
     LISTWISE=ON;
VARIABLE:   NAMES ARE Q_code PFA1-PFA5
                PCA1-PCA4
                Neuro1-Neuro4
                Extro1-Extro4
                Openn1-Openn4
                Agree1-Agree4
                Consc1-Consc4
                Lg10AFA SQRTabsEPS
                Fore_own Indu
                Log10absSales
                Age AreaofHead FTyear;
        MISSING ARE ALL (-99);
        USEVARIABLES ARE Openn1-Openn3 PFA1 PFA3 PFA4 PFA5;
        GROUPING = Indu (0=No 1=Yes);
ANALYSIS:   ESTIMATOR = MLMV;
DEFINE: standardize Openn1-Openn3 PFA1 PFA3 PFA4 PFA5;
MODEL:  Openn BY Openn1-Openn3;
     PFA BY PFA1 PFA3 PFA4 PFA5;
     PFA ON Openn;
     Openn2 WITH Openn1;
MODEL No:
MODEL Yes:
SAVEDATA: DIFFTEST=Test_H1.DAT; ! Save inf for Chi-square difference test;
```

Appendix 52. Mplus multi-group SEM input file for the moderating effect of industry on openness - PFA relationship: Invariance model (Step 2 restricted)

```
TITLE:  Testing the hypothesis of moderating effect of Industry on Openn-PFA
      Invariance model (Step 2 Restricted) without PFA2, Openn4
DATA:   FILE IS PER1.dat;
      LISTWISE=ON;
VARIABLE:   NAMES ARE Q_code
                  PFA1-PFA5
                  PCA1-PCA4
                  Neuro1-Neuro4
                  Extro1-Extro4
                  Openn1-Openn4
                  Agree1-Agree4
                  Consc1-Consc4
                  Lg10AFA SQRTabsEPS
                  Fore_own Indu
                  Log10absSales
                  Age AreaofHead FTyear;
         MISSING ARE ALL (-99);
         USEVARIABLES ARE Openn1-Openn3 PFA1 PFA3 PFA4 PFA5;
         GROUPING = Indu (0=No 1=Yes);
ANALYSIS:   ESTIMATOR = MLMV;
         DIFFTEST=Test_H1.DAT; !Retrieve saved information;
DEFINE: standardize Openn1-Openn3 PFA1 PFA3 PFA4 PFA5;
MODEL:  Openn BY Openn1-Openn3;
      PFA BY PFA1 PFA3 PFA4 PFA5;
      PFA ON Openn(1);
MODEL No:
MODEL Yes:
```

Appendix 53. Mplus multi-group SEM input file for the moderating effect of industry on openness - PCA relationship: Baseline model with no industry (other)

```
TITLE:  Moderating effect of Industry on Openn-PCA
      Baseline model with no industry (other)
DATA:   FILE IS PER1.dat;
VARIABLE:   NAMES ARE Q_code
                  PFA1-PFA5
                  PCA1-PCA4
                  Neuro1-Neuro4
                  Extro1-Extro4
                  Openn1-Openn4
                  Agree1-Agree4
                  Consc1-Consc4
                  Lg10AFA SQRTabsEPS
                  Fore_own Indu
                  Log10absSales
                  Age AreaofHead FTyear;
         MISSING ARE ALL (-99);
         USEVARIABLES ARE Openn1-Openn4 PCA1-PCA4;
         USEOBSERVATIONS = Indu EQ 0;
ANALYSIS:   ESTIMATOR = ML;
DEFINE: standardize Openn1-Openn4 PCA1-PCA4;
MODEL:  Openn BY Openn1-Openn4;
      PCA BY PCA1-PCA4;
      PCA ON Openn;
OUTPUT: TECH1 STDYX;
```

Appendix 54. Mplus multi-group SEM input file for the moderating effect of industry on openness - PCA relationship: Baseline model with industry

```
TITLE:  Moderating effect of Industry on Openn-PCA
      Baseline model with industry
DATA:   FILE IS PER1.dat;
VARIABLE:   NAMES ARE Q_code
                  PFA1-PFA5
                  PCA1-PCA4
                  Neuro1-Neuro4
                  Extro1-Extro4
                  Openn1-Openn4
                  Agree1-Agree4
                  Consc1-Consc4
                  Lg10AFA SQRTabsEPS
                  Fore_own Indu
                  Log10absSales
                  Age AreaofHead FTyear;
         MISSING ARE ALL (-99);
         USEVARIABLES ARE Openn1-Openn4 PCA1-PCA4;
         USEOBSERVATIONS = Indu EQ 1;
ANALYSIS:   ESTIMATOR = ML;
DEFINE: standardize Openn1-Openn4 PCA1-PCA4;
MODEL:  Openn BY Openn1-Openn4;
      PCA BY PCA1-PCA4;
      PCA ON Openn;
OUTPUT: TECH1 STDYX;
```

Appendix 55. Mplus multi-group SEM input file for the moderating effect of industry on openness - PCA relationship: Invariance model (Step 1 unrestricted)

```
TITLE:  Testing the hypothesis of moderating effect of Industry on Openn-PCA
      Invariance model (Step 1 unrestricted)
DATA:   FILE IS PER1.dat;
      LISTWISE=ON;
VARIABLE:   NAMES ARE Q_code
                  PFA1-PFA5
                  PCA1-PCA4
                  Neuro1-Neuro4
                  Extro1-Extro4
                  Openn1-Openn4
                  Agree1-Agree4
                  Consc1-Consc4
                  Lg10AFA SQRTabsEPS
                  Fore_own Indu
                  Log10absSales
                  Age AreaofHead FTyear;
         MISSING ARE ALL (-99);
         USEVARIABLES ARE Openn1-Openn4 PCA1-PCA4;
         GROUPING = Indu (0=No 1=Yes);
ANALYSIS:   ESTIMATOR = MLMV;
DEFINE: standardize Openn1-Openn4 PCA1-PCA4;
MODEL:  Openn BY Openn1-Openn4;
      PCA BY PCA1-PCA4;
      PCA ON Openn;
MODEL No:
MODEL Yes:
SAVEDATA: DIFFTEST=Test_H1.DAT; ! Save inf for Chi-square difference test;
```

Appendix 56. Mplus multi-group SEM input file for the moderating effect of industry on openness - PCA relationship: Invariance model (Step 2 restricted)

```
TITLE:  Testing the hypothesis of moderating effect of Industry on Openn-PCA
      Invariance model (Step 2 Restricted)
DATA:   FILE IS PER1.dat;
      LISTWISE=ON;
VARIABLE:   NAMES ARE Q_code
                  PFA1-PFA5
                  PCA1-PCA4
                  Neuro1-Neuro4
                  Extro1-Extro4
                  Openn1-Openn4
                  Agree1-Agree4
                  Consc1-Consc4
                  Lg10AFA SQRTabsEPS
                  Fore_own Indu
                  Log10absSales
                  Age AreaofHead FTyear;
         MISSING ARE ALL (-99);
         USEVARIABLES ARE Openn1-Openn4 PCA1-PCA4;
         GROUPING = Indu (0=No 1=Yes);
ANALYSIS:   ESTIMATOR = MLMV;
         DIFFTEST=Test_H1.DAT; !Retrieve saved information;
DEFINE: standardize Openn1-Openn4 PCA1-PCA4;
MODEL:  Openn BY Openn1-Openn4;
      PCA BY PCA1-PCA4;
      PCA ON Openn(1);
MODEL No:
MODEL Yes:
```

Appendix 57. Mplus input file of CFA model for assessing the effect of PCO on AFA

```
TITLE:  CFA model for assessing the effect of PCO on AFA
      ! Related file: PCO_AFA_CFA_3
DATA:   FILE IS PCO1.dat;
VARIABLE:   NAMES ARE Q_code
                  PFA1-PFA5
                  PCA1-PCA4
                  PCO1-PCO4
                  NetAbi1-NetAbi6
                  IntInf1-IntInf4
                  SocAst1-SocAst5
                  AppSin1-AppSin3
                  Lg10AFA Log10absSales
                  Fore_own Indu
                  Age AreaofGrow
                  AreaofHead FTyear;
         USEVARIABLES ARE PCO1-PCO4;
ANALYSIS: ESTIMATOR=ML;
MODEL:  PCO BY PCO1-PCO4;
OUTPUT: STANDARDIZED MODINDICES (ALL);
```

Appendix 58. Mplus input file of full SEM model for assessing the effect of PCO on AFA

```
TITLE:  Full SEM model for assessing the effect of PCO on AFA
      ! Related file: PCO_AFA_Full_3
DATA:   FILE IS PCO1.dat;
VARIABLE:   NAMES ARE Q_code
                  PFA1-PFA5
                  PCA1-PCA4
                  PCO1-PCO4
                  NetAbi1-NetAbi6
                  IntInf1-IntInf4
                  SocAst1-SocAst5
                  AppSin1-AppSin3
                  Lg10AFA Log10absSales
                  Fore_own Indu
                  Age AreaofGrow
                  AreaofHead FTyear;
         MISSING ARE ALL (-99);
         USEVARIABLES ARE PCO1-PCO4 Lg10AFA;
ANALYSIS: ESTIMATOR=ML;
MODEL:  PCO BY PCO1-PCO4;
      Lg10AFA ON PCO;
OUTPUT: STANDARDIZED MODINDICES (ALL);
```

Appendix 59. Mplus input file of CFA model for assessing the moderating effect of sales on PCO-AFA relationship

```
TITLE:  CFA model for assessing the moderating effect of SALES on PCO-AFA
      ! Related file: PCO_CFA_7_SALES_AFA
DATA:   FILE IS PCO1.dat;
VARIABLE:   NAMES ARE Q_code
                  PFA1-PFA5
                  PCA1-PCA4
                  PCO1-PCO4
                  NetAbi1-NetAbi6
                  IntInf1-IntInf4
                  SocAst1-SocAst5
                  AppSin1-AppSin3
                  Lg10AFA Log10absSales
                  Fore_own Indu
                  Age AreaofGrow
                  AreaofHead FTyear;
         USEVARIABLES ARE PCO1-PCO4;
ANALYSIS: ESTIMATOR=ML;
MODEL:  PCO BY PCO1-PCO4;
OUTPUT: STANDARDIZED MODINDICES (ALL);
```

Appendix 60. Mplus input file of full SEM model for assessing the moderating effect of sales on PCO-AFA relationship: Model without interaction

```
TITLE:  Moderating effects of sales on PCO-AFA
      Model 0, no interaction    ! Related file: pco1_nomod_7_sales_afa
DATA:   FILE IS PCO1.dat;
          type is individual;
VARIABLE:   NAMES ARE Q_code PFA1-PFA5
                  PCA1-PCA4
                  PCO1-PCO4
                  NetAbi1-NetAbi6
                  IntInf1-IntInf4
                  SocAst1-SocAst5
                  AppSin1-AppSin3
                  Lg10AFA Log10absSales
                  Fore_own Indu
                  Age AreaofGrow
                  AreaofHead FTyear;
         MISSING ARE ALL (-99);
         USEVARIABLES ARE PCO1-PCO4 Lg10AFA Log10absSales;
ANALYSIS: ESTIMATOR = ML;
DEFINE: standardize PCO1-PCO4 Lg10AFA Log10absSales;
MODEL:  PCO BY PCO1-PCO4;
      Log10absSales WITH PCO;
      Lg10AFA ON PCO Log10absSales;
      PCO;
OUTPUT: SAMPSTAT TECH1 TECH4 residual standardized;
```

Appendix 61. Mplus input file of full SEM model for assessing the moderating effect of sales on PCO-AFA relationship: Model with interaction

```
TITLE:  TITLE:  Moderating effects of sales on PCO-AFA
      Model 1, with interaction
      ! Related file: pco1_mod_7_stand_sales_afa
DATA:   FILE IS PCO1.dat;
    type is individual;
VARIABLE:   NAMES ARE Q_code PFA1-PFA5
                  PCA1-PCA4
                  PCO1-PCO4
                  NetAbi1-NetAbi6
                  IntInf1-IntInf4
                  SocAst1-SocAst5
                  AppSin1-AppSin3
                  Lg10AFA Log10absSales
                  Fore_own Indu
                  Age AreaofGrow
                  AreaofHead FTyear;
         MISSING ARE ALL (-99);
         USEVARIABLES ARE PCO1-PCO4 Lg10AFA Log10absSales;
ANALYSIS:   TYPE = RANDOM;
         ESTIMATOR = ML;
         ALGORITHM = INTEGRATION;
DEFINE: standardize PCO1-PCO4 Lg10AFA Log10absSales;
MODEL:  PCO BY PCO1-PCO4;
      PCOxSALES | PCO XWITH Log10absSales;
      Log10absSales WITH PCO;
      Lg10AFA ON PCO Log10absSales PCOxSALES;
      PCO;
OUTPUT: SAMPSTAT TECH1;
```

Appendix 62. Mplus input file of CFA model for assessing the moderating effect of sales on PCO-PFA relationship

```
TITLE:  CFA model for assessing the moderating effect of SALES on PCO-PFA
      ! Related file: pco1_cfa_7_sales_pfa
DATA:   FILE IS PCO1.dat;
VARIABLE:   NAMES ARE Q_code
                  PFA1-PFA5
                  PCA1-PCA4
                  PCO1-PCO4
                  NetAbi1-NetAbi6
                  IntInf1-IntInf4
                  SocAst1-SocAst5
                  AppSin1-AppSin3
                  Lg10AFA Log10absSales
                  Fore_own Indu
                  Age AreaofGrow
                  AreaofHead FTyear;
        USEVARIABLES ARE PFA1-PFA5 PCO1-PCO4;
ANALYSIS: ESTIMATOR=ML;
MODEL:  PFA BY PFA1-PFA5;
      PCO BY PCO1-PCO4;
OUTPUT: STANDARDIZED MODINDICES (ALL);
```

Appendix 63. Mplus input file of full SEM model for assessing the moderating effect of sales on PCO-PFA relationship: Model without interaction

```
TITLE:  Moderating effects of sales on PCO-PFA
      Model 0, no interaction
DATA:   FILE IS PCO1.dat;
          type is individual;
VARIABLE:   NAMES ARE Q_code
                  PFA1-PFA5
                  PCA1-PCA4
                  PCO1-PCO4
                  NetAbi1-NetAbi6
                  IntInf1-IntInf4
                  SocAst1-SocAst5
                  AppSin1-AppSin3
                  Lg10AFA Log10absSales
                  Fore_own Indu
                  Age AreaofGrow
                  AreaofHead FTyear;
        MISSING ARE ALL (-99);
        USEVARIABLES ARE PFA1-PFA5
                  PCO1-PCO4
                  Log10absSales;
ANALYSIS: ESTIMATOR = ML;
DEFINE: standardize PFA1-PFA5
                  PCO1-PCO4
                  Log10absSales;
MODEL:  PFA BY PFA1-PFA5;
      PCO BY PCO1-PCO4;
      Log10absSales WITH PCO;
      PFA ON PCO Log10absSales;
      PCO;
OUTPUT: SAMPSTAT TECH1 TECH4 residual standardized;
```

Appendix 64. Mplus input file of full SEM model for assessing the moderating effect of sales on PCO-PFA relationship: Model with interaction

```
TITLE:  Moderating effects of sales on PCO-PFA
      Model 1, with interaction
DATA:   FILE IS PCO1.dat;
   type is individual;
VARIABLE:   NAMES ARE Q_code
                  PFA1-PFA5
                  PCA1-PCA4
                  PCO1-PCO4
                  NetAbi1-NetAbi6
                  IntInf1-IntInf4
                  SocAst1-SocAst5
                  AppSin1-AppSin3
                  Lg10AFA Log10absSales
                  Fore_own Indu
                  Age AreaofGrow
                  AreaofHead FTyear;
        MISSING ARE ALL (-99);
        USEVARIABLES ARE PFA1-PFA5 PCO1-PCO4 Log10absSales;
ANALYSIS:   TYPE = RANDOM;
        ESTIMATOR = ML;
        ALGORITHM = INTEGRATION;
DEFINE: standardize PFA1-PFA5 PCO1-PCO4 Log10absSales;
MODEL:  PFA BY PFA1-PFA5;
      PCO BY PCO1-PCO4;
      PCOxSALES | PCO XWITH Log10absSales;
      Log10absSales WITH PCO;
      PFA ON PCO Log10absSales PCOxSALES;
      PCO;
OUTPUT: SAMPSTAT TECH1;
```

Appendix 65. Mplus input file of CFA model for assessing the moderating effect of sales on PCO-PCA relationship

```
TITLE:  CFA model for assessing the moderating effect of SALES on PCO-PCA
      ! Related file: PCO_CFA_7_SALES_PCA
DATA:   FILE IS PCO1.dat;
VARIABLE:   NAMES ARE Q_code
                  PFA1-PFA5
                  PCA1-PCA4
                  PCO1-PCO4
                  NetAbi1-NetAbi6
                  IntInf1-IntInf4
                  SocAst1-SocAst5
                  AppSin1-AppSin3
                  Lg10AFA Log10absSales
                  Fore_own Indu
                  Age AreaofGrow
                  AreaofHead FTyear;
        USEVARIABLES ARE PCA1-PCA4 PCO1-PCO4;
ANALYSIS: ESTIMATOR=ML;
MODEL:  PCA BY PCA1-PCA4;
      PCO BY PCO1-PCO4;
OUTPUT: STANDARDIZED MODINDICES (ALL);
```

Appendix 66. Mplus input file of full SEM model for assessing the moderating effect of sales on PCO-PCA relationship: Model without interaction

```
TITLE:  Moderating effects of sales on PCO-PCA
      Model 0, no interaction
DATA:   FILE IS PCO1.dat;
          type is individual;
VARIABLE:   NAMES ARE Q_code PFA1-PFA5
                  PCA1-PCA4 PCO1-PCO4
                  NetAbi1-NetAbi6
                  IntInf1-IntInf4
                  SocAst1-SocAst5
                  AppSin1-AppSin3
                  Lg10AFA Log10absSales
                  Fore_own Indu
                  Age AreaofGrow
                  AreaofHead FTyear;
         MISSING ARE ALL (-99);
         USEVARIABLES ARE PCA1-PCA4 PCO1-PCO4 Log10absSales;
ANALYSIS:   ESTIMATOR = ML;
DEFINE: standardize PCA1-PCA4 PCO1-PCO4 Log10absSales;
MODEL:  PCA BY PCA1-PCA4;
      PCO BY PCO1-PCO4;
      Log10absSales WITH PCO;
      PCA ON PCO Log10absSales;
      PCO;
OUTPUT: SAMPSTAT TECH1 TECH4 residual standardized;
```

Appendix 67. Mplus input file of full SEM model for assessing the moderating effect of sales on PCO-PCA relationship: Model with interaction

```
TITLE:  Moderating effects of sales on PCO-PCA
          Model 1, with interaction
DATA:   FILE IS PCO1.dat;
          type is individual;
VARIABLE:   NAMES ARE Q_code PFA1-PFA5
                  PCA1-PCA4 PCO1-PCO4
                  NetAbi1-NetAbi6
                  IntInf1-IntInf4
                  SocAst1-SocAst5
                  AppSin1-AppSin3
                  Lg10AFA Log10absSales
                  Fore_own Indu
                  Age AreaofGrow
                  AreaofHead FTyear;
         MISSING ARE ALL (-99);
         USEVARIABLES ARE PCA1-PCA4 PCO1-PCO4 Log10absSales;
ANALYSIS:   TYPE = RANDOM;
         ESTIMATOR = ML;
         ALGORITHM = INTEGRATION;
DEFINE: standardize PCA1-PCA4 PCO1-PCO4 Log10absSales;
MODEL:  PCA BY PCA1-PCA4;
      PCO BY PCO1-PCO4;
      PCOxSALES | PCO XWITH Log10absSales;
      Log10absSales WITH PCO;
      PCA ON PCO Log10absSales PCOxSALES;
      PCO;
OUTPUT: SAMPSTAT TECH1;
```

Appendix 68. Mplus input file of CFA model for assessing the moderating effect of foreign ownership on PCO-AFA relationship

```
TITLE:  CFA model for assessing the moderating effect of Foreown on PCO-AFA
      ! Related file: PCO1_CFA_7_Foreown_AFA
DATA:   FILE IS PCO1.dat;
VARIABLE:   NAMES ARE Q_code
                  PFA1-PFA5
                  PCA1-PCA4
                  PCO1-PCO4
                  NetAbi1-NetAbi6
                  IntInf1-IntInf4
                  SocAst1-SocAst5
                  AppSin1-AppSin3
                  Lg10AFA Log10absSales
                  Fore_own Indu
                  Age AreaofGrow
                  AreaofHead FTyear;
        USEVARIABLES ARE PCO1-PCO4;
ANALYSIS: ESTIMATOR=ML;
MODEL:  PCO BY PCO1-PCO4;
OUTPUT: STANDARDIZED MODINDICES (ALL);
```

Appendix 69. Mplus input file of full SEM model for assessing the moderating effect of foreign ownership on PCO-AFA relationship: Model without interaction

```
TITLE:  Moderating effects of Foreown on PCO-AFA
        Model 0, no interaction
        ! Related file: pco1_nomod_7_stand_foreown_afa
DATA:   FILE IS PCO1.dat;
          type is individual;
VARIABLE:   NAMES ARE Q_code
                  PFA1-PFA5
                  PCA1-PCA4
                  PCO1-PCO4
                  NetAbi1-NetAbi6
                  IntInf1-IntInf4
                  SocAst1-SocAst5
                  AppSin1-AppSin3
                  Lg10AFA Log10absSales
                  Fore_own Indu
                  Age AreaofGrow
                  AreaofHead FTyear;
        MISSING ARE ALL (-99);
        USEVARIABLES ARE PCO1-PCO4
                  Lg10AFA
                  Fore_own;
ANALYSIS: ESTIMATOR = ML;
DEFINE: standardize PCO1-PCO4
                  Lg10AFA
                  Fore_own;
MODEL: PCO BY PCO1-PCO4;
     Fore_own WITH PCO;
     Lg10AFA ON PCO Fore_own;
     PCO;
OUTPUT: SAMPSTAT TECH1 TECH4 residual standardized;
```

Appendix 70. Mplus input file of full SEM model for assessing the moderating effect of foreign ownership on PCO-AFA relationship: Model with interaction

```
TITLE:  Moderating effects of foreign ownership on PCO-AFA
        Model 1, with interaction
        ! Related file: pco1_mod_7_stand_foreown_afa
DATA:   FILE IS PCO1.dat;
         type is individual;
VARIABLE:   NAMES ARE Q_code
                  PFA1-PFA5
                  PCA1-PCA4
                  PCO1-PCO4
                  NetAbi1-NetAbi6
                  IntInf1-IntInf4
                  SocAst1-SocAst5
                  AppSin1-AppSin3
                  Lg10AFA Log10absSales
                  Fore_own Indu
                  Age AreaofGrow
                  AreaofHead FTyear;
        MISSING ARE ALL (-99);
        USEVARIABLES ARE PCO1-PCO4 Lg10AFA Fore_own;
ANALYSIS: TYPE = RANDOM;
      ESTIMATOR = ML;
      ALGORITHM = INTEGRATION;
DEFINE: standardize PCO1-PCO4 Lg10AFA Fore_own;
MODEL:  PCO BY PCO1-PCO4;
      PCOxForeown | PCO XWITH Fore_own;
      PCO WITH Fore_own;
      Lg10AFA ON PCO Fore_own PCOxForeown;
      PCO;
OUTPUT: SAMPSTAT TECH1;
```

Appendix 71. Mplus input file of CFA model for assessing the moderating effect of foreign ownership on PCO-PFA relationship

```
TITLE:  CFA model for assessing the moderating effect of Foreown on PCO-PFA
        ! Related file: PCO_CFA_7_Foreown_PFA
DATA:   FILE IS PCO1.dat;
VARIABLE:   NAMES ARE Q_code
                  PFA1-PFA5
                  PCA1-PCA4
                  PCO1-PCO4
                  NetAbi1-NetAbi6
                  IntInf1-IntInf4
                  SocAst1-SocAst5
                  AppSin1-AppSin3
                  Lg10AFA Log10absSales
                  Fore_own Indu
                  Age AreaofGrow
                  AreaofHead FTyear;
        USEVARIABLES ARE PFA1-PFA5 PCO1-PCO4;
ANALYSIS: ESTIMATOR=ML;
MODEL:  PFA BY PFA1-PFA5;
      PCO BY PCO1-PCO4;
OUTPUT: STANDARDIZED MODINDICES (ALL);
```

Appendix 72. Mplus input file of full SEM model for assessing the moderating effect of foreign ownership on PCO-PFA relationship: Model without interaction

```
TITLE:  Moderating effects of sales on PCO-PFA
          Model 0, no interaction    ! Related file: pco1_nomode_7_stand_foreown_pfa
DATA:   FILE IS PCO1.dat;
          type is individual;
VARIABLE:   NAMES ARE Q_code PFA1-PFA5
                  PCA1-PCA4 PCO1-PCO4
                  NetAbi1-NetAbi6
                  IntInf1-IntInf4
                  SocAst1-SocAst5
                  AppSin1-AppSin3
                  Lg10AFA Log10absSales
                  Fore_own Indu
                  Age AreaofGrow
                  AreaofHead FTyear;
         MISSING ARE ALL (-99);
         USEVARIABLES ARE PFA1-PFA5 PCO1-PCO4 Fore_own;
ANALYSIS: ESTIMATOR = ML;
DEFINE: standardize PFA1-PFA5 PCO1-PCO4 Fore_own;
MODEL:  PFA BY PFA1-PFA5;
       PCO BY PCO1-PCO4;
       Fore_own WITH PCO;
       PFA ON PCO Fore_own;
       PCO;
OUTPUT: SAMPSTAT TECH1 TECH4 residual standardized;
```

Appendix 73. Mplus input file of full SEM model for assessing the moderating effect of foreign ownership on PCO-PFA relationship: Model with interaction

```
TITLE:      Moderating effects of foreign ownership on PCO-PFA
             Model 1, with interaction       ! Related file: pco1_mod_7_stand_for_pfa
DATA:       FILE IS PCO1.dat;
             type is individual;
VARIABLE:   NAMES ARE Q_code PFA1-PFA5
                  PCA1-PCA4 PCO1-PCO4
                  NetAbi1-NetAbi6
                  IntInf1-IntInf4
                  SocAst1-SocAst5
                  AppSin1-AppSin3
                  Lg10AFA Log10absSales
                  Fore_own Indu
                  Age AreaofGrow
                  AreaofHead FTyear;
         MISSING ARE ALL (-99);
         USEVARIABLES ARE PFA1-PFA5 PCO1-PCO4 Fore_own;
ANALYSIS:   TYPE = RANDOM;
             ESTIMATOR = ML;
             ALGORITHM = INTEGRATION;
DEFINE:     standardize PFA1-PFA5 PCO1-PCO4 Fore_own;
MODEL:      PFA BY PFA1-PFA5;
             PCO BY PCO1-PCO4;
             PCOxFore_own | PCO XWITH Fore_own;
             Fore_own WITH PCO;
             PFA ON PCO Fore_own PCOxFore_own;
             PCO;
OUTPUT:     SAMPSTAT TECH1;
```

Appendix 74. Mplus input file of CFA model for assessing the moderating effect of foreign ownership on PCO-PCA relationship

```
TITLE:     CFA model for assessing the moderating effect of Foreown on PCO-PCA
        ! Related file: PCO_CFA_7_Foreown_PCA
DATA:      FILE IS PCO1.dat;
VARIABLE:  NAMES ARE Q_code
                PFA1-PFA5
                PCA1-PCA4
                PCO1-PCO4
                NetAbi1-NetAbi6
                IntInf1-IntInf4
                SocAst1-SocAst5
                AppSin1-AppSin3
                Lg10AFA Log10absSales
                Fore_own Indu
                Age AreaofGrow
                AreaofHead FTyear;
        USEVARIABLES ARE PCA1-PCA4 PCO1-PCO4;
ANALYSIS:  ESTIMATOR=ML;
MODEL:     PCA BY PCA1-PCA4;
        PCO BY PCO1-PCO4;
OUTPUT:    STANDARDIZED MODINDICES (ALL);
```

Appendix 75. Mplus input file of full SEM model for assessing the moderating effect of foreign ownership on PCO-PCA relationship: Model without interaction

```
TITLE:     Moderating effects of sales on PCO-PCA
           Model 0, no interaction
           ! Related file: pco1_nomod_7_stand_foreown_pca
DATA:      FILE IS PCO1.dat;
           type is individual;
VARIABLE:  NAMES ARE Q_code
                PFA1-PFA5
                PCA1-PCA4
                PCO1-PCO4
                NetAbi1-NetAbi6
                IntInf1-IntInf4
                SocAst1-SocAst5
                AppSin1-AppSin3
                Lg10AFA Log10absSales
                Fore_own Indu
                Age AreaofGrow
                AreaofHead FTyear;
        MISSING ARE ALL (-99);
        USEVARIABLES ARE PCA1-PCA4 PCO1-PCO4 Fore_own;
ANALYSIS:  ESTIMATOR = ML;
DEFINE:    standardize PCA1-PCA4 PCO1-PCO4 Fore_own;
MODEL:     PCA BY PCA1-PCA4;
           PCO BY PCO1-PCO4;
           Fore_own WITH PCO;
           PCA ON PCO Fore_own;
           PCO;
OUTPUT:    SAMPSTAT TECH1 TECH4 residual standardized;
```

Appendix 76. Mplus input file of full SEM model for assessing the moderating effect of foreign ownership on PCO-PCA relationship: Model with interaction

```
TITLE:     Moderating effects of foreign ownership on PCO-PCA
           Model 1, with interaction    ! Related file: pco1_mod_7_stand_foreown_pca
DATA:      FILE IS PCO1.dat;
           type is individual;
VARIABLE:  NAMES ARE Q_code PFA1-PFA5
                PCA1-PCA4 PCO1-PCO4
                NetAbi1-NetAbi6
                IntInf1-IntInf4
                SocAst1-SocAst5
                AppSin1-AppSin3
                Lg10AFA Log10absSales
                Fore_own Indu
                Age AreaofGrow
                AreaofHead FTyear;
       MISSING ARE ALL (-99);
       USEVARIABLES ARE PCA1-PCA4 PCO1-PCO4 Fore_own;
ANALYSIS:  TYPE = RANDOM;
           ESTIMATOR = ML;
           ALGORITHM = INTEGRATION;
DEFINE:    standardize PCA1-PCA4 PCO1-PCO4 Fore_own;
MODEL:     PCA BY PCA1-PCA4;
           PCO BY PCO1-PCO4;
           PCOxFore_own | PCO XWITH Fore_own;
           Fore_own WITH PCO;
           PCA ON PCO Fore_own PCOxFore_own;
           PCO;
OUTPUT:    SAMPSTAT TECH1;
```

Appendix 77. Mplus CFA input file for the MP-CS hypothesised model

```
TITLE:  CFA for the MP-CS hypothesised model
     ! Related file: MP_CFA_3_3
DATA:   FILE IS MP3.dat;
VARIABLE:  NAMES ARE Q_code Lg10AFA
                PFA1-PFA5 PCA1-PCA4
                PCO1-PCO4
                NetAbi1-NetAbi6 IntInf1-IntInf4
                SocAst1-SocAst5 AppSin1-AppSin3
                Neuro1-Neuro4 Extro1-Extro4
                Openn1-Openn4 Agree1-Agree4
                Consc1-Consc4
                EduAtt SQRTCEOTen
                B_size Bsizecom
                NonExe Inst_own
                Dual SQRTabsEPS
                Fore_own AreaofGrow
                Age Indu Log10absSales AreaofHead;
       MISSING ARE ALL (-99);
       USEVARIABLES ARE PFA1-PFA5 PCA1-PCA4
ANALYSIS: ESTIMATOR=ML;
MODEL:  PFA BY PFA1-PFA5;
     PCA BY PCA1-PCA4;
     PCA1 WITH PFA5;
     PCA2 WITH PFA5;
     PCA3 WITH PFA5;
OUTPUT: STANDARDIZED MODINDICES (ALL);
```

Appendix 78. Mplus full SEM input file for the MP-CS hypothesised model

```
TITLE:  Full SEM for the Managerial Power - Career Success (MP-CS) hypothesised model
        ! Relating file MP_FULL_3_23
DATA:   FILE IS MP3.dat;
VARIABLE:   NAMES ARE Q_code Lg10AFA
                  PFA1-PFA5 PCA1-PCA4
                  PCO1-PCO4
                  NetAbi1-NetAbi6 IntInf1-IntInf4
                  SocAst1-SocAst5 AppSin1-AppSin3
                  Neuro1-Neuro4 Extro1-Extro4
                  Openn1-Openn4 Agree1-Agree4
                  Consc1-Consc4
                  EduAtt SQRTCEOTen
                  Dual B_size Inst_own
                  SQRTabsEPS Fore_own
                  Bsizecom NonExe
                  AreaofGrow Age Indu
                  Log10absSales AreaofHead;
        MISSING ARE ALL (-99);
        USEVARIABLES ARE PFA1-PFA5 PCA1-PCA4 Lg10AFA
                Dual SQRTCEOTen B_size;
ANALYSIS: ESTIMATOR=ML;
MODEL:  PFA BY PFA1-PFA5;
      PCA BY PCA1-PCA4;
      Lg10AFA PFA PCA ON Dual;
      Lg10AFA PFA PCA ON SQRTCEOTen;
      Lg10AFA PFA PCA ON B_size;
OUTPUT: STANDARDIZED MODINDICES (ALL);
```