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**LEADERSHIP, CONTROL AT WORK, SUPERVISOR-SUBORDINATE GUANXI
AND PSYCHOLOGICAL OWNERSHIP: A LONGITUDINAL STUDY IN CHINA**

A thesis
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ABSTRACT

The development of globalization in China has generated a growing number of Western organizations that engage in co-operations, joint ventures, or direct investments in this country. These foreign companies mostly bring their own management styles to China. As a consequence, enterprises are dealing with cultural differences and challenges from different leadership styles.

The purpose of this study was to longitudinally test a theoretical model of the relations among leadership, perceived control, personal *guanxi* and psychological ownership in China with two data collection points separated by a six-month interval ($N=971$ at Time 1, $N=201$ at Time 2), and to examine the relationship between leadership styles (transformational and paternalistic leadership), perceived control, supervisor-subordinate *guanxi*, and psychological ownership in Chinese work contexts. SPSS and structural equation modelling (SEM) were used to conduct the correlation and mediation analyses, respectively.

Findings from this study indicated that perceived control was related to supervisor-subordinate *guanxi* in the Chinese work context. The results showed Chinese workers had good personal *guanxi* with their supervisor when they perceived high work control. Perceived control also had stronger mediation effects between Chinese paternalistic leadership and supervisor-subordinate *guanxi* than between Western transformational leadership and supervisor-subordinate *guanxi*. Supervisor-subordinate *guanxi* had significant positive effects on psychological ownership of the job and psychological ownership of the organization. Cross-sectional results showed that supervisor-subordinate *guanxi* had mediation effects between perceived control and psychological ownership of the job and psychological ownership of the organization, respectively. In contrast, longitudinal analyses did not show similar results.

The consequences of psychological ownership of the job and of the organization in the Chinese work context were comparable to findings from previous Western studies. However, this study found high correlations between psychological ownership of the job and of the organization within the Chinese sample. This is slightly different to previous Western studies. Psychological ownership of the job had cross-sectional and longitudinal mediation effects between affective attachment to supervisor and the criterion variables. Psychological ownership of the organization had short-term mediation effects between affective attachment to supervisor and affective organizational commitment, and longitudinally mediated the relationship between affective attachment to supervisor and psychological withdrawal.

This research contributes an understanding of how different manager/supervisor behaviours influenced employees' work attitudes in Chinese organizations. Giving work control to subordinates can strengthen personal *guanxi* at the work place. Good personal *guanxi* between supervisor and subordinate can increase subordinates' feelings of possession toward the job and the organization. The research provides new knowledge about the impact of perceived control, supervisor-subordinate *guanxi* and psychological ownership in the Chinese work context.

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CHAPTER 1 INTRODUCTION

Chapter Overview

This thesis focuses on the effects that leadership styles have on supervisor-subordinate *guanxi*, perceived control and psychological ownership in Chinese organizations. Longitudinal research was conducted to examine the relationship between transformational leadership, paternalistic leadership, perceived control, supervisor-subordinate *guanxi*, psychological ownership of the organization, and psychological ownership of the job, job satisfaction, affective organizational commitment, and psychological withdrawal among a group of Chinese employees in China. This chapter includes the background to the study, research issues, purpose and contribution of the research, research questions and the structure of the thesis.

1.1 Background of the Study

China is the second-largest economy of the world (Huang & Bond, 2012; Jacques, 2009), and is becoming an economic superpower. It is attracting more foreign investment than other countries in the world (Huang & Bond, 2012), engaging in co-operations, joint ventures, or direct investments. These foreign companies are mostly from Western countries (namely, the United States, Canada, Western Europe, Australia and New Zealand) and bring their own management styles to China (Jacques, 2009). As a consequence, enterprises are dealing with cultural differences and challenges from different leadership styles (Felfe, 2008). There is also great interest in the use of Western organizational psychology to better understand the psychological and social processes that characterize Chinese employees (Bond, 2010; Huang & Bond, 2012). On the other hand, China has undergone obvious changes in economic industrialization, although it is still believed to be one of the most traditional and collectivist countries in Asia (Felfe, 2008).

China has been strongly shaped by Confucianism. In Confucian philosophy, the family is the core unit in the society and the state was seen as a form of ‘superfamily’ (Redding & Witt, 2007). Ideally, low status family members, who have less means of existence, offer loyalty to gain responsible care from high status members who control most resources and order is maintained by discipline. As Weber (1951, p. 153) discussed in his book, *The Religion of China*:

The charismatic conception of imperial prerogative and the identity of order in the cosmos and in society determined these basic presuppositions. Everything depended upon the behaviour of the officials and these men were responsible for the leadership of a society which was conceived as one large, patrimonially ruled community. The monarch should deal with the uneducated mass of the people as children. His primary duties were to care for officialdom materially and spiritually and to maintain good and respectful relations with them.

Therefore, absolute power was concentrated in the Chinese leadership (Redding & Witt, 2007), and as a Chinese, the individual needs to know how to behave in all circumstances. The key roles were specified into five fundamental relationships in society, which Confucius called ‘*wu lun*’ (五伦)--emperor and subject (superior-subordinate), father and son, husband and wife, elder brother and younger, and friends (Redfern & Ho, 2009). These five fundamental relationships were fully defined in Confucian teaching (Mencius, 1895a, p. 565):

Between father and son, there should be affection; between sovereign and minister, righteousness; between husband and wife, attention to their separate functions; between elder brother and younger, a proper order; and between friends, fidelity.

Two of these dyadic relationships, between father and son and between emperor and subject, were highlighted in Confucian philosophy. “In the family, there is the relation of father and son; abroad, there is the relation of sovereign and minister. These are the two important relations among men” (Mencius, 1895b, p. 630). Hence, to be Chinese is to understand how to be in

connection with each other that becomes the ground rules of social order, and the concept of ‘filial piety’ is the core to follow in this order. This is the obligation of unquestioning obedience and respect from a son to a father (Bond, 2010; Huang & Bond, 2012; Hwang, 2012).

Chinese business persons and workers were influenced by the Confucian worldview, placing a constraint on the expression of individual desires and emphasizing loyalty, obedience and hard work (Redding & Witt, 2007). Chinese family business people believed that networks of family businesses formed a defensive wall against insecurity in business and to protect their family interests. Therefore, to be a Chinese worker is to work in a web of relations which is regulated and controlled by cultural norms and relationship rules. In the Chinese work context, individuals are expected to show loyalty towards the employer and to sacrifice for the group and company interests. Hence, the management of different cultures is a challenge for Western organizations that undertake cross-cultural activities in China. Cross-cultural leadership styles are needed to overcome cultural barriers so as to avoid misunderstanding and conflict (Berry, Poortinga, Segall, & Dasen, 2002).

1.2 Research Issues

Previous research (Chen & Kao, 2009; Farh, Cheng, Chou, & Chu, 2006) confirmed that paternalism is a regular pattern in Chinese leadership, which is different from the leadership practiced in the West. Paternalistic leadership, defined as “a style that combines strong discipline and authority with fatherly benevolence” (Farh & Cheng, 2000, p. 91), involves three dimensions: (1) benevolence, (2) morality, and (3) authoritarianism (Cheng, Chou, & Farh, 2000). Previous research (Cheng, Chou, Wu, Huang, & Farh, 2004; Farh et al., 2006) suggests that paternalistic leadership is an effective and prevalent management style in Chinese business organizations, particularly in family-owned organizations. Paternalistic leadership stems from the Confucian ideal of the five fundamental relationships and the norm of reciprocity (Farh & Cheng, 2000). Farh et al. (2006) found that Chinese and Taiwanese employees place high value

on paternalistic leadership because they are eager to reciprocate the care and protection of authority from supervisors by showing loyalty and conformity.

On the other hand, leadership as a social influence process is a universal phenomenon that crosses national borders (Farh & Cheng, 2000). In the Chinese context, many Western instruments have been translated to test the generality of Western leadership models to Chinese organizations (Chen & Farh, 1999; Farh, Podsakoff, & Cheng, 1987; Gupta & Wang, 2004; Hsu, Hsu, Huang, Leong, & Li, 2003).). There are two broad types of leadership examined in Western research: transactional and transformational. Transactional leadership is limited to the exchanges between leaders and their followers (Antonakis, Avolio, & Sivasubramaniam, 2003; Northouse, 2007). It is focused on subordinate goal and role clarification and the ways managers positively or negatively reinforce subordinates' behaviours. Transformational leadership, on the other hand, is focused on motivating subordinates to perform beyond expectations (Antonakis et al., 2003). To achieve this goal, transformational leaders induce subordinates to transcend self-interest in favour of the organization and raise their motivational level in terms of Maslow's need hierarchy (Singer & Singer, 2001; Walumbwa, Wang, Lawler, & Shi, 2004). Bass (1985) argued that such performance cannot be accomplished by transactional leadership alone.

Previous research has shown that the transformational leadership style is significantly related to a number of different variables in the Western work context: job satisfaction, commitment, involvement, learning culture, self-esteem, gender differences, organization quality improvement, and organization learning (Arnold, Barling, & Kelloway, 2001; Bass, 1999; Eagly, Johannesen-Schmidt, & van Engen, 2003; Laohavichien, Fredendall, & Cantrell, 2009; Mannheim & Halamish, 2008; Xirasagar, 2008). Some research has been conducted to test the relations between transformational leadership and work outcomes in the Chinese context. For example, transformational leadership is positively related to Chinese employees'

organizational commitment, job satisfaction, group cohesiveness, emotional intelligence and organizational innovation; and negatively correlated to work withdrawal behaviours (Farh & Cheng, 2000; Lee, 2007; Walumbwa, Wang, Lawler, & Shi, 2004; Wang & Huang, 2009; Wong, Tjosvold, & Lu, 2010; Yang, 2009).

Although transformational leadership can be applied across national borders, conceptions of it vary widely across cultures (Farh & Cheng, 2000). Transformational leadership has some similarities with paternalistic leadership. For example, the transformational style is leader-centric (Chen & Farh, 2010; Meindl, 1990), the leader is the agent of transformation, while the followers and the organization are the targets of the transformation. This relationship fits the hierarchical structuring of paternalistic leadership (Chen & Farh, 2010). One characteristic of transformational leadership is the ability to make followers agree that the collective interests of the organization are higher than individual interests. This orientation fits well with the Confucian definition of the superior and reflects the paternalistic leadership dimension of moral leadership (Chen & Farh, 2010; Yang, Peng, & Lee, 2008). Further, the transformational leadership dimension of individualized consideration explicitly parallels the paternalistic leadership component of benevolent leadership. Followers' socio-emotional loyalty to, and identification with, the leader are a feature of effective leadership in the Chinese Confucian philosophy.

Transformational leadership also defines leadership in terms of followers' identification with the leader (Bass, 1985; Bass & Avolio, 1990; Chen & Farh, 2010). Hence, transformational leadership is presupposed to have significant effects on employees' work attitudes, as paternalistic leadership does in the Chinese work context. Specifically, it could be an effective supervision style for managers/supervisors managing the personal relationships with their subordinates. Hence, this study explored the content of the paternalistic and transformational leadership style combined within the Chinese work context.

Guanxi is a time-honoured Chinese form of networking based on personal relationships and it

shares certain characteristics with modern Western networking. It is an interwoven network of interpersonal relationships based upon Confucianism, which includes social rules, values and structures (Chang & Lii, 2005; Lovett, Simmons, & Kali, 1999; Zhang & Zhang, 2006). This study has focused on *guanxi* between supervisor and subordinate, which is defined as “a dyadic, particular and sentimental tie that has the potential of facilitating favour exchanges between the parties connected by the tie” (Bian, 2006, p. 312). In other words, supervisor-subordinate *guanxi* refers to a personal relationship developed and maintained both inside and outside working hours (Cheung, Wu, Chan, & Wong, 2009).

Guanxi relationships have been explored by different disciplines: psychology, anthropology, demography, sociology and economics (Zhang & Zhang, 2006), and Western and Chinese scholars have studied *guanxi* using three main research methods (Zhang & Zhang, 2006). The first research method is a focus on definitions, characteristics, dimensions, nature and principles of *guanxi* from sociological standpoints (e.g. Cheng & Cheng, 2004; Fan, 2002; Hwang, 1987; Luo, 1997). The second research approach has focused on investigating the consequences to and implications of *guanxi* in Chinese society and organizational dynamics (Zhang & Zhang, 2006). The last research method deals with explorations of the ethical status of *guanxi* (Zhang & Zhang, 2006). Some Western scholars believe that *guanxi* is unethical and related to unethical behaviours such as bureaucratic corruption, cronyism and under-table dealing (Chan, Cheng, & Szeto, 2002; Warren, Dunfee, & Li, 2004), but this perspective is not supported by other researchers (Dunfee & Warren, 2001; Szeto, Wright, & Cheng, 2006). For instance, there is a significant relationship between supervisor-subordinate *guanxi* and important work outcomes (Chen, Friedman, Yu, Fang, & Lu, 2009). Studies have found that both supervisors and subordinates depend on *guanxi* in the Chinese work context, and supervisors offer more bonuses and promotion opportunities to subordinates with whom they have good rather than poor *guanxi* (Cheng, Farh, Chang, & Hsu, 2002). Reciprocally, these subordinates have greater trust in their

supervisors and report better performance (Chen et al., 2009). In summary, one main purpose of the current research was to explore the relationships between paternalistic and transformational leadership styles and supervisor-subordinate *guanxi* in the Chinese work context. The second research approach mentioned above emphasizes the significance of *guanxi* to Chinese organizational dynamics, hence this approach was used in the present study.

Additionally, theories of psychological ownership have been discussed repeatedly in the Western work context. Psychological ownership is based on feelings of possessiveness and being psychologically tied to a target in nature (Pierce & Jussila, 2011). Brown (1989) suggests that psychological ownership will be the key to organizational competitiveness during the twenty-first century. Organizational scholars have suggested that, under certain circumstances, organizational members develop possessive feelings for their job and for their organization (Pierce, Kostova, & Dirks, 2001; Pierce, O'Driscoll, & Coghlan, 2004; Pierce, Rubenfeld, & Morgan, 1991; Van Dyne & Pierce, 2004). Dirks, Cummings and Pierce (1996) emphasize that psychological ownership measures an employee's psychological and emotional investment in the target of ownership. Vandewalle, Dyne, and Kostova (1995) argue that psychological ownership represents a bonding such that organizational members feel a sense of possessiveness toward the target of ownership even though no legal claim exists. With regard to organizational commitment, Pierce et al. (1991) proposed that as employees develop feelings of ownership for the organization, they become increasingly integrated into the organization. Pierce et al. (2001) further argue that feelings of ownership are pleasure-producing in and of themselves and, as a consequence, organizational members will want to maintain their relationship with that which produces positive effects. Van Dyne and Pierce (2004) examined the relationship of psychological ownership with work attitudes and work behaviours. They found positive correlations between psychological ownership of the organization and employee attitudes (e.g. organizational commitment, job satisfaction, organization-based self-esteem), and work

behaviour (e.g. performance and organizational citizenship behaviour).

Likewise, personal control has been shown to have a significant relationship with psychological ownership (Li, 2008; O'Driscoll, Pierce, & Coghlan, 2006). In the work context, perceived control refers to “employees’ belief about the extent to which they have autonomy in their job (e.g. freedom to schedule work and determine how work is done) and are allowed to participate in making decisions on issues that affect their task domain” (Ashforth & Saks, 2000, p. 313). Pierce et al. (1991) note that control is an important component contributing to the development of the experienced state of ownership. They further found that perceived control mediates the relationship between three sources of work environment structure (e.g., technology, autonomy, and participative decision making) and psychological ownership of the job.

Researchers whose studies focused on leadership behaviours (Avolio, Walumbwa, & Weber, 2009; Fleishman, 1953; Fleishman & Harris, 1962; Halpin & Winer, 1957; Northouse, 2007; Yukl, 2002) argue that there is a need to understand how managers/supervisors affect subordinates psychologically and how a manager/supervisor responds to subordinates’ reactions. Relationships between leadership styles, perceived control and psychological ownership are formed in the Western work context. For instance, Li (2008) found that managers in New Zealand use a task-oriented leadership style to make subordinates feel they have control at work directly, in order to improve their feelings of ownership. In contrast, there is lack of research within Chinese organizations exploring the relationships between leadership styles, perceived control and psychological ownership.

There is an old Chinese saying: “Similarity exists in dissimilarity and vice versa” (Cheng et al., 2004, p.92). Transformational leadership from the West and Chinese paternalistic leadership may include general management behaviours that are applicable across cultures, as well as emic behaviours that are unique and are only applicable in a particular cultural setting (Cheng et al., 2004; Yang, 2000). Hence, it is necessary to understand which variables (i.e., transformational

leadership, perceived control and psychological ownership) are universal and which (i.e., supervisor-subordinate *guanxi* and paternalistic leadership) are culture specific when applying a Western organization psychology perspective to Chinese organizations. Hence, this research hypothesizes that Chinese employees' perceived control and levels of felt ownership will be influenced by a construct that is specific to the Chinese work context—supervisor-subordinate *guanxi*.

Finally, a direct relationship between psychological ownership and other variables was examined in this research. These variables are affective organizational commitment, job satisfaction, and psychological withdrawal.

- Affective organizational commitment: “an employee’s emotional attachment to, identification with, and involvement in the organization” (Meyer & Allen, 1997, p. 11).
- Job satisfaction: “how people feel about their jobs and different aspects of their jobs. It is the extent to which people like (satisfaction) or dislike (dissatisfaction) their jobs” (Spector, 1997, p. 2).
- Psychological withdrawal (e.g. day dreaming and making excuses to get out of work): is correlated with employees’ general dissatisfaction with their job or organization (Li, 2008).

1.3 Purpose of the Research

The purpose of this study was to undertake research in multiple organizations in China, to:

1. Examine the relationship between leadership styles, perceived control, supervisor-subordinate *guanxi*, and psychological ownership in Chinese work contexts; and
2. Longitudinally test the theoretical model, as described in purpose 1, in China.

Firstly, the primary emphasis of this research was to explore the relationships between different leadership styles, perceived control, supervisor-subordinate *guanxi*, and psychological

ownership of the job and of the organization. This research integrated *guanxi* and theories of psychological ownership and perceived control, in order to discover the impact of *guanxi* on feelings of psychological ownership among Chinese employees. Little research has been done on these relationships, hence the present study explored new concepts in relation to *guanxi*. Similarly, the application of leadership has been discussed for decades by scholars from both Western and Eastern cultures, but only a few researchers have focused on supervision behaviours, and how those behaviours affect subordinates' feelings about their job and organization in the Chinese work context. Further, theories of perceived control and psychological ownership have been discussed over two decades from the Western perspective (e.g. Pierce & Jussila, 2011; Pierce, Kostova, & Dirks, 2001; Pierce, O'Driscoll, & Coghlan, 2004; Pierce, Van Dyne, & Cummings, 1997), but few studies are related to Chinese organizations, hence this study examined the relationship between perceived control and psychological ownership in the Chinese work context.

Secondly, this research was designed as a longitudinal study of Chinese employees, with two data collection points separated by a six-month interval. The longitudinal design has two advantages: (a) the researcher can determine the direction and extent of change in the research (Shaughnessy, Zechmeister, & Zechmeister, 2006); and (b) the longitudinal design helps in understanding the ordering of causes and effects in the theoretical model. Data were collected on the same variables and on the same respondents with a six-month interval. The six-month interval gave enough time to identify the longitudinal causal relationships between variables over time.

1.4 Research Questions

The following research questions guided this study.

1. Is supervisor-subordinate *guanxi* related to psychological ownership within the Chinese work context?
2. Does perceived control mediate the relationship between (a) transformational, and (b) paternalistic leadership and supervisor-subordinate *guanxi* within the Chinese work context?
3. Does supervisor-subordinate *guanxi* mediate the relationship between perceived control and psychological ownership of the job and of the organization within the Chinese work context?
4. Do psychological ownership of the job and of the organization play a mediating role between supervisor-subordinate *guanxi* and criterion outcomes, respectively, within the Chinese work context?

1.5 Structure of the Thesis

This thesis consists of eight chapters. The present chapter contains a description of the research background. Specifically, this chapter describes research issues, purpose and contribution of the research, and research questions. Chapter 2 describes the theoretical model of the current research, and provides a literature review on the variables incorporated in this study and mediation hypotheses. Chapter 3 describes the methodology and analytical approaches used to examine the research hypotheses. Chapter 4 presents the results of confirmatory factor analysis for the research measures. Chapter 5 presents Time 1 results, Chapter 6 presents Time 2 results and Chapter 7 describes longitudinal results. Finally, Chapter 8 discusses the importance and contributions of this research, the research findings, and their implications. Certain limitations of the study and recommendations for future research in this field are also discussed in Chapter 8.

CHAPTER 2 THEORETICAL MODEL AND LITERATURE REVIEW

Chapter Overview

This chapter presents the theoretical model of the study. I review previous research on the variables of interest and discuss hypotheses based on cross-sectional and longitudinal analyses. Finally, I discuss the mediating mechanisms of perceived control, supervisor-subordinate *guanxi*, psychological ownership of the job and psychological ownership of the organization. Mediation and longitudinal hypotheses are also stated in this section.

2.1 Theoretical Model of the Study

The theoretical model was developed from a literature review on leadership styles, *guanxi*, perceived control and psychological ownership perspectives. I propose (see Figure 2.1) that (a) specific leadership styles will significantly influence feelings of control at work from the employee perspective; (b) perceived control will mediate the relationship between the leadership styles and supervisor-subordinate *guanxi*; (c) personal *guanxi* will mediate the relationships between perceived control at work and psychological ownership of the job and of the organization in the Chinese work context; and (d) psychological ownership of the job and of the organization will mediate the relationships between supervisor-subordinate *guanxi* and employees' work attitudes in the Chinese work context. Figure 2.1 provides a framework to explore the research objectives stated earlier. Below I discuss the variables in the theoretical model, starting from the left hand side of the model.

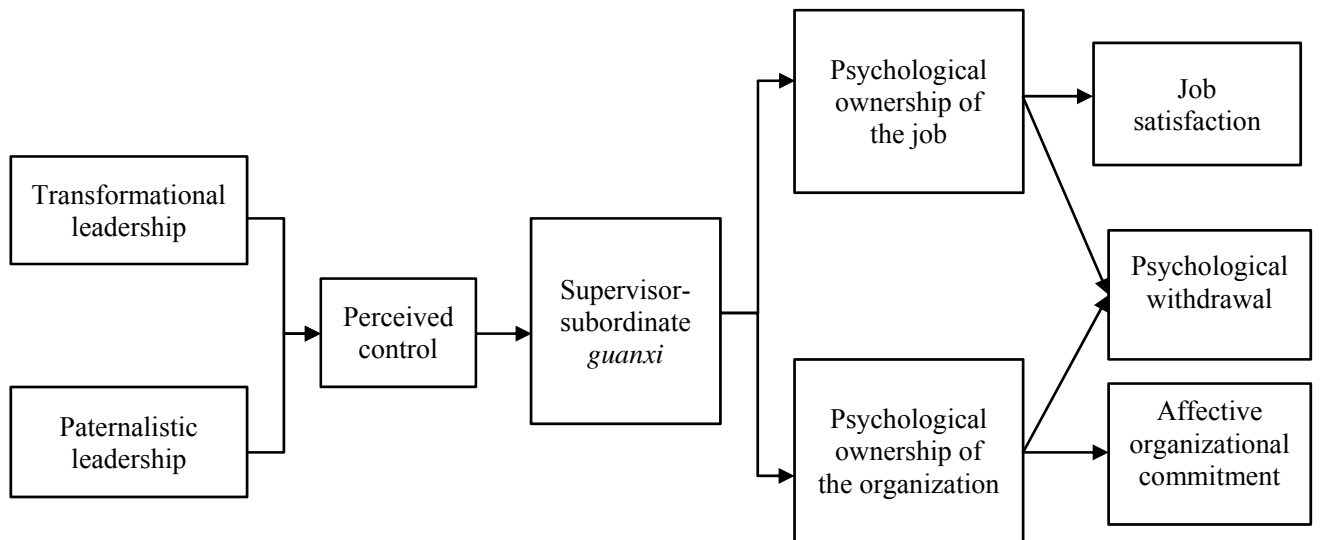


Figure 2.1. The theoretical model of the study

2.2 Review of the Literature

2.2.1 Leadership styles research in China

Leadership style is considered a complex phenomenon in Chinese organizations, combining both culturally universal (etic) and culturally specific (emic) aspects (Chen & Farh, 2010). Market economy, global economy, and the technological revolution challenge Chinese societies and shape Chinese organizations daily (Bond, 2010). Conversely, China is also living in its own rich cultural traditions. For example, Confucianism is one of the core ideologies which highlights that keeping good *guanxi* between individuals is a relational rule in Chinese society. China also is a communist country, and communism deeply influences Chinese modern socialistic values and institutional practices. Hence, the Chinese work context is complex, which explains why leadership is a difficult issue to apply in Chinese organizations. On one hand, Western leadership concepts and theories (e.g. transformational leadership) have been used and tested in Chinese work contexts and have found significant support (Chen & Farh, 2010). On the other hand, leadership research which focuses on concepts and models based on uniquely Chinese social and cultural traditions also has been published over the last decade in both English (e.g.

Chen & Lee, 2008; Cheng et al., 2004; Tsui, Bian, & Cheng, 2006) and Chinese (e.g. Cheng, Chou, & Farh, 2000b; Cheng, Chou, Huang, Farh, & Peng, 2003). These academic publications indicate that the paternalistic leadership model has been well developed and systematically researched (Bond, 2010; Farh & Cheng, 2000; Farh et al., 2006; Farh, Liang, Chou, & Cheng, 2008). This is the reason to bring paternalistic leadership into the present research.

2.2.2 Paternalistic leadership

Paternalism is based on the traditional Chinese family structure, and has crossed the boundary between different families and been generalized to the workplace in China today (Farh et al., 2008). The superior in an organization is like a father/mother and takes care of subordinates like a parent would, such as by providing guidance and protection. In return, the subordinates are normally required to be obedient and loyal to the superior (Aycan, 2006; Farh et al., 2008). Paternalism is a significant characteristic within Chinese organizations.

Based on previous work (e.g. Deyo, 1978; 1983; Pye, 1985; Silin, 1976), Redding (1990, p. 130) divided paternalism into seven themes:

- 1) dependence of the subordinate as a mind-set; 2) personalized loyalty, leading to willingness by subordinates to conform; 3) authoritarianism modified by sensitivity to subordinates' view; 4) authority not divisible when it has become so clearly identified with a person; 5) aloofness and social distancing within the hierarchy; 6) allowance for the leader's intentions to remain loosely formulated and unarticulated; and 7) the leader as exemplar and teacher.

Cheng (Cheng, 1995a, 1995b; Cheng et al., 2004) used a series of case studies, structured interviews, and quantitative research methods to explore leadership in Taiwan's family businesses. These studies confirmed that paternalistic leadership is a general leadership style in various Chinese organizations.

From an extensive review of the literature, Farh and Cheng (2000) further proposed a three

dimensional model of paternalistic leadership: authoritarianism, benevolence, and morality. *Authoritarianism* refers to a leader claiming absolute authority and control over subordinates and demanding unquestioned obedience from subordinates. *Benevolence* refers to a leader's behaviours that demonstrate individualized, holistic concern for subordinates' personal and familial well-being. *Morality* relates to a leader's behaviours that show superior personal moral character, self-discipline, and unselfishness (Cheng et al., 2004; Farh et al., 2008).

In Farh and Cheng's (2000) paternalistic leadership model, each dimension is hypothesized to correspond with subordinate responses. For instance, authoritarian leadership behaviours are expected to match with subordinates' dependence and compliance, and benevolent behaviours are expected to coordinate with subordinates' respect for the leader. In this paternalistic leadership model, all subordinate responses are theorized to have originated from Chinese traditional culture, which emphasizes followers' unquestioned obedience in a hierarchical relationship, obligations to maintain reciprocal relationships with others, and acceptance of moral teachings (Chen & Farh, 2010; Cheng et al., 2004; Farh et al., 2008).

A series of empirical studies was conducted to examine the validity of Farh and Cheng's (2000) three dimensions of paternalistic leadership. Cheng and Farh (2001) conducted a study to compare employees from both Taiwan and the Chinese mainland using the paternalistic leadership model. They found conceptual differences between the three dimensions of paternalistic leadership. Cheng, Shieh and Chou (2002) and Cheng et al. (2004) separately conducted studies to examine subordinates' attitudinal and behavioural outcomes by comparing both theories of paternalistic leadership and Western transformational leadership within Chinese organizations. They argued paternalistic leadership has a more significant effect on subordinate responses than does transformational leadership. Similarly, a few paternalistic leadership studies have been conducted of subordinates' belief in tradition. For example, Farh, Early, and Lin (1997) argued that traditional Chinese society is strongly based on the five fundamental

relationships of Confucianism. These relationships indicate the status of people to one another within the Chinese traditional social system. Individual loyalty and obedience to authority play a significant role within these five fundamental relationships, and are the basis of Chinese social norms.

However, Chinese people are differentiated by degree of modernization, education, wealth, and values. Absolute submission to authority may not be the essential value for all Chinese, especially for the younger generations with higher Western education (Cheng & Farh, 2001; Kulich & Zhang, 2010; Yang, 1996). Previous studies (e.g. Farh et al., 1997; Farh, Hackett, & Liang, 2007; Hui, Lee, & Rousseau, 2004; Xie, Schaubroeck, & Lam, 2008) have shown that individual differences in belief in tradition influence Chinese employees' work attitudes and behaviours in a variety of organizational contexts. Based on the paternalistic leadership theory, individuals who recognize more traditional Chinese values are more likely to relate to paternalistic leadership positively than those who do not. Cheng et al. (2004) found that in terms of the three psychological responses (e.g. identification, compliance, and gratitude) to paternalistic leadership, authoritarian leadership did not significantly influence subordinates who have a low degree of belief in tradition, but positively affected those with higher degrees of belief in tradition. Farh et al. (2006) also reported similar findings, that is, authoritarian leadership was negatively related to job satisfaction among subordinates who had a low endorsement of traditional Chinese values, but had a significant and positive relationship with job satisfaction among subordinates with a high endorsement of traditional Chinese values.

In summary, previous studies have demonstrated that paternalistic leadership works more positively when subordinates have a high degree of Chinese traditional values. These findings indicate that paternalistic leadership is a main leadership style in the Chinese context, and that it can influence subordinates' work behaviours.

2.2.3. Transformational leadership

This leadership style has been discussed comprehensively for over a half century by Western scholars. Many types of leadership styles have been identified and distinguished, such as task-oriented vs. relation-oriented and autocratic vs. democratic (Likert, 1961,1967). The present research focuses on transformational leadership and its consequences in promoting Chinese employees' work attitudes and performance. The first reason for choosing transformational leadership is that few studies have been conducted to investigate the impact of transformational leadership within Chinese work contexts. The second is that theories of transformational leadership have been studied and examined since the 1960s, and much research has been conducted to improve these theories (e.g. Avolio et al., 2009; Avolio & Bass, 1988; Podsakoff, Dorfman, Howell, & Todor, 1986; Podsakoff, MacKenzie, & Bommer, 1996; Podsakoff, MacKenzie, Moorman, & Fetter, 1990).

Bass and Avolio (1994) argue that the core of transformational leadership is to create organizational changes through a vision of new work values and the future of the organization, which go beyond the status quo. Transformational leadership consists of four conceptually distinct factors: (a) idealized influence (attributes and behaviours); (b) intellectual stimulation; (c) individual consideration; and (d) inspirational motivation (Bass & Avolio, 1997; Eagly et al., 2003; Mary, 2010). Definitions of these factors are presented in Table 2.1.

Transformational leadership is based on charismatic leadership (Weber, 1968). Managers/supervisors who adopt a transformational style try to develop followers into leaders, and attempt to bring changes into the organization (Bass, 1999; Bass & Avolio, 1990; Gellis, 2001). Empirical studies (e.g. Barling, Weber, & Kelloway, 1996; Bass, Avolio, & Atwater, 1996; Bass, Waldman, Avolio, & Bebb, 1987; Den Hartog, Van Muijen, & Koopman, 1996; Erkutlu, 2008) have been conducted to examine the association between transformational

leadership and a series of outcomes, and several predictions have been confirmed: (1) subordinates' performance can be improved as a consequence of the leader's influence; (2) subordinates have greater commitment to the manager/supervisor; (3) transformational leadership influences subordinates' intrinsic work motivation, level of development, and sense of purpose (a transformational leader drives his/her subordinates to excel beyond their ordinary limits); (4) transformational leaders can help teams maximize their performance through delineating a vision and shared similar values; and (5) teams are more open to innovation and risk taking under the influences of transformational leadership.

Table 2.1. Definitions of transformational leadership dimensions

Factor	Definition
<ul style="list-style-type: none"> Idealized influence <ul style="list-style-type: none"> A. attributes B. behaviours 	<p>Manager/supervisor demonstrates qualities that motivate respect and pride from association with him/her.</p> <p>Manager/supervisor communicates values, purpose and importance of organization's mission</p>
<ul style="list-style-type: none"> Inspirational motivation 	Manager/supervisor motivates subordinates to have high expectations and commit to the organization.
<ul style="list-style-type: none"> Intellectual stimulation 	Manager/supervisor challenges subordinates to be creative, innovative and to challenge the norm.
<ul style="list-style-type: none"> Individualized consideration 	Manager/supervisor provides a supportive climate to assist subordinates' individual needs.

Additionally, studies have been conducted to show that transformational leadership is applicable in Chinese organizations. For example, Javidan and Carl (2005) suggested Chinese managers are familiar with core features of charismatic leadership as conceived in the West. Wang and colleagues (2005) found that the level of supervisors' transformational style significantly affected subordinates' in-role and extra-role behaviours at work. Transformational leadership has similarities with paternalistic leadership but also has differences. For example,

transformation style is leader-centric (Meindl, 1990), which corresponds with hierarchy and authority in paternalistic leadership. Autocratic leaders act in a dictatorial way for personal benefits. Authoritarian leaders emphasize high performance through absolute control, strict discipline and unquestioned obedience from subordinates, in order to achieve collective benefits for the team (Chen & Farh, 2010). Individualized consideration in transformational leadership is similar to benevolence in paternalistic leadership. Individualized consideration is limited to subordinates at work, but benevolence is long-term oriented rather than individualized consideration and it covers subordinates' personal issues within and beyond work hours through supervisor-subordinate *guanxi* (Wu & Xu, 2012). Both transformational and paternalistic leadership emphasize leaders' ethics and morality. Western transformational leadership focuses on a higher level of moral values and image-building in business ethics, whereas Chinese paternalistic leadership emphasizes leaders' practice of self-cultivation (Wu & Xu, 2012).

A Chinese manager/supervisor may apply more than one type of leadership to lead subordinates to achieve high performance in Chinese work context. Based on those similarities and differences between transformational and paternalistic leadership, I further argue that employees would perceive different levels of work control when their supervisor applies different leadership styles.

2.2.4 Perceived control

Perceived control at work is an important job characteristic and plays a significant role in organizational behaviour (Idsoe, 2006; Spector, 1986). Ganster (1989, p. 3) defined control as "the ability to exert some influence over one's environment, so that the environment becomes more rewarding or less threatening". According to Pierce et al. (2004), reviews of the child development, sociology, gerontology, geography, and psychology literature show that perceived control plays a major role in human development. Control exercised over an object eventually

gives rise to feelings of ownership for that object (Li, 2008). Prelinger (1959) argues that the more an individual feels that she or he has control over and can influence an object, the more likely it is that this object will be perceived as part of the self. Perceived control at work is associated with autonomy at work, relating to the extent to which individuals can control how and when they do their work tasks (Hackman & Oldham, 1980; Idsoe, 2006).

Deci and Ryan (1991) argue that people have an intrinsic requirement for self-determination in the work environment, that is, the exercise of choice in making personal decisions at work. To be self-determining, people must perceive that they have control in the work environment. Previous research (e.g. Miller, 1979; Thompson, 1981) suggested that control at work is related to positive health outcomes, whereas lack of control causes negative health outcomes. For example, researchers (e.g. Greenberger, Strasser, Cummings, & Dunham, 1989; Schaubroeck & Merritt, 1997; Spector, 1986; Stevens, Bavetta, & Gist, 1993; Yoon, Han, & Seo, 1996) found that the extent to which employees believe they have control is a major determinant of their affective responses, such as job satisfaction, work involvement and organizational commitment. Other empirical research (e.g. Bullers, 1999; Gecas & Seff, 1989; Mirowsky & Ross, 1989; Wallston & Wallston, 1978; Wallston, Wallston, Smith, & Dobbins, 1987; Wheaton, 1983) has further established that low levels of perceived control are related to several indicators of physical and psychological distress, whereas high levels of perceived control are associated with various indicators of successful well-being. For instance, high levels of perceived control reduce organization members' job dissatisfaction (Spector, 1986). Some other studies (e.g. Andrisani & Nestle, 1976; Becker & Hills, 1981) highlighted the effects of high perceived control on problem solving and goal attainment. They argued that a high level of perceived control is related positively to personal confidence.

One of the core questions in this study is whether a Chinese manager/supervisor is able to give subordinates' enough personal control at work to build up and maintain *guanxi* with them.

Li (2008) conducted a study to investigate the relationships between leadership styles (task-oriented, relationship-oriented and participative leadership) and perceived control in non-profit organizations (NPOs) in New Zealand. Results of that study showed all leadership variables had a positive and significant relationship with perceived control. Li found social volunteers perceived control at work when they understood how to achieve and complete their tasks. Therefore, I argue that the manager/supervisor's leadership style might influence a subordinate's sense of control in the Chinese work context.

As Chen and his colleagues (2014, p.799) highlighted, "a key motivational mechanism of transformational leadership is the transformation of followers into leaders themselves". To achieve this goal, a transformational supervisor could empower his/her subordinates at work, such as giving subordinates control to participate in decision making in their work unit. The transformational supervisor also could motivate subordinates to have high performance expectations and challenge them by giving subordinates enough control over the work environment to complete a task. Therefore, I hypothesized that transformational leadership would be related to perceived control within the Chinese work context. The following hypotheses are proposed.

Cross-sectional hypotheses

Hypothesis 1: There will be a significant positive relationship between transformational leadership and perceived control within the Chinese work context at both Time 1 and Time 2.

H1a: Idealized influence attributes and behaviours will be positively related to perceived control at both Time 1 and Time 2.

H1b: Inspirational motivation will be positively related to perceived control at both Time 1 and Time 2.

H1c: Intellectual stimulation will be positively related to perceived control at both Time 1 and Time 2.

H1d: Individualized consideration will be positively related to perceived control at both Time 1 and Time 2.

One of the research purposes was to test the theoretical model longitudinally in China, in order to understand the ordering of causes and effects between predictors and criterion variables. Therefore, the following longitudinal hypotheses are proposed.

Longitudinal hypotheses

Hypothesis 2: There will be a significant positive relationship between transformational leadership and perceived control within the Chinese work context over time.

H2a: Idealized influence attributes and behaviours at Time 1 will be positively related to perceived control at Time 2.

H2b: Inspirational motivation at Time 1 will be positively related to perceived control at Time 2.

H2c: Intellectual stimulation at Time 1 will be positively related to perceived control at Time 2.

H2d: Individualized consideration at Time 1 will be positively related to perceived control at Time 2.

I argue that while both transformational supervisor and paternalistic supervisor give control to subordinates, the effects would be different. Transformational leadership is related to optimism, excitement, or stimulation (Chen et al., 2014). In other words, a transformational leader hopes subordinates treating the organization and the leader as one, but they need to retain their feelings for the organization rather than for the leaders at the personal level. Thus transformational leader

gives work control to subordinates, in order to motivate them to achieve high performance for the organisation. In contrast, the effects of paternalistic leadership are related to admiration, respect, liking, gratitude, or fear (Chen et al., 2014). A paternalistic leader hopes subordinates' feelings for the leader will remain at the interpersonal level. Thus, the paternalistic leader gives work control to subordinates for exchange obedience and respect toward the leader rather than toward the whole organization.

The concept of perceived control at work has been examined by few studies in China. Cheng, Zhang, Leung and Zhou (2010) investigated the associations between time control at work, perceived distributive justice, job satisfaction and organizational commitment. As mentioned, paternalistic leadership is an indigenous Chinese leadership style which is based on its three components: authoritarianism, benevolence, and morality. Based on the Confucian value of hierarchy, a typical authoritarian supervisor may not give enough control to subordinates at work. He/she might use their authority to influence subordinates' behaviours. However, when a benevolent supervisor acts like a kind father/mother with long-term care and concern for the subordinates' job related and personal well-being, he/she might give more work autonomy to them, such as control over the work environment. As a result, the subordinates are likely to develop appreciation, respect and gratitude toward the supervisor.

Similarly, a moral supervisor who is concerned with the collective good rather than self-interest, is highly respected, admired and viewed as an ideal leader by Chinese employees (Chen et al., 2014). This kind of supervisor is likely to serve as a role model for employees, and he/she will not take advantage of subordinates (e.g. expecting them work extra hours without pay), will treat subordinates as equals at work, and give enough control to subordinates. As a result, control over the work environment, working hours, and amount of work load would be resources to be exchanged with subordinates by the supervisor, in order to form an emotional bond and a reciprocal relationship to continue a positive exchange. Therefore, I propose the following

hypotheses.

Cross-sectional hypotheses

Hypothesis 3: There will be a significant relationship between paternalistic leadership and perceived control within the Chinese work context at both Time 1 and Time 2.

H3a: An authoritarian form of paternalistic leadership will be negatively related to perceived control at both Time 1 and Time 2.

H3b: A benevolent form of paternalistic leadership will be positively related to perceived control at both Time 1 and Time 2.

H3c: A moral form of paternalistic leadership will be positively related to perceived control at both Time 1 and Time 2.

Longitudinal hypotheses

Hypothesis 4: There will be a significant relationship between paternalistic leadership and perceived control within the Chinese work context over time.

H4a: An authoritarian form of paternalistic leadership at Time 1 will be negatively related to perceived control at Time 2.

H4b: A benevolent form of paternalistic leadership at Time 1 will be positively related to perceived control at Time 2.

H4c: A moral form of paternalistic leadership at Time 1 will be positively related to perceived control at Time 2.

2.2.5 Supervisor-subordinate guanxi

Increasing research interest has been paid to the concept of *guanxi* since the late 1970s (Chen & Chen, 2004; Han & Altman, 2009). *Guanxi* has been recognised as an important characteristic of

Chinese supervision, and a key concept for understanding organizational behaviour within the Chinese work context. *Guanxi* is “a quality relationship that determines the appropriate behaviours and treatments of each other” (Chen & Tjosvold, 2006, p. 1730). According to Yang (1994, p. 1),

Guanxi means a relationship between objects, forces, or persons. When it is used to refer to relationships between people, not only can it be applied to husband-wife, kinship, and friendship relations, it can also have the sense of 'social connections', dyadic relationships that are based implicitly (rather than explicitly) on mutual interest and benefit.

Hence, each individual in a *guanxi* relationship shares a social tie that is important to him/her. The social tie includes kinship, former classmate, same last name, same place of birth, former colleague, comrade in arms, former teacher/student, former boss/subordinate, and former neighbour (Farh, Tsui, Xin, & Cheng, 1998). Such a foundation of *guanxi* is defined as *guanxi* ties (Huang & Bond, 2012; Hwang, 2012; Yang, 1994; Zhang & Zhang, 2006). As Jacobs (1979) observed, a person seeking support would first turn to a person from his/her *guanxi* ties. When he/she desires support from a stranger, he/she might attempt to discover a direct or indirect connection with this new contact through his/her *guanxi* ties, in order to develop closer *guanxi*.

Empirical studies (Park & Luo, 2001; Zhang & Zhang, 2006) have summarized *guanxi* relationships as reciprocal, utilitarian, and transferable among parties who share a common connection. Therefore, supervisor-subordinate *guanxi* is described as “the relationship between a subordinate and their immediate supervisor, and this definition has the sense of ‘social connections’ based on mutual interest and benefit” (Han & Altman, 2009, p. 92). The supervisor-subordinate relationship is a kind of Chinese social relationship, and it can be characterized by familial collectivism. Familial collectivism is “a set of values, beliefs, and their associated behavioural norms that take the family as a model for relationships in other domains

of life” (Chen et al., 2009, p. 378), which is a characteristic of Chinese social relationships (Bond & Hwang, 1986). As an important Chinese cultural characteristic, *guanxi* between supervisor and subordinate can extend kin-relationships to people who are not kin. This extension is called the familization process (Chen et al., 2009; Yang, 2006). As Yang (2006) mentioned, structure and function between the family and outside-family, organizations are similar in Chinese society. Chinese workers apply their familistic cognitions, affects, intentions and behaviours in their work organizations and vice versa. Through the familization process, workers would psychologically transform their work organization to the home where they can think, feel, intend, and behave in a familial way.

On the other hand, familization in the Chinese work context can be explained through three types of *guanxi*. The *obligatory type* of *guanxi* consists of blood and marriage relationships. This type of *guanxi* is based on the relations among family members which include close clan members and in-laws (Su & Littlefield, 2001; Zhang & Zhang, 2006). Responsibility, obligation, mutual trust and loyalty are core factors in this type of *guanxi*. For example, individuals with higher rank in the family are obliged to help other family members without an equal reciprocity (Farh et al., 1998). On the other hand, the weaker family members should repay the favour in loyalty to the providers, and if they did not do so they would be censured. The *reciprocal type* is a wider relationship than the obligatory type. It includes all kinds of relationships with neighbours, classmates, colleagues and friends who share similar experiences or have a common background (Zhang & Zhang, 2006). This type of *guanxi* is based on the reciprocal exchange of favours. Further, reciprocal *guanxi* is not only confined to people’s blood ties and locality origins, but can also be achieved in social interactions (Wu, 1999). The *utilitarian type* of *guanxi* is simply the relationship between general acquaintances, and it is the broadest relationship of all. This type does not necessarily involve favour exchange with others, but repayment (e.g. money or other material form) is still necessary. Utilitarian *guanxi* allows an individual to set up

a personal relationship with a stranger through an intermediary who has *guanxi* with both parties (Park & Luo, 2001). Wu (1999) emphasized that such action bridges the gap between two unrelated individuals, in order that an outsider can join another person's social circle.

For example, junior employees would be considered as acquaintances by other seniors when they had just come into an organization. The utilitarian *guanxi* would be applied among the junior and senior employees at the initial stage. As personal interactions increase within work, these employees would become colleagues with each other. Utilitarian *guanxi* may be shifted to the reciprocal type. As time goes by, junior and senior colleagues might become familial through marriage, then the reciprocal type would be shifted to the obligatory type. However, not all of the employees would be familial based on blood and marriage relationships. Based on particular social ties, *guanxi* among employees can extend kin-relationships to people who are not kin, in order to complete familization in the Chinese work context (Chen, Chen, & Huang, 2013).

Farh et al. (1998) demonstrated the effect of supervisor-subordinate *guanxi* on job outcomes (e.g. performance ratings, intentions to quit, and organizational commitment of the subordinates) within the Chinese context, but this does not provide any suggestion on how the supervisor can build up or improve their *guanxi* with their subordinates at the workplace. As Chen et al. (2009) indicated, *guanxi* between supervisor and subordinate is changed when the relationship between supervisor and subordinate has been transferred from work-orientation to family-orientation. They argued that this change indicated that supervisor-subordinate *guanxi* is a multi-dimensional construct, consisting of three dimensions: *affective attachment*, which refers to “an emotional connection, understanding, and willingness to care for one another in any circumstance” (p. 378); *personal-life inclusion*, which refers to “the degree to which subordinates and supervisors are included in each other's private or family lives” (p. 378); and *deference to supervisor*, which refers to “the degree of obedience and devotion a subordinate has toward his/her supervisor” (p. 379).

Law and colleagues (2000) compared the concepts of supervisor-subordinate *guanxi*, leader-member exchange (LMX) and commitment to supervisor. In this study, supervisor-subordinate *guanxi* was positively related to the subordinate's probability of receiving bonus allocation and promotion, but not to performance rating or task assignment; LMX, on the other hand, was related to all four outcomes. The effects of LMX on job assignment, chances of promotion, and bonus allocation were all mediated by performance ratings whereas the effects of supervisor-subordinate *guanxi* were not. Law et al.'s study demonstrated that supervisor-subordinate *guanxi* is a concept distinct and unique from LMX and commitment to supervisor. Law et al. argue that supervisor-subordinate *guanxi* had power over supervisory decisions on subordinates' promotion and bonus allocation in the Chinese work context.

Cheng, Farh, Chang and Hsu (2002) also confirmed Law et al.'s (2000) research results, and found that supervisors and subordinates depend on *guanxi* in the Chinese work context. *Guanxi* influences the quality of supervisor-subordinate relationship, managerial behaviours, and subordinate attitudes. Based on Law et al.'s research, Chen et al. (2009) discussed the similarities and differences between supervisor-subordinate *guanxi* and leader-member exchanges (LMX). They argued that both constructs highlighted the importance of the quality of the relationship between a supervisor and a subordinate. Beyond this similarity, they agreed with Law et al.'s argument that LMX focuses on work-oriented exchanges, whereas supervisor-subordinate *guanxi* emphasizes both work and non-work related exchanges. Chen and Tjosvold (2007) compared the effects of personal *guanxi* and LMX and they contributed two significant findings. First, LMX tended to have more significant effects than personal *guanxi* at work. Second, the positive effect of personal *guanxi* was significant in a Chinese manager-Chinese employee relationship but not in an American manager-Chinese employee relationship.

All these researchers agreed that supervisor-subordinate *guanxi* is a cultural characteristic in the Chinese work context. However, they did not suggest how a Chinese manager/supervisor

builds up good *guanxi* with his/her subordinates within the Chinese work context. In the present study, I investigated perceived control as a latent variable to explore the relationship between subordinates' feelings of control at work and feelings of *guanxi* with their immediate supervisor. I hypothesized that the immediate supervisor who gives working control to subordinates can build up and maintain good *guanxi* with subordinates. Cheng et al.'s (2010) study demonstrated that the connections between a supervisor and subordinates could affect employees' feeling of control over work time. However, they did not describe whether giving enough control over work time to subordinates would build up and maintain good *guanxi* between supervisor and subordinate. The Confucian value of hierarchy is deep-rooted in the Chinese society (Chen et al., 2014). Chinese employees might agree that only the individual who occupies a higher position should have the power to make decisions. Supervisors thus have rights to exchange work resources (e.g. work environment, working hours and workloads) with subordinates in the Chinese workplace. Ganster (1989) argued that perceived control at work is an individual's ability to receive desired outcomes and avoid undesired outcomes. Having and maintaining good *guanxi* would be a desired outcome for both supervisor and subordinate. Chinese supervisors would give subordinates work control to exchange obedience and respect from them, in order to form an emotional bond and a reciprocal relationship. Subordinates need to keep a *guanxi* with the supervisor because the supervisor has power over subordinates' performance. Hence, giving subordinates control at work might influence their willingness and ability to build up and maintain good *guanxi* with their supervisor.

Additionally, Yang (2006) argued that personal interactions between supervisor and subordinate at the Chinese workplace can be characterized by familization. *Guanxi* between supervisor and subordinate can extend kin-relationships to people who are not kin to complete the familization process (Chen et al., 2013). Therefore, supervisor-subordinate *guanxi* emphasizes exchanges both inside and outside working hours in the Chinese work context. I

argue that subordinates will perceive control at work when the supervisor provides a supportive climate to assist subordinates' individual needs. In return, the subordinates would attach affectively to their supervisor (e.g. sharing thoughts with the supervisor toward work and life) and share their supervisor's private life (e.g. helping to deal with the supervisor's family errands).

At the same time, repayment is necessary to build up and maintain *guanxi* between the supervisor and subordinate in the Chinese work place (Zhang & Zhang, 2006). Based on the Confucian value of hierarchy, the supervisor has the right and power to make decisions. When a supervisor gives control over the work environment to subordinates, s/he might hope to see appreciation, obedience and respect from the subordinates, in order to form a reciprocal relationship to continue the work and non-work related exchange. Therefore, I propose the following hypotheses:

Cross-sectional hypotheses

Hypothesis 5: There will be a significant positive relationship between perceived control and supervisor-subordinate *guanxi* within the Chinese work context at both Time 1 and Time 2.

H5a: Perceived control will be positively related to affective attachment to the supervisor at both Time 1 and Time 2.

H5b: Perceived control will be positively related to personal-life inclusion at both Time 1 and Time 2.

H5c: Perceived control will be positively related to deference to supervisor at both Time 1 and Time 2.

Longitudinal hypotheses

Hypothesis 6: There will be a significant and positive relationship between perceived control and supervisor-subordinate *guanxi* within the Chinese work context over time.

H6a: Perceived control at Time 1 will be positively related to affective attachment to the supervisor at Time 2.

H6b: Perceived control at Time 1 will be positively related to personal-life inclusion at Time 2.

H6c: Perceived control at Time 1 will be positively related to deference to supervisor at Time 2.

2.2.6 Psychological ownership of the job and of the organization

Ownership is a “dual creation, part attitude, part in the mind, part ‘real’” (Etzioni, 1991, p. 466) and the psychology of possession is well rooted in people. Employee ownership literature clearly suggests that the ownership construct is multidimensional and that ownership appears to operate as a formal state, as well as a psychologically experienced phenomenon. Pierce, Kostova, and Dirks, (2003, p.87) wrote:

Although possibly related, legal and psychological ownership differ in some significant ways. For example, legal ownership is recognized foremost by society, and hence the rights that come with ownership are specified and protected by the legal system. In contrast, psychological ownership is recognized foremost by the individual who holds this feeling. Consequently, it is the individual who manifests the felt rights associated with psychological ownership.

According to Pierce et al. (2001), the core of psychological ownership is the feeling of possessiveness and of being psychologically tied to an object. Pierce et al. (1991) suggest that psychological ownership appears when employees feel they own a piece of it, it is ‘theirs’; when employees have the right to be notified about the status of the owned object and they are informed; and when they have the right to influence/control the target of ownership and that they do, in fact, implement influence/control. In other words, when individuals feel they are represented by an object (e.g. an organization or a job), and they find it becomes ‘theirs’, the

target becomes part of the psychological owner's identity (Pierce et al., 2001; Pierce et al., 2003; Pierce et al., 1991). Feelings of ownership also provide positive psychological and behavioural effects. James (1890, p. 178) noted that the loss of possessions leads to “shrinkage of our personality, a partial conversion of ourselves to nothingness” and feelings of depression, whereas the growth of possessions can produce a positive and inspiring effect (Formanek, 1991).

The feeling of possession is the core which differentiates psychological ownership from organizational commitment, organizational identification and internalization. For example, psychological ownership answers the question ‘Is this my work?’ whereas organizational commitment answers the question ‘Should I maintain my membership in this organization and why—because I ought to, I need to, and/or because I want to?’ Organizational identification addresses the question ‘Who am I?’ and organizational internalization concerns itself with the question ‘What do I believe?’ (Pierce & Jussila, 2011; Van Dyne & Pierce, 2004). Pierce et al. (2001) also concluded that feelings of ownership (feeling that something is mine or ours) are essentially different from wanting or needing to retain membership in an organization (e.g. organizational commitment), from using a unique and admired characteristic of the organization to define oneself (e.g. organizational identification), and from association with an organization because of goal congruence (e.g. organizational internalization).

In the present study, I focused on individuals' psychological ownership of their organization and their job. Two different types of psychological ownership have been identified in previous studies of psychological ownership (O'Driscoll, Pierce, & Coghlan, 2006; Pierce et al., 2003; Pierce et al., 1991; Pierce, Van Dyne, & Cummings, 1997). Psychological ownership of the job is concerned with individuals' feelings of possession of, and connection with, their particular job (Mayhew, Ashkanasy, Bramble, & Gardner, 2007). Psychological ownership of the organization is concerned with individuals' feelings of possession and psychological connection to an organization as a whole (Mayhew et al., 2007). Van Dyne and Pierce (2004) argued that an

individual's psychological ownership of job and organization should be considered as an attitudinal rather than an enduring personality trait. Thus, psychological ownership indicates the individual's current attitudes in regard to both the present organization and the existing job (Mayhew et al., 2007).

Pierce and Jussila (2011) suggested an employee can stay in the organization, can be committed to the organization, and can identify with the organization without having possessive feelings for the organization. An employee can be satisfied with his/her job and attach his/her goal with the organization's goal, but still does not feel the organization is his/her psychological property. However, it does not mean that there is no relationship between psychological ownership and each of these constructs. Pierce et al. (1991) proposed that as employee-owners develop feelings of ownership for the organization, they become increasingly integrated into the organization. They further argued that feelings of ownership are pleasure-producing in and of themselves and, as a consequence, organizational members will want to maintain their relationship with that which produces positive affect. Dyne and Pierce (2004) examined the relationships of psychological ownership with work attitudes and work behaviours and confirmed previous arguments. There are positive links between psychological ownership for the organization and work attitudes (e.g. organizational commitment, job satisfaction, organization-based self-esteem), and work behaviour (e.g. performance and organizational citizenship behaviours). Pierce et al. (1997) theorised that a sense of possession, the core of psychological ownership, leads to a sense of responsibility.

Perceived control has been considered as an antecedent variable to psychological ownership of the job and of the organization (Pierce et al., 2001). Rudmin and Berry (1987) argued that the ability to implement influence and control is a fundamental component of feeling ownership. This argument supported McClelland's (1951) statement about 'self'. McClelland believed that when an individual is able to control external objects, the objects become part of the individual's

extended self. Conversely, a lack of control is related to the 'not-self' (McClelland, 1951). Pierce et al. (2001) provided the 'routes to' feelings of ownership. They claimed that control was a route to perceive psychological ownership, which means control of an object may produce feelings of ownership toward the object. Pierce et al. (2004) asserted that the extent to which individuals experience control over their job and work environment is positively associated with feelings of ownership for their job and organization. They found that perceived control mediates the relationship between three sources of work environment structure (technology, autonomy, and participative decision making) and psychological ownership of job and organization. Hence, perceived control determines the development of a sense of psychological ownership.

However, explanations of the relationship between perceived control and psychological ownership have been centred on the Western work context. No explanation has been given of whether this relationship would vary within the Chinese work context. Meanwhile, a few studies examined psychological ownership in the Chinese mainland or Taiwanese work context, but they focused on psychological ownership of the organization rather than employees' felt ownership of the job. This study will examine both psychological ownership of the job and psychological ownership of the organization in the Chinese work context.

As Pierce et al. (2001) mentioned, there are at least three essential motives that give rise to feelings of ownership: control of the target; self-identity, which is coming to know oneself, expressing the self to others, and maintaining continuity in the self; and home, which means having a place to reside. I also propose that supervisor-subordinate *guanxi* would have a significant direct relationship with psychological ownership within the Chinese work context through those three routes to feelings of ownership. Firstly, *guanxi* is an important cultural characteristic of Chinese supervision. Law et al. (2000) found that good personal *guanxi* between leaders and followers influences the subordinate's probability of receiving bonus allocation and promotion in the Chinese work context. Therefore, employees try to control and

maintain good *guanxi* with their supervisor. Second, personal *guanxi* can shift the relationship between supervisors and subordinates from the utilitarian type (acquaintance) to the reciprocal type (sharing the same background). Supervisor-subordinate *guanxi* helps employees to identify themselves; for instance, ‘we are colleagues’ would be a self-identity between employees in an organization. Third, supervisor-subordinate *guanxi* can extend kin-relationships to people who are not kin (familization) within the Chinese work context. Through the familization process, a Chinese employee would apply his/her familistic cognitions, affects, intentions and behaviours to the work organization, and consider the workplace as a home. Therefore, I hypothesize there would be a significant positive relationship between supervisor-subordinate *guanxi* and psychological ownership. The following hypotheses are proposed.

Cross-sectional hypotheses

Hypothesis 7: There will be a significant positive relationship between supervisor-subordinate *guanxi* and psychological ownership of the job within the Chinese work context at both Time 1 and Time 2.

H7a: Affective attachment to supervisor will be positively related to psychological ownership of the job at both Time 1 and Time 2.

H7b: Personal-life inclusion will be positively related to psychological ownership of the job at both Time 1 and Time 2.

H7c: Deference to supervisor will be positively related to psychological ownership of the job at both Time 1 and Time 2.

Hypothesis 8: There will be a significant and positive relationship between supervisor-subordinate *guanxi* and psychological ownership of the organization within the Chinese work context at both Time 1 and Time 2.

H8a: Affective attachment to supervisor will be positively related to psychological

ownership of the organization at both Time 1 and Time 2.

H8b: Personal-life inclusion will be positively related to psychological ownership of the organization at both Time 1 and Time 2.

H8c: Deference to supervisor will be positively related to psychological ownership of the organization at both Time 1 and Time 2.

Longitudinal hypotheses

Hypothesis 9: There will be a significant positive relationship between supervisor-subordinate *guanxi* and psychological ownership of the job within the Chinese work context over time.

H9a: Affective attachment to supervisor at Time 1 will be positively related to psychological ownership of the job at Time 2.

H9b: Personal-life inclusion at Time 1 will be positively related to psychological ownership of the job at Time 2.

H9c: Deference to supervisor at Time 1 will be positively related to psychological ownership of the job at Time 2.

Hypothesis 10: There will be a significant positive relationship between supervisor-subordinate *guanxi* and psychological ownership of the organization within the Chinese work context over time.

H10a: Affective attachment to supervisor at Time 1 will be positively related to psychological ownership of the organization at Time 2.

H10b: Personal-life inclusion at Time 1 will be positively related to psychological ownership of the organization at Time 2.

H10c: Deference to supervisor at Time 1 will be positively related to psychological

ownership of the organization at Time 2.

In the following sections, I discuss the relationship between psychological ownership and three important attitudinal effects: job satisfaction, affective organizational commitment and psychological withdrawal.

2.2.7. Job satisfaction

Job satisfaction is one of the most popular concepts to have been examined in organizational behaviour studies since the 1920s. Locke (1976, p. 1300) defined job satisfaction as a “pleasurable or positive emotional state resulting from the appraisal of one’s job or job experiences.” Job satisfaction is an affective component of an attitude and emphasizes how an individual’s job and job experiences (for example, control at work) make him/her feel in general. It answers the question ‘How does my job make me feel?’ Job satisfaction is also a positive or negative evaluation of an individual’s overall job situation. If individuals perceive their job as meeting their job values, then they are job satisfied. Therefore, job satisfaction answers the question ‘What do I think of my job?’

Research on psychological ownership (e.g. Coghlan, 1997; Van Dyne & Pierce, 2004; Vandewalle et al., 1995) has shown a significant relationship between psychological ownership and job satisfaction. Other research (e.g. Pierce & Furo, 1990; Pierce et al., 1991) also found that the relationship between psychological ownership and job satisfaction is dependent on employees developing a felt ownership for their job. Several recent studies examined the significant relationship between psychological ownership of the job and job satisfaction. For instance, Mayhew et al. (2007) reported a positive and significant relationship between psychological ownership of the job and job satisfaction ($r = 0.51$). Dunford, Schleicher and Zhua (2009) observed a correlation of 0.52 ($p < .01$) between psychological ownership and job satisfaction. I have theorized that job satisfaction would be associated with psychological

ownership of the job, but not the organization. This is because job satisfaction is considered as the extent to which people like their jobs (Spector, 1997), rather than feel satisfied with the organization in general, so psychological ownership of the job will determine job satisfaction more than organization-based psychological ownership. This leads to hypotheses 11 and 12.

Cross-sectional hypothesis

Hypothesis 11: There will be a significant positive relationship between psychological ownership of the job and job satisfaction within the Chinese work context at both Time 1 and Time 2.

Longitudinal hypothesis

Hypothesis 12: There will be a significant positive relationship between psychological ownership of the job at Time 1 and job satisfaction at Time 2 within the Chinese work context.

2.2.8. Affective organizational commitment

Previous research findings on psychological ownership have also supported a positive relationship between psychological ownership of the organization and organizational commitment. Pierce et al. (1991) argued that when employees start to develop feelings of psychological ownership for the organization, they emotionally attach to the organization. Pierce et al. (2001) further suggested that feelings of ownership create pleasure in the job and the organization for organizational members. As a consequence, organizational members will want to maintain their relationship with that which produces positive effects.

There is a general acceptance that organizational commitment consists of three components: normative, continuance and affective (Allen & Meyer, 1990). Normative commitment refers to a feeling of obligation to stay at the organization or to continue employment (Allen & Meyer,

1990; Reiley, 2006). According to Wiener's research (1982), normative commitment can be developed as a function of socialization experiences, such as societal or familial experiences. Hence, employees with a high level of normative commitment feel that they have a moral obligation to continue their employment with the organization (Bentein, Vabdenberghe, & Stinglhamber, 2005). However, the distinction between normative and affective commitment has not been always supported by empirical results. Research by Meyer, Allen, and Smith (1993), Somers (1995), and Bergman (2006) showed some overlap between normative and affective commitment. Normative commitment, therefore, was not a focus in my study.

Continuance commitment reflects what material benefits the employee will have to give up if they decide to leave the organization (Reiley, 2006). Meyer et al. (1993) argued that continuance commitment is the fundamental link between employees and their organization because the employees feel they need to keep the material benefits offered by the organization, and which other places cannot provide. As a consequence, if the employees believe that fewer possible alternatives are available, then their continuance commitment will be stronger (Reiley, 2006). However, the concepts of continuance commitment argues against Pierce et al.'s (2001) idea of psychological ownership. Pierce et al. argued the feelings of psychological ownership are from individuals' pleasure produced in and of themselves, but continuance commitment is related to individuals' passive attitudes. Hence, continuance commitment was not included in the present study.

Affective commitment refers to the "employees' emotional attachment to, identification with, and involvement in, the organization" (p. 2). In other words, it indicates the degree of employees' enhanced feelings of devotion, belongingness, and stability in their organizations (Reiley, 2006). Pierce et al. (2001) described psychological ownership as the feeling of possessiveness and of being psychologically tied to an object. The feeling of possessiveness shows that possessions provide people with feelings of belonging and personal space. Thus, feelings of psychological

ownership satisfy the basic human need for a place (Pierce & Jussila, 2011). Through a feeling of possession of the organization, employees would view it as a place where to dwell (e.g. home), which provides mental comfort and security for the employees. Pierce et al. (2001) also argued that feelings of ownership are pleasure-producing in and of themselves. As a result, organizational members with high level of psychological ownership may produce positive work attitudes such as stronger affective organizational commitment. As mentioned, feeling attachment and belonging is the nature of affective organizational commitment, it is reasonable to predict that feeling ownership toward the organization would lead to high levels of affective commitment. Previous research provided empirical evidence to support this argument (e.g. Han, et al., 2010; Mayhew et al., 2007; O'Driscoll et al., 2006). Therefore, I theorized that there would be a significant and positive relationship between affective organizational commitment and psychological ownership of the organization.

Cross-sectional hypothesis

Hypothesis 13: There will be significant positive relationship between psychological ownership of the organization and affective organizational commitment within the Chinese work context at both Time 1 and Time 2.

Longitudinal hypothesis

Hypothesis 14: There will be significant positive relationship between psychological ownership of the organization at Time 1 and affective organizational commitment at Time 2 within the Chinese work context.

2.2.9. Psychological withdrawal

Psychological withdrawal (for example, day dreaming on the job, chatting during work about non-work topics and making excuses to get out of work) is correlated with organization members' general negative connections with the job and the organization (Hanisch & Hulin,

1991). An individual who feels exhausted from work is expressing aversive attitudes and feelings toward the job and the organization, such as job dissatisfaction or a high level of turnover intention. Therefore, these aversive attitudes and feelings can be considered as a form of psychological withdrawal that precedes any form of behavioural withdrawal (Li, 2008). In contrast, organizational members who have a high level of job satisfaction or have strong feelings of possession for their organization or job will avoid psychological withdrawal so as to maintain continued and emotional attachment to work (Allen & Meyer, 1990; Blau & Boal, 1987; Dyne & Pierce, 2004).

Li (2008) investigated the relationships between psychological ownership of the job and three specific work constructs (turnover intentions, psychological withdrawal, and sense of responsibility) from work. A diverse set of jobs in a group of New Zealand organizations was studied. Li (2008) reported a negative relationship between psychological ownership of the job and psychological withdrawal. His study suggested that psychological ownership of the job has a significant relationship with psychological withdrawal rather than the other two variables. Based on these ideas, I hypothesize the following:

Cross-sectional hypotheses

Hypothesis 15: There will be a significant and negative relationship between psychological ownership of the job and psychological withdrawal within the Chinese work context at both Time 1 and Time 2.

Hypothesis 16: There will be a significant and negative relationship between psychological ownership of the organization and psychological withdrawal within the Chinese work context at both Time 1 and Time 2.

Longitudinal hypotheses

Hypothesis 17: There will be a significant and negative relationship between psychological

ownership of the job at Time 1 and psychological withdrawal at Time 2 within the Chinese work context.

Hypothesis 18: There will be a significant and negative relationship between psychological ownership of the organization at Time 1 and psychological withdrawal at Time 2 within the Chinese work context.

2.2.10. Mediating role of perceived control

I hypothesize that paternalistic and transformational leadership would have significant relationships with perceived control, and that perceived control will have a significant relationship with supervisor-subordinate *guanxi* over work.

Kerr and Jermier (1978) argued that when subordinates have a clear goal and know how to do their work, they would normally feel control, and be motivated and satisfied. Lahman and Weaver (1998) also considered that if people believed that they had some degree of control, they might be more likely to engage in various problem-solving activities which might provide job satisfaction. Pierce et al. (2004) found that perceived control fully mediated the relationship between work environment structure and feelings of ownership for the job. Full mediation effects were also found for control in the relationship between each of the three work environment variables (technology, autonomy and participative decision making) and job-based psychological ownership. Li (2008) also found that perceived control has mediation effects between task-oriented leadership and job-based psychological ownership. A supervisor's personal preferences influence subordinates' job satisfaction and performance outcomes. A subordinate who has a good *guanxi* relationship with his/her supervisor may have appropriate job autonomy from the supervisor, in order to decide how to do the work and how to pace themselves with a work context. Based on these investigations, I proposed that different leadership/supervision styles would influence subordinates' ability to deal with their

environment at work, which indirectly affects the subordinates' intention to build up a good *guanxi* with the supervisor within the Chinese work context. Hypotheses 19 to 22 reflect this.

Cross-sectional hypotheses

Hypothesis 19: Perceived control will mediate the relationship between transformational leadership and supervisor-subordinate *guanxi* within the Chinese work context at both Time 1 and Time 2.

H19a: Perceived control will mediate the relationships between (1) idealized influence attributes and behaviours (II), (2) inspirational motivation (IM), (3) intellectual stimulation (IS), (4) individualized consideration (IC) and affective attachment to supervisor (AA) at both Time 1 and Time 2.

H19b: Perceived control will mediate the relationships between (1) II, (2) IM, (3) IS, (4) IC and personal-life inclusion (PI) at both Time 1 and Time 2.

H19c: Perceived control will mediate the relationship between (1) II, (2) IM, (3) IS, (4) IC and deference to supervisor (DS) at both Time 1 and Time 2.

Hypothesis 20: Perceived control will mediate the relationship between paternalistic leadership and supervisor-subordinate *guanxi* within the Chinese work context at both Time 1 and Time 2.

H20a: Perceived control will mediate the relationships between (1) an authoritarian form of paternalistic leadership (AF), (2) a benevolent form of paternalistic leadership (BF), (3) a moral form of paternalistic leadership (MF) and AA at both Time 1 and Time 2.

H20b: Perceived control will mediate the relationships between (1) AF, (2) BF, (3) MF and PI at both Time 1 and Time 2.

H20c: Perceived control will mediate the relationships between (1) AF, (2) BF, (3) MF and DS at both Time 1 and Time 2.

Longitudinal hypotheses

Hypothesis 21: Perceived control will mediate the relationships between transformational leadership and supervisor-subordinate *guanxi* within the Chinese work context over time.

H21a: Perceived control at Time 2 will mediate the relationships between (1) II at Time 1, (2) IM at Time 1, (3) IS at Time 1, (4) IC at Time 1 and AA at Time 2.

H21b: Perceived control at Time 2 will mediate the relationships between (1) II at Time 1, (2) IM at Time 1, (3) IS at Time 1, (4) IC at Time 1 and PI at Time 2.

H21c: Perceived control at Time 2 will mediate the relationships between (1) II at Time 1, (2) IM at Time 1, (3) IS at Time 1, (4) IC at Time 1 and DS at Time 2.

Hypothesis 22: Perceived control will mediate the relationship between paternalistic leadership and supervisor-subordinate *guanxi* within the Chinese work context over time.

H22a: Perceived control at Time 2 will mediate the relationships between (1) AF at Time 1, (2) BF at Time 1, (3) MF at Time 1 and AA at Time 2.

H22b: Perceived control at Time 2 will mediate the relationships between (1) AF at Time 1, (2) BF at Time 1, (3) MF at Time 1 and PI at Time 2.

H22c: Perceived control at Time 2 will mediate the relationships between (1) AF at Time 1, (2) BF at Time 1, (3) MF at Time 1 and DS at Time 2.

2.2.11. Mediating role of supervisor-subordinate *guanxi*

I also hypothesize that perceived control would have a significant relationship with supervisor-subordinate *guanxi*, and that supervisor-subordinate *guanxi* would have a significant relationship with psychological ownership of the job and psychological ownership of the organization over work. Combining these two predictions suggests that supervisor-subordinate *guanxi* would mediate the relationships between perceived control and psychological ownership of the job and of the organization.

As mentioned before, both supervisors and subordinates depend on *guanxi* connections within the Chinese work context. Supervisors offer more opportunities and resources (including material and immaterial) to subordinates who have good *guanxi* with the supervisor than to those who have poor *guanxi*. In return, subordinates reciprocate with greater trust in their supervisor and better performance. Little research has focussed on the mediation effects of supervisor-subordinate *guanxi*. Wei, Liu, Chen and Wu (2010) confirmed that supervisor-subordinate *guanxi* had mediating effects between political skill and career development of the subordinates. Based on this finding, different leadership/supervision styles would affect how employees handle the *guanxi* relationship with their direct supervisor. Based on Yang's (2006) theory of the familization process, Chinese workers apply their familistic cognitions and behaviours to their work organization. In contrast, the work organization would be considered as a home where the workers can behave in a familial way. The degree of supervisor-subordinate *guanxi* thus decides the level of work control, such as job autonomy, technology support and participative decision making, which employees would have within the Chinese organizational context. When Chinese employees view building good *guanxi* with their supervisor as a work goal and feel able to control it within the Chinese work context, they may have feelings of ownership of the job and of the organization. Therefore, the following hypotheses are proposed.

Cross-sectional hypotheses

Hypothesis 23: Supervisor-subordinate *guanxi* will mediate the relationship between perceived control and psychological ownership of the job (POJ) within the Chinese work context at both Time 1 and Time 2.

H23 (a) affective attachment, (b) personal-life inclusion, (c) deference to supervisor will mediate the relationships between perceived control and POJ at both Time 1 and Time 2.

Hypothesis 24: Supervisor-subordinate *guanxi* will mediate the relationship between perceived control and psychological ownership of the organization (POO) within the Chinese work context at both Time 1 and Time 2.

H24 (a) affective attachment, (b) personal-life inclusion, (c) deference to supervisor will mediate the relationships between perceived control and POO at both Time 1 and Time 2.

Longitudinal hypotheses

Hypothesis 25: Supervisor-subordinate *guanxi* will mediate the relationship between perceived control and POJ within the Chinese work context over time.

H25 (a) AA at Time 2, (b) PI at Time 2, (c) DS at Time 2 will mediate the relationships between perceived control at Time 1 and POJ at Time 2.

Hypothesis 26: Supervisor-subordinate *guanxi* will mediate the relationship between perceived control and POO within the Chinese work context over time.

H26 (a) AA at Time 2, (b) PI at Time 2, (c) DS at Time 2 will mediate the relationships between perceived control at Time 1 and POO at Time 2.

2.2.12. Mediating role of psychological ownership

Following the theoretical model of this thesis (see Figure 2.1, p.13), the psychology of possession can provide insight into how supervisor-subordinate *guanxi* associates with Chinese employees' work attitudes and behaviour. In this study, it is expected that the positive effects of *guanxi* can be understood in terms of the association between supervisor-subordinate *guanxi* and employees' feelings of psychological ownership for their job and organization within the Chinese work context. O'Driscoll et al. (2006) explored the potential mediating role of psychological ownership in the relationship between levels of work environment structure and employee responses. They examined the role of psychological ownership as a mediator of relationships between work environment structure, affective commitment, and employee citizenship behaviours. Results indicated that when the work environment provided opportunities for employees to exercise job autonomy and control and to participate in work-related decisions, individuals were more likely to feel a strong sense of ownership for both their job and the organization. Individuals who have high levels of organizational ownership may be more inclined to exhibit behaviours that serve to promote the welfare of the organization more broadly. Bernhard and O'Driscoll (2011) found that psychological ownership of the job and of the organization mediated the relationship between leadership style and affective organizational commitment, job satisfaction, and turnover intentions. They further found support for psychological ownership of the organization as a full mediator of the relationship between transformational leadership and organizational citizenship behaviours. Hence, I also expected that psychological ownership of the job and the organization would have mediating effects between supervisor-subordinate *guanxi* and job satisfaction, affective organizational commitment, and psychological withdrawal within the Chinese work context. Following the investigations above, the following hypotheses are proposed.

Cross-sectional hypotheses

Hypothesis 27: POO will mediate the relationships between supervisor-subordinate *guanxi*:

(a) affective attachment, (b) personal-life inclusion, (c) deference to supervisor and affective organizational commitment within the Chinese work context at both Time 1 and Time 2.

Hypothesis 28: POO will mediate the relationships between supervisor-subordinate *guanxi*: (a)

affective attachment, (b) personal-life inclusion, (c) deference to supervisor and psychological withdrawal within the Chinese work context at both Time 1 and Time 2.

Hypothesis 29: POJ will mediate the relationship between supervisor-subordinate *guanxi*: (a)

affective attachment, (b) personal-life inclusion, (c) deference to supervisor and job satisfaction within the Chinese work context at both Time 1 and Time 2.

Hypothesis 30: POJ will mediate the relationship between supervisor-subordinate *guanxi*: (a)

affective attachment, (b) personal-life inclusion, (c) deference to supervisor and psychological withdrawal within the Chinese work context at both Time 1 and Time 2.

Longitudinal hypotheses

Hypothesis 31: POO at Time 2 will mediate the relationships between supervisor-subordinate

guanxi: (a) affective attachment at Time 1, (b) personal-life inclusion at Time 1, (c) deference to supervisor at Time 1 and affective organizational commitment at Time 2 within the Chinese work context.

Hypothesis 32: POO at Time 2 will mediate the relationships between supervisor-subordinate

guanxi: (a) affective attachment at Time 1, (b) personal-life inclusion at

Time 1, (c) deference to supervisor at Time 1 and psychological withdrawal at Time 2 within the Chinese work context.

Hypothesis 33: POJ at Time 2 will mediate the relationship between supervisor-subordinate *guanxi*: (a) affective attachment at Time 1, (b) personal-life inclusion at Time 1, (c) deference to supervisor at Time 1 and job satisfaction at Time 2 within the Chinese work context.

Hypothesis 34: POJ at Time 2 will mediate the relationship between supervisor-subordinate *guanxi*: (a) affective attachment at Time 1, (b) personal-life inclusion at Time 1, (c) deference to supervisor at Time 1 and psychological withdrawal at Time 2 within the Chinese work context.

2.3. Chapter Summary

This chapter discussed the theoretical model (Figure 2.1, p.13) and hypotheses developed for the study. The theoretical model builds on the relation between perceived control and psychological ownership, which suggests applying different forms of leadership would influence an individual's feelings of psychological ownership. I further proposed that the relation between perceived control and psychological ownership within the Chinese work context will be affected by supervisor-subordinate *guanxi*, which is a core cultural characteristic in China.

In addition, I incorporated four sets of mediation effects in the theoretical model. Firstly, the mediation effects of perceived control between leadership (transformational and paternalistic leadership) and supervisor-subordinate *guanxi*. Secondly, the mediation effects of supervisor-subordinate *guanxi* between perceived control and psychological ownership of the organization and of the job. Thirdly, the mediation effects of psychological ownership of the job between supervisor-subordinate *guanxi* and criterion variables (affective organizational commitment, job satisfaction, and psychological withdrawal). Finally, the mediation effects of psychological

ownership of the organization between supervisor-subordinate *guanxi* and criterion variables. Longitudinal hypotheses also were tested for causal relationships between variables. The research methodology of this study will be discussed in the next chapter.

CHAPTER 3 METHODOLOGY

Chapter Overview

This chapter describes the methodology used in this research: research design, organizational context, samples, measures, research procedure, and data analysis.

3.1. Research Design

The present study has investigated the effects of different leadership styles on perceived control, supervisor-subordinate *guanxi*, psychological ownership of the organization and psychological ownership of the job. For this investigation, a self-report questionnaire was designed and included two predictors (transformational leadership and paternalistic leadership), four mediators (perceived control, supervisor-subordinate *guanxi*, psychological ownership of the organization, and psychological ownership of the job) and three criterion variables (affective organizational commitment, job satisfaction and psychological withdrawal). This research was designed to be a longitudinal study of Chinese employees, with two data collection points separated by a six-month interval.

3.2. Organizational Context

The questionnaire measuring variables of interest was administered in 12 commercial organizations in Nanning city and Shenzhen city, China. Nanning is the capital city of Guangxi Zhuang Autonomous Region. It is the centre of polity and economy, science and technology, education, culture and health of the province (NanningGovernmentwebsite, 2013). It plays an important role in the economic development of southwest China and has become a commercial and communication centre for Southeast Asia (NanningGovernmentwebsite, 2013). Shenzhen is a major city of Guangdong Province, and is the first and one of the most successful Special Economic Zones in China (ShenzhenGovernmentOnline, 2013).

Participants were selected from multiple sectors, in order to estimate and reduce sampling errors. Sampling error is a measure of “how closely we can reproduce from a sample the results that would be obtained if we should take a complete count or census” (Hansen, Hurwitz, & Madow, 1953, p. 10). Previous studies (Ernst, 2001; Iarossi, 2006; Mandell & Sauter, 1984) suggested that selecting samples randomly from multiple sectors would reduce sampling errors better than samples from a single sector. In the present study, two organizations are from the wholesale/retail sector, two were from the health/medical sector, three were from government sector, one was a financial organisation, and one each are from the hospitality sector, food industry, real estate sector and mining sector.

3.3. Research Samples

All employees of the twelve organizations were invited to participate in this study. Table 3.1 shows the total participants from each organization along with the percentage of questionnaires returned at Time 1 and at Time 2.

At Time 1, 1,550 questionnaires were distributed to all participants in the twelve organizations, and 972 questionnaires were fully completed and returned, representing a response rate of 62.7 per cent. At Time 2, three organizations withdrew from the research, resulting in a final sampling frame for Time 2 of 805 participants who had completed the Time 1 questionnaire. A total of 202 participants fully completed and returned the questionnaires at Time 2, which represented a 25.1 per cent response rate of eligible participants. After deleting outliers, respondents at Time 1 and Time 2 were 971 and 201, respectively.

Table 3.1. Number of participants from each organization

Organization code	Questionnaires distributed (Time1)	Number of respondents (Time 1)	Response rate (Time 1)	Number of respondents (Time 2)	Response rate (Time 2)
1	100	49	49.0%	26	53.1%
2	120	87	72.5%	16	18.4%
3	50	30	60.0%	7	23.3%
4	200	158	79.0%	16	10.1%
5	100	47	47.0%	15	31.9%
6	10	7	70.0%	0	0%
7	170	121	71.2%	0	0%
8	50	39	78.0%	0	0%
9	200	106	53.0%	5	4.7%
10	500	296	59.2%	97	32.8%
11	30	16	53.3%	10	62.5%
12	20	16	80.0%	10	62.5%
Total	1,550	972	62.7%	202	25.1%

3.4. Sample Demographics

At Time 1, the participants' average age was 31 years, ranging from 18 to 59 years of age. Males comprised 50.7 per cent of the sample. The average number of hours worked per week ranged from 22 to 90 hours, with a mean of 46 hours. The average tenure with the organization was 5.6 years, and the average tenure within the job was 6.2 years.

Six hundred and ninety one participants reported they were not a manager or supervisor, which comprised 71.2 per cent of the sample at Time 1. One hundred and ninety seven participants (20.3%) were first line supervisors, middle level managers were 7.2 percent, and

senior managers comprised only 1.3 percent of the sample. Three hundred and sixty three participants (37.4%) indicated they held a bachelor degree. Three hundred and fifteen participants (32.4%) had a diploma. Holders of a high school certificate comprised 19.8 per cent, a master degree, 4.9 per cent; and a PhD degree, 0.5 percent. However, thirty participants (3.1%) reported they had completed only junior high school.

At Time 2 (a six-month time interval), the sample demographics were similar to Time 1. The participants' average age was 30 years, ranging from 19 to 53 years of age. Males comprised 47.3 percent of the sample. The average number hours worked per week ranged from 28 to 70 hours, with a mean of 44 hours. The average tenure with the organization was 4.9 years, and the average tenure within the job was 5.4 years.

Time 2 respondents did not significantly differ from Time 1 respondents: 64.7 per cent of the respondents were not a manager or supervisor; 26.4 percent of the respondents were first line supervisors, 6.0 percent were middle level managers and 3.0 percent were senior managers. Respondents who held a bachelor degree were 51.2 per cent, and 28.9 per cent held a diploma. Holders of a high school certificate comprised 8.5 per cent; a master degree, 7.5 per cent; a PhD, 1.5 percent; and junior high school, graduates, 1.0 per cent.

3.5. Measures

Table 3.2 presents a summary of the variables used in this study, their sources and initial Cronbach's alpha coefficients before CFA for Time 1 and Time 2. Cronbach's alpha coefficients after CFA are presented in Chapter 4. I used a paper-based questionnaire as the instrument for the survey. The questionnaire was translated from English into Chinese by the researcher because all participants spoke Chinese (see Appendix D). The English version of the questionnaire can be seen in Appendix C. Details of back-translation are presented in the research procedure section.

I distributed ten copies of the Chinese version questionnaire to randomly selected native

Chinese speakers in China. These people do not speak English daily or have little knowledge about English language, and work at different industries. These ten people helped to highlight ambiguities and errors in the design of the questionnaire, especially in the instructions and items. In general, all participants felt the questionnaire was clear and easy to understand. Based on this response, no significant changes were made.

Table 3.2. Variables, sources of the scales and reliability analysis

Variable	Source	No of Items*	Reliability	
			Time 1	Time 2
1. Authoritarian leadership	Cheng et al. (2004)	9	.80	.80
2. Benevolent leadership	Cheng et al. (2004)	11	.92	.94
3. Moral leadership	Cheng et al. (2004)	6	.56	.58
4. Idealized influence	Podsakoff et al. (1990)	3	.89	.89
5. Inspirational motivation,	Podsakoff et al. (1990)	2	.67	.64
6. Intellectual stimulation	Podsakoff et al. (1990)	3	.86	.84
7. Individualized consideration	Podsakoff et al. (1990)	3	.69	.78
8. Perceived control	Dwyer & Ganster (1991)	22	.90	.88
9. Affective attachment	Chen et al. (2009)	4	.81	.83
10. Personal-life inclusion	Chen et al. (2009)	4	.71	.72
11. Deference to supervisor	Chen et al. (2009)	4	.79	.79
12. Psychological ownership of the organization	Pierce, Van Dyne & Cummings (1997)	2	.88	.90
13. Psychological ownership of the job	Pierce, Van Dyne & Cummings (1997)	4	.91	.93
14. Affective commitment	Meyer & Allen (1984)	8	.41	.09
15. Job satisfaction	Mirvis & Cammann (1982)	3	.71	.78
16. Psychological withdrawal	Lehman & Simpson (1992)	8	.89	.88

Note: * Items retained before conducting CFA.

3.5.1. Paternalistic leadership

I measured paternalistic leadership using the scale by Cheng et al. (2004). This scale has three distinct factors: the authoritarian form of paternalistic leadership consists of nine items (Appendix C, items 18-26); the benevolent form of paternalistic leadership consists of eleven items (Appendix C, items 1-11); and the moral form of paternalistic leadership has six items (Appendix C, items 12-17). Responses were recorded using a 7-point Likert scale ranging from

1=*strongly disagree* to 7= *strongly agree*. According to Cheng et al. (2004), these three scales have high reliability. In the present study, Cronbach's alpha (α) for the authoritarian form of paternalistic leadership was .80 at both Time 1 and Time 2. For the benevolent form of paternalistic leadership, α was .92 at Time 1, and .94 at Time 2; for the moral form of paternalistic leadership, α was .56 at Time 1, and .58 at Time 2.

3.5.2. Transformational leadership

I used Podsakoff, MacKenzie, Moorman and Fetter's (1990) scale to measure transformational leadership. This scale contains four dimensions: idealized influence contains three items (Appendix C, items 27-29), inspirational motivation contains two items (Appendix C, items 30-31), intellectual stimulation contains three items (Appendix C, items 32-34), and individualized consideration contains three items (Appendix C, items 35-37). Each dimension was measured using a 7-point Likert scale ranging from 1=*strongly disagree* to 7= *strongly agree*. According to Doucet, Poitras, and Chenevert (2009), these scales have high reliability.

In the present study, α for idealized influence was .89 at both Time 1 and Time 2. For inspirational motivation, α was .67 at Time 1, and .64 Time 2. For intellectual stimulation, α was .86 at Time 1, and .84 at Time 2. For individualized consideration, α was .69 at Time 1, and .78 at Time 2.

3.5.3. Perceived control

Perceived control was measured using the instrument developed and validated by Dwyer and Ganster (1991). Twenty-two items (Appendix C, items 46-67) were used to measure perceived control over participants' work environment. Each item was anchored with 1= *very little* to 5= *very much*. In present study, the reliability for this scale was .90 at Time 1 and .88 at Time 2.

3.5.4. Supervisor-subordinate guanxi

Supervisor-subordinate *guanxi* scale was developed by Chen, Friedman, Yu, Fang, and Lu (2009). It contains three dimensions: affective attachment (4 items, Appendix C, items 71-74), personal-life inclusion (4 items, Appendix C, items 75-78), and deference to supervisor (4 items, refer to Appendix C, items 79-82). Each dimension was measured using a 7-point Likert scale ranging from 1=*strongly disagree* to 7= *strongly agree*. In the present study, for affective attachment, α was .81 at Time 1, and .83 at Time 2. For personal-life inclusion α was .71 at Time 1, and .72 at Time 2. For deference to supervisor, α was .79 at both Time 1 and Time 2.

3.5.5. Psychological ownership

Psychological ownership was measured via an instrument initially developed and validated by Pierce, Van Dyne and Cummings (1997). Further validation evidence was provided by Coghlan (1997) and Van Dyne and Pierce (2004). Items measuring psychological ownership express the emotional state of ownership. Four items measured psychological ownership of the job (Appendix A, items 85-88), and two items measured psychological ownership of the organization (Appendix C, items 83-84). Each item was measured on a Likert type scale anchored with 1=*strongly disagree* to 7= *strongly agree*. In the present study, reliability for psychological ownership of the job was .91 at Time 1, and .93 at Time 2. For psychological ownership of the organization, reliability was .88 at Time 1, and .90 at Time 2.

3.5.6. Affective organizational commitment

I used Meyer and Allen's (1984) scale to measure affective organizational commitment. Empirical support for the instrument was presented in Meyer, Allen and Gellatly (1990) and O'Driscoll, Pierce, and Coghlan (2006). Eight items measure affective commitment (Appendix C, items 89-96). Each item response was measured on a Likert type scale anchored with 1=*strongly*

disagree to 7= *strongly agree*. In the present study, Cronbach's alpha was lower than previous studies, for affective commitment, .41 at Time 1, and .09 at Time 2.

3.5.7. Job satisfaction

Job satisfaction was measured using the instrument developed by Seashore, Lawler, Mirvis and Cammann (1982). Three items (Appendix C, items 68-70) access job satisfaction using a Likert scale anchored with 1= *strongly disagree* to 7= *strongly agree*. In this study, α was .71 at Time 1, and .78 at Time 2.

3.5.8. Psychological withdrawal

I used Lehman and Simpson's (1992) scale to measure psychological withdrawal behaviours. Eight items (Appendix C, items 113-120), for example "Thought of being absent" and "Daydreamed," were introduced with the statement "In the past twelve months, how often have you....?" Responses were obtained using a 7-point scale where 1= *never* and 7= *very often*. In the present study, the reliability coefficient was .89 at Time 1, and .88 at Time 2.

3.6. Research Procedure

Ethical approval for the research was given by the Research and Ethics Committee, School of Psychology, University of Waikato. A self-report questionnaire was distributed to participants twice (with a six-month interval) in China. The questionnaire was translated from English into Chinese by the researcher. A qualified TESOL (Teaching English to Speakers of Other Languages) Chinese-English bilingual, from department of General and Applied Linguistics at the University of Waikato, checked the equivalence of the English-Chinese translation. This TESOL Chinese-English bilingual then back-translated the questionnaire from Chinese to English. The back-translation technique ensured the equivalence of the wordings between the original and back-translated versions and no significant changes were made in the questionnaire.

Recruiting the twelve organizations was based on contacting business networks. The initial contact with organisations included direct contact by phone and email. After the initial contact, I met with the Chief Executive Officer (CEO) or human resources manager from each organization to further explain the purpose and the nature of the research, and how confidentiality and privacy would be maintained. A timeframe was agreed with these CEOs or human resources managers, and they sent internal statements to all employees when the questionnaires were distributed, in order to encourage employees' participation.

CEOs/human resource managers of all recruited organizations allowed me to attend their staff meeting. At the meeting, I distributed the questionnaires, and briefed the participants on the process of completing questionnaires. The CEO/human resource manager left the meeting room so that each participant would complete the questionnaire without interaction with their supervisors. The completed questionnaires were placed in the envelope provided, sealed and returned directly to me. For the longitudinal analyses, I matched each participant at Time 2 with Time 1. Each participant was asked to create their own code by putting the initials of their name, date of birth, month of birth and place of birth, in order to maintain the participant's anonymity. An example of the code is provided in Appendix C.

My email address was provided in case the participants had any inquiry about the questionnaires. Six months after the Time 1 questionnaire had been completed, I met these CEOs/human resources managers again and used the same procedure to distribute the Time 2 questionnaires.

3.7. Data Analyses

The data analyses included data preparation, checking for outliers, normality checks, reliability and validity checks, confirmatory factor analysis, descriptive statistics, correlations, structural equation modelling, and longitudinal analysis.

3.7.1. Data preparation

Data were entered into Statistical Package for Social Science (SPSS) 19.0 for analyses. All negatively worded items were reverse scored, and then I examined frequencies of all items to detect data entry errors and missing values.

After correcting entry errors and replacing missing responses, I proceeded to check for potential outliers. Outliers are observations very different from other observations which may negatively affect results of statistical tests (Field, 2009), such as the indices of model fit, parameter estimates, and standard errors. They can negatively affect data distribution, such as means, standard deviations and correlations (Panatik, 2010; Riley, 2012). I used the Mahalanobis distance test (D^2) using SPSS 19.0 to assess multivariate outliers, which is a common approach to detect multivariate outliers (Hair, Black, Babin, & Anderson, 2010). After being checked for multivariate outliers, the normality of the data set was tested using the Kolmogorov-Smirnov skewness and kurtosis statistics. The results from the assessment of normality at Time 1 are reported in Chapter 5, and results at Time 2 are reported in Chapter 6.

3.7.2. Confirmatory factor analysis (CFA)

I conducted CFA analyses using AMOS 19.0 on eight constructs. The main function of CFA is to confirm the relationship between each factor and the set of observed measures it is meant to explain (Byrne, 2009; Yang, 2010). The results of CFA are reported in Chapter 4.

3.7.3. Descriptive Statistics

After I had completed CFA analyses, descriptive statistics were computed to provide statistical information on each variable in this study. Correlations were also calculated to examine the relationships between all variables.

3.7.4. Structural equation modelling (SEM)

SEM is a methodology that contains a confirmatory approach to the analysis of a structural theory (Byrne, 2009). I used SEM to test mediation effects of four mediator variables (perceived control, supervisor-subordinate *guanxi*, and psychological ownership of the organization, and psychological ownership of the job). There were three reasons for applying SEM. First, SEM combines CFA models and path models, thus relationships among a set of variables (latent and observed) can be statistically tested based on a theoretical model (Yang, 2010). The capacity to perform multiple regressions is the second reason to choose SEM. It is able to test as many variables as necessary at a time (Kline, 2005; Yang, 2010), and to represent more complicated relationships among variables, such as giving path coefficients for the direct and indirect effects of variables (Yang, 2010). Finally, most variables have measurement errors, which can seriously impact on research results at times. SEM is able to examine causal relations among all latent variables in order to take measurement errors into account when testing path relations (Newman, Vance, & Moneyham, 2010; Yang, 2010).

In this study, I tested the fit of the eight hypothesised mediation models. If the model did not provide an acceptable fit to the data, I re-specified the model by using modification indices, which is referred to a ‘model trimming’. Model trimming is a process in which the non-significant paths in a model are removed (Kremelberg, 2011), in order to get a better fitting structural model.

In testing the mediation effects, I checked the direct effect, indirect effect, and total effect statistics. I also used 1000 bootstrap samples and bias-corrected confidence intervals (95%) to determine the significance of the hypothesized mediation effects. These methods are recommended by Shrout and Bolger (2002), and MacKinnon, Fairchild, and Fritz (2007).

3.7.5. Longitudinal Analyses

The purpose of the longitudinal analyses was to examine the relationships between all variables across a six-month time interval. This study used a two-wave panel design, in order to provide further information about possible relations between variables in the research model. Longitudinal correlation analysis was conducted through SPSS 19.0 and Time 1 variables were correlated with Time 2.

I performed longitudinal mediation analyses using SEM techniques to examine the mediation hypotheses. Longitudinal mediation analysis allowed me to examine many aspects that cross-sectional analyses cannot provide, such as whether an effect is stable over time (MacKinnon et al., 2007). In this study, I used the autoregressive model to test the longitudinal mediation hypotheses, recommended by Gollob and Reichardt (1991), MacKinnon (1994) and Cole and Maxwell (2003). In this approach, first I estimated the effects of the predictor components at Time 1 on the mediator variable at Time 2, controlling for the mediator variable at Time 1. Second, I estimated the effects of the mediator variable at Time 2 on the criterion variables at Time 2, controlling for the criterion variables at Time 1.

3.8. Chapter Summary

This chapter has discussed the methods applied in this study, including selecting research design, recruiting organizations and selecting samples, constructing measures and analysing data. In Chapter 4, I discuss the psychometric analyses of the research measures. I will present Time 1 results in Chapter 5 and present Time 2 results in Chapter 6. Longitudinal results will be presented in Chapter 7.

CHAPTER 4 PSYCHOMETRIC ANALYSIS OF THE MEASURES

Chapter Overview

Results of psychometric analysis of the research measures are presented in this chapter. There are two main sections: methods for handling missing values and identifying multivariate outliers in the data; and results of confirmatory factor analyses (CFA) for all variables.

4.1. Missing Values and Multivariate Outliers

I used SPSS Statistics 19 to analyse the data. Before analysing these data, missing values and multivariate outliers were examined (Hair et al., 2010). Variables were examined separately for 972 participants at Time 1 and 202 participants at Time 2.

I inspected frequencies of all items to detect any missing values. There were 310 missing values detected at Time 1, and 57 missing values detected at Time 2. These missing values were replaced by the 'person mean' substitution (Raymond, 1987), which replaces missing values by the person mean of remaining item scores (Dodeen, 2003). The effectiveness of person mean substitution is not influenced by the change in the percentage of missing data (Dodeen, 2003), in order to maximise statistical power in the analysis (Allison, 2003; Pigott, 2001).

After replacing missing values, potential multivariate outliers were examined. The Mahalanobis (D^2) measure was applied. According to Hair et al. (2010, p. 66),

The D^2 measure divided by the number of variables involved (D^2/df) is approximately distributed as a t -value. 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.

With $p < .001$, one participant at Time 1 and Time 2 was identified as having multivariate outliers and was deleted. As result, the final sample was 971 participants at Time 1, 201 participants at Time 2.

4.2. Confirmatory Factor Analyses

The research model was tested through CFA, which was performed using AMOS 19 with maximum likelihood estimation (Byrne, 2009). A main purpose of conducting CFA is to examine measurement model fit and the uniqueness of each variable, and this allows the researcher to test how well the measured variables represent the constructs (Hair et al., 2010). Eight constructs were examined: paternalistic leadership, transformational leadership, transactional leadership, perceived control, psychological ownership, supervisor-subordinate *guanxi*, affective organizational commitment, and job satisfaction. CFA analysis was not conducted for psychological withdrawal. This is because scales of psychological withdrawal contain items that reflect distinct behaviours which are grouped under a specific label (see Appendix A). They reflect some commonality, but they do not form a single formative construct (Spector et al., 2006). Hence, CFA was not appropriate for this measure.

4.2.1. Evaluation of model fit

Several fit indices were examined to assess model fit to the data: the chi-square (χ^2), the normed chi-square value (ratio of chi-square to df, χ^2/df), standardized root mean residual (SRMR), root mean square error of approximation with the 90 per cent confidence interval (RMSEA), comparative fit index (CFI), and Akaike information criterion (AIC). The SRMR index ranges from 0 to 1.00, and in a good fitting model the conservative cut-off value is .05. The RMSEA index indicates an unacceptable fit at values close to 0.10, and a reasonable fit at .06-.08, and a close fit at .05. The CFI indices range from 0 to 1.00, with values closer to .90 or better indicating a good fit of the model to the data (Byrne, 2009; Hair et al., 2010; Schumacker &

Lomax, 2010; Smith, Tisak, Hahn, & Schmieder, 1997). AIC values address the issue of parsimony in the assessment of model fit, and they are used in the comparison of alternative models. The smaller value indicates a better fit of the hypothesised model (Byrne, 2009; Schumacker & Lomax, 2010).

4.2.2. Interpretation of parameter estimates

The parameter estimates were examined to provide support for the evaluation of model fit. Standardised factor loadings were examined, and the criterion for acceptable factor loadings was set at $>.40$. According to Tabachnick and Fidell (2007, p. 649), “loadings in excess of .71 (50% overlapping variance) are considered excellent, .63 (40% overlapping variance) very good, .55 (30% overlapping variance) good, .45 (20% overlapping variance) fair, and .32 (10% overlapping variance) poor”. Therefore, .40 and above was operationally defined as a salient factor loading (Panatik, 2010).

4.2.3. Interpretation of inter-factor

The correlations between factors were also examined, in order to interpret relationships between factors. The criterion for acceptable inter-factor correlations was set at $<.70$ as recommended by Morrow (1983). Morrow argued that factor redundancy would be evidenced by high positive interrelations among relevant measures. These intercorrelations need to be particularly high, for example, ranging from .70 to .80. Therefore, a correlation between two factors lower than .70 indicates that the two factors can be considered to be separate and distinct from each other.

4.2.4. Reliability coefficient

Cronbach's alpha is used to measure the internal consistency of responses. According to Hair et al. (2010), the acceptable cut-off value of Cronbach's alpha is .70. Cronbach's alpha coefficients after CFA are presented on pages 65-76 (Tables 4.2, 4.5, 4.8, 4.11, 4.13 4.15, and 4.17).

4.3. Paternalistic Leadership

Paternalistic leadership (PL) consists of three factors: authoritarian form, benevolent form and moral form. I tested the goodness-of-fit of paternalistic leadership at Time 1 and Time 2. Firstly, I combined all factors into one factor, in order to compare CFA results with the three-factor model, to confirm whether these three factors were distinct. The results in Table 4.1 show that the CFA of the one-factor model provided an unacceptable model fit at both times. In contrast, initial CFA results of the three-factor model indicated better fit indices than the one-factor model.

Secondly, although the three-factor model provided better fit indices, it was still not totally acceptable, and thus I ran the three-factor model with a re-specification of the model as suggested by the modification indices. CFA of the modified three-factor model showed that the model fitted the data better when seven out of 26 items were deleted (for details see Appendix C). Items PL12, PL25, PL23, PL14, PL20, PL18 and PL13 were deleted sequentially. Compared with other models, this re-specified three-factor model showed significant differences in Chi-square (χ^2) values at both times (Table 4.1). This confirmed that the re-specified three-factor model was better than the one-factor model and the initial three-factor model.

Standardized factor loadings were examined in order to explore whether the factors loaded significantly on the remaining items. After the re-specification, the authoritarian form of paternalistic leadership contained five items, and the standardized factor loadings ranged from .61 to .78 at Time 1 and .57 to .82 at Time 2 (Table 4.2). The benevolent form of paternalistic leadership still contained 11 items, and the standardized factor loadings ranged from .49 to .82 at Time 1, and from .59 to .88 at Time 2 (Table 4.2). The moral form of paternalistic leadership contained three items, and the standardized factor loadings ranged from .72 to .89 at Time 1, and from .82 to .96 at Time 2 (Table 4.2).

Intercorrelations between factors were lower than .70 (Table 4.3). Reliability (α) of each factor was high at both times (Table 4.2). Hence, based on the results of CFA, standardized factor loadings, factor correlations and reliability, the 19-item three-factor paternalistic leadership scale provided the most acceptable fit. This model was adopted for all further analyses.

Table 4.1. Confirmatory factor analysis of paternalistic leadership

MODEL	χ^2	df	χ^2/df	SRMR	RMSEA	CFI	AIC	$\Delta\chi^2$
<i>Time 1 (n=971)</i>								
3factors	2484.97	296	8.40	.10	.09	.82	2594.97	$\Delta\chi^2_{(147)}=1790.26^{***}$
1 factor	4545.23	299	15.20	.33	.12	.65	4649.23	$\Delta\chi^2_{(150)}=3851.52^{***}$
3 factors ^a	693.71	149	4.66	.05	.06	.94	775.71	--
<i>Time 2 (n=201)</i>								
3factors	1000.01	296	3.38	.14	.11	.70	1110.01	$\Delta\chi^2_{(147)}=707.53^{***}$
1 factor	1420.52	299	4.75	.32	.14	.59	1524.52	$\Delta\chi^2_{(150)}=1128.04^{***}$
3 factors ^a	292.48	149	1.96	.05	.07	.87	374.48	--

Note: ^a 7 items were deleted.

*** $P < .001$

Table 4.2. Factor loadings and reliability for the three-factor paternalistic leadership model at Time 1 and Time 2.

	Benevolent form		Moral form		Authoritarian form	
	<i>Time 1</i>	<i>Time 2</i>	<i>Time 1</i>	<i>Time 2</i>	<i>Time 1</i>	<i>Time 2</i>
Items						
PL1	.69	.77				
PL2	.81	.86				
PL3	.82	.83				
PL4	.81	.88				
PL5	.70	.80				
PL6	.49	.59				
PL7	.67	.78				
PL8	.79	.85				
PL9	.69	.77				
PL10	.73	.72				
PL11	.62	.62				

Table 4.2. (continued)

	Benevolent form		Moral form		Authoritarian form	
	<i>Time 1</i>	<i>Time 2</i>	<i>Time 1</i>	<i>Time 2</i>	<i>Time 1</i>	<i>Time 2</i>
Items						
PL15			.72	.82		
PL16			.89	.96		
PL17			.84	.87		
PL19					.61	.63
PL21					.78	.82
PL22					.61	.57
PL24					.64	.66
PL26					.74	.66
α	.92	.94	.85	.91	.81	.80

Table 4.3. Intercorrelations of the three-factor of the paternalistic leadership model at Time1 and Time 2.

	MF		AF	
	<i>Time 1</i>	<i>Time 2</i>	<i>Time 1</i>	<i>Time 2</i>
BF	.52	.54	-.42	-.55
MF			-.23	-.29

Note: AF=authoritarian form of paternalistic leadership, BF=benevolent form of paternalistic leadership, MF=moral form of paternalistic leadership

4.4. Transformational Leadership

Transformational leadership contained four factors: idealized influence (II), inspirational motivation (IM), intellectual stimulation (IS), and individualized consideration (IC). I tested the goodness-of-fit of transformational leadership at Time 1 and Time 2.

To confirm the distinctiveness of these four factors, I compared the fit statistics of a four-factor model with those of a one-factor model. The results in Table 4.4 indicated that the one-factor model did not provide an acceptable model fit, whereas the four-factor model yielded a good fit. However, intercorrelations between factors were all higher than .70 (Table 4.5). Inter-

correlations suggested that factors II, IM and IS highly overlapped with each other. Thus I decided to test a two-factor model to compare with the one- and four-factor model.

First, I combined II, IM and IS into one factor because they highly overlapped with each other, and then tested with IC. This two-factor model did not provide an ideal fit at both times (see Table 4.4). Second, intercorrelations between IM and IS were strongest at both times. Hence, I combined IM and IS into one factor (motivational stimulation (MS)), and tested a three-factor model to compare with one-, two-, and four-factor model. The model fit statistics show that the three-factor model provided a good model fit at both times, except RMSEA value (.10) at Time 2. Intercorrelations were lower than the four-factor model, but intercorrelations between II and MS was still high. This is a limitation which will be discussed in the discussion chapter. Between II and MS, $r = .83$ at Time 1, $r = .87$ at Time 2; between II and IC, $r = .68$ at Time 1, $r = .66$ at Time 2; between MS and IC, $r = .73$ at time 1, $r = .65$ at time 2 (see Table 4.6).

Table 4.4. Confirmatory factor analysis of transformational leadership

MODEL	χ^2	df	χ^2/df	SRMR	RMSEA	CFI	AIC	$\Delta\chi^2$
<i>Time 1 (n=971)</i>								
4factors	213.75	38	5.63	.03	.07	.97	269.75	$\Delta\chi^2_{(3)}=73.59^{***}$
1 factor	883.14	44	20.07	.06	.14	.87	927.14	$\Delta\chi^2_{(3)}=595.80^{***}$
2 factors	630.94	43	14.67	.05	.11	.91	676.94	$\Delta\chi^2_{(2)}=343.60^{***}$
3 factors	287.34	41	7.01	.04	.08	.96	337.34	--
<i>Time 2 (n=201)</i>								
4factors	116.76	38	3.07	.05	.10	.95	172.76	$\Delta\chi^2_{(3)}=73.59^{***}$
1 factor	284.02	44	6.45	.08	.17	.83	328.02	$\Delta\chi^2_{(3)}=595.80^{***}$
2 factors	166.58	43	3.87	.05	.12	.92	212.58	$\Delta\chi^2_{(2)}=343.60^{***}$
3 factors	119.74	41	2.92	.05	.10	.95	169.74	--

*** $P < .001$

Table 4.5. Factor loadings and reliability for the four-factor transformational leadership model at Time 1 and Time 2.

	Idealized influence		Motivational stimulation		Individualized consideration	
	<i>Time 1</i>	<i>Time 2</i>	<i>Time 1</i>	<i>Time 2</i>	<i>Time 1</i>	<i>Time 2</i>
Items						
TL1	.84	.91				
TL2	.88	.88				
TL3	.85	.80				
TL4			.69	.72		
TL5			.74	.72		
TL6			.87	.86		
TL7			.84	.84		
TL8			.72	.72		
TL9					.91	.96
TL10					.72	.78
TL11					.40	.50
α	.89	.89	.88	.88	.69	.78

Table 4.6. Intercorrelations of the three-factor transformational leadership model at Time 1 and Time 2.

	MS		IC	
	<i>Time 1</i>	<i>Time 2</i>	<i>Time 1</i>	<i>Time 2</i>
II	.83	.87	.68	.66
MS			.73	.65

Note: II= idealized influence, MS= motivational stimulation, IC= individualized consideration

4.5. Perceived Control

I adopted the 22-item job control measure (Dwyer & Ganster, 1991). This measure had a single factor, but Smith et al. (1997) found two factors (e.g., general control and predictability). I applied CFA analysis and compared the one-factor with the two-factor model. The results are shown in Table 4.7.

Initially, both the one-factor and the two-factor model did not provide acceptable fit indices. However, factor correlations for the two-factor model exceeded .70 at Time 1 ($r = .88$) and Time 2 ($r = .82$). This suggested that general control and predictability form a single factor.

Following the modification indices, the one-factor model was re-specified. Eight of 22 items (PC9, PC8, PC20, PC12, PC18, PC21, PC6 and PC17) were deleted sequentially. CFA results of the re-specified one factor model showed that this model fitted the data better, and had significant differences in χ^2 values at both times when compared with other models (Table 4.7.). Reliability and standardized factor loadings also confirmed that the 14-item one factor model was the most acceptable model. Factor loadings ranged from .43 to .69 at Time 1; and from .42 to .66 at Time 2 (Table 4.8.). Thus the 14-item on factor model was retained.

Table 4.7. Confirmatory factor analysis of perceived control

MODEL	χ^2	df	χ^2/df	SRMR	RMSEA	CFI	AIC	$\Delta\chi^2$
<i>Time 1 (n=971)</i>								
1 factor	1957.24	209	9.37	.07	.09	.76	2045.24	$\Delta\chi^2_{(132)}=1493.12^{***}$
2 factors	1748.96	188	9.30	.07	.09	.77	1834.96	$\Delta\chi^2_{(111)}=1284.84^{***}$
1 factor ^a	464.12	77	6.03	.04	.04	.90	520.12	--
<i>Time 2 (n=201)</i>								
1 factor	675.59	209	3.23	.09	.11	.68	763.59	$\Delta\chi^2_{(132)}=438.62^{***}$
2 factors	595.60	188	3.17	.09	.10	.68	681.60	$\Delta\chi^2_{(111)}=358.63^{***}$
1 factor ^a	236.97	77	3.08	.07	.10	.79	292.97	--

Note: ^a 8 items were deleted

*** $P < .001$

Table 4.8. Factor loadings and reliability of the one-factor perceived control model at Time 1 and Time 2.

	Perceived Control	
	Time 1	Time 2
Items		
PC1	.62	.55
PC2	.58	.45
PC3	.53	.55
PC4	.58	.52
PC5	.55	.63
PC7	.56	.42
PC10	.58	.54
PC11	.51	
PC13	.67	.66
PC14	.69	.62
PC15	.54	.46
PC16	.61	.54
PC19	.43	.48
PC22	.63	.75
α	.87	.85

4.6. Supervisor-subordinate *Guanxi*

Supervisor-subordinate *guanxi* contained three factors: affective attachment (AA), personal-life inclusion (PI), and deference to supervisor (DS). The results in Table 4.9 show that the three-factor model provided better model fit than the one-factor model, but the fit statistics were not good.

Following the modification indices, the three-factor model was re-specified. Three of 12 items (SSGX5, SSGX8, and SSGX10) were deleted sequentially. AA contained four items, PI contained two items and DS contained three items, and the re-specified three-factor model provided a better fit (Table 4.9.). Before the re-specification, most inter-correlations between factors were below .70 at both times (Table 4.10).

Table 4.9. Confirmatory factor analysis of supervisor-subordinate guanxi

MODEL	χ^2	df	χ^2/df	SRMR	RMSEA	CFI	AIC	$\Delta\chi^2$
<i>Time 1 (n=971)</i>								
3factors	783.62	51	15.37	.11	.12	.83	837.62	$\Delta\chi^2_{(27)}=675.47^{***}$
1 factor	2008.84	54	37.20	.15	.19	.55	2056.84	$\Delta\chi^2_{(30)}=1900.69^{***}$
3 factors ^a	108.15	24	4.51	.05	.06	.97	150.15	--
<i>Time 2 (n=201)</i>								
3factors	150.17	51	2.95	.09	.10	.90	204.17	$\Delta\chi^2_{(27)}=100.04^{***}$
1 factor	411.44	54	7.62	.13	.18	.64	459.44	$\Delta\chi^2_{(30)}=361.31^{***}$
3 factors ^a	50.13	24	2.09	.06	.07	.97	92.13	--

Note: ^a 3 items were deleted.*** $p < .001$

After the re-specification, inter-correlations between AA and PI were higher than the criterion .70 at both times (e.g., Time 1, $r = .71$; Time 2, $r = .75$). I decided to choose the re-specified three-factor model although these two factors highly correlated because a re-specified single factor model may not justify the nature of supervisor-subordinate *guanxi*.

CFA results of the re-specified three-factor model showed that this model fitted the data better, and had significant differences in χ^2 values at both times compared with the other models (see Table 4.9.). Reliability and standardized factor loadings also confirmed that the nine-item three-factor model was the most acceptable model. Factor loadings ranged from .57 to .88 at Time 1; and from .52 to .90 at Time 2 (see Table 4.11.).

Table 4.10. Intercorrelations of the three-factor supervisor-subordinate *guanxi* model before re-specification at Time 1 and Time 2.

	PI		DS	
	<i>Time 1</i>	<i>Time 2</i>	<i>Time 1</i>	<i>Time 2</i>
AA	.65	.73	.28	.35
PI			.33	.38

Table 4.11. Factor loadings and reliability of the three-factor supervisor-subordinate guanxi model at Time 1 and Time 2.

	Affective attachment		Personal-life inclusion		Deference to supervisor	
	<i>Time 1</i>	<i>Time 2</i>	<i>Time 1</i>	<i>Time 2</i>	<i>Time 1</i>	<i>Time 2</i>
Items						
SSGX1	.71	.81				
SSGX2	.79	.84				
SSGX3	.75	.71				
SSGX4	.61	.62				
SSGX6			.72	.77		
SSGX7			.85	.90		
SSGX9					.57	.52
SSGX11					.88	.87
SSGX12					.83	.84
α	.81	.83	.76	.82	.79	.76

4.7. Psychological Ownership

Psychological ownership comprised two factors: psychological ownership of the organization (POO) and psychological ownership of the job (POJ). The results in Table 4.12 indicate that the two-factor model provided better fit than the one-factor model. However, the fit indices were not ideal, especially at Time 2. Hence the two-factor model was re-specified. After deleting one item (POJ4), the re-specified model provided an acceptable fit. Further, compared with the one-factor model and two-factor models, this re-specified two-factor model showed significant differences in χ^2 values at both times (Table 4.12). This confirmed that the re-specified model was better than the other two models.

Table 4.12. Confirmatory factor analysis of psychological ownership

MODEL	χ^2	df	χ^2/df	SRMR	RMSEA	GFI	AGFI	CFI	AIC	$\Delta\chi^2$
<i>Time 1 (n=971)</i>										
2 factors	84.67	8	10.58	.03	.10	.97	.93	.98	110.67	$\Delta\chi^2_{(4)}=64.87^{***}$
1 factor	537.78	9	59.75	.07	.25	.85	.65	.88	561.78	$\Delta\chi^2_{(5)}=517.98^{***}$
2 factors ^a	19.80	4	4.95	.01	.06	.99	.97	.99	41.80	--
<i>Time 2 (n=201)</i>										
2factors	48.87	8	6.11	.03	.16	.93	.81	.96	74.87	$\Delta\chi^2_{(4)}=35.19^{***}$
1 factor	101.79	9	11.31	.05	.23	.85	.66	.91	125.79	$\Delta\chi^2_{(5)}=52.92^{***}$
2 factors ^a	13.68	4	3.42	.02	.10	.98	.91	.99	35.68	--

Note: ^a 1 item was deleted

*** P<.001

After re-specification, POO contained two items, and the standardized factor loadings ranged from .84 to .94 at Time 1, and both factor loadings were .89 at Time 2. POJ consisted of three items, and the standardized factor loadings ranged from .80 to .92 at Time 1, and from .84 to .93 at Time 2 (Table 4.13.). Reliability was high at both times ($r = .88$).

Factor correlations exceeded the criterion .70 at both times ($r = .77$ at Time 1, $r = .87$ at Time 2). However, previous research has consistently illustrated that psychological ownership of the organization and psychological ownership of the job are distinct, although interrelated, constructs (Bernhard & O'Driscoll, 2011; Mayhew et al., 2007). According to Bernhard and O'Driscoll (p. 349), "While psychological ownership of the organization relates to employees' psychological connection to the organization as a whole, psychological ownership of the job is concerned with an individual's feeling of possession toward their specific job." The Chinese work context is influenced by paternalism, which is based on the traditional Chinese family structure and generalized to the workplace in China (Farh et al., 2008). The superior in an organization is like a father and takes care of subordinates like a parent would, such as providing guidance and protection. In return, the subordinates are normally required to be obedient and loyal to the superior (Aycan, 2006; Farh et al., 2008). Since obedience and loyalty have been highlighted as the characteristics of Chinese employees, they may think that felt ownership of

the organization and the job are the same thing in the Chinese work context. Further discussion of this issue will be presented in Chapter 8. Hence, the two-factor psychological ownership model was accepted and used for further analyses.

Table 4.13. Factor loadings and reliability of the two-factor psychological ownership model at Time 1 and Time 2.

Items	Psychological ownership of the organization		Psychological ownership of the job	
	<i>Time 1</i>	<i>Time 2</i>	<i>Time 1</i>	<i>Time 2</i>
POO1	.84	.89		
POO2	.94	.89		
POJ1			.80	.84
POJ2			.92	.93
POJ3			.89	.91
α	.88	.90	.88	.92

4.8. Affective Organizational Commitment

I adopted the eight-item affective organizational commitment scale developed by Meyer and Allen (1984). Initial CFA results of the one factor model showed unacceptable fit indices at both times (see Table 4.14.).

Because half of the affective organizational commitment items were negatively worded, they were recoded before conducting any analysis (see Appendix C). I combined those four negatively worded items into one factor called Negative affective commitment (NAC), and the other four items into a factor called Positive affective commitment (PAC). I conducted CFA for this eight-item two factor model, and compared the results with the one-factor model. The two-factor model showed better model fit than the one factor model. Intercorrelations were $r = -.55$ at Time 1, and $r = -.80$ at Time 2.

However, the fit indices were not ideal at both times. Following the modification indices, the two-factor model was re-specified. After deleting two items (AC6 and AC8) sequentially, the re-specified model showed an acceptable fit at both times. Further, compared with the one-factor model and the initial two-factor model, the re-specified two-factor model showed significant differences in χ^2 values at both times (Table 4.14). Therefore, this re-specified model is better than other models.

Table 4.14. Confirmatory factor analysis of affective organizational commitment

MODEL	χ^2	df	χ^2/df	SRMR	RMSEA	CFI	AIC	$\Delta\chi^2$
<i>Time 1 (n=971)</i>								
2 factors	259.25	19	13.65	.08	.11	.88	293.25	$\Delta\chi^2_{(11)}=214.41^{***}$
1 factor	556.47	20	27.82	.10	.17	.74	588.47	$\Delta\chi^2_{(12)}=511.63^{***}$
2 factors ^a	44.84	8	5.61	.03	.07	.98	70.84	--
<i>Time 2 (n=201)</i>								
2 factors	51.53	19	2.71	.06	.09	.94	85.53	$\Delta\chi^2_{(11)}=41.05^{***}$
1 factor	80.77	20	4.04	.07	.12	.89	112.77	$\Delta\chi^2_{(12)}=70.23^{***}$
2 factors ^a	10.54	8	1.32	.03	.04	.99	36.54	--

Note: ^a 2 items were deleted
^{***} P<.001

After the re-specification, NAC contained three items, and the standardized factor loadings ranged from .67 to .81 at Time 1, and from .72 to .89 at Time 2 (Table 4.15.). PAC contained three items, and the standardized factor loadings ranged from .64 to .74 at Time 1, and from .59 to .82 at Time 2 (Table 4.15.). Reliability was high at both times. The correlation between the two factors was below .70 at Time 1 ($r = .56$), but it exceeded the criterion at Time 2 ($r = .82$). My findings also confirmed Meyer, Allen and Smith's (1993) research, which found a six-item affective commitment model provided better fit than eight items. Meyer et al. deleted the same two items as I did in this analysis. Therefore, the six-item two-factor model was used for all further analyses.

Table 4.15. Factor loadings and reliability of the two-factor affective organizational commitment model at Time 1 and Time 2.

	Negative affective commitment		Positive affective commitment	
	<i>Time 1</i>	<i>Time 2</i>	<i>Time 1</i>	<i>Time 2</i>
Items				
AC1	.81	.89		
AC2			.64	.70
AC3	.74	.72		
AC4			.68	.59
AC5			.74	.82
AC7	.67	.73		
α	.79	.82	.73	.74

4.9. Job Satisfaction

Job satisfaction contains only three items. I constrained factor loadings of two items to be 1, leaving another factor loading free. I found when I constrained factor loadings of items JS1 and JS3, and left JS2 free, this provided the best model fit (see Table 4.16.), although RMSEA was not ideal at Time 2. The standardized factor loadings ranged from .53 to .75 at Time 1, from .57 to .86 at Time 2. Reliability was $\alpha=.71$ at Time 1, $\alpha=.78$ at Time 2. The one-factor model was accepted for further analyses.

Table 4.16. Confirmatory factor analysis of job satisfaction

Model	χ^2	df	χ^2/df	SRMR	RMSEA	CFI
<i>Time 1 (n=971)</i>						
1 factor	2.26	1	2.26	.01	.03	.99
<i>Time 2 (n=201)</i>						
1 factor	3.63	1	3.63	.02	.10	.99

Table 4.17. Factor loadings and reliability of the one-factor job satisfaction model at Time 1 and Time 2.

	Job satisfaction	
	<i>Time 1</i>	<i>Time 2</i>
Items		
JS1	.75	.81
JS2	.53	.57
JS3	.74	.86
α	.71	.78

4.10. Psychological Withdrawal

CFA analysis was not conducted across psychological withdrawal because items of this construct described different behaviours at work, and they were not highly related to each other. Reliability of psychological withdrawal was .89 at Time 1 and .88 at Time 2.

4.11. Chapter Summary

This chapter has presented the CFA results of most of the research instruments. According to the final CFA results, paternalistic leadership scales contained three factors: authoritarian form (five items), benevolent form (11 items) and moral form (three items). Transformational leadership consisted of three factors: idealized influence (three items), motivational stimulation (five items), and individualized consideration (three items). Perceived control was a single factor variable and consisted of 14 items after re-specification. Supervisor-subordinate *guanxi* comprised three factors: affective attachment (four items), personal-life inclusion (two items), and deference to supervisor (three items). Psychological ownership was confirmed to contain two factors: psychological ownership of the job (three items); and psychological ownership of the organization (two items). Finally, affective organizational commitment contained two factors: negative affective commitment (three items) and positive affective commitment (three items);

and job satisfaction was confirmed as a single factor variable (three items). All variables were carried over to the model testing stage.

CHAPTER 5 TIME 1 RESULTS

Chapter Overview

The purpose of this research was to examine the relationships between leadership, perceived control, supervisor-subordinate *guanxi*, psychological ownership and wellbeing variables (affective commitment, job satisfaction, and psychological withdrawal) in Chinese work contexts. This study has also investigated the mediating role played by perceived control, supervisor-subordinate *guanxi*, and psychological ownership of the job and of the organization.

This chapter presents the results of statistical analyses at Time 1, which are divided into three parts: descriptive analyses, correlations between all variables, and mediation analyses using structural equation modelling.

5.1. Descriptive Statistics

Descriptive statistics for all variables, including means, standard deviations, skewness and kurtosis statistics are presented in Table 5.1. The skewness and kurtosis indices test the normality of scores on the latent variables. According to Kline (2011), absolute values of skewness over 3.0 and absolute values of kurtosis higher than 10.0 would be problematic. Results indicated that skewness and kurtosis indices were all lower than these threshold indices.

Responses to the perceived control items were recorded using a 5-point scale ranging from 1 (very little) to 5 (very much). All other responses were recorded using a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). In relation to paternalistic leadership, participants obtained moderate to high mean scores (benevolent form = 4.83, moral form = 4.89 and authoritarian form = 3.58). Participants produced moderate to high mean scores for transformational leadership (idealized influence = 5.04, motivational stimulation = 4.86 and individualized consideration = 4.81).

Most participants perceived a high level of control at work ($M = 2.96$), and had moderate mean scores for supervisor-subordinate *guanxi* (affective attachment = 4.84, deference to supervisor = 3.42 and personal-life inclusion = 4.10). Participants also provided moderate-high mean scores for psychological ownership of the job ($M = 4.73$) and psychological ownership of the organization ($M = 4.44$). Results also showed moderate mean scores for affective commitment (positive affective commitment = 4.52 and negative affective commitment = 3.42). Most participants reported a moderate-high mean score for job satisfaction ($M = 5.00$) and a low score for psychological withdrawal ($M = 2.62$).

Table 5.1. Descriptive statistics for all variables at Time 1

Variable	M	SD	Skewness	Kurtosis
BF (a)	4.83	1.08	-.20	-.11
MF (a)	4.89	1.46	-.43	-.31
AF (a)	3.58	1.22	.19	-.37
II (a)	5.04	1.37	-.44	-.24
MS (a)	4.86	1.17	-.27	-.12
IC (a)	4.81	1.12	-.05	-.04
control (b)	2.96	.61	-.03	.80
AA (a)	4.84	1.19	-.29	-.23
PI (a)	4.10	1.50	-.18	-.46
DS (a)	3.42	1.40	.21	-.39
POO (a)	4.44	1.37	-.36	-.17
POJ (a)	4.73	1.30	-.37	-.07
NAC (a)	3.42	1.31	.16	-.17
PAC (a)	4.52	1.18	-.05	-.09
JS (a)	5.00	1.12	-.24	-.38
PW (c)	2.62	1.04	.81	.48

Note: BF=benevolent form of paternalistic leadership; AF=authoritarian form of paternalistic leadership; MF=moral form of paternalistic leadership; II=idealized influence; MS=motivational stimulation IC=individualized consideration; CR=contingent reward; MEA=management by exception-active; MEP=management by exception-passive; control=perceived control; AA=affective attachment; DS=deference to supervisor; PL=personal-life inclusion; POO=psychological ownership of organization; POJ=psychological ownership of job; PAC=positive affective commitment; NAC= negative affective commitment; JS=job satisfaction; PW=Psychological withdrawal (a) 1= strongly disagree, 7= strongly agree; (b) 1= very little, 5= very much; (c) 1= never, 7=always

5.2. Correlations

Correlations among all variables were examined through the Pearson product-moment correlation coefficient (r) and are presented in Table 5.2. According to Cohen (1988, 1992), $r = .10$ represents a small effect size, $r = .30$ represents medium effect size, and $r = .50$ represents a large effect size.

Perceived control was positively related to idealized influence ($r = .30, p < .01$), motivational stimulation ($r = .34, p < .01$) and individualized consideration ($r = .26, p < .01$). Hypotheses H1a-H1d thus were supported at Time 1. Meanwhile, perceived control was positively related to the benevolent form of paternalistic leadership ($r = .35, p < .01$) and the moral form of paternalistic leadership ($r = .19, p < .01$), and negatively correlated with the authoritarian form of paternalistic leadership ($r = -.06, p < .05$). Thus, hypotheses H3a-H3c were supported at Time 1.

Further, perceived control positively related to all three dimensions of supervisor-subordinate *guanxi*: affective attachment ($r = .45, p < .01$), personal-life inclusion ($r = .32, p < .01$) and deference to supervisor ($r = .24, p < .01$). Thus, hypotheses H5a-H5c were supported at Time 1. Psychological ownership of the job also positively correlated with affective attachment ($r = .50, p < .01$), personal-life inclusion ($r = .37, p < .01$) and deference to supervisor ($r = .28, p < .01$). Psychological ownership of the organization positively correlated with affective attachment ($r = .48, p < .01$), personal-life inclusion ($r = .40, p < .01$) and deference to supervisor ($r = .27, p < .01$). Therefore, hypotheses H7a-H7c, and H8a-H8c were supported at Time 1. Further, there was a strong correlation between psychological ownership of the job and of the organization ($r = .69, p < .01$). This result was different from previous research findings (Bernhard & O'Driscoll, 2011; O'Driscoll et al., 2006a; Pierce et al., 2003), which reported small-medium correlations between psychological ownership of the organization and the job. This is further discussed in Chapter 8.

Table 5.2. Correlations between all variables at Time 1

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. BF																
2. MF	.46**															
3. AF	-.34**	-.17**														
4. II	.71**	.53**	-.35**													
5. MS	.71**	.45**	-.22**	.76**												
6. IC	.62**	.40**	-.45**	.58**	.59**											
7. control	.35**	.19**	-.06*	.30**	.34**	.26**										
8. AA	.68**	.41**	-.46**	.67**	.61**	.58**	.45**									
9. PI	.47**	.21**	-.17**	.38**	.39**	.31**	.32**	.57**								
10. DS	.23**	.08*	.10**	.21**	.21**	.12**	.24**	.24**	.26**							
11. POO	.42**	.19**	-.17**	.37**	.42**	.28**	.40**	.48**	.40**	.27**						
12. POJ	.44**	.28**	-.12**	.44**	.45**	.31**	.42**	.50**	.37**	.28**	.69**					
13. NAC	-.36**	-.17**	.33**	-.29**	-.33**	-.32**	-.17**	-.35**	.26**	-.07*	-.50**	-.43**				
14. PAC	.44**	.28**	-.16**	.43**	.46**	.33**	.34**	.47**	.35**	.28**	.61**	.60**	-.42**			
15. JS	.46**	.35**	-.28**	.45**	.44**	.38**	.32**	.51**	.27**	.10**	.50**	.63**	-.47**	.52**		
16. PW	-.23**	-.21**	.24**	-.25**	-.22**	-.20**	.09**	-.19**	-.01	.14**	-.09**	-.18**	.39**	-.18**	-.34**	--

Note: N=971; *p<.05;**p<.01 BF=benevolent form of paternalistic leadership; AF=authoritarian form of paternalistic leadership; MF=moral form of paternalistic leadership; II=idealized influence; MS=motivational stimulation IC=individualized consideration; control=perceived control; AA=affective attachment; DS=deference to supervisor PL=personal-life inclusion; POO=psychological ownership of organization; POJ=psychological ownership of job; PAC= positive affective commitment; NAC= negative affective commitment; JS=job satisfaction; PW= Psychological withdrawal

Psychological ownership of the job was positively related to job satisfaction ($r = .63, p < .01$) and negatively related to psychological withdrawal ($r = -.18, p < .01$). Therefore, hypotheses 11 and 15 were supported at Time 1. Psychological ownership of the organization was significantly related to negative affective commitment ($r = -.50, p < .01$) and positive affective commitment ($r = .61, p < .01$). Hypothesis 13 was supported at Time 1. Psychological ownership of the organization was negatively related to psychological withdrawal ($r = -.09, p < .01$), therefore hypothesis 16 was supported at Time 1.

5.3. Mediation Relationships

According to Baron and Kenny (1986, p. 1173), mediation is defined as the “generative mechanism through which the focal independent variable is able to influence the dependent variable of interest.” A mediator is a third variable in a causal pathway, and mediates a relationship between an independent variable and a dependent variable, and transfers the effect of the independent variable on the dependent variable (Cheong & MacKinnon, 2012; Sobel, 1982). In this study, mediation hypotheses were tested by structural equation modelling (AMOS 19). When the relationship between the predictors and the criterion variables is completely or partially intervened by a third variable, it is considered to be a significant mediator (Cheong & MacKinnon, 2012). Two types of structural model for every mediation relationship were compared to find the best fitting model, and results are provided for each model separately.

Model 1 was a full mediation model (Figure 5.1). It included pathways from predictor variables to the intermediate variable (path a) and from the intermediate variable to criterion variables (path b). According to Mathieu and Taylor (2006), when the indirect effects (path a and path b) are significant, and the direct effect (path c) is not significant, then full mediation is declared. Model 2 was a partial mediation model (Figure 5.2). In Figure 5.2, if the direct effect (path c) and indirect effects (path a and path b) all are significant, partial mediation is declared. Further, if the direct effect is not significant and indirect effects are significant, full mediation is

declared. However, if either path a or path b is not significant, no mediation is declared (Mathieu and Taylor, 2006).

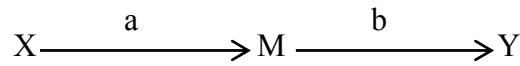


Figure 5.1. Model 1 (Full mediation)

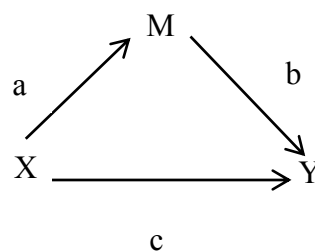


Figure 5.2. Model 2 (Partial mediation)

5.4. Analytical Strategy

Mediation hypotheses were tested through SEM, specifically AMOS 19. A test of the overall research model (Figure 5.3) would not allow testing of individual mediation relationships because AMOS does not report significance tests for multiple mediation effects. Therefore, a sub-model approach was adopted (Klein, Fan, & Preacher, 2006). The research model was divided into three sub-models, in order to test the hypothesized mediated relationships individually. This resulted in three separate models, each representing a different set of hypotheses. The three models (A, B and C) are shown in Figure 5.3.

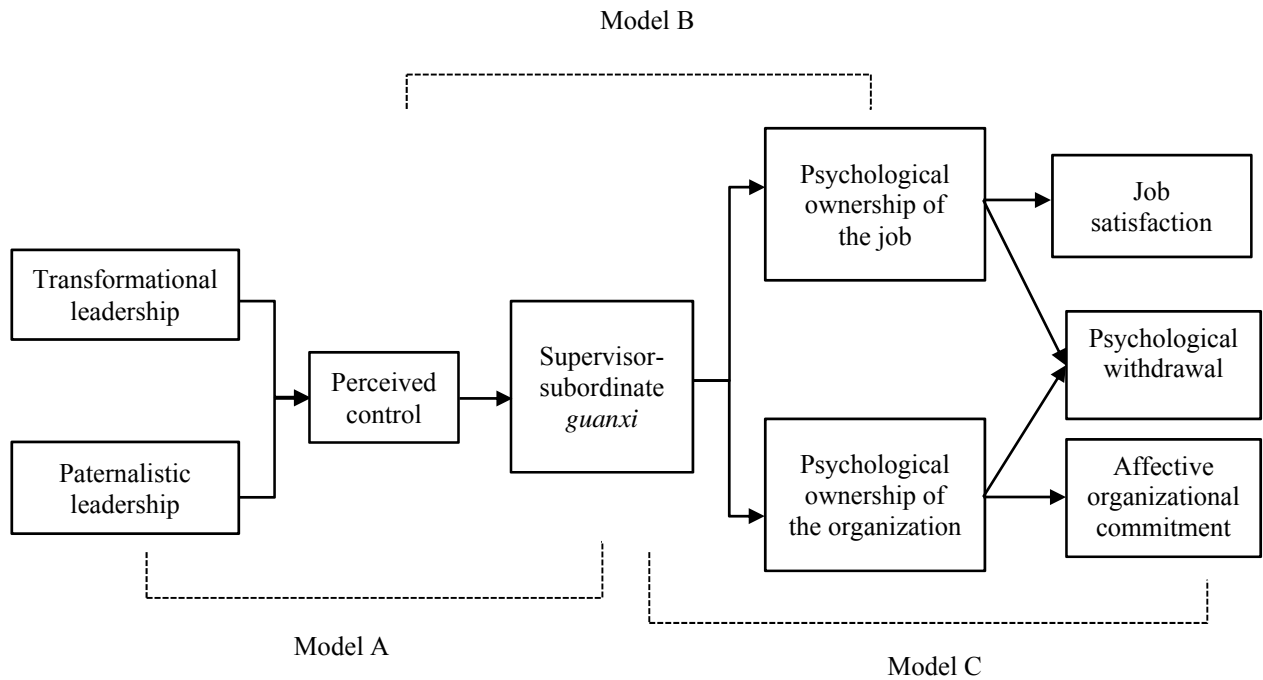


Figure 5.3. Hypothesised mediation model

Model A posits that the two different leadership styles would be related to perceived control, which in turn would be related to all three dimensions of supervisor-subordinated *guanxi*. Therefore, Model A was further divided into two sub-models (Figure 5.4) to examine the mediating role of perceived control between these two leadership styles and supervisor-subordinate *guanxi*.

Model B posits that perceived control would be correlated with all three dimensions of supervisor-subordinate *guanxi*, which in turn are associated with psychological ownership of the organization and of the job (Figure 5.5, p.84). Model C (Figure 5.6, p.85) posits that supervisor-subordinate *guanxi* would be related to psychological of the job and of the organization, which in turn would be related to the criterion variables (affective organizational commitment, job satisfaction, and psychological withdrawal).

Before examining the specific mediation hypotheses, I tested the model fit for each mediation model at Time 1, then examined path coefficients. In order to determine the best fitting model, the chi-square (χ^2), the normed chi-square value (ratio of chi-square to df, χ^2/df), standardized

root mean residual (SRMR), root mean square error of approximation with the 90 per cent confidence interval (RMSEA), comparative fit index (CFI), and Akaike information criterion (AIC) were examined.

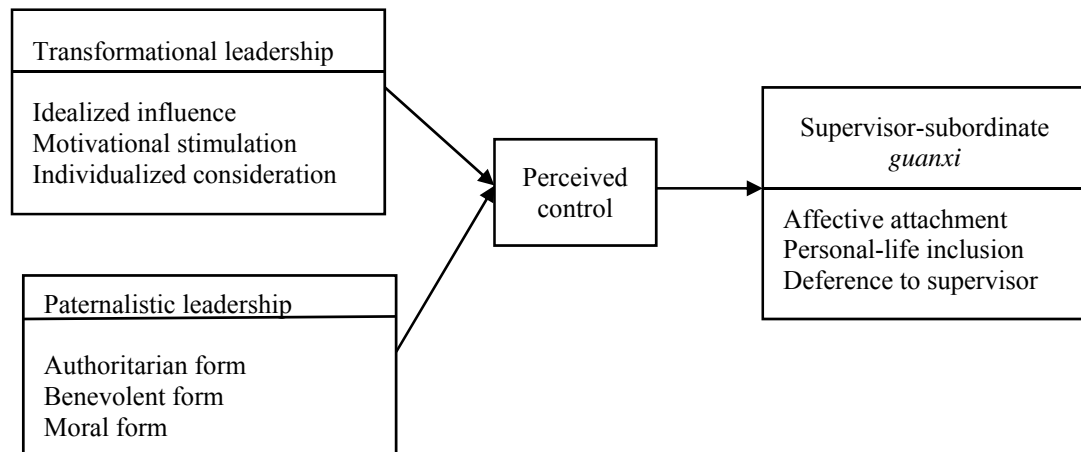


Figure 5.4. Model A: Perceived control as a mediator of relationships between leadership styles and supervisor-subordinate *guanxi*

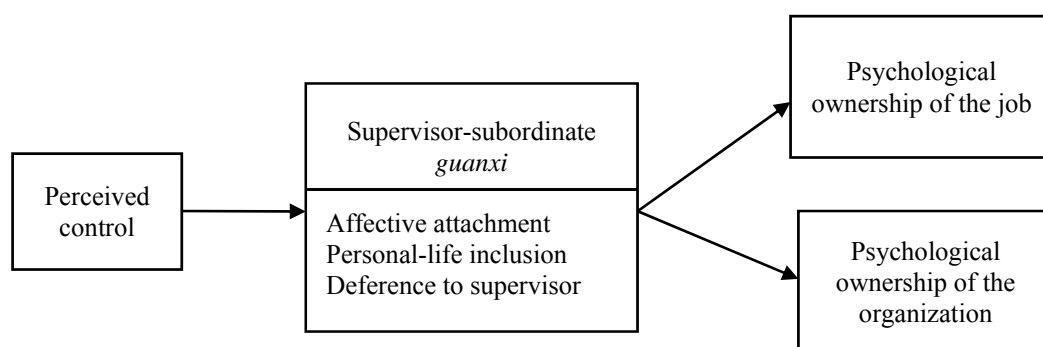


Figure 5.5. Model B: Supervisor-subordinate *guanxi* as a mediator of relationships between perceived control and psychological ownership of the job and of the organization

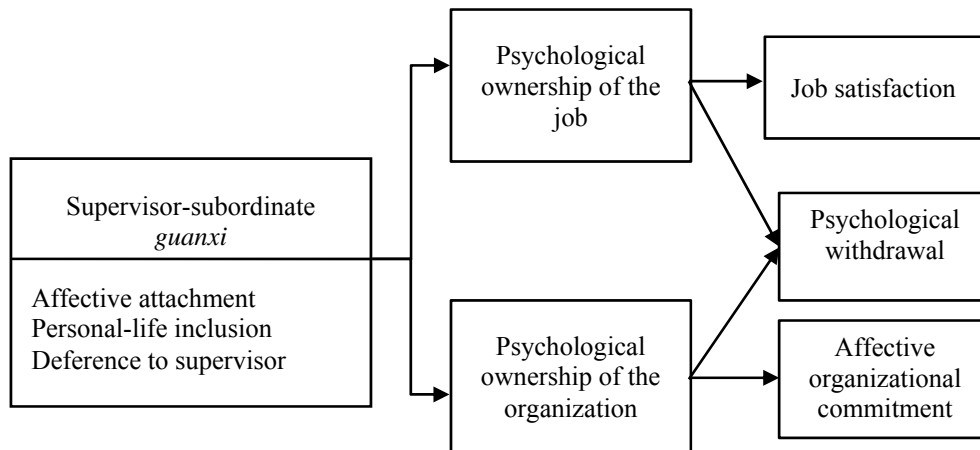


Figure 5.6. Model C: Psychological ownership as a mediator of relationships between supervisor-subordinate *guanxi* and the criterion variables

5.5. Model A: Perceived Control as a Mediator

Figure 5.4 presents the first part of the hypothesized mediation model (Model A). I hypothesized that perceived control would mediate the relationships between transformational leadership, paternalistic leadership and supervisor-subordinate *guanxi*.

Transformational leadership consisted of three factors: idealized influence (II), motivational stimulation (MS) and individualized consideration (IC). Paternalistic leadership formed three factors: authoritarian form (AF), benevolent form (BF) and moral form (MF). These variables served as predictor variables in Model A. Perceived control (control) was the mediator variable. Supervisor-subordinate *guanxi* consisted of three factors: affective attachment (AA), personal-life inclusion (PI), and deference to supervisor (DS). These variables served as criterion variables. Because there were three components in both leadership styles, Model A was separated into two sub-models: Model A1 examined mediation effects of perceived control between transformational leadership and supervisor-subordinate *guanxi*; Model A2 tested mediation effects of perceived control between paternalistic leadership and supervisor-subordinate *guanxi*.

5.5.1. Model A1: Transformational leadership as a predictor

Two models (full mediation and partial mediation) were tested to determine the best model fit. Model 1 examined full mediation, including pathways between the predictor variables (II, MS, and IC), the mediator (control) and the criterion variables (AA, PI, and DS). Model 1 did not yield acceptable fit to the data (Table 5.3). Model 2 tested partial mediation, which included testing the direct relationships between the predictor variables (II, MS, and IC) and the criterion variables (AA, PI, and DS). Results of fit indices showed that Model 2 provided better fit statistics than Model 1.

The chi-square difference ($\Delta\chi^2$) test was used to explore whether there was any significant difference between the two models. $\Delta\chi^2$ test results are provided in Table 5.3 and show that Model 2 (partial mediation) was significantly different from Model 1 (full mediation). Model 2 provided the best fit, with the data indicating that perceived control played a partial mediating role between transformational leadership and supervisor-subordinate *guanxi* overall. Therefore, partial mediation was adopted for testing the path coefficients.

Table 5.3. Model fit indices for structural comparisons in Model A1

MODEL	χ^2	df	χ^2/df	SRMR	RMSEA	CFI	AIC	$\Delta\chi^2$
1	2351.70	515	4.57	.10	.06	.88	2511.70	$\Delta\chi^2_{(9)} = 520.28^{***}$
2	1831.42	506	3.62	.05	.05	.91	2009.42	--

***p<.001

The main purpose of testing partial mediation is to determine the direct, indirect and total effects of perceived control. Standardised parameter estimates of Model A1 are provided in Table 5.4, in order to show significant and direct relationships between transformational leadership, perceived control and supervisor-subordinate *guanxi*.

The standardised parameter estimates showed motivational stimulation was significantly related to perceived control ($\beta=.25$, $p<.01$, $R^2=.17$), and individualized consideration was

significantly related to perceived control ($\beta=.19$, $p<.01$, $R^2=.17$) while perceived control was significantly related to affective attachment ($\beta=.27$, $p<.001$, $R^2=.71$), personal-life inclusion ($\beta=.21$, $p<.01$, $R^2=.29$) and deference to supervisor ($\beta=.18$, $p<.01$, $R^2=.07$). There was no significant direct relationship between idealized influence and perceived control ($\beta=.01$, ns).

Table 5.4. Standardised parameter estimates of relationships between transformational leadership, perceived control and supervisor-subordinate *guanxi*

	Criterion variables			Mediator
	AA	PI	DS	Control
Predictors				
II	.55***	.18*	.10	.01
MS	.02	.18*	.04	.25**
IC	.18***	.10	.03	.19**
Mediator				
Control	.27***	.21**	.18**	--

** $P<.01$ *** $P<.001$. II=idealized influence, MS=motivational stimulation, IC=individualized consideration, control=perceived control, AA=affective attachment, PI = personal-life inclusion, DS =deference to supervisor.

Table 5.5 presents the direct, indirect and total effects statistics for the mediation effects of perceived control. As mentioned before, if the direct effects and indirect effects are significant, then partial mediation is declared. Conversely, when the direct effects are not significant and indirect effects are significant, partial mediation is rejected and full mediation is declared. The type of mediation was determined following Klein et al.'s (2006) suggestions. Six mediation paths were tested and all paths were significant. Overall, model fit statistics indicated that perceived control partially mediated relationships between predictor variables and criterion variables. However, in some specific paths, perceived control provided full mediation between predictors and criterion variables. For example, control played a full mediating role between MS and AA, between MS and DS, between IC and PI, and also between IC and DS. Control only

partially mediated relationship between MS and PI, and also between IC and AA. Therefore, hypotheses H19a (2) (3) (4), hypotheses H19b (2) (3) (4), and hypotheses H19c (2) (3) (4) were supported at Time 1. Hypotheses H19a (1), H19b (1), and H19c (1) were rejected.

Table 5.5. Model A1. Mediation effects of perceived control between transformational leadership and supervisor-subordinate *guanxi*

Predictors → Mediator → Outcomes	Direct effects	Indirect effects	Total effects	Type of mediation
MS → control → AA	.02	.52**	.54	Full
MS → control → PI	.18*	.46**	.64	Partial
MS → control → DS	.04	.44**	.48	Full
IC → control → AA	.18**	.46**	.64	Partial
IC → control → PI	.10	.40**	.50	Full
IC → control → DS	.03	.37**	.40	Full

** P<.01. *** P<.001 MS=motivational stimulation, IC= individualized consideration, control=perceived control, AA =affective attachment, PI= personal-life inclusion, DS=deference to supervisor.

5.5.2. Model A2: Paternalistic leadership as a predictor

Full mediation and partial mediation were tested to determine which type of mediation fitted the data better. Model 1 examined full mediation between paternalistic leadership (authoritarian form (AF), benevolent form (BF), moral form (MF)), the mediator (control) and supervisor-subordinate *guanxi* (affective attachment (AA), personal-life inclusion (PI), and deference to supervisor (DS)). Model 1 yielded acceptable fit indices, except SRMR (see Table 5.6). Model 2 tested partial mediation, including testing the direct relationships between the predictor variables (AF, BF and MF) and the criterion variables (AA, PI, and DS). Results of fit indices show Model 2 provided better fit statistics than Model 1. $\Delta\chi^2$ test results are also provided in Table 5.6 and show that Model 2 (partial mediation) was significantly different from Model 1

(full mediation). Therefore, partial mediation provided the best fit with the data and was used for further analyses.

Table 5.6. Model fit indices for structural model comparisons of Model A2.

MODEL	χ^2	df	χ^2/df	SRMR	RMSEA	CFI	AIC	$\Delta\chi^2$
1	2573.47	785	3.28	.09	.05	.90	2809.47	$\Delta\chi^2_{(13)}=678.90^{***}$
2	1894.57	772	2.45	.04	.04	.94	2156.57	--

***p<.001

The standardised parameter estimates for Model A2 are provided in Table 5.7. Standardised parameter estimates indicated that the benevolent form of paternalistic leadership was significantly related to perceived control ($\beta = .41$, $p < .001$, $R^2 = .16$), and the authoritarian form of paternalistic leadership was also significantly related to perceived control ($\beta = .09$, $p < .05$, $R^2 = .16$), while perceived control was significantly correlated with affective attachment ($\beta = .29$, $p < .001$, $R^2 = .76$), personal-life inclusion ($\beta = .19$, $p < .001$, $R^2 = .35$), and deference to supervisor ($\beta = .15$, $p < .001$, $R^2 = .13$). However, there was no significant relationship between the moral form of paternalistic leadership and perceived control ($\beta = .04$, ns).

Table 5.8 presents the direct, indirect and total effects statistics for the mediation effects of perceived control for Model A2. Six mediation paths were tested and all paths were significant. Path coefficients showed that perceived control partially mediated the relationships between benevolent leadership, affective attachment, personal-life inclusion and deference to supervisor. It partially mediated the relationships between authoritarian form of paternalistic leadership, affective attachment, and deference to supervisor, but it had full mediation effects between authoritarian leadership and personal-life inclusion. Therefore, hypotheses H20a (1) (2), hypotheses H20b (1) (2), and hypotheses H20c (1) (2) were supported at Time 1. Hypotheses H20a (3), H20b (3) and H20c (3) were rejected.

Overall, according to model fit statistics, partial mediation fit the data better than full mediation. Perceived control had mainly partial mediation effects between paternalistic leadership and supervisor-subordinate *guanxi*.

Table 5.7. Standardised parameter estimates of relationships between paternalistic leadership, perceived control and supervisor-subordinate *guanxi*

	Criterion variables			Mediator
	AA	PI	DS	control
Predictors				
BF	.48***	.51***	.30***	.41***
MF	.10***	-.03	-.07	.04
AF	-.32***	-.01	.25***	.09*
Mediator				
control	.29***	.19***	.15***	--

* P<.05, ** P <.01, *** P<.001. AF=authoritarian form of paternalistic leadership, BF=benevolent form of paternalistic leadership, ML=moral form of paternalistic leadership control=perceived control, AA=affection attachment, PI= personal-life inclusion, DS=deference to supervisor.

Table 5.8. Mediation effects of perceived control between paternalistic leadership and supervisor-subordinate *guanxi*

Predictors → Mediator → Outcomes	Direct effects	Indirect effects	Total effects	Type of mediation
BF → control → AA	.48***	.70***	1.18	partial
BF → control → PI	.51***	.60***	1.11	partial
BF → control → DS	.30***	.55***	.85	partial
AF → control → AA	-.32***	.38***	.06	partial
AF → control → PI	-.01	.28***	.27	Full
AF → control → DS	.25***	.24***	.49	partial

***P<.001. AF=authoritarian form of paternalistic leadership, BF=benevolent form of paternalistic leadership, PC=perceived control, AA=affection attachment, PI= personal-life inclusion, DS=deference to supervisor

5.6. Model B: Supervisor-subordinate *Guanxi* as a Mediator

Figure 5.5 (p.83) presents the second part of the hypothesized mediation model (Model B). I hypothesized that supervisor-subordinate *guanxi* (affective attachment (AA), personal-life inclusion (PI), and deference to supervisor (DS)) would mediate the relationships between perceived control (control), psychological ownership of the job (POJ) and psychological ownership of the organization (POO). However, AMOS does not report significance tests for multiple mediation effects. Thus Model B was deconstructed into three sub-models to test the hypothesized mediated relationships individually.

5.6.1. Model B1: Affective attachment as mediator

Model 1 (full mediation) and Model 2 (partial mediation) were evaluated. Fit indices showed indices of both models yield similar results (Table 5.9). $\Delta\chi^2$ test results are provided in Table 5.9 and show that Model 2 was better than Model 1.

Table 5.9. Model fit indices for structural model comparisons of Model B1

MODEL	χ^2	df	χ^2/df	SRM R	RMSE A	CF I	AIC	$\Delta\chi^2$
1	590.46	211	2.80	.05	.04	.96	720.46	$\Delta\chi^2_{(5)}=52.54^{***}$
2	643.00	216	2.98	.04	.05	.96	762.10	--

***p<.001

Standardised parameter estimates for Model B1 (Table 5.10) indicated that perceived control was significantly related to affective attachment ($\beta = .54$, $p < .001$, $R^2 = .29$), while affective attachment was significantly related to psychological ownership of the organization ($\beta = .43$, $p < .001$, $R^2 = .34$) and psychological ownership of the job ($\beta = .46$, $p < .001$, $R^2 = .38$).

Table 5.10. Standardised parameter estimates of relationships between perceived control, affective attachment and psychological ownership of the organization and of the job

	Criterion variables		Mediator
	POO	POJ	AA
Predictors			
control	.23***	.23***	.54***
Mediator			
AA	.43***	.46***	--

*** P < .001. control = perceived control, AA=affective attachment, POO=psychological ownership of the organization, POJ=psychological ownership of the job

Table 5.11 presents the direct, indirect and total effects statistics for the mediation effects of affective attachment for Model B1. The results show that affective attachment partially mediated the relationships between psychological ownership of the organization and of the job. Therefore, hypotheses H23a and H24a were supported at Time 1. Path coefficients also indicated that partial mediation was the main mediation type to fit the data. Although results of model fit (Table 5.9) indicated full mediation fitted data better than partial mediation, full mediation occurred when the direct path from the predictor to the criterion was not significant in the partial mediation model. Results of mediation effects showed the paths between the predictor variables and the mediator, and between the mediator and the criterion variables were both significant. Therefore, partial mediation was confirmed in Model B1.

Table 5.11. Mediation effects of affective attachment

Predictors → Mediator → Outcomes	Direct effects	Indirect effects	Total effects	Type of mediation
control → AA → POO	.23***	.97***	1.20	partial
control → AA → POJ	.23***	1.00***	1.23	partial

*** P < .001; control=perceived control, AA=affective attachment, POJ=psychological ownership of the job, POO=psychological ownership of the organization.

5.6.2. Model B2: Personal-life inclusion as mediator

Model 1 (full mediation) and Model 2 (partial mediation) were evaluated. Fit indices showed both models yield acceptable results (Table 5.12). Model 2 provided better fit statistics than Model 1. $\Delta\chi^2$ test results showed Model 2 was significantly different to Model 1. Hence, Model 2 (partial mediation) was used for further analyses.

Table 5.12. Model fit indices for structural model comparisons of Model B2

MODEL	χ^2	df	χ^2/df	SRMR	RMSEA	CFI	AIC	$\Delta\chi^2$
1	583.34	176	3.31	.07	.05	.95	693.34	$\Delta\chi^2_{(8)}=151.76^{***}$
2	431.58	168	2.57	.03	.04	.97	557.58	--

***p<.001

Standardised parameter estimates (Table 5.13) indicated perceived control was significantly related to personal-life inclusion ($\beta = .38$, $p < .001$, $R^2 = .15$), while personal-life inclusion was significantly correlated with psychological ownership of the organization ($\beta = .35$, $p < .001$, $R^2 = .31$) and psychological ownership of the job ($\beta = .31$, $p < .001$, $R^2 = .31$).

Table 5.13. Standardised parameter estimates of relationships between perceived control, personal-life inclusion and psychological ownership of the organization and of the job

	Criterion variables		Mediator
	POO	POJ	PI
Predictors			
control	.32***	.35***	.38***
Mediator			
PI	.35***	.31***	--

*** P < .001. control = perceived control, PI=personal-life inclusion, POO=psychological ownership of the organization, POJ=psychological ownership of the job.

Table 5.14 presents the direct, indirect and total effects statistics for the mediation effects of personal-life inclusion. The results indicate that personal-life inclusion partially mediated the relationships between psychological ownership of the organization and of the job. Therefore, hypotheses H23b and H 24b were supported at Time 1. The path coefficients also show that partial mediation fitted the data better than full mediation.

Table 5.14. Mediation effects of personal-life inclusion

Predictors → Mediator → Outcomes	Direct effects	Indirect effects	Total effects	Type of mediation
control → PI → POO	.32***	.73***	1.05	partial
control → PI → POJ	.35***	.69***	1.04	partial

*** P<.001. control = perceived control, PI=personal-life inclusion, POO=psychological ownership of the organization, POJ=psychological ownership of the job.

5.6.3. Model B3. Deference to supervisor as mediator

Model 1 (full mediation) and Model 2 (partial mediation) were evaluated. Fit indices showed that both models yielded acceptable results (Table 5.15). Model 2 provided better fit statistics than Model 1. $\Delta\chi^2$ test results showed Model 2 was significantly different to Model 1. Therefore, Model 2 (partial mediation) was used for further analyses.

Table 5.15. Model fit indices for structural model comparisons of Model B3

MODEL	χ^2	df	χ^2/df	SRMR	RMSEA	CFI	AIC	$\Delta\chi^2$
1	679.81	190	3.58	.10	.05	.95	805.81	$\Delta\chi^2_{(4)}=174.66^{***}$
2	505.15	186	2.72	.04	.04	.97	639.15	--

***p<.001

The standardised parameter estimates for Model B3 (Table 5.16) indicated that perceived control was significantly related to deference to supervisor ($\beta = .24$, $p < .001$, $R^2 = .06$), while deference to

supervisor was significantly correlated with psychological ownership of the organization ($\beta = .15$, $p < .001$, $R^2 = .26$) and psychological ownership of the job ($\beta = .21$, $p < .001$, $R^2 = .23$).

Table 5.16. Standardised parameter estimates of relationships between perceived control, deference to supervisor and psychological ownership of the organization and of the job

	Criterion variables		Mediator
	POO	POJ	DS
Predictors			
control	.42***	.42***	.24***
Mediator			
DS	.15***	.21***	--

*** $P < .001$. control = perceived control, DS=deference to supervisor, POO=psychological ownership of the organization, POJ=psychological ownership of the job.

Table 5.17 presents the direct, indirect and total effects statistics for the mediation effects of deference to supervisor for the Model B3. The results indicated that deference to supervisor partially mediated the relationships between perceived control, psychological ownership of the organization and of the job. Therefore, hypotheses H23c and H24c were supported at Time 1. The path coefficients also showed that partial mediation was the main mediation type to fit the data.

Table 5.17. Mediation effects of deference to supervisor

Predictors → Mediator → Outcomes	Direct effects	Indirect effects	Total effects	Type of mediation
control → DS → POO	.42***	.39***	.81	partial
control → DS → POJ	.42***	.45***	.87	partial

*** $P < .001$ control = perceived control, DS=deference to supervisor, POO=psychological ownership of the organization, POJ=psychological ownership of the job.

5.7. Model C: Psychological Ownership as a Mediator

Figure 5.6 (p.86) presents the third part of the hypothesized mediation model (Model C). I hypothesized that psychological ownership of the organization (POO) would mediate the relationships between supervisor-subordinate *guanxi*: affective attachment (AA), personal-life inclusion (PI), and deference to supervisor (DS); and criterion variables: negative affective commitment (NAC), positive affective commitment (PAC) and psychological withdrawal (PW). Psychological ownership of the job (POJ) was predicted to mediate the relationships between three dimensions of supervisor-subordinate *guanxi* and criterion variables: job satisfaction (JS) and psychological withdrawal (PW). As mentioned earlier, AMOS does not report significance tests for multiple mediation effects. Thus Model C was deconstructed into two sub-models to test the hypothesized mediated relationships individually.

5.7.1. Model C1: Psychological ownership of the organization as a mediator

Model 1 examined full mediation including pathways between the predictor variables (AA, PI, and DS), the mediator (POO) and the criterion variables (NAC, PAC, PW, OCBI, and OCBO). Model 1 did not yield acceptable fit indices (Table 5.18). Model 2 tested partial mediation which included testing the direct relationships between the predictor variables and the criterion variables. Fit indices showed Model 2 provided better fit statistics than Model 1 (see Table 5.18). $\Delta\chi^2$ test results showed (Table 5.18) that Model 2 was significantly different to Model 1. Therefore Model 2 (partial mediation) was used for further analyses.

Table 5.18. Model fit indices for structural model comparisons of Model C1

MODEL	χ^2	df	χ^2/df	SRMR	RMSEA	CFI	AIC	$\Delta\chi^2$
1	445.39	116	3.84	.07	.05	.96	555.39	$\Delta\chi^2_{(8)}=143.38^{***}$
2	286.01	108	2.65	.04	.04	.98	412.01	--

***p<.001

Standardised parameter estimates (Table 5.19) for Model C1 indicated AA was significantly related to POO ($\beta = .48$, $p < .001$, $R^2 = .34$), while POO was correlated with NAC ($\beta = -.58$, $p < .001$, $R^2 = .46$), PAC ($\beta = .59$, $p < .001$, $R^2 = .63$), and POO did not relate to PW ($\beta = -.02$, ns). Meanwhile, PI was not related to POO ($\beta = .08$, ns). DS was significantly related to POO ($\beta = .12$, $p < .001$, $R^2 = .34$), while POO was correlated with NAC and PAC.

Table 5.19. Standardised parameter estimates of relationships between supervisor-subordinate *guanxi*, psychological ownership of the organization and criterion variables

	Criterion variables			Mediator
	NAC	PAC	PW	POO
Predictors				
AA	-.21**	.28***	-.46***	.48***
PI	.02	-.04	.28***	.08
DS	.30***	.11**	.20***	.12***
Mediator				
POO	-.58***	.59***	-.02	--

* $P < .05$, ** $P < .01$, *** $P < .001$. AA=affection attachment, DS=deference to supervisor, POO=psychological ownership of the organization, NAC=negative affective commitment, PAC=positive affective commitment, PW= psychological withdrawal.

Table 5.20 presents the direct, indirect and total effects statistics for the mediation effects of psychological ownership of the organization. All mediation paths were significant. The results showed psychological ownership of the organization partially mediated relationships between affection attachment, negative affective commitment and positive affective commitment. Psychological ownership of the organization also partially mediated relationships between deference to supervisor, negative affective commitment and positive affective commitment. Therefore, hypotheses H27a and H27c were supported at Time 1. Hypotheses H27b and H28a-H28c were rejected. Overall, according to model fit statistics and path coefficients, partial mediation fitted the data better than full mediation.

Table 5.20. Mediation effects of psychological ownership of the organization

Predictors → Mediator → Outcomes	Direct effects	Indirect effects	Total effects	Type of mediation
AA → POO → NAC	-.21**	-.10***	-.31	Partial
AA → POO → PAC	.28***	1.07***	1.35	Partial
DS → POO → NAC	.30***	-.46***	-.16	Partial
DS → POO → PAC	.11**	.71**	.82	Partial

** P< .01 *** P< .001 AA= affective attachment, DS= deference to supervisor, POO= psychological ownership of the organization, NAC= negative affective commitment, PAC= positive affective commitment.

5.7.2. Model C2: Psychological ownership of the job as mediator

Model 1 (full mediation) and Model 2 (partial mediation) were evaluated. Fit indices showed Model 2 provided better fit statistics than Model 1 (Table 5.21). $\Delta\chi^2$ test results showed (Table 5.21) Model 2 was significantly different to Model 1. Therefore, Model 2 (partial mediation) was used for further analyses.

Table 5.21. Model fit indices for structural model comparisons of Model C2

MODEL	χ^2	df	χ^2/df	SRMR	RMSEA	CFI	AIC	$\Delta\chi^2$
1	513.97	91	5.64	.07	.07	.94	603.97	$\Delta\chi^2_{(9)}=162.29^{***}$
2	351.68	82	4.29	.05	.06	.96	459.68	--

***p<.001

Standardised parameter estimates for Model C2 (Table 5.22) indicated AA was significantly related to POJ ($\beta = .57$, $p < .001$, $R^2 = .38$), while POJ was correlated with JS ($\beta = .62$, $p < .001$, $R^2 = .81$), PW ($\beta = -.14$, $p < .01$, $R^2 = .13$), and PI was not related to POJ ($\beta = -.02$, ns). DS was significantly related to POJ ($\beta = .17$, $p < .001$, $R^2 = .38$), while POJ was correlated with both criterion variables.

Table 5.22. The standardised parameter estimates of relationships between supervisor-subordinate *guanxi*, psychological ownership of the job and criterion variables

	Criterion variables		Mediator
	JS	PW	POJ
Predictors			
AA	.61***	-.38***	.56***
PI	-.29***	.28***	-.02
DS	-.11**	.20***	.17***
Mediator			
POJ	.62***	-.15**	--

* P< .05, ** P< .01, *** P< .001. AA=affection attachment, DS=deference to supervisor, POJ=psychological ownership of the job, JS=job satisfaction, PW= psychological withdrawal

Table 5.23 presents the direct, indirect and total effects statistics for the mediation effects of psychological ownership of the job for the Model C2. Four mediation paths were tested and all mediation paths were significant. Results of path coefficients show that partial mediation was the main mediation type to fit the data. Psychological ownership of the job partially mediated relationships between affection attachment, job satisfaction and psychological withdrawal. Psychological ownership of the job partially mediated relationships between deference to supervisor, job satisfaction and psychological withdrawal. Therefore, hypotheses H29a, H29c, H30a and H30c were supported at Time 1. Hypotheses H29b and H30b were rejected.

Table 5.23. Mediation effects of psychological ownership of the job

Predictors → Mediator → Outcomes	Direct effects	Indirect effects	Total effects	Type of mediation
AA → POJ → JS	.61***	1.18***	1.80	Partial
AA → POJ → PW	-.38***	.41***	.03	Partial
DS → POJ → JS	-.11***	.79***	.68	Partial
DS → POJ → PW	.20***	.02***	.22	Partial

* P< .05 ** P< .01 *** P< .001 AA=affection attachment, DS=deference to supervisor, POJ=psychological ownership of the job, JS=job satisfaction, PW= psychological withdrawal

5.8. Chapter Summary

In conclusion, this chapter found significant correlations between latent variables. I also investigated the extent to which perceived control, supervisor-subordinate *guanxi*, and psychological ownership of the organization and of the job mediated the relationships between transformational leadership, transactional leadership, paternalistic leadership and criterion variables. In sum, twenty-six mediation paths were tested, and all paths were significant at Time 1. Overall, partial mediation provided the best model fit statistics for all models. Further discussion of these results will be presented in Chapter 8.

CHAPTER 6 TIME 2 RESULTS

Chapter Overview

This chapter examines the cross-sectional relationships between all variables at Time 2. This study also investigated the mediating role that perceived control, supervisor-subordinate *guanxi*, and psychological ownership of the organization and of the job play in the research model. The statistical analyses at Time 2 are divided into three parts: descriptive analyses, correlations, and mediation analyses. These results will be presented following the format adopted in Chapter 5.

6.1. Descriptive Statistics

Following Kline's (2011) guidance on the skewness and kurtosis acceptable thresholds, absolute values of skewness over 3.0 and absolute values of kurtosis higher than 10.0 would be problematic. Results indicated skewness and kurtosis indices did not exceed these threshold indices at Time 2 (Table 6.1).

In relation to paternalistic leadership, participants indicated moderate to high mean scores (benevolent form = 4.91, moral form = 4.96, and authoritarian form = 3.40). Participants provided high mean scores for transformational leadership (idealized influence = 5.16, motivational stimulation = 4.92, and individualized consideration = 5.01). Most participants perceived a moderate level of control at work ($M = 3.04$), and provided moderate mean scores for supervisor-subordinate *guanxi* (affective attachment = 4.96, personal-life inclusion = 4.11, and deference to supervisor = 3.48). Participants also indicated similar moderate-high mean scores between psychological ownership of the organization ($M = 4.51$) and psychological ownership of the job ($M = 4.80$). Results also showed low-moderate mean scores for affective commitment (negative affective commitment = 3.31 and positive affective commitment = 4.65). Most participants reported a moderate mean score for job satisfaction ($M = 5.02$), and a low score for psychological withdrawal ($M = 2.51$).

Table 6.1. Descriptive statistics: mean, standard deviations, skewness and kurtosis for all variables at Time 2

Variable	M	SD	Skewness	Kurtosis
BF (a)	4.91	1.14	-.59	.36
MF (a)	4.96	1.50	-.68	-.02
AF (a)	3.40	1.14	.09	-.16
II (a)	5.16	1.29	-.44	-.44
MS (a)	4.92	1.06	-.17	.01
IC (a)	5.01	1.09	.03	-.61
control (b)	3.04	.54	.06	1.20
AA (a)	4.96	1.20	-.22	-.68
PI (a)	4.11	1.43	-.21	-.54
DS (a)	3.48	1.25	.12	-.07
POO (a)	4.51	1.43	-.32	-.26
POJ (a)	4.80	1.29	-.46	.01
NAC (a)	3.31	1.23	.12	-.33
PAC (a)	4.65	1.15	-.18	.15
JS (a)	5.02	1.16	-.17	-.77
PW (c)	2.51	.90	.49	-.61

Note: BF=benevolent form of paternalistic leadership; AF= authoritarian form of paternalistic leadership; MF=moral form of paternalistic leadership; II=idealized influence; MS=motivational stimulation; IC=individualized consideration; control=perceived control; AA=affective attachment; DS=deference to supervisor PL=personal-life inclusion; POO=psychological ownership of organization; POJ=psychological ownership of job; PAC= positive affective commitment; NAC= negative affective commitment; JS=job satisfaction; PW= Psychological withdrawal.
(a) 1= strongly disagree, 7= strongly agree; (b) 1= very little, 5= very much; (c) 1= never, 7=always

6.2. Correlations

The correlations among all variables were examined using the Pearson product-moment correlations coefficient (r). As at Time 1, any reference made to the strength of the correlations

is based on the recommendations of Cohen (1988, 1992), who suggested that $r = .10$ represents small effect sizes, $r = .30$ represents medium effect sizes, and $r = .50$ represents large effect sizes.

Perceived control also positively correlated with idealized influence ($r = .36, p < .01$), motivational stimulation ($r = .37, p < .01$), and individualized consideration ($r = .32, p < .01$). Hypotheses H1a-H1d thus were supported at Time 2. Perceived control was positively related to the benevolent form of paternalistic leadership ($r = .36, p < .01$) and the moral form of paternalistic leadership ($r = .24, p < .01$), and negatively correlated with the authoritarian form of paternalistic leadership ($r = -.20, p < .01$). Thus, hypotheses H3a-H3c were supported at Time 2. These results fully confirmed results at Time 1.

Perceived control also positively related to all three dimensions of supervisor-subordinate *guanxi*: affective attachment ($r = .43, p < .01$), personal-life inclusion ($r = .38, p < .01$) and deference to supervisor ($r = .17, p < .01$). Thus, hypotheses H5a-5c were supported at Time 2. This fully confirmed findings at Time 1. Psychological ownership of the job also positively related to affective attachment ($r = .53, p < .01$), personal-life inclusion ($r = .48, p < .01$) and deference to supervisor ($r = .16, p < .05$). Psychological ownership of the organization positively correlated with affective attachment ($r = .49, p < .01$), personal-life inclusion ($r = .44, p < .01$) and deference to supervisor ($r = .16, p < .05$). Therefore, hypotheses H7a-H7c, and H8a-H8c were supported at Time 2. These results fully confirmed findings at Time 1. Also, there was a strong correlation between psychological ownership of the job and of the organization ($r = .79, p < .01$) at Time 2. This confirmed the findings at Time 1.

Table 6.2. Correlations between all variables at Time 2

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. BF																
2. MF	.51**															
3. AF	-.46**	-.23**														
4. II	.69**	.53**	-.48**													
5. MS	.67**	.48**	-.33**	.79**												
6. IC	.62**	.42**	-.52**	.59**	.55**											
7. control	.36**	.24**	-.20**	.36**	.37**	.32**										
8. AA	.70**	.42**	-.55**	.74**	.70**	.59**	.43**									
9. PI	.49**	.27**	-.32**	.45**	.48**	.36**	.38**	.63**								
10. DS	.36**	.17**	-.08	.37**	.31**	.17**	.17**	.32**	.35**							
11. POO	.42**	.31**	-.25**	.39**	.45**	.31**	.34**	.49**	.44**	.16*						
12. POJ	.44**	.32**	-.26**	.42**	.44**	.41**	.41**	.53**	.48**	.16*	.79**					
13. NAC	-.34**	-.22**	.40**	-.38**	-.39**	-.37**	-.21**	-.48**	-.41**	.01	-.60**	-.53**				
14. PAC	.50**	.41**	-.28**	.49**	.48**	.35**	.29**	.55**	.47**	.24**	.70**	.74**	-.61**			
15. JS	.44**	.34**	-.34**	.42**	.46**	.39**	.42**	.56**	.45**	.08	.61**	.70**	-.60**	.62**		
16. PW	-.23**	-.29**	.18**	-.31**	-.27**	-.25**	-.10	-.30**	-.19**	-.01	-.34**	-.41**	.27**	-.36**	-.41**	--

Note: N=201; *p<.05; **p<.01 BL=benevolent form of paternalistic leadership; AL=authoritarian form of paternalistic leadership; ML=moral form of paternalistic leadership; II=idealized influence; M=motivation IC=individualized consideration; control=perceived control; AA=affection attachment; DS=deference to supervisor PL=personal-life inclusion; POO=psychological ownership of organization; POJ=psychological ownership of job; PAC= positive affective commitment; NAC= negative affective commitment; JS=job satisfaction; PW= Psychological withdrawal.

Psychological ownership of the job positively related to job satisfaction ($r = .70, p < .01$) and negatively related to psychological withdrawal ($r = -.41, p < .01$). Therefore, hypotheses 11 and 15 were supported at Time 2 and confirmed findings at Time 1. Psychological ownership of the organization significantly related to negative affective commitment ($r = -.60, p < .01$) and positive affective commitment ($r = .70, p < .01$). Hypothesis 13 was supported at Time 2, and confirmed findings at Time 1. Psychological ownership of the organization was negatively related to psychological withdrawal ($r = -.34, p < .01$). Hypothesis 16 was supported at Time 2 and confirmed the same findings at Time 1.

6.3. Mediation Relationships

The mediation analyses at Time 2 followed the same process as Time 1. Two types of structural model for every mediation relationship were compared to find the best fitting model, and results are provided for each model separately. The research model was divided into three sub-models (Models A, B, and C), in order to test the hypothesized mediated relationship individually.

6.4. Model A: Perceived Control as a Mediator

In Model A (Figure 6.1), perceived control was hypothesized to mediate the relationships between transformational leadership, paternalistic leadership and supervisor-subordinate *guanxi*.

In this study, transformational leadership consisted of three factors: idealized influence (II), motivational stimulation (MS), and individualized consideration (IC). Paternalistic leadership formed three factors: authoritarian form (AF), benevolent form (BF), and moral form (MF). These variables served as predictor variables in Model A. Perceived control (control) was the mediator variable. Supervisor-subordinate *guanxi* consisted of three factors: affective attachment (AA), personal-life inclusion (PI), and deference to supervisor (DS). These variables served as criterion variables.

Model A was separated into two sub-models: Model A1 examined mediation effects of perceived control between transformational leadership and supervisor-subordinate *guanxi*; Model A2 tested mediation effects of perceived control between paternalistic leadership and supervisor-subordinate *guanxi*.

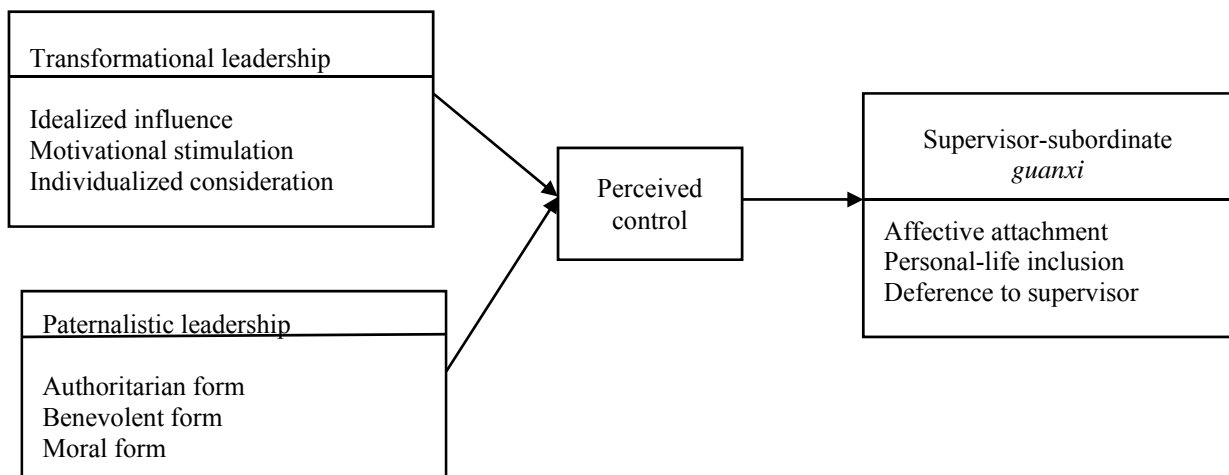


Figure 6.1. Model A: Perceived control as a mediator of relationships between leadership styles and supervisor-subordinate *guanxi*

6.4.1. Model A1: Transformational leadership as a predictor

Two models (full mediation and partial mediation) were tested to determine the best model fit. Model 1 examined full mediation, including pathways between the predictor variables (II, M, and IC), the mediator (control) and the criterion variables (AA, PI, and DS). Model 1 did not yield an acceptable fit to the data (Table 6.3). Model 2 tested partial mediation, which included the direct relationships between the predictor variables (II, M, and IC) and the criterion variables (AA, PI, and DS). Fit indices showed that Model 2 provided better fit statistics than Model 1, but they were not ideal, as SRMR was high. One explanation for this was that the sample size decreased from 971 participants to 201 participants at Time 2 (Distefano, 2002; Fan, Thompson, & Wang, 1999; Hutchinson & Olmos, 1998; Rigdon & Ferguson, 1991).

The chi-square difference ($\Delta\chi^2$) test (Table 6.3) was used to explore whether there was any significant difference between the two models. Model 2 (partial mediation) was significantly different from Model 1 (full mediation). Model 2 provided the best fit with the data, which indicates that perceived control played a partial mediating role between transformational leadership and supervisor-subordinate *guanxi* overall. This confirmed results at Time 1, and partial mediation was adopted for testing the path coefficients.

Table 6.3. Model fit indices for structural comparisons of Model A1

MODEL	χ^2	df	χ^2/df	SRMR	RMSEA	CFI	AIC	$\Delta\chi^2$
1	1140.70	515	2.22	.12	.08	.82	1300.70	$\Delta\chi^2_{(13)}=233.89^{***}$
2	906.81	502	1.81	.07	.06	.88	1092.81	--

***p<.001

The main purpose of testing partial mediation is to determine the direct, indirect and total effects of perceived control. Transformational leadership components (II, MS, and IC) were predictors and supervisor-subordinate *guanxi* components (AA, PI, and DS) were criterion variables. The standardised parameter estimates of Model A1 are provided in Table 6.4, and show significant direct relationships between transformational leadership, perceived control and supervisor-subordinate *guanxi* at Time 2.

Standardised parameter estimates at Time 2 did not confirm results at Time 1. At Time 1, perceived control had significant mediation between motivational stimulation and criterion variables, and it also mediated the relationship between individualized consideration and criterion variables. However, at Time 2, there was no significant and direct relationship between predictor variables (II, M and IC) and the mediator (control). Therefore, hypotheses H19a (1) (2) (3) (4), hypotheses H19b (1) (2) (3) (4), and hypotheses H19c (1) (2) (3) (4) were rejected. This result did not confirm results at Time 1.

Table 6.4. The standardised parameter estimates of relationships between transformational leadership, perceived control and supervisor-subordinate *guanxi*

	Criterion variables			Mediator
	AA	PI	DS	control
Predictors				
II	.47***	.24	.51*	.14
MS	.26	.22	1.11	.17
IC	.13*	.06	.06	.18
Mediator				
control	.17**	.25**	.06	--

** P<.01 *** P<.001. II=idealized influence, MS=motivational stimulation, IC=individualized consideration, control=perceived control, AA=affective attachment, PI = personal-life inclusion, DS =deference to supervisor.

6.4.2. Model A2: Paternalistic leadership as a predictor

Full mediation and partial mediation were tested to determine which type of mediation fitted the data better. Model 1 examined full mediation between predictor variables (AF, BF, and MF), the mediator (control) and criterion variables (AA, PI, and DS). Model 1 did not yield acceptable fit indices (Table 6.5). Model 2 tested partial mediation which included testing the direct relationships between the predictor variables (AF, BF and MF) and the criterion variables (AA, PI, and DS). Results of fit indices showed Model 2 provided similar fit statistics as Model 1, but $\Delta\chi^2$ test results showed Model 2 (partial mediation) was significantly different from Model 1 (full mediation) and values of AIC were lower in Model 2 (Table 6.5). Therefore, partial mediation provided better fit with the data and was used for further analyses.

Table 6.5. Model fit indices for structural model comparisons of Model A2.

MODEL	χ^2	df	χ^2/df	SRMR	RMSEA	CFI	AIC	$\Delta\chi^2$
1	1292.89	793	1.63	.08	.05	.89	1528.79	$\Delta\chi^2_{(6)}=34.06^{***}$
2	1258.83	787	1.60	.06	.05	.90	1490.83	--

*** $P < .001$

The standardised parameter estimates for Model A2 are provided in Table 6.6. Standardised parameter estimates for Model A2 indicated that only the benevolent form of paternalistic leadership ($\beta = .34$, $p < .001$, $R^2 = .16$) was significantly related to perceived control, while perceived control was significantly correlated with affective attachment ($\beta = .26$, $p < .001$, $R^2 = .70$) and personal-life inclusion ($\beta = .30$, $p < .001$, $R^2 = .40$). There was no significant direct relationship between the moral form of paternalistic leadership and perceived control ($\beta = .09$, ns) and between the authoritarian form of paternalistic leadership and perceived control ($\beta = .01$, ns) at Time 2. At Time 1, there was a significant relationship between the authoritarian form of paternalistic leadership and perceived control. Results at Time 2 did not confirm this finding. There was no relationship between the moral form of paternalistic leadership and perceived control at Time 1. Findings at Time 2 confirmed this. There was a significant direct relationship between perceived control and deference to supervisor at Time 1, whereas no significant relationship between perceived control and deference to supervisor was found ($\beta = .07$, ns) at Time 2.

Table 6.6. The standardised parameter estimates of relationships between paternalistic leadership, perceived control and supervisor-subordinate *guanxi*

	Criterion variables			Mediator
	AA	PI	DS	control
Predictors				
BF	.47***	.39***	.40***	.34***
MF	.01	-.06	-.02	.09
AF	-.32***	-.15	.13	.01
Mediator				
control	.26***	.30***	.07	--

** P <.01 *** P<.001. AF=authoritarian form of paternalistic leadership, BF=benevolent form of paternalistic leadership, MF=moral form of paternalistic leadership control=perceived control, AA=affection attachment, PI= personal-life inclusion, DS=deference to supervisor.

Table 6.7 presents the direct, indirect and total effects for the mediation effects of perceived control for Model A2. Two paths were tested and both paths were significant. Path coefficients showed that perceived control partially mediated the relationships between benevolent form of paternalistic leadership, affection attachment and personal-life inclusion. Therefore, hypotheses H20a (2) and H20b (2) were supported at Time 2. However, hypotheses H20a (1), H20a (3), hypotheses H20b (1), H20b (3), and hypotheses H20c (1) (2) (3) were rejected. These results partially confirmed findings at Time 1. Overall, according to model fit statistics, partial mediation fitted the data better than full mediation. Perceived control had partial mediation effects between paternalistic leadership and supervisor-subordinate *guanxi* at Time 2. This confirmed findings at Time 1.

Table 6.7. Mediation effects of perceived control between paternalistic leadership and supervisor-subordinate *guanxi*

Predictors → Mediator → Outcomes	Direct effects	Indirect effects	Total effects	Type of mediation
BF → control → AA	.47***	.60***	1.07	partial
BF → control → PI	.39***	.64***	1.03	partial

***P<.001. BL=benevolent leadership, control=perceived control, AA=affection attachment, PI= personal-life inclusion

6.5. Model B: Supervisor-subordinate *Guanxi* as a Mediator

In Model B (Figure 6.2), I hypothesized that supervisor-subordinate *guanxi* (affective attachment (AA), personal-life inclusion (PI), and deference to supervisor (DS)) would mediate the relationships between perceived control (control), psychological ownership of the job (POJ) and psychological ownership of the organization (POO). However, AMOS does not report significance tests for multiple mediation effects. Thus Model B was deconstructed into three sub-models to test the hypothesized mediated relationships individually.

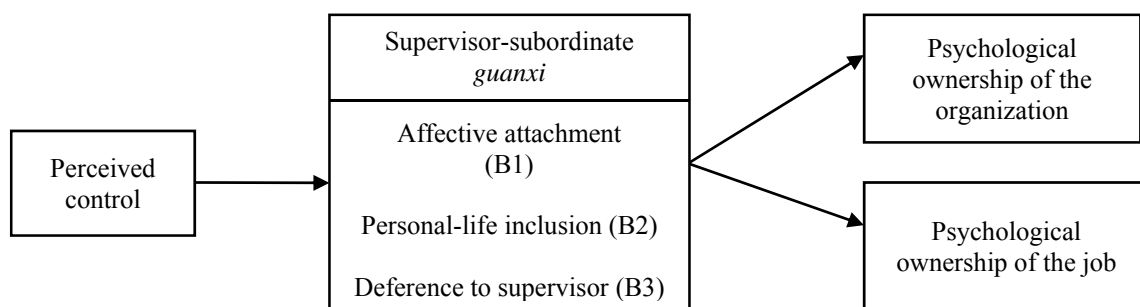


Figure 6.2. Model B: Supervisor-subordinate *guanxi* as a mediator of relationships between perceived control and psychological ownership of the job and of the organization

6.5.1. Model B1: Affective attachment as mediator

Model 1 (full mediation) and Model 2 (partial mediation) were evaluated. Fit indices showed that Model 2 slightly better than Model 1 (Table 6.8). The chi-square difference ($\Delta\chi^2$) test (Table 6.8) showed Model 2 was significantly different from Model 1. Values of AIC were lower in Model 2. Therefore, partial mediation provided better fit with the data.

Table 6.8. Model fit indices for structural model comparisons of Model B1.

MODEL	χ^2	df	χ^2/df	SRMR	RMSEA	CFI	AIC	$\Delta\chi^2$
1	353.71	220	1.61	.06	.05	.96	465.71	$\Delta\chi^2_{(2)}=10.34^{**}$
2	343.37	218	1.58	.06	.05	.94	459.37	--

**p<.01

Standardised parameter estimates for Model B1 (see Table 6.9) indicated perceived control was significantly related to affective attachment ($\beta = .52$, $p < .001$, $R^2 = .28$), while affective attachment was significantly related to psychological ownership of the organization ($\beta = .17$, $p < .05$, $R^2 = .32$) and psychological ownership of the job ($\beta = .25$, $p < .01$, $R^2 = .38$).

Table 6.9. The standardised parameter estimates of relationships between perceived control, affective attachment and psychological ownership of the organization and of the job

	Criterion variables		Mediator
	POO	POJ	AA
Predictors			
Control	.17*	.25**	.52***
Mediator			
AA	.46***	.44***	--

* $P < .05$ ** $P < .01$ *** $P < .001$. control=perceived control, AA=affective attachment, POJ=psychological ownership of the job, POO=psychological ownership of the organization

Table 6.10 presents the direct, indirect and total effects statistics for the mediation effects of affective attachment. The results showed that affective attachment partially mediated the relationships between psychological ownership of the organization and of the job. Therefore, hypotheses H23a and H24a were supported at Time 2. These results fully confirmed findings at Time 1. The path coefficients also indicated that partial mediation was the main mediation type to fit the data. Partial mediation was confirmed in Model B1. These results fully replicated results at Time 1.

Table 6.10. Mediation effects of affective attachment

Predictors → Mediator → Outcomes	Direct effects	Indirect effects	Total effects	Type of mediation
control → AA → POO	.17*	.98***	1.15	partial
control → AA → POJ	.25**	.96***	1.21	partial

* P<.05; ** P <.01; *** P<.001; control=perceived control, AA=affective attachment, POJ=psychological ownership of the job, POO=psychological ownership of the organization

6.5.2. Model B2: Personal-life inclusion as mediator

Model 1 (full mediation) and Model 2 (partial mediation) were evaluated. Fit indices showed Model 1 did not yield acceptable results (Table 6.11). Model 2 provided better fit statistics than Model 1. $\Delta\chi^2$ test results show that Model 2 was significantly different to Model 1. Hence, partial mediation fitted the data better than full mediation.

Table 6.11. Model fit indices for structural model comparisons of Model B2

MODEL	χ^2	df	χ^2/df	SRMR	RMSEA	CFI	AIC	$\Delta\chi^2$
1	299.78	180	1.67	.07	.06	.94	401.78	$\Delta\chi^2_{(4)}=35.77^{***}$
2	264.01	176	1.50	.05	.05	.95	374.01	--

***p<.001

Standardised parameter estimates for Model B2 (Table 6.12) indicated perceived control was significantly related to personal-life inclusion ($\beta = .46$, $p < .001$, $R^2 = .22$), while personal-life inclusion significantly related to psychological ownership of the organization ($\beta = .42$, $p < .001$, $R^2 = .31$) and psychological ownership of the job ($\beta = .41$, $p < .001$, $R^2 = .36$).

Table 6.12. The standardised parameter estimates of relationships between perceived control, personal-life inclusion and psychological ownership of the organization and of the job

	Criterion variables		Mediator
	POO	POJ	PI
Predictors			
control	.22**	.29***	.46***
Mediator			
PI	.42***	.41***	--

*** $P < .001$ control=perceived control, PI=personal-life inclusion, POJ=psychological ownership of the job, POO=psychological ownership of the organization

Table 6.13 presents the direct, indirect and total effects statistics for the mediation effects of personal-life inclusion. The results indicated that personal-life inclusion partially mediated the relationships between perceived control and psychological ownership of the organization and of the job. Therefore, hypotheses H23b and H 24b were supported at Time 2. Path coefficients also showed that partial mediation fitted the data better than full mediation. These results fully confirmed results at Time 1.

Table 6.13. Mediation effects of personal-life inclusion

Predictors → Mediator → Outcomes	Direct effects	Indirect effects	Total effects	Type of mediation
control → PI → POO	.22***	.88***	1.10	partial
control → PI → POJ	.29***	.87***	1.16	partial

*** $P < .001$ control=perceived control, PI=personal-life inclusion, POJ=psychological ownership of the job, POO=psychological ownership of the organization

6.5.3. Model B3: Deference to supervisor as mediator

Model 1 (full mediation) and Model 2 (partial mediation) were evaluated. Fit indices showed Model 1 did not yield acceptable results (Table 6.14). Model 2 provided better fit statistics than Model 1. $\Delta\chi^2$ test results show Model 2 was significantly different to Model 1. Partial mediation fitted the data better than full mediation.

Table 6.14. Model fit indices for structural model comparisons of Model B3.

MODEL	χ^2	df	χ^2/df	SRMR	RMSEA	CFI	AIC	$\Delta\chi^2$
1	370.03	200	1.85	.12	.06	.91	476.03	$\Delta\chi^2_{(2)} = 39.49^{***}$
2	330.54	198	1.67	.06	.06	.93	440.54	--

***p<.001

Standardised parameter estimates for Model B3 (Table 6.15) indicated perceived control was significantly related to deference to supervisor ($\beta = .19$ $p < .05$, $R^2 = .04$), but there was no significant direct relationship between deference to supervisor and psychological ownership of the organization and of the job. Hypotheses H23c and H24c were not supported at Time 2. This result did not confirm findings at Time 1, where hypotheses H23c and H24c were supported.

Table 6.15. The standardised parameter estimates of relationships between perceived control, deference to supervisor and psychological ownership of the organization and of the job

	Criterion variables		Mediator
	POO	POJ	DS
Predictors			
control	.40***	.48***	.19*
Mediator			
DS	.02	.01	--

*p<.05, *** P< .001; control=perceived control, DS=deference to supervisor, POJ=psychological ownership of the job, POO=psychological ownership of the organization

6.6. Model C: Psychological Ownership as a Mediator

In Model C (Figure 6.3), I hypothesized that psychological ownership of the organization (POO) would mediate the relationships between supervisor-subordinate *guanxi* (affective attachment (AA), personal-life inclusion (PI), and deference to supervisor (DS)) and criterion variables (negative affective commitment (NAC), positive affective commitment (PAC), and psychological withdrawal (PW)). Psychological ownership of the job (POJ) would mediate the relationships between the three dimensions of supervisor-subordinate *guanxi* and criterion variables: job satisfaction (JS) and psychological withdrawal (PW). However, AMOS does not report significance tests for multiple mediation effects. Thus Model C was deconstructed into two sub-models to test the hypothesized mediated relationships individually.

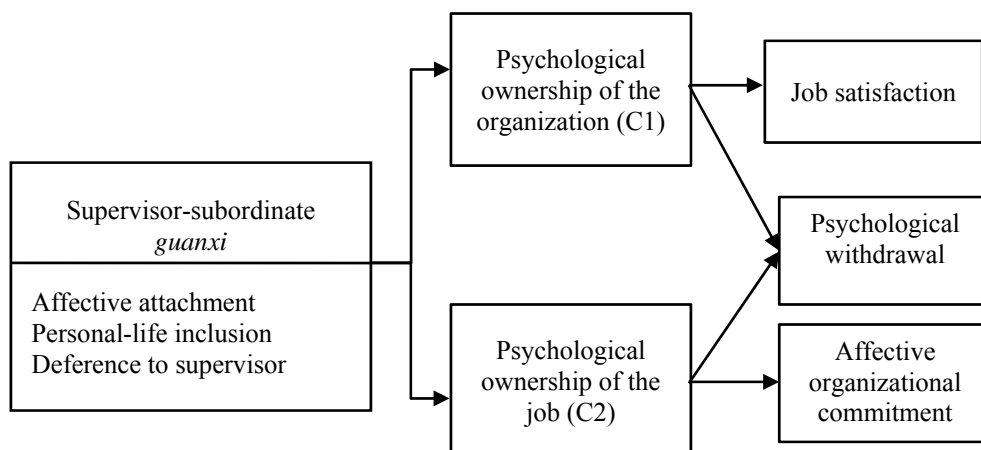


Figure 6.3. Model C: Psychological ownership as a mediator of relationships between supervisor-subordinate *guanxi* and the criterion variables

6.6.1 Model C1: Psychological ownership of the organization as a mediator

Model 1 examined full mediation including pathways between predictor variables (AA, PI, and DS), the mediator (POO) and criterion variables (NAC, PAC, and PW). Model 1 did not yield acceptable fit indices (Table 6.16). Model 2 tested partial mediation which included testing

direct relationships between the predictor variables and the criterion variables. Results of fit indices showed Model 2 provided similar fit statistics as Model 1 (Table 6.16). However, $\Delta\chi^2$ test results showed that Model 2 was significantly different from Model 1 and AIC was lower in Model 2. Therefore, partial mediation fitted the data better than full mediation.

Table 6.16. Model fit indices for structural model comparisons of Model C1.

MODEL	χ^2	df	χ^2/df	SRMR	RMSEA	CFI	AIC	$\Delta\chi^2$
1	218.19	124	1.76	.06	.06	.95	312.19	$\Delta\chi^2_{(9)}=22.11^{**}$
2	196.08	115	1.71	.06	.06	.96	308.08	--

**p<.01

Standardised parameter estimates for Model C1 (Table 6.17) indicated affective attachment was significantly related to psychological ownership of the organization ($\beta = .36$, $p<.01$, $R^2=.33$), while psychological ownership of the organization was correlated with negative affective commitment ($\beta = -.63$, $p<.001$, $R^2=.67$), positive affective commitment ($\beta = .79$, $p<.001$, $R^2=.89$), and psychological withdrawal ($\beta = -.30$, $p<.001$, $R^2=.19$)

Personal-life inclusion was significantly related to psychological ownership of the organization ($\beta = .28$, $p<.05$, $R^2=.33$), while psychological ownership of the organization was significantly correlated with negative affective commitment, positive affective commitment, and psychological withdrawal at Time 2. Simultaneously, deference to supervisor was not related to psychological ownership of the organization significantly ($\beta = -.11$, ns).

These findings partially confirmed findings at Time 1. Psychological ownership of the organization did not relate to personal-life inclusion, but was significantly related to deference to supervisor at Time 1, whereas, psychological ownership of the organization did not relate to deference to supervisor, but significantly related to personal-life inclusion at Time 2.

Table 6.17. The standardised parameter estimates of relationships between supervisor-subordinate *guanxi*, psychological ownership of the organization and criterion variables.

	Criterion variables			Mediator
	NAC	PAC	PW	POO
Predictors				
AA	-.28**	.37***	-.33**	.36**
PI	-.03	-.18	.16	.28*
DS	.22***	.08	.10	-.11
Mediator				
POO	-.63***	.79***	-.30***	--

* $P < .05$; ** $P < .01$; *** $P < .001$; AA=affection attachment, PI=personal-life inclusion, DS=deference to supervisor, POJ=psychological ownership of the job, NAC=negative affective commitment, PAC=positive affective commitment, JS=job satisfaction, PW= psychological withdrawal

Table 6.18 presents the direct, indirect and total effects statistics for the mediation effects of psychological ownership of the organization for Model C1. Six mediation paths were tested and all mediation paths were significant. Psychological ownership of the organization partially mediated relationships between affection attachment, negative affective commitment, positive affective commitment, and psychological withdrawal. The results also showed psychological ownership of the organization played a full mediating role between personal-life inclusion, negative affective commitment, positive affective commitment, and psychological withdrawal. Hypotheses H27a-H27b and H28a-H28b were supported. H27c and H28c were rejected at Time 2.

Overall, according to model fit statistics, partial mediation fitted the data better than full mediation. However, in specific paths, psychological ownership of the organization provided full mediation between personal-life inclusion and criterion variables. These results were different to results at Time 1. Four mediation paths were significant at Time 1. At Time 2, six mediation paths were significant, and three were full mediation paths, but psychological ownership of the organization did not have any mediation effect between deference to supervisor and criterion

variables at Time 2. In contrast, psychological ownership of the organization partially mediated relationships between deference to supervisor and criterion variables at Time 1.

Table 6.18. Mediation effects of psychological ownership of the organization

Predictors → Mediator → Outcomes	Direct effects	Indirect effects	Total effects	Type of mediation
AA → POO → NAC	-.28**	-.27**	-.55	Partial
AA → POO → PAC	.37***	1.15***	1.52	Partial
AA → POO → PW	-.33**	.06**	-.27	Partial
PI → POO → NAC	-.03	-.35*	-.38	Full
PI → POO → PAC	-.18	1.07*	.89	full
PI → POO → PW	.16	-.02*	.14	Full

* P< .05 ** P< .01 *** P< .001 AA=affectionate attachment, PI=personal-life inclusion, DS=deference to supervisor, POJ=psychological ownership of the job, NAC=negative affective commitment, PAC=positive affective commitment, JS=job satisfaction, PW= psychological withdrawal.

6.6.2. Model C2: Psychological ownership of the job as mediator

Model 1 (full mediation) and Model 2 (partial mediation) were evaluated between predictors (AA, PI, and DS) and criterion variables (JS and PW). Results of fit indices showed Model 2 provided better fit statistics than Model 1 (Table 6.19). $\Delta\chi^2$ test results showed Model 2 was significantly different from Model 1. Partial mediation fitted the data better than full mediation.

Table 6.19. Model fit indices for structural model comparisons of Model C2

MODEL	χ^2	df	χ^2/df	SRMR	RMSEA	CFI	AIC	$\Delta\chi^2$
1	134.81	95	1.42	.06	.05	.98	216.81	$\Delta\chi^2_{(5)}=12.19^*$
2	122.62	90	1.36	.05	.04	.98	214.62	--

*p<.05

Standardised parameter estimates for Model C2 (Table 6.20) indicated affective attachment was significantly related to psychological ownership of the job ($\beta = .41$, $p < .001$, $R^2 = .37$), while psychological ownership of the job was correlated to job satisfaction ($\beta = .65$, $p < .001$, $R^2 = .71$) and psychological withdrawal ($\beta = -.35$, $p < .001$, $R^2 = .21$), personal-life inclusion was significantly related to psychological ownership of the job ($\beta = .28$, $p < .05$, $R^2 = .37$), while psychological ownership of the job was correlated with the criterion variables. Deference to supervisor was not related to psychological ownership of the job significantly.

Table 6.20. The standardised parameter estimates of relationships between supervisor-subordinate *guanxi*, psychological ownership of the job and criterion variables

	Criterion variables		Mediator
	JS	PW	POJ
Predictors			
AA	.28**	-.29*	.41***
PI	.03	.16	.28*
DS	-.12	.10	-.11
Mediator			
POJ	.65***	-.35***	--

* $P < .05$; ** $P < .01$; *** $P < .001$; AA=affective attachment, PI=personal-life inclusion, DS=deference to supervisor, POJ=psychological ownership of the job, JS=job satisfaction, PW= psychological withdrawal.

Table 6.21 presents the direct, indirect and total effects statistics for the mediation effects of psychological ownership of the job for the Model C2. Four mediation paths were tested and all were significant. Results of path coefficients showed psychological ownership of the job partially mediated relationships between affective attachment, job satisfaction, and psychological withdrawal. The results also showed psychological ownership of the job fully mediated the relationships between personal-life inclusion, job satisfaction and psychological withdrawal. Hypotheses H29a-H29b and H30a-H30b were supported at Time 2. Hypotheses H29c and H30c were rejected. Overall, according to model fit statistics, partial mediation fit the

data better than full mediation. However, in specific paths, psychological ownership of the job provided full mediation between personal-life inclusion and criterion variables.

These results were different to the results at Time 1. Four mediation paths were significant at Time 1, and all were partial mediation. At Time 2, four mediation paths were significant, and two of them were full mediation paths. Psychological ownership of the job partially mediated relationships between deference to supervisor and both criterion variables at Time 1. However, psychological ownership of the job did not have any mediation effect between deference to supervisor and the criterion variables at Time 2.

Table 6.21. Mediation effects of psychological ownership of the job

Predictors → Mediator → Outcomes	Direct effects	Indirect effects	Total effects	Type of mediation
AA → POJ → JS	.28**	1.07***	1.35	Partial
AA → POJ → PW	-.29*	.08***	-.21	Partial
PI → POJ → JS	.02	.92*	.94	Full
PI → POJ → PW	.15	-.07*	.08	Full

* $P < .05$; ** $P < .01$; *** $P < .001$; AA=affective attachment, PI=personal-life inclusion, POJ=psychological ownership of the job, JS=job satisfaction, PW=psychological withdrawal.

6.7. Chapter Summary

In conclusion, correlations at Time 2 partially confirmed findings at Time 1. The results supported the findings that there was a strong correlation between psychological ownership of the organization and of the job at Time 1.

This study also investigated the extent to which perceived control, supervisor-subordinate *guanxi*, and psychological ownership of the organization and of the job mediated the relationships between transformational leadership, transactional leadership, paternalistic leadership and criterion variables at Time 2. In sum, sixteen mediation paths were tested, and all paths were significant at Time 2.

Perceived control did not play a mediating role between transformational leadership and supervisor-subordinate *guanxi* at Time 2. This was different to findings at Time 1. Perceived control had partial mediation effects between paternalistic leadership and supervisor-subordinate *guanxi* at Time 2. This confirmed findings at Time 1.

Partial mediation was the main type in Model B when affective attachment mediated the relationships between perceived control and psychological ownership of the organization and of the job. Personal-life inclusion partially mediated the relationships between perceived control and psychological ownership of the organization and of the job at Time 2, and partial mediation fitted data better than full mediation. These two findings fully confirmed the findings at Time 1. However, deference to supervisor did not play a mediating role between perceived control and psychological ownership of the organization and of the job at Time 2. This did not support findings at Time 1, which indicated deference to supervisor was a main mediator between perceived control and psychological ownership of the organization and of the job.

Model fit statistics of Model C showed partial mediation fit the data better than full mediation at Time 2. This confirmed findings at Time 1. However, in specific paths, psychological ownership of the organization and of the job played a full mediating role between personal-life inclusion and criterion variables at Time 2. Both types of psychological ownership did not have mediation effects between deference to supervisors and criterion variables at Time 2. These findings were different to findings at Time 1. Further discussion of these results is presented in Chapter 8.

CHAPTER 7 LONGITUDINAL ANALYSIS

Chapter Overview

The main purpose of this chapter is to examine the longitudinal mediation role that perceived control, supervisor-subordinate *guanxi*, psychological ownership of the organization and psychological ownership of the job played in the research model. This chapter presents the statistical analyses at Time 2, divided into three parts: descriptive statistics, comparing means at Time 1 and Time 2; longitudinal correlations; and longitudinal mediation analyses. These results will be presented following the format adopted in Chapter 5 and Chapter 6.

7.1. Descriptive Statistics

Means, standard deviations and t-tests at Time 1 and Time 2 are provided in Table 7.1. Paired-sample t-tests were conducted to show whether there were any statistical differences between Time 1 and Time 2 means. The results showed that only deference to supervisor had significantly higher scores at Time 2 compared to Time 1, and the mean scores for other variables did not show any significant difference between Time 1 and Time 2. Implications of this change will be discussed in Chapter 8.

7.2. Longitudinal Correlations

The longitudinal correlations among all variables were examined using the Pearson product-moment correlation coefficient (r) and are presented in Table 7.2. As in the cross-sectional results, the strength of the correlations is based on the recommendations of Cohen (1988, 1992). Idealized influence (II) ($r = .18$, $p < .01$), motivational stimulation (MS) ($r = .22$, $p < .01$), and individualized consideration (IC) ($r = .24$, $p < .01$) at Time 1 were significantly related to perceived control at Time 2. Hypotheses H2a-H2d were supported longitudinally. Further, the authoritarian form of paternalistic leadership at Time 1 was negatively correlated with perceived control ($r = -.21$, $p < .01$) at Time 2. The benevolent form of paternalistic leadership at Time 1

was positively related to perceived control ($r = .24, p < .01$) at Time 2, and there was no significant relation between the moral form of paternalistic leadership at Time 1 and perceived control ($r = .01, ns$) at Time 2. Hypotheses H4a and H4b were supported, but H4c was rejected.

Table 7.1. Mean, standard deviation and t-tests at Time 1 and Time 2

Variables	Mean Time1	SD	Mean Time 2	SD	t-test
1. BF	4.92	1.07	4.91	1.14	.15
2. MF	5.10	1.39	4.96	1.50	1.09
3. AF	3.44	1.21	3.40	1.14	.46
4. II	5.19	1.34	5.16	1.29	.29
5. MS	4.92	1.14	4.92	1.06	-.06
6. IC	5.01	1.14	5.01	1.09	-.05
7. PC	2.97	.61	3.04	.54	-1.62
8. AA	4.90	1.27	4.96	1.20	-.74
9. PI	4.00	1.63	4.11	1.43	-.98
10. DS	3.21	1.45	3.48	1.25	-2.63*
11. POO	4.44	1.50	4.51	1.43	-.60
12. POJ	4.83	1.37	4.80	1.29	.28
13. NAC	3.34	1.40	3.31	1.23	.32
14. PAC	4.59	1.19	4.65	1.15	-.67
15. JS	5.17	1.10	5.02	1.16	1.64
16. PW	2.51	.84	2.51	.90	-.05

Note: N=201. * $p < .05$. BL=benevolent form of paternalistic leadership; AF=authoritarian form of paternalistic leadership; MF=moral form of paternalistic leadership; II=idealized influence; MS=motivational stimulation; IC=individualized consideration; control=perceived control; AA=affective attachment; DS=deference to supervisor PL=personal-life inclusion; POO=psychological ownership of organization; POJ=psychological ownership of job; PAC=positive affective commitment; NAC= negative affective commitment; JS=job satisfaction; PW= Psychological withdrawal.

Although some coefficients were quite low, perceived control at Time 1 had significant relationships with all three dimensions of supervisor-subordinate *guanxi* at Time 2: affective attachment ($r = .13, p < .05$), personal-life inclusion ($r = .22, p < .01$) and deference to supervisor ($r = .13, p < .05$). Thus, hypotheses H6a-H6c were supported. All three dimensions of supervisor-subordinate *guanxi* at Time 1 were significantly related to psychological ownership of the job at Time 2: affective attachment ($r = .43, p < .01$), personal-life inclusion ($r = .26, p < .01$) and deference to supervisor ($r = .15, p < .05$). These three dimensions at Time 1 were also

significantly related to psychological ownership of the organization at Time 2: affective attachment ($r = .39, p < .01$), personal-life inclusion ($r = .26, p < .05$) and deference to supervisor ($r = .14, p < .05$). Therefore, hypotheses H9a-H9c and H10a-H10c were supported.

There was a strong longitudinal correlation between psychological ownership of the organization at Time 1 and psychological ownership of the job at Time 2 ($r = .45, p < .01$). Psychological ownership of the job at Time 1 also was significantly related to psychological ownership of the organization at Time 2 ($r = .50, p < .01$).

Psychological ownership of the organization at Time 1 was significantly related to negative affective commitment ($r = -.33, p < .01$), and positive affective commitment ($r = .41, p < .01$) at Time 2. It negatively related to psychological withdrawal ($r = -.24, p < .01$) at Time 2. Hypothesis 14 and 18 were supported. Psychological ownership of the job at Time 1 significantly correlated with positively related to job satisfaction ($r = .35, p < .01$) and negatively related to psychological withdrawal ($r = -.27, p < .01$) at Time 2. Hypotheses 12 and 17 were supported.

Table 7.2. Longitudinal correlations between all variables used in this study

Time 1	Time 2															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. BF	.52**	.24**	-.27**	.46**	.40**	.43**	.24**	.46**	.38**	.15*	.30**	.32**	-.28**	.33**	.28**	-.19**
2. MF	.22**	.23**	-.09	.28**	.17**	.21**	.01	.22**	.19**	.05	.10	.10	-.14*	.09	.15*	-.19**
3. AF	-.36**	-.20**	.45**	-.40**	-.26**	-.42**	-.21**	-.41**	-.22**	-.02	-.22**	-.27**	.32**	-.24**	-.27**	.36**
4. II	.46**	.20**	-.25**	.53**	.43**	.41**	.18**	.44**	.37**	.21**	.22**	.30**	-.24**	.33**	.23**	-.27**
5. MS	.42**	.16*	-.11	.41**	.45**	.31**	.22**	.37**	.32**	.22**	.23**	.24**	-.23**	.29**	.21**	-.23**
6. IC	.41**	.21**	-.23**	.36**	.29**	.46**	.24**	.35**	.22**	.14*	.23**	.29**	-.19**	.28**	.23**	-.23**
7. control	.13*	.09	-.13*	.18**	.20**	.14*	.45**	.13*	.22**	.13*	.19**	.16*	-.20**	.15*	.19**	-.02
8. AA	.48**	.23**	-.35**	.46**	.43**	.39**	.28**	.49**	.44**	.25**	.39**	.43**	-.36**	.41**	.37**	-.32**
9. PI	.34**	.24**	-.13*	.30**	.34**	.27**	.21**	.30**	.45**	.28**	.26*	.26**	-.22**	.29**	.29**	-.13**
10. DS	.16*	.05	-.08	.23**	.19**	.04	-.02	.19**	.16*	.40**	.14*	.15*	.01	.13*	-.01	-.04
11. POO	.34**	.18**	-.06	.31**	.32**	.20**	.23**	.31**	.39**	.12	.42**	.45**	-.33**	.41**	.32**	-.24**
12. POJ	.35**	.17**	-.17**	.33**	.34**	.24**	.29**	.35**	.44**	.16*	.37**	.50**	-.33**	.39**	.35**	-.27**
13. NAC	-.31**	-.17**	.13*	-.22**	-.29**	-.28**	-.28**	-.28**	-.27**	-.07	-.33**	-.34**	.38**	-.37**	-.28**	.18**
14. PAC	.37**	.16*	-.15*	.28**	.29**	.29**	.29**	.38**	.38**	.17**	.38**	.48**	-.34**	.48**	.41**	-.29**
15. JS	.34**	.23**	-.23**	.31**	.29**	.21**	.21**	.32**	.29**	-.04	.32**	.41**	-.35**	.33**	.38**	-.33**
16. PW	-.19**	-.20**	.19**	-.16*	-.16*	-.19**	-.06	-.24**	-.17**	.11	-.14**	-.20**	.20**	-.12*	-.14*	.50**

Note: N=201. *p< .05. **p< .01. BF=benevolent form of paternalistic leadership; AF=authoritarian form of paternalistic leadership; MF=moral form of paternalistic leadership; II=idealized influence; MS=motivational stimulation; IC=individualized consideration; control=perceived control; AA=affection attachment; DS=deference to supervisor PL=personal-life inclusion; POO=psychological ownership of organization; POJ=psychological ownership of job; PAC= positive affective commitment; NAC= negative affective commitment; JS=job satisfaction; PW=Psychological withdrawal

7.3. Longitudinal mediation relationships

The aim of this analysis was to test longitudinal mediation effects of four mediator variables (perceived control, supervisor-subordinate *guanxi*, psychological ownership of the organization and psychological ownership of the job). Longitudinal mediation analyses were tested through structural equation modelling, specifically AMOS 19.0. To test the longitudinal mediation hypotheses I used the autoregressive model (Figure 7.1) which was recommended by Gollob and Reichardt (1991), MacKinnon (1994) and Cole and Maxwell (2003). In this model, the criterion variable at Time 2 is predicted by both the predictor and criterion variables at Time 1, and by the mediator at Time 2 (MacKinnon, 1994).

Based on the autoregressive model, path a and path b are sufficient to determine longitudinal mediation effects. I also controlled the Time 1 mediator and Time 1 criterion variables, in order to avoid contamination and inflated causal path estimates (Cole & Maxwell, 2003; Panatik, 2010; Riley, 2012). Further, I followed Gollob and Reichardt's study (1991), and estimated the total effect ($a \times b + c$) of the T1 predictor on T2 criterion to examine the assumption of longitudinal mediation effects.

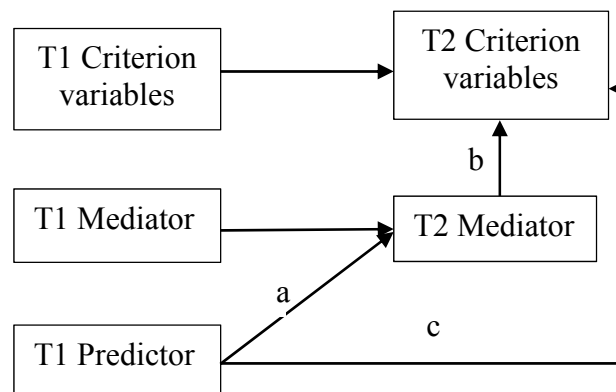


Figure 7.1. Longitudinal autoregressive mediation model

Full mediation and partial mediation for every longitudinal relationship were compared to find the best fitting model, and results are provided for each model separately. As mentioned in

Chapter 5 and Chapter 6, AMOS does not report significance tests for multiple mediation effects. Therefore, the research model was divided into three sub-models (Model A, B, and C), in order to test the hypothesized longitudinal mediated relationships separately.

7.4. Model A: Time 2 Perceived Control as a Mediator

In Model A (Figure 7.2), Time 2 perceived control was hypothesized to mediate the relationships between transformational leadership and paternalistic leadership at Time 1 and Time 2 supervisor-subordinate *guanxi*. Time 1 perceived control and Time 1 supervisor-subordinate *guanxi* were controlled to avoid any potential confounding effect of the Time 1 mediator on the Time 2 mediator and also Time 1 criterion variables on Time 2 variables.

Transformational leadership consisted of three factors: idealized influence (II), motivational stimulation (MS) and individualized consideration (IC). Paternalistic leadership formed three factors: authoritarian form (AF), benevolent form (BF) and moral form (MF). These variables served as predictor variables in Model A. Perceived control (control) was the mediator variable. Supervisor-subordinate *guanxi* consisted of three factors: affective attachment (AA), personal-life inclusion (PI), deference to supervisor (DS). These variables served as criterion variables.

Model A was separated into two sub-models, in order to focus on each type of leadership. Model A1 examined longitudinal mediation effects of Time 2 perceived control between Time 1 transformational leadership and Time 2 supervisor-subordinate *guanxi*; Model A2 tested longitudinal mediation effects of Time 2 perceived control between Time 1 paternalistic leadership and Time 2 supervisor-subordinate *guanxi*.

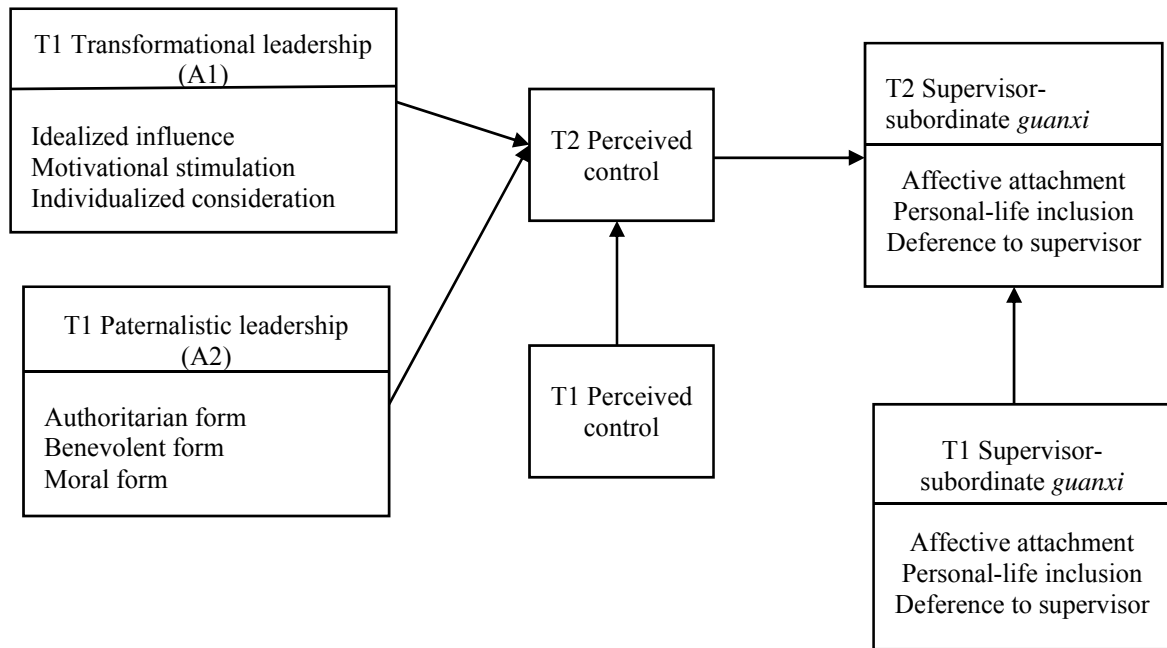


Figure 7.2. Model A: Longitudinal mediation effects of perceived control

7.4.1. Model A1: Time 1 transformational leadership as a predictor

Two models (full mediation and partial mediation) were tested to determine the best model fit. Model 1 examined full mediation, including pathways between the Time 1 predictor variables (II (t1), MS (t1), and IC (t1)), the Time 2 mediator (control (t2)) and the Time 2 criterion variables (AA (t2), PI (t2), and DS (t2)). Model 1 did not yield an acceptable fit to the data (Table 7.5). Model 2 tested partial mediation, which included the direct relationships between the predictor variables (II (t1), MS (t1), and IC (t1)) and the Time 2 criterion variables (AA (t2), PI (t2), and DS (t2)). Fit indices showed that Model 2 provided better fit statistics than Model 1, but they were not ideal. SRMR was higher than the cut-off value .05, which might be because the sample size was changed significantly (Brown, 2006; Distefano, 2002; Fan et al., 1999; Hutchinson & Olmos, 1998; Rigdon & Ferguson, 1991).

Table 7.3. Model fit indices for structural comparisons of Model A1

MODEL	χ^2	df	χ^2/df	SRMR	RMSEA	CFI	AIC	$\Delta\chi^2$
1	2281.62	1255	1.82	.11	.06	.77	2527.62	$\Delta\chi^2_{(27)}=282.06^{**}$
2	1999.56	1228	1.62	.10	.05	.83	2299.56	--

***p<.001

The chi-square difference ($\Delta\chi^2$) test (Table 7.3) showed Model 2 (partial mediation) was significantly different from Model 1 (full mediation). Also, the AIC is smaller in Model 2. Therefore, Model 2 provided the better fit with the data, which indicates that the partial mediation model fitted the data better than the full mediation model.

The standardised parameter estimates of Model A1 are provided in Table 7.6, in order to show significant direct relationships between Time 1 transformational leadership, Time 2 perceived control and Time 2 supervisor-subordinate *guanxi*. The standardised parameter estimates showed there were significant relationships between the mediator (control (t2)) and criterion variables (AA (t2), PI (t2), and DS (t2)). However, there was no significant relationship between the predictor variables (II (t1), MS (t1) and IC (t1)) and the mediator (control (t2)). Only two out of nine direct relationships between predictors and criterion variables were significant in Model A1. Therefore, hypotheses H21a (1) (2) (3) (4), hypotheses H21b (1) (2) (3) (4) and hypotheses H21c (1) (2) (3) (4) were rejected. Overall, these results showed that perceived control did not play a substantial longitudinal mediating role between Time 1 transformational leadership and Time 2 supervisor-subordinate *guanxi*.

Table 7.4. Standardised parameter estimates of relationships between Time 1 transformational leadership, Time 2 perceived control and Time 2 supervisor-subordinate *guanxi*

	Criterion variables			Mediator
	AA (t2)	PI (t2)	DS (t2)	Control (t2)
Predictors				
II (t1)	.34*	.33*	.07	.18
MS (t1)	-.11	-.12	.05	-.11
IC (t1)	.01	-.08	.43	.06
Mediator				
Control (t2)	.43***	.39***	.20*	--

* $P < .05$, *** $P < .001$, II=idealized influence, MS=motivational stimulation, IC= individualized consideration, control =perceived control, AA= affective attachment, PI = personal-life inclusion, DS =deference to supervisor. t1= Time 1, t2=Time 2.

7.4.2. Model A2: Time 1 paternalistic leadership as a predictor

Two models (full mediation and partial mediation) were tested to determine the best model fit. Model 1 examined full mediation, including pathways between the predictor variables (AF (t1), BF (t1), and MF (t1)), the mediator (control (t2)) and the criterion variables (AA (t2), PI (t2), and DS (t2)). Model 1 did not yield an acceptable fit to the data (Table 7.5). Model 2 tested partial mediation, which included the direct relationships between the predictor variables (AF (t1), BF (t1), and MF (t1)) and the criterion variables (AA (t2), PI (t2), and DS (t2)).

Table 7.5. Model fit indices for structural comparisons of Model A2

MODEL	χ^2	df	χ^2/df	SRMR	RMSEA	CFI	AIC	$\Delta\chi^2$
1	3544.71	1996	1.78	.14	.06	.76	3842.71	$\Delta\chi^2_{(26)}=274.60^{***}$
2	3270.11	1970	1.66	.12	.06	.80	3620.11	--

*** $P < .001$

Fit indices showed that Model 2 provided better fit statistics than Model 1, but they were not ideal. The chi-square difference ($\Delta\chi^2$) test (Table 7.5) showed that Model 2 (partial mediation)

was significantly different from Model 1 (full mediation). Also, the AIC in Model 2 is smaller than the AIC in model 1. Therefore, Model 2 provided the better fit with the data, which indicates that the partial mediation model fitted the data better than the full mediation model.

The standardised parameter estimates (Table 7.6) showed that only the moral form of paternalistic leadership (MF (t1)) ($\beta = -.19$, $p < .05$, $R^2 = .25$) was significantly related to the mediator (control (t2)), while the mediator (control (t2)) was significantly correlated with criterion variables: affective attachment (AA(t2)) ($\beta = .36$, $p < .001$, $R^2 = .43$), personal-life inclusion (PI (t2)) ($\beta = .39$, $p < .001$, $R^2 = .33$), and deference to supervisor (DS (t2)) ($\beta = .21$, $p < .05$, $R^2 = .24$).

Table 7.6. Standardised parameter estimates of relationships between Time 1 paternalistic leadership, Time 2 perceived control and Time 2 supervisor-subordinate *guanxi*

	Criterion variables			Mediator
	AA (t2)	PI (t2)	DS (t2)	control (t2)
Predictors				
BF (t1)	.35***	.19	.02	.15
MF (t1)	.01	.04	-.06	-.19*
AF (t1)	-.20*	.02	.04	-.15
Mediator				
control (t2)	.36***	.39***	.21*	--

* $P < .05$, *** $P < .001$; BF=benevolent form of paternalistic leadership, MF=moral form of paternalistic leadership, AF=authoritarian form of paternalistic leadership, control=perceived control, AA=affective attachment, PI = personal-life inclusion, DS =deference to supervisor. t1= Time 1, t2=Time 2.

Table 7.7 presents the direct, indirect and total effects for the longitudinal mediation effects of Time 2 perceived control for Model A2. Three paths were tested and all paths were significant. Therefore, hypotheses path coefficients showed that perceived control at Time 2 fully mediated the relationships between the moral form of paternalistic leadership at Time 1, affective attachment, personal-life inclusion and deference to supervisor at Time 2. Hence, hypotheses H22a (3), H22b (3), and H22c (3) were supported. Hypotheses H22a (1), H22a (2), hypotheses

H22b (1), H22b (2), and hypotheses H22c (1), H22c (2) were rejected. Overall, model fit statistics indicated that Time 2 perceived control partially mediated relationships between Time 1 predictor variables and Time 2 criterion variables. However, in specific path coefficients, Time 2 perceived control provided full mediation between Time 1 predictors and Time 2 criterion variables.

Table 7.7. Longitudinal mediation effects of Time 2 perceived control between Time 1 paternalistic leadership and Time 2 supervisor-subordinate *guanxi*

Predictors → Mediator → Outcomes	Direct effects	Indirect effects	Total effects	Type of mediation
MF (t1) → control (t2) → AA (t2)	.01	.17***	.18	full
MF (t1) → control (t2) → PI (t2)	.04	.20***	.24	full
MF (t1) → control (t2) → DS (t2)	-.06	.02*	-.04	full

* P<.05, ***P<.001. MF = moral form of paternalistic leadership, control = perceived control, AA = affective attachment, PI = personal-life inclusion, DS= deference to supervisor, t1 = Time 1, t2 = Time 2

7.5. Model B: Time 2 Supervisor-subordinate *Guanxi* as a Mediator

In Model B (Figure 7.3), I hypothesized that Time 2 supervisor-subordinate *guanxi* (affective attachment (AA (t2)), personal-life inclusion (PI (t2)), and deference to supervisor (DS (t2))) would mediate the relationships of Time 1 perceived control (control (t1)), with Time 2 psychological ownership of the job (POJ (t2)) and Time 2 psychological ownership of the organization (POO (t2)) respectively. I controlled Time 1 supervisor-subordinate *guanxi*, Time 1 psychological ownership of the job and Time 1 psychological ownership of the organization to avoid any potential confounding effect of the Time 1 mediator on the Time 2 mediator and also Time 1 criterion variables on Time 2 variables. As mentioned earlier, AMOS does not report significance tests for multiple mediation effects. Thus Model B was deconstructed into three sub-models to test the hypothesized mediated relationships individually.

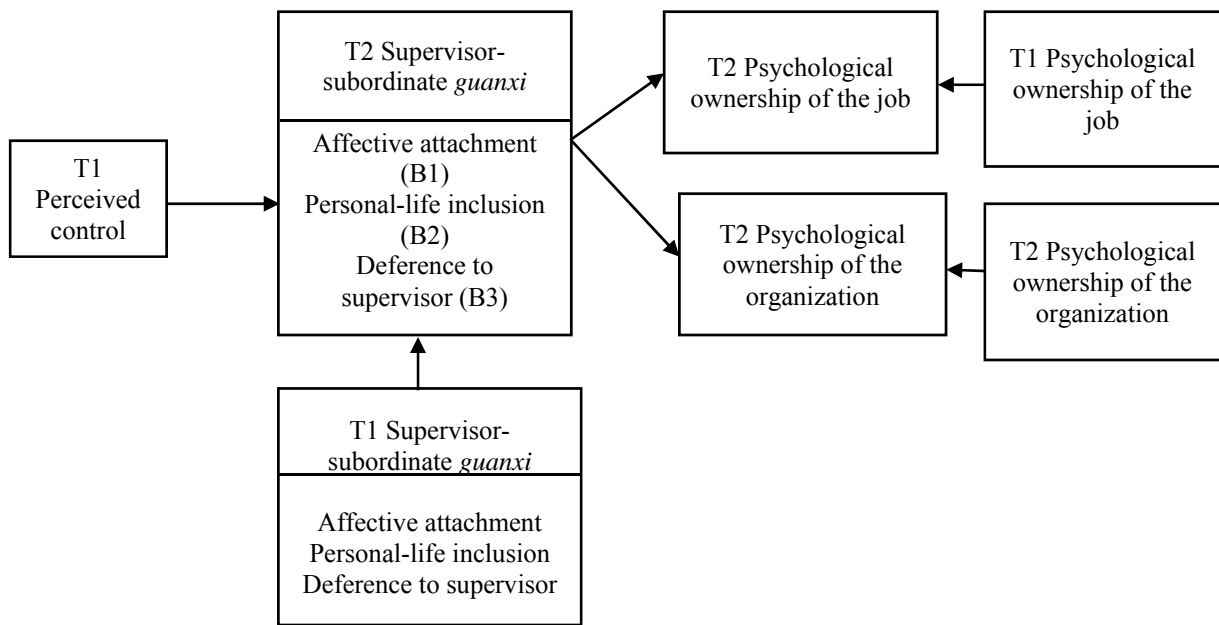


Figure 7.3. Model B: Longitudinal mediation effects of supervisor-subordinate *guanxi*

7.5.1. Model B1: Time 2 affective attachment as mediator

Two models (full mediation and partial mediation) were tested to determine the best model fit. Model 1 examined full mediation, including pathways between the predictor (control (t1)), the mediator (AA (t2)) and the criterion variables (POO (t2) and POJ (t2)). Model 1 did not yield an acceptable fit to the data (Table 7.10). Model 2 tested partial mediation, which included the direct relationships between the Time 1 predictor (control (t1)) and the Time 2 criterion variables (POO (t2) and POJ (t2)). Fit indices showed that Model 2 provided better fit statistics than Model 1, but they were not ideal. The chi-square difference ($\Delta\chi^2$) test (Table 7.10) showed Model 2 (partial mediation) was significantly different from Model 1 (full mediation) and the AIC in Model 2 is smaller. Therefore, Model 2 provided the better fit with the data, which indicates that the partial mediation model fitted data better than the full mediation model.

Table 7.8. Model fit indices for structural comparisons of Model B1

MODEL	χ^2	df	χ^2/df	SRMR	RMSEA	CFI	AIC	$\Delta\chi^2$
1	922.66	456	2.02	.17	.07	.88	1066.66	$\Delta\chi^2_{(11)}=130.60^{***}$
2	792.06	445	1.78	.16	.06	.91	958.06	--

***p<.001

The standardised parameter estimates (Table 7.9) showed there were significant relationships between the mediator (AA (t2)) and the criterion variables (POO (t2) and POJ (t2)), but there was no significant relationship between the predictor (control (t1)) and the mediator (AA (t2)). Also, the direct relationships between predictor and criterion variables were not significant. Therefore, Time 2 affective attachment did not play a longitudinal mediating role between Time 1 perceived control and Time 2 psychological ownership of the job and of the organization. Hypotheses H25a and H26a were rejected.

Table 7.9. Standardised parameter estimates of relationships between Time 1 perceived control, Time 2 affective attachment and Time 2 psychological ownership of the job and of the organization

	Criterion variables		Mediator
	POO (t2)	POJ (t2)	AA (t2)
Predictor			
Control (t1)	.05	-.04	-.10
Mediator			
AA (t2)	.50***	.47***	--

*** P < .001, control=perceived control, AA=affective attachment, POO=psychological ownership of the organization, POJ=psychological ownership of the job, t1 = Time 1, t2 = Time 2

7.5.2. Model B2: Time 2 personal-life inclusion as mediator

Two models (full mediation and partial mediation) were tested to determine the best model fit. Model 1 examined full mediation, including pathways between the predictor (control (t1)), the mediator (PI (t2)) and the criterion variables (POO (t2) and POJ (t2)). Model 1 did not yield an acceptable fit to the data (Table 7.10). Model 2 tested partial mediation, which included the direct relationships between the predictor (control (t2)) and the criterion variables (POO (t2) and POJ (t2)).

Fit indices showed that Model 2 provided better fit statistics than Model 1, but SRMR was high. The chi-square difference ($\Delta\chi^2$) test (Table 7.10) showed Model 2 (partial mediation) was significantly different from Model 1 (full mediation) and AIC in Model 2 is smaller. Therefore, Model 2 provided the better fit with the data, which indicates that the partial mediation model fitted the data better than the full mediation model.

Table 7.10. Model fit indices for structural comparisons of Model B2

MODEL	χ^2	df	χ^2/df	SRMR	RMSA	CFI	AIC	$\Delta\chi^2$
1	731.00	342	2.14	.16	.08	.88	859.00	$\Delta\chi^2_{(5)}=59.58^{***}$
2	671.42	337	1.99	.15	.07	.90	809.42	--

*** P < .001

The standardised parameter estimates (Table 7.11) showed there were significant relationships between the mediator (PI (t2)) and the criterion variables (POO (t2) and POJ (t2)), but there was no significant relationship between the predictor (control (t1)) and the mediator (PI (t2)). Also, the direct relationships between predictor and criterion variables were not significant. Therefore, Time 2 personal-life inclusion may not play a longitudinal mediating role between Time 1 perceived control and Time 2 psychological ownership of the organization and of the job. Hypotheses H25b and H26b were rejected.

Table 7.11. Standardised parameter estimates of relationships between Time 1 perceived control, Time 2 personal-life inclusion and Time 2 psychological ownership of the job and of the organization

	Criterion variables		Mediator
	POO (t2)	POJ (t2)	PI (t2)
Predictor			
Control (t1)	-.02	-.08	.11
Mediator			
PI (t2)	.41***	.41***	--

***P< .001, control=perceived control, PI=personal-life inclusion, POO=psychological ownership of the organization, POJ=psychological ownership of the job, t1 = Time 1, t2 = Time 2

7.5.3. Model B3: Time 2 deference to supervisor as mediator

Two models (full mediation and partial mediation) were tested to determine the best model fit. Model 1 examined full mediation, including pathways between the predictor (control (t1)), the mediator (DS (t2)) and the criterion variables (POO (t2) and POJ (t2)). Model 1 did not yield an acceptable fit to the data (Table 7.12). Model 2 tested partial mediation, which included the direct relationships between the predictor (control (t2)) and the criterion variables (POO (t2) and POJ (t2)).

Fit indices showed that Model 2 provided better fit statistics than Model 1, but SRMR was high. The chi-square difference ($\Delta\chi^2$) test (see Table 7.12) showed Model 2 (partial mediation) was significantly different from Model 1 (full mediation). Therefore, Model 2 provided the better fit with the data, which indicates that the partial mediation model fitted data better than the full mediation model.

Table 7.12. Model fit indices for structural comparisons of Model B3

MODEL	χ^2	df	χ^2/df	SRMR	RMSA	CFI	AIC	$\Delta\chi^2$
1	743.42	397	1.87	.13	.07	.90	879.42	$\Delta\chi^2_{(7)}=77.82^{***}$
2	665.60	390	1.70	.13	.06	.92	815.60	--

*** P < .001

The standardised parameter estimates (Table 7.13) showed there was no significant relationship between the predictor (control (t1)) and the mediator (DS (t2)); there was no significant relationship between the mediator (DS (t2)) and the criterion variables (POO (t2) and POJ (t2)); and there was no significant relationship between predictor (control (t1)) and the criterion variables (POO (t2) and POJ (t2)). Therefore, Time 2 deference to supervisor did not play a longitudinal mediating role between Time 1 perceived control and Time 2 psychological ownership of the job and of the organization. Hence, hypotheses H25c and H26c were rejected.

Table 7.13. Standardised parameter estimates of relationships between Time 1 perceived control, Time 2 deference to supervisor and Time 2 psychological ownership of the job and of the organization

	Criterion variables		Mediator
	POO (t2)	POJ (t2)	PI (t2)
Predictor			
control (t1)	.03	-.04	.09
Mediator			
DS (t2)	.05	.06	--

***P< .001, control=perceived control, PI=personal-life inclusion, POO=psychological ownership of the organization, POJ=psychological ownership of the job, t1 = Time 1, t2 = Time 2

7.6. Model C: Time 2 Psychological Ownership as a Mediator

In Model C (Figure 7.4), I hypothesized that Time 2 psychological ownership of the organization (POO (t2)) and Time 2 psychological ownership of the job (POJ (t2)) would mediate the relationships between Time 1 supervisor-subordinate *guanxi* (affective attachment (AA (t1))),

personal-life inclusion (PI (t1)), and deference to supervisor (DS (t1))) and Time 2 criterion variables (negative affective commitment (NAC (t2)), positive affective commitment (PAC (t2)), job satisfaction (JS (t2)), psychological withdrawal behaviours (PWB (t2)), individual-targeted organizational citizenship behaviours (OCBI (t2)), and organizational targeted organizational-citizenship behaviours (OCBO (t2))). I controlled Time 1 psychological ownership of the job, Time 1 psychological ownership of the organization and Time 1 criterion variables to avoid any potential confounding effect of the Time 1 mediator on the Time 2 mediator and also Time 1 criterion variables on Time 2 variables. As mentioned earlier, AMOS does not report significance tests for multiple mediation effects. Thus Model C was deconstructed into two sub-models to test the hypothesized longitudinal mediated relationships individually.

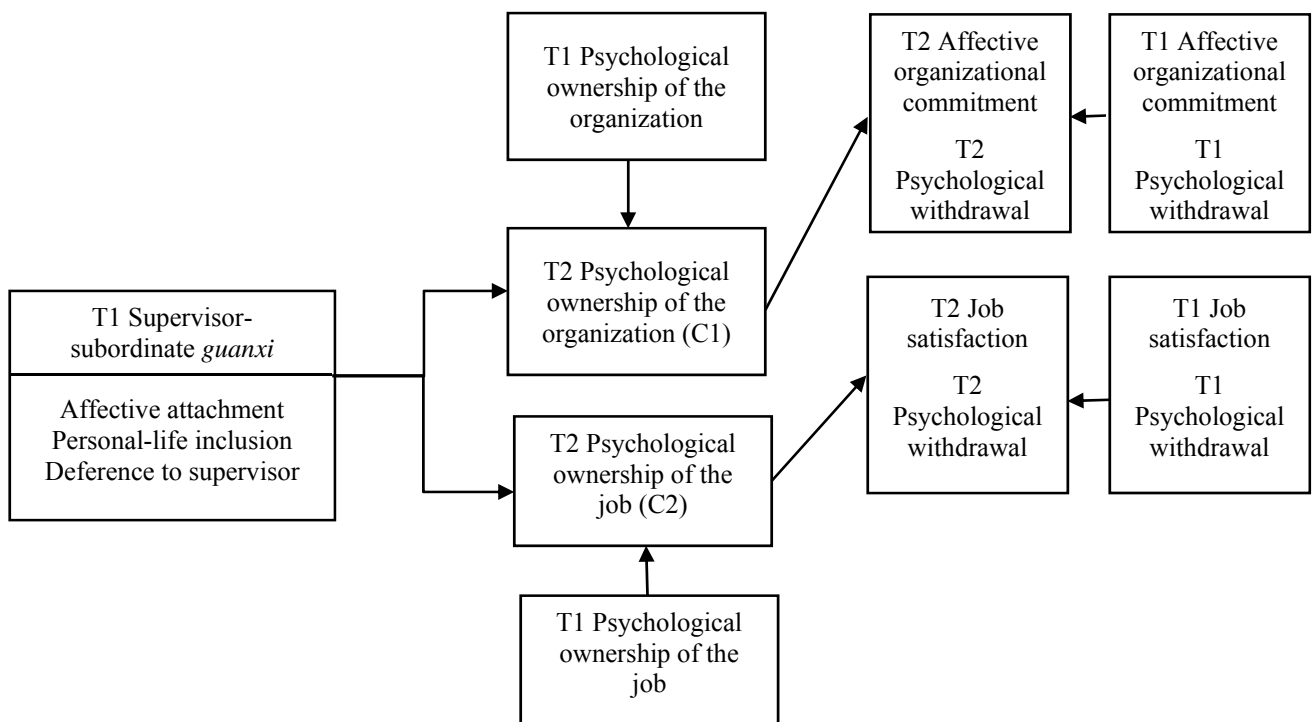


Figure 7.4. Model C: Longitudinal mediation effects of psychological ownership of the organization and of the job

7.6.1 Model C1: Time 2 psychological ownership of the organization as a mediator

Model 1 examined full mediation, including pathways between the predictor variables (AA (t1), PI (t1), and DS (t1)), the mediator (POO (t2)) and the criterion variables (NAC (t2), PAC (t2), and PW (t2)). Model 2 tested partial mediation, which included testing the direct relationships between the predictor variables and the criterion variables. Fit indices showed both models did not provide ideal fit statistics (Table 7.14), but $\Delta\chi^2$ test results (Table 7.14) showed that Model 2 was significantly different from Model 1, and Model 2 provided smaller AIC. Therefore the partial mediation model fitted the data better than the full mediation model.

Table 7.14. Model fit indices for structural comparisons of Model C1

MODEL	χ^2	df	χ^2/df	SRMR	RMSEA	CFI	AIC	$\Delta\chi^2$
1	672.38	309	2.18	.18	.08	.87	810.38	$\Delta\chi^2_{(10)}=132.20^{***}$
2	540.18	299	1.81	.15	.06	.91	698.18	--

***p<.001

The standardised parameter estimates (Table 7.15) for Model C1 showed that only AA (t1) was significantly related to POO (t2) ($\beta = .47$, $p < .001$, $R^2 = .23$), while POO (t2) was significantly correlated with NAC (t2) ($\beta = -.71$, $p < .001$, $R^2 = .60$), PAC (t2) ($\beta = .92$, $p < .001$, $R^2 = .80$), PW (t2) ($\beta = -.28$, $p < .001$, $R^2 = .33$). There was no significant relationship between personal-life inclusion at Time 1 and psychological ownership of the organization at Time 2, while deference to supervisor at Time 1 did not relate to psychological ownership of the organization at Time 2.

Table 7.15. Standardised parameter estimates of relationships between Time 1 supervisor-subordinate *guanxi*, Time 2 psychological ownership of the organization and Time 2 criterion variables

	Criterion variables			Mediator
	NAC (t2)	PAC (t2)	PW (t2)	POO (t2)
Predictors				
AA (t1)	-.17	.04	-.23	.42**
PI (t1)	.06	.01	.12	-.15
DS (t1)	.12	-.03	.13	-.05
Mediator				
POO (t2)	-.68***	.82***	-.26***	--

* P< .05 ** P< .01 *** P< .001; AA= affective attachment, PI= personal-life inclusion, DS= deference to supervisor, POO= psychological ownership of the organization, NAC= negative affective commitment, PAC= positive affective commitment, PW= psychological withdrawal, t1=Time 1, t2=Time 2.

Table 7.16 presents the direct, indirect and total effects for the longitudinal mediation effects of Time 2 psychological ownership of the organization for Model C1. Three paths were tested and all paths were significant. Path coefficients showed that Time 2 psychological ownership of the organization fully mediated the relationships between Time 1 affective attachment and Time 2 criterion variables. Hence, hypotheses H31a and H32a were supported, and hypotheses H31b, H31c, H32b, and H32c were rejected. Overall, model fit statistics indicated that Time 2 psychological ownership of the organization partially mediated relationships between Time 1 predictor variables and Time 2 criterion variables. The specific path coefficients did not confirm this finding, and this showed full mediation was the main type between Time 1 predictor variables and Time 2 criterion variables.

Table 7.16. Longitudinal mediation effects of Time 2 psychological ownership of the organization between Time 1 supervisor-subordinate *guanxi* and Time 2 criterion variables

Predictors → Mediator → Outcomes	Direct effects	Indirect effects	Total effects	Type of mediation
AA (t1) → POO (t2) → NAC (t2)	-.17	-.26**	-.43	full
AA (t1) → POO (t2) → PAC (t2)	.04	1.24***	1.28	full
AA (t1) → POO (t2) → PW (t2)	-.23	.16***	-.07	full

* P<.05 ***P<.001. AA= affective attachment, PI= personal-life inclusion, DS= deference to supervisor, POO= psychological ownership of the organization, NAC= negative affective commitment, PAC= positive affective commitment, PW= psychological withdrawal, t1=Time 1, t2=Time 2

7.6.2. Model C2: Time 2 psychological ownership of the job as a mediator

Model 1 examined full mediation, including pathways between Time 1 predictor variables (AA, PI, and DS), Time 2 mediator (POJ) and Time 2 criterion variables (JS and PW). Model 2 tested partial mediation, which included the direct relationships between the Time 1 predictor variables and the Time 2 criterion variables. Fit indices showed both models did not provide ideal fit statistics (Table 7.17), but $\Delta\chi^2$ test results showed (Table 7.17) that Model 2 was significantly different from Model 1 and Model 2 provided a smaller AIC. Therefore Model 2 (partial mediation) fitted the data better than full mediation.

Table 7.17. Model fit indices for structural comparisons of Model C2

MODEL	χ^2	df	χ^2/df	SRMR	RMSEA	CFI	AIC	$\Delta\chi^2$
1	377.34	219	1.72	.17	.06	.94	491.34	$\Delta\chi^2_{(6)}=17.93^{**}$
2	359.41	213	1.69	.17	.06	.95	485.41	--

**p<.01

The standardised parameter estimates (Table 7.18) for Model C2 showed that only AA (t1) was significantly related to POJ (t2) ($\beta = .35$, $p < .01$, $R^2 = .25$), while POJ (t2) was significantly

correlated with JS (t2) ($\beta = .76$, $p < .001$, $R^2 = .68$) and PW (t2) ($\beta = -.29$, $p < .001$, $R^2 = .33$). There was no significant relationship between personal-life inclusion at Time 1 and psychological ownership of the job at Time 2, while deference to supervisor at Time 1 did not relate to psychological ownership of the job at Time 2.

Table 7.18. Standardised parameter estimates of relationships between Time 1 supervisor-subordinate *guanxi*, Time 2 psychological ownership of the job and Time 2 criterion variables

	Criterion variables		Mediator
	JS (t2)	PW (t2)	POJ (t2)
Predictors			
AA (t1)	-.03	-.24*	.35**
PI (t1)	.16	.14	-.09
DS (t1)	-.19**	.14*	-.06
Mediator			
POJ (t2)	.76***	-.29***	--

* $P < .05$ ** $P < .01$ *** $P < .001$; AA= affective attachment, PI= personal-life inclusion, DS= deference to supervisor, POJ= psychological ownership of the job, JS= job satisfaction, PW= psychological withdrawal, t1=Time 1, t2=Time 2

Table 7.19 presents the direct, indirect and total effects for the longitudinal mediation effects of Time 2 psychological ownership of the job for Model C2. Two paths were tested and both paths were significant. Path coefficients showed that Time 2 psychological ownership of the job fully mediated the relationships between Time 1 affective attachment and Time 2 job satisfaction. Time 2 psychological ownership of the job also partially mediated the relationships between Time 1 affective attachment and Time 2 psychological withdrawal. Hence, hypotheses H33a and H34a were supported while hypotheses H33b, H33c H34b, and H34c were rejected.

Overall, model fit statistics indicated that partial mediation fitted data better than full mediation. However, in specific path coefficients, Time 2 psychological ownership of the job provided full mediation between Time 1 affective attachment and Time 2 job satisfaction.

Table 7.19. Longitudinal mediation effects of Time 2 psychological ownership of the job between Time 1 supervisor-subordinate *guanxi* and Time 2 criterion variables

Predictors → Mediator → Outcomes	Direct effects	Indirect effects	Total effects	Type of mediation
AA (t1) → POJ (t2) → JS (t2)	-.03	1.11**	1.08	full
AA (t1) → POJ (t2) → PW (t2)	-.24*	.06**	-.18	partial

* P<.05 ***P<.001. AA= affective attachment, PI= personal-life inclusion, DS= deference to supervisor, POJ= psychological ownership of the job, JS= job satisfaction, PW= psychological withdrawal, t1=Time 1, t2=Time 2

7.7. Chapter Summary

In conclusion, this chapter investigated longitudinal mediation effects of four mediator variables (perceived control, supervisor-subordinate *guanxi*, psychological ownership of the organization and psychological ownership of the job). Minimal longitudinal mediation support was found for perceived control, which only fully mediated the relationship between moral leadership and all three dimensions of supervisor-subordinate *guanxi*. No support was found for the mediating role of supervisor-subordinate *guanxi*. There was support for psychological ownership of the organization fully mediating the effects of affective attachment on the criterion variables. Also, there was support for psychological ownership of the job playing a mediating role between affective attachment and the criterion variables. The implications and possible explanations of the findings are discussed in Chapter 8.

CHAPTER 8 DISCUSSION

Chapter Overview

This research integrated *guanxi* with theories of psychological ownership and perceived control, in order to discover the impact of *guanxi* on feelings of psychological ownership within the Chinese work context. Only a few previous studies were focused on supervision behaviours, although the application of leadership has been discussed over decades. The findings contribute further understanding of how different manager/supervisor behaviours indirectly affect employees' work attitudes in Chinese organizations. Four sets of mediation effects were examined: the mediation effects of perceived control; the mediation effects of supervisor-subordinate *guanxi*; the mediation effects of psychological ownership of the job; and the mediation effects of psychological ownership of the organization. This chapter discusses the following themes: research design, psychometric properties of measures, research findings, theoretical significance, practical implications, research strengths and limitations, and makes recommendations for future research.

8.1. Research Design

A two-wave panel design was used, and the mediation hypotheses outlined in Figure 2.1 (p.13) were tested cross-sectionally and longitudinally. The participants were drawn from multiple sectors across 12 commercial organizations in Nanning city and Shenzhen city, China. Self-report questionnaires were collected at two points in time, with a six-month time lag between Time 1 and Time 2. The questionnaires were used to collect data on 16 latent variables. There were 971 respondents at Time 1 and 201 respondents at Time 2 who matched with Time 1 participants.

According to Gollob and Reichardt (1987), three principles of causality can be satisfied in a longitudinal design but not in a cross-sectional design. First, it takes time for some variables to

exert their effects. Some variables may not demonstrate any causal relationship when they are measured at the same time. Second, some variables have effects on themselves at a later time; these are called autoregressive effects. Third, the size of an effect is influenced by the time interval. Different time lags, such as minutes, hours, days and years, cause different effect sizes. This study applied longitudinal analyses through a two-wave panel design to overcome some of the limitations of cross-sectional analyses.

The two-wave panel design was a strength of the study because the effects were tested twice, but it was a ‘half-longitudinal design’ (Cole & Maxwell, 2003). Multiple waves, such as three-wave data collection, would be preferable (Zapf, Dormann, & Frese, 1996). However, due to practical constraints (e.g. data collection time and financial support), three-wave data collection could not be achieved in this research.

8.2. Psychometric Properties of Measures

The measures showed ideal reliabilities at both Time 1 and Time 2. CFA analysis was conducted on all latent variables, except psychological withdrawal, in order to confirm their factorial structure. Items of psychological withdrawal described different behaviours, and they were not highly correlated with each other, thus CFA was not conducted on this measure (Spector et al., 2006).

The final CFA results confirmed the same factor structure for most of the research instruments at both times. Paternalistic leadership contained three factors (authoritarian form, benevolent form and moral form). Perceived control was a single factor variable, supervisor-subordinate *guanxi* was confirmed to be a three-dimensional variable (affective attachment, personal-life inclusion, and deference to supervisor), and job satisfaction was confirmed as a single factor variable.

Transformational leadership originally contained four factors (idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration). However,

intercorrelations between inspirational motivation and intellectual stimulation were high at both times ($r = .98$ at Time 1 and $r = .99$ at Time 2). Therefore, inspirational motivation and intellectual stimulation were combined into one factor (motivational stimulation), and items from inspirational motivation and intellectual stimulation were all retained. The three-factor model yielded a good model fit at both times and intercorrelations between the three factors were acceptable. Hence I assessed transformational leadership as three dimensions (idealized influence, motivational stimulation, and individualized consideration).

Correlations ($r = .77$ at Time 1, $r = .87$ at Time 2) between psychological ownership of the job and psychological ownership of the organization indicated that these two dimensions were highly interrelated. This result did not confirm previous research (e.g. Bernhard & O'Driscoll, 2011; Mayhew et al., 2007; O'Driscoll et al., 2006) which has consistently illustrated that psychological ownership of the job and psychological ownership of the organization are distinct. Only two recent studies (Chiu, Hui, & Lai, 2007; Han, Chiang, & Chang, 2010) have applied theories of psychological ownership to the Chinese and Taiwanese work context, but both studies focused only on organization-oriented psychological ownership, and they did not test psychological ownership of the job at the individual level. Fit indices in the present study indicated that the two-factor model of psychological ownership was better than the one-factor model at both times. Therefore, psychological ownership was retained as two factors in this study.

Finally, affective organizational commitment was a single factor before conducting CFA. However, the one factor model showed unacceptable reliabilities at both times ($\alpha = .41$ at Time 1 and $\alpha = .09$ at Time 2). Because four items were negatively worded, these four negatively worded items were combined into one factor (negative affective commitment), and the other four items were combined into a factor called positive affective commitment. Two items were deleted through CFA, confirming Meyer et al.'s (1993) research, as they deleted the same two items.

Reliabilities of these two subscales were high at both times: negative affective commitment ($\alpha=.79$ at Time 1 and $\alpha=.82$ at Time 2), positive affective commitment ($\alpha=.73$ at Time 1 and $\alpha=.74$ at Time 2).

8.3. Research Findings

Firstly, results of this research showed that the research model was applicable to the sample at both times. As predicted, transformational and paternalistic leadership were associated with perceived control, while perceived control was related to supervisor-subordinate *guanxi*. Supervisor-subordinate *guanxi* was related to psychological ownership of the job and of the organization, and psychological ownership of the job and of the organization were associated with criterion variables. Secondly, the mean levels of sixteen variables did not show any significant difference between Time 1 and Time 2, except that deference to supervisor showed significantly higher mean scores at Time 2. This might be because the degree of *guanxi* between supervisors and subordinates was getting stronger across time. One possible reason for the supervisor-subordinate *guanxi* improvement was that the personal relationship between supervisors and subordinates was developed and maintained well both inside and outside working hours. Subordinates might understand that the supervisor has to obey decisions from top management when changes occurred within the organization (e.g. downsizing), and thus they would defer to the supervisor. Another reason for the significantly higher mean scores could be that subordinates tried to maintain good personal *guanxi* with their supervisor at work. This is because supervisor-subordinate *guanxi* determines subordinates' probability of receiving bonus allocations and promotion (Law et al., 2000). There is a Chinese saying: "Be careful, or the leader will give you tight shoes" (Wang & Chee, 2011, p. 30). Chinese supervisors can make life very difficult for any subordinate who challenges their authority. A supervisor might negatively evaluate the performance of a subordinate's who the supervisor has bad *guanxi* with. Deference

to one's supervisor could show subordinate's loyalty and obedience to supervisor. This is a way to gain good *guanxi* with the supervisor.

There were twenty-six significant mediation paths at Time 1, whereas there were sixteen significant mediation paths at Time 2. Mediation results at Time 2 indicated that perceived control did not play a mediating role between transformational leadership and supervisor-subordinate *guanxi*. Deference to supervisor did not play a mediating role between perceived control and psychological ownership of the organization and of the job. Psychological ownership of the job and of the organization did not have mediation effects between deference to supervisors and criterion variables. Thus mediation results at Time 2 partially confirmed the mediation results at Time 1. Partial mediation was the main type of mediation.

The research hypotheses are discussed through the hypothesized model (Figure 8.1), which is based on the theoretical model of the study (Figure 2.1, p13). Findings of Model A, Model B and Model C are discussed sequentially in the order relationships between predictors and criterion variables, and relationships between predictors, mediators and outcomes. Cross-sectional and longitudinal findings for discussions of each model are discussed.

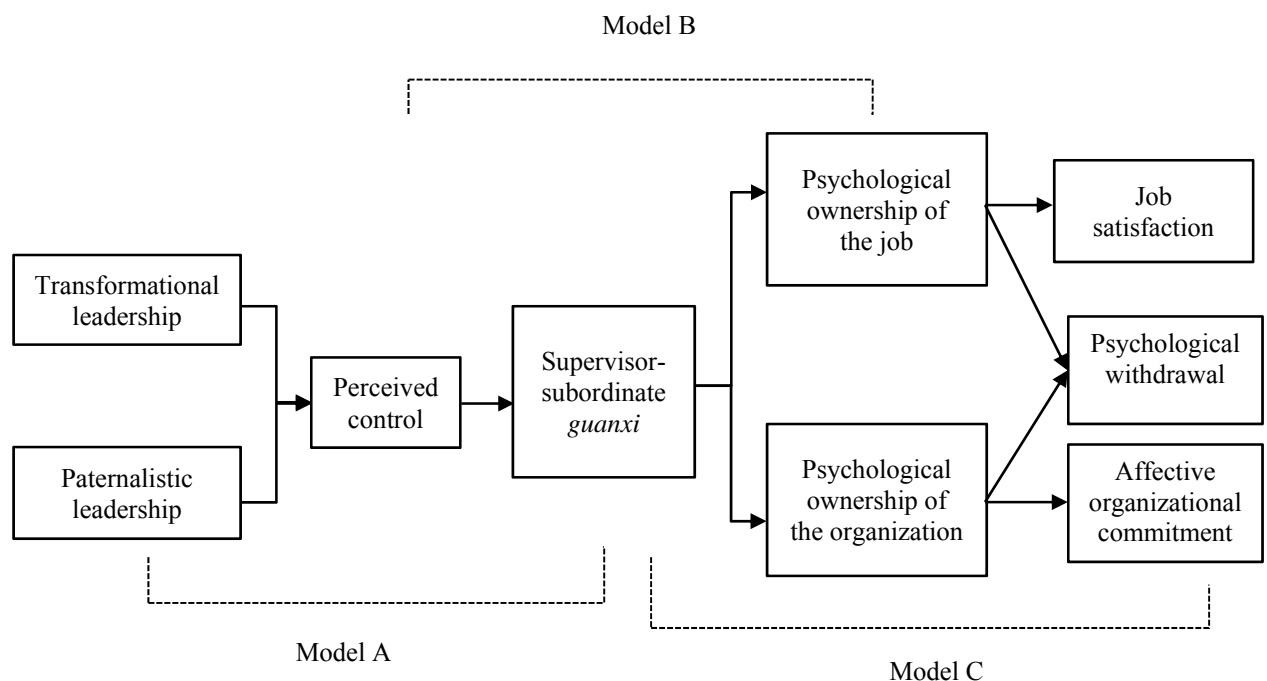


Figure 8.1. Hypothesized research model.

8.3.1. Model A: leadership-perceived control-supervisor-subordinate *guanxi* relationships

The relationships among transformational leadership, paternalistic leadership, perceived control and supervisor-subordinate *guanxi* are discussed in three sections: main effects of leadership styles on perceived control; main effects of perceived control on supervisor-subordinate *guanxi*; and mediating effects of perceived control. All relationships were examined both cross-sectionally and longitudinally. The longitudinal approach for the current research involved estimating the effects of predictors at Time 1 on mediators and criterion variables at Time 2.

Main effects of leadership styles on perceived control

A summary of cross-sectional and longitudinal relationships between leadership styles (transformational leadership and paternalistic leadership) and perceived control is presented in Table 8.1. The overall results are in agreement with Li's (2008) study, which found leadership styles were related to employees' feelings of control at work within Western organizations. This study provided similar results that leadership styles have significant direct relationships with employees' perceived control within Chinese work organizations.

The relationship between transformational leadership and perceived control was consistently in the expected direction. Perceived control was positively related to idealized influence, motivational stimulation and individualized consideration in both cross-sectional and longitudinal analyses. These findings support findings from previous studies (e.g. Javidan & Carl, 2005; Wang et al. 2005), which showed that transformational leadership was applicable within Chinese organizations.

Correlations between transformational leadership and perceived control were similar to correlations between paternalistic leadership and perceived control. Perceived control was positively related to the benevolent form of paternalistic leadership and the moral form of

paternalistic leadership, but negatively correlated with the authoritarian form of paternalistic leadership.

Table 8.1. Results for direct relationship between leadership styles and perceived control

Leadership styles		Perceived control		
		Time 1	Time 2	Longitudinal
<i>Transformational leadership</i>				
Idealized influence	→	√	√	√
Motivational stimulation	→	√	√	√
Individualized consideration	→	√	√	√
<i>Paternalistic leadership</i>				
Authoritarian form	→	√	√	√
Benevolent form	→	√	√	√
Moral form	→	√	√	

Note. √ Significant hypothesized relationship

The results contribute new determinants of perceived control. The authoritarian form of paternalistic leadership had negative effects on employees' felt control at work, whereas the benevolent form of paternalistic leadership had positive effects on perceived control in the Chinese work context. The moral form of paternalistic leadership had positive effects on felt control at work cross-sectionally, but it did not have any effect longitudinally. A possible explanation for this result could be that the Chinese subordinates are likely to place more emphasis on supervisor's morality. A supervisor's moral leadership may not be followed in the long-term if he/she does not keep the moral standard in Confucian teaching (Huang, 2012).

The benevolence (ren, 仁)-righteousness (yi, 义)-propriety (li, 礼) ethical system is the key value in Confucian teaching (Huang & Bond, 2012). This ethical system is described by the following proposition in the book of *The Doctrine of the Mean* (Legge, 1895, p. 383):

Benevolence is the characteristic element of humanity, and the great exercise of it is in loving relatives. Righteousness is the accordance of actions with what is right, and the great exercise of it is in honouring the worthy. The decreasing measures of the love due to relatives, and the steps in the honour due to the worthy, are produced by the principle of propriety.

This ethical system is carried out via five fundamental relationships: to show filial piety to parents, to respect elders, to be loyal to the leader or superior as well as to friends and family in daily life. In today's Chinese work place, the ethical system focuses on personal relationships (including outside the work place), respecting authority, and caring about peers or team members (Wang & Chee, 2011). Therefore, the ethical system requires the supervisor to be a role model for his/her organization or team, and such a role model is called *Junzi* (a true gentleman) in Confucian teaching (Hwang, 2012; Wang & Chee, 2011).

The word *Junzi* (君子) consists of two Chinese characters. *Jun* (君) means superior, or an honoured title given to specific individuals. *Zi* (子) means master, a title of respect for a gentleman. How a leader becomes a *Junzi* is described by Legge (1895, p. 311):

The ancients, who wished to illustrate illustrious virtue throughout the kingdom, first ordered well their own states. Wishing to order well their states, they first regulated their families. Wishing to regulate their families, they first cultivated their persons. Wishing to cultivate their persons, they first rectified their hearts. Wishing to rectify their heart, they first sought to be sincere in their thoughts.

To be a *Junzi*, the leader should first cultivate his/her morality, and he/she should practice filial piety and look after his/her family, then he/she should show loyalty to the country (the superfamily) (Redding, 1990; Wang & Chee, 2011). It is a rare attainment for a supervisor to be

fully respected as a *Junzi* in today's Chinese work place (Wang & Chee, 2011). Although cross-sectional analyses supported that supervisors' moral leadership makes subordinates perceive control at work, Chinese subordinates still tend to place more emphasis on supervisor's moral leading abilities (Huang, 2012). As Confucius said, "when a prince's personal conduct is correct, his government is effective without the issuing of orders. If his personal conduct is not correct, he may issue orders, but they will not be followed" (Legge, 1895, p. 178). Subordinates expect their supervisor has an obligation to control him/herself at work and not be aggressive. He/she needs to be benevolent, love subordinates properly and be empathic to everyone (Wang & Chee, 2011). If the supervisor's behaviours are not in accord with subordinates' moral expectations, for example, the supervisor may exclude a subordinate who he/she does not like from participating in decision-making. Other subordinates may seem to follow the supervisor's orders under his/her authority, but these subordinates would think 'the supervisor might cheat me the same way if he/she does not like me in the future,' thus they question the supervisor's moral leadership in their minds. In the long-term, subordinates might no longer follow the supervisor's orders as his/her supervision is based on personal preferences. Thus, the moral form of paternalistic leadership cannot longitudinally relate to perceived control when subordinates do not follow the supervisor's moral leadership.

Main effects of perceived control on supervisor-subordinate guanxi

A summary of cross-sectional and longitudinal relationships between perceived control and supervisor-subordinate *guanxi* is presented in Table 8.2. The relationship between perceived control and the three dimensions of supervisor-subordinate *guanxi* was consistently in the expected direction. Perceived control had positive relationships with affective attachment to the supervisor and personal-life inclusion at both Time 1 and Time 2, and also had a positive longitudinal relation with these two variables. However, perceived control only had a positive

relation with deference to supervisor cross-sectionally, and did not have any effect on deference to supervisor longitudinally.

Table 8.2. Results for direct relationship between perceived control on supervisor-subordinate *guanxi*

Perceived control		Supervisor-subordinate <i>guanxi</i>		
		Time 1	Time 2	Longitudinal
→	Affective attachment	√	√	√
→	Personal-life inclusion	√	√	√
→	Deference to supervisor	√	√	

Note. √ Significant hypothesized relationship

These results supported the understanding that Chinese subordinates have willingness and ability to build up good *guanxi* with their supervisor when they perceive they have personal control at work. In both the short-term and long-term, subordinates emotionally connect to the supervisor and share the supervisor's private life after work when they perceive control at work as they expected. This supported Yang's (2006) ideas that personal interactions between supervisor and subordinate at the Chinese workplace can be characterized by the familization process. In contrast, perceived control had a direct relation with deference to supervisor in the short-term rather than in the long-term. As mentioned in Chapter 2 (p.25), the utilitarian type of *guanxi* is the most common relationship between general acquaintances, and the characteristics of utilitarian *guanxi* are less trust and limited duration (Zhang & Zhang, 2006). It does not necessarily involve favour exchange with others, but repayment is necessary. This type of *guanxi* is generally implied in the Chinese work place (Hwang, 2012; Zhang & Zhang, 2006). The subordinates need to control resources (e.g. working time, amount of work and physical condition of work), in order to complete work tasks. When subordinates felt control at work as

they expected, in return they were deferent to the supervisor immediately. However, when the subordinates completed the tasks they might think keeping a personal relationship with the supervisor would not be necessary. The degree of obedience and devotion subordinates have toward the supervisor would be reduced. Therefore, subordinates' perceived control at work might not be related to deference to supervisor in the long-term.

Mediating effects of perceived control

Analyses were conducted to examine whether perceived control mediated the relationships between leadership styles (transformational and paternalistic leadership) and supervisor-subordinate *guanxi* (Table 8.3). The results show that perceived control did not mediate the relation between transformational leadership and supervisor-subordinate *guanxi*.

Time 1 results support the prediction from previous studies that transformational leadership affected subordinates' commitment to the supervisor. Results show that subordinates perceived control at work when the supervisor motivated and challenged them to be creative and provided a supportive climate to assist subordinates' individual needs. The subordinates affectively attach to their supervisor, share their supervisor's private life and are deferential to the supervisor when they have control at work.

However, longitudinal results did not indicate that perceived control had mediation effects over time between three dimensions of transformational leadership and three dimensions of supervisor-subordinate *guanxi*. One plausible reason for this inconsistency might be that supervisors were not able to transform the organization's long-term goals into subordinates' personal goals and did not motivate subordinates to commit to the organization and provide a supportive climate to assist subordinates at work consistently.

Table 8.3. Summary of results for the mediating effects of perceived control

Predictors		Mediator	Outcomes		
				Time 1	Time 2 Longitudinal
<i>TL</i>					
II	→	control	→	AA	
MS	→	control	→	AA	√
IC	→	control	→	AA	√
II	→	control	→	PI	
MS	→	control	→	PI	√
IC	→	control	→	PI	√
II	→	control	→	DS	
MS	→	control	→	DS	√
IC	→	control	→	DS	√
<i>PL</i>					
AL	→	control	→	AA	√
BL	→	control	→	AA	√ √
ML	→	control	→	AA	
AL	→	control	→	PI	√
BL	→	control	→	PI	√ √
ML	→	control	→	PI	
AL	→	control	→	DS	√
BL	→	control	→	DS	√
ML	→	control	→	DS	

Note. √ Significant hypothesized relationship TL=transformational leadership, II=idealized influence, MS= motivational stimulation, IC= individualized consideration, PL= paternalistic leadership, AF= authoritarian form of paternalistic leadership, BF= benevolent form of paternalistic leadership, MF= moral form of paternalistic leadership, AA=affective attachment, PI=personal-life inclusion, DS= deference to supervisor

Supervisor-subordinate *guanxi* is based on mutual interest and benefit between supervisor and subordinate (Han & Altman, 2009), and it can be classified under Zhang and Zhang's (2006) three types of *guanxi*: utilitarian, reciprocal, and obligatory (Chapter 2, p.38). Therefore, a second plausible reason for this inconsistency might be that the utilitarian *guanxi* is the main type of *guanxi* between Chinese supervisor and subordinate. The nature of this relationship is repayment exchange. When a transformational leader gives enough control to subordinates, these subordinates could immediately attach to their supervisor, to share supervisor's private life and to be deferential to the supervisor in return. On the other hand, the duration of the utilitarian type of *guanxi* is temporary. Subordinates may still have high level of control at work when the subordinates have completed the tasks or changed position, but the utilitarian type of supervisor-subordinate *guanxi* would be extinguished because subordinates might need to build up new *guanxi* with a new supervisor. This could be a reason why transformational leadership had a consistent relationship with perceived control, but perceived control did not longitudinally mediate the relation between transformational leadership and supervisor-subordinate *guanxi*.

Thirdly, it is possible that the difference in sample size between Time 1 ($N = 971$) and Time 2 ($N = 201$) had a significant effect on the inconsistent mediation results. The demographics were analysed to see whether there was a considerable change between Time 1 and Time 2 participants. For example, at Time 1, the participants' average age was 31 years, ranging from 18 to 59 years old. Males comprised 50.7 per cent of the sample. At Time 2 (a six-month time interval), the sample demographics were similar to Time 1. The participants' average age was 30 years, ranging from 19 to 53 years old, and females comprised 47.3 per cent of the sample. However, there was a substantial change in educational background between Time 1 and Time 2 participants. At Time 1, 37.4 per cent participants indicated they held a bachelor degree, high school certificate (19.8%), master degree (4.9%), and junior high school (3.1%). At Time 2, the percentages were bachelor degree (51.2%), high school certificate (8.5%), master degree (7.5%),

and junior high school (1.0%). Compared with employees having less schooling, highly educated employees might have different perceptions of maintaining personal *guanxi* with the supervisor. These employees are not only affected by traditional collectivism, but also by non-traditional individualism (Yan, 2009). They tend to emphasize the supervisors' leading abilities rather than maintaining long-term *guanxi* with the supervisor (Gallo, 2011). This could be another reason why transformational leadership had a significant relationship with perceived control, but perceived control did not consistently mediate the relation between transformational leadership and supervisor-subordinate *guanxi*.

Lastly, the time lag (6 months) used in the present study might affect the results at Time 2. As mentioned in Chapter 2, supervisor-subordinate *guanxi* can be characterized by familization process. The familization process takes a long time to complete. Many things can happen in a workplace over a six-month time frame (e.g., restructure redundancy, change work position or supervisor etc.). These events could influence subordinates to maintain *guanxi* with their supervisor. Therefore, a longer time lag (e.g., 12 months) might produce more stable results.

In contrast, perceived control partially mediated the relationship between paternalistic leadership and supervisor-subordinate *guanxi*. Paternalistic leadership consists of authoritarianism, benevolence and morality. Results show that perceived control did not mediate the relationship between authoritarianism and supervisor-subordinate *guanxi*. Perceived control partially mediated the relationship between benevolence and supervisor-subordinate *guanxi* in the cross-sectional analyses. Perceived control only mediated the relationship between morality and supervisor-subordinate *guanxi* in the longitudinal analyses.

These results firstly indicate that Chinese subordinates might not accept leadership which only emphasizes strict discipline and unquestioned obedience at work. Authoritarianism would not make subordinates perceive control at work, as a consequence control at work did not relate to *guanxi* between supervisors and subordinates either short-term or long-term. These results

confirm Cheng, Huang and Chou's (2002) finding that the authoritarian form of paternalistic leadership had negative effects in a Chinese work context. The manager/supervisor should not play an authoritarian role at the work place.

Secondly, control at work would be perceived by Chinese subordinates immediately when supervisors demonstrated individualized concern for subordinates' personal and familial well-beings. This could improve personal *guanxi* between supervisors and subordinates in the short-term. However, good *guanxi* needs to be maintained. Supervisors need to keep being benevolent, otherwise, control cannot play a long-term mediating role between paternalistic leadership and supervisor-subordinate *guanxi*.

Thirdly, the results show that perceived control does not have any mediation effect between supervisor's morality and supervisor-subordinate *guanxi* in the short-term, but it has longitudinal mediation effects between morality and supervisor-subordinate *guanxi*. A plausible reason is that perceived control might not mediate the relationship between the supervisor's morality and the utilitarian type of supervisor-subordinate *guanxi*. However, if the *guanxi* between supervisor and subordinate is the reciprocal or obligatory type, then perceived control mediates the relationship between the supervisor's morality and supervisor-subordinate *guanxi* in the long-term. This is because the duration of the utilitarian type is temporary and the motivation for building utilitarian *guanxi* is utilitarianism, requiring less trust to maintain the relationship between supervisors and subordinates (Zhang & Zhang, 2006). In contrast, the duration of reciprocal or obligatory type of *guanxi* is longer than the utilitarian type of *guanxi*, requiring full trust and reputation to maintain it. Full trust from subordinates and a gained reputation are based on the supervisor's morality at work.

In summary, transformational leadership was positively related to perceived control in both cross-sectional and longitudinal analyses. The relationship between paternalistic leadership and perceived control was also consistently in the expected direction. These results show that both

transformational leadership and paternalistic leadership were applicable within Chinese organizations. The relationship between perceived control and three dimensions of supervisor-subordinate *guanxi* was consistently significant in both cross-sectional and longitudinal analyses. This supports the expectation that employees' feelings of control at work influence their willingness and ability to build up personal *guanxi* with their supervisor. However, cross-sectional and longitudinal results do not support that perceived control had mediation effects between transformational leadership and supervisor-subordinate *guanxi*. In contrast, perceived control partially mediated the relation between paternalistic leadership and supervisor-subordinate *guanxi*. The following section discusses the findings of Model B.

8.3.2. Model B: perceived control-supervisor-subordinate *guanxi*-psychological ownership relationships

The relationship between perceived control and supervisor-subordinate *guanxi* (Model A) is discussed above. Two sub-sections are discussed in this section: main effects of supervisor-subordinate *guanxi* on psychological ownership of the job and of the organization; and mediating effects of supervisor-subordinate *guanxi* between perceived control and psychological ownership of the job and of the organization.

*Main effects of supervisor-subordinate *guanxi**

A summary of cross-sectional and longitudinal relationships between supervisor-subordinate *guanxi* and psychological ownership of the job and of the organization is presented in Table 8.4. The overall results fully answered the first research question that supervisor-subordinate *guanxi* is positively and significantly related to psychological ownership of the job and of the organization within the Chinese work context. This finding contributes a new antecedent variable to psychological ownership in the Chinese work context.

There are at least three essential motives that provide feelings of ownership: control of the target; self-identity, and home (Pierce et al., 2001). Psychological ownership influences an

individual's motivation and performance through these three routes. I argue that supervisor-subordinate *guanxi* functions as the fourth route to produce feelings of ownership toward the job and the organization in the Chinese work context.

Table 8.4. Direct effects of supervisor-subordinate *guanxi* on psychological ownership of the job and of the organization

Supervisor-subordinate <i>guanxi</i>		Psychological ownership		
		Time 1	Time 2	Longitudinal
Affective attachment	→ Psychological ownership of the job	√	√	√
Personal-life inclusion	→ Psychological ownership of the job	√	√	√
Deference to supervisor	→ Psychological ownership of the job	√	√	√
Affective attachment	→ Psychological ownership of the organization	√	√	√
Personal-life inclusion	→ Psychological ownership of the organization	√	√	√
Deference to supervisor	→ Psychological ownership of the organization	√	√	√

Note. √ Significant hypothesized relationship

The present results support that Chinese employees self-identified themselves (e.g. ‘we are team mates’) via supervisor-subordinate *guanxi*, in order to produce feelings of ownership for their job and organization. The research results support the proposition that Chinese employees would have feelings of ownership toward their job and organization if the relationship between supervisors and subordinates was family-oriented. This corresponds to Yang's (2006) argument that familization occurs within Chinese organizations. Familization would work through three types of personal *guanxi*: utilitarian, reciprocal and obligatory. An individual would go through the development of acquaintance-close friends-familial members to complete the familization process within the Chinese work context (Wang & Chee, 2011; Yang, 2006). Through this

process, the individual considers the organization as a home and invests in this target, producing feelings of ownership toward the job and the organization.

Mediating effects of supervisor-subordinate guanxi

The mediating effects of supervisor-subordinate *guanxi* are presented in Table 8.5. Supervisor-subordinate *guanxi* had short-term but not long-term partial mediation effects between perceived control and psychological ownership of the job and psychological ownership of the organization.

Cross-sectional results confirm that affective attachment to supervisor partially mediated the relationship between perceived control and psychological ownership of the job and of the organization. Personal-life inclusion also partially mediated the relationship between perceived control and psychological ownership of the job and of the organization at both times. However, affective attachment to supervisor and personal-life inclusion had no longitudinal mediation effects between perceived control and psychological ownership of the job and of the organization. The results do not support the hypotheses that deference to supervisor would mediate the relationship between perceived control and psychological ownership of the job and of the organization longitudinally.

A possible explanation for these results could be that Chinese subordinates have willingness to build up good *guanxi* with their supervisor when they perceive positive control at work. Subordinates could have emotional attachment to the supervisor and share the supervisor's private life after work. Through the process of affective attachment to the supervisor and personal-life inclusion, the distance between supervisor and subordinate might become closer, and the closer relationship might help subordinates to identify themselves as *Zijiren* (自己人) with each other. *Zijiren* means a small group of really close friends who are very special people based on the obligatory type of *guanxi* rather than reciprocal or utilitarian types of *guanxi*, but having no kinship among them (Wang & Chee, 2011). Therefore, self-identify as *Zijiren* would produce feelings of ownership toward the job and organization.

Table 8.5. Summary of results for the mediating effects of supervisor-subordinate *guanxi*

Predictors		Mediator		Outcomes	Time 1	Time 2	Longitudinal
control	→	Affective attachment	→	Psychological ownership of the job	√	√	
control	→	Personal-life inclusion	→	Psychological ownership of the job	√	√	
control	→	Deference to supervisor	→	Psychological ownership of the job	√		
control	→	Affective attachment	→	Psychological ownership of the organization	√	√	
control	→	Personal-life inclusion	→	Psychological ownership of the organization	√	√	
control	→	Deference to supervisor	→	Psychological ownership of the organization	√		

Note. √ Significant hypothesized relationship

However, the relationship might vary as personal *guanxi* changes between supervisors and subordinates. The supervisor-subordinate *guanxi* would be worse when supervisor and subordinate do not cooperate well at work, such as in competition for work resources, where a personality does not match, or taking advantage of subordinates for personal gain. This might be a plausible reason to explain why affective attachment to supervisor and personal-life inclusion had short-term mediation effects rather than long-term effects. Another explanation would be that the utilitarian type of *guanxi* might be the main type of *guanxi* between supervisor and subordinate in the workplace. This type of *guanxi* is motivated by utilizing each other and the duration is short. Utilitarian *guanxi* vanishes when repayment exchanges between supervisor and subordinate have been completed. Chinese subordinates might consider that emotional attachment to the supervisor and sharing the supervisor's private life after work as the main actions to complete the utilitarian exchanges, but to be deferential to the supervisor is not necessary. Hence, the results do not support the hypotheses that deference to supervisor would

mediate the relationship between perceived control and psychological ownership of the job and of the organization.

Results also showed that correlations between psychological ownership of the job and psychological ownership of the organization were high at both Time 1 ($r = .69, p < .01$), and Time 2 ($r = .79, p < .01$). Longitudinal analyses also show a moderately high correlation between psychological ownership of the job at Time 1 and psychological ownership of the organization at Time 2 ($r = .50, p < .01$), and a moderately high correlation between psychological ownership of the job at Time 2 and psychological ownership of the organization at Time 1 ($r = .45, p < .01$). These results are somewhat different to previous research which reported small-medium correlations between psychological ownership of the job and the organization among Western samples. For example, Bernhard and O'Driscoll (2011) reported a medium correlation ($r = .50, p < .01$) between psychological ownership of the job and of the organization from German samples. O'Driscoll et al. (2006) reported a medium correlation ($r = .60, p < .05$) from New Zealand samples. Mayhew et al. (2007) reported a medium correlation ($r = .43, p < .01$) from Australian samples.

A plausible reason for the high correlations between psychological ownership of the job and of the organization in the Chinese samples could be that Chinese employees' psychological connection to the job and to organization are viewed as a whole. As described, in a Confucian society, the family is the fundamental social unit with a very tight structure, emphasizing the hierarchical order of seniority, age and gender (Hwang, 2008), and the benevolence-righteousness propriety (*ren-yi-li*) ethical system is the essential component of the Confucian society. This ethical system requires everybody to interact with each other through five fundamental relationships within a Chinese family and interact with acquaintances through his/her *guanxi* ties outside the family. Chinese culture thus is strongly collectivist or group oriented (Hofstede & Hofstede, 2005) and a Chinese social relationship is characterized by

familial collectivism (Bond & Hwang, 1986). Under the influence of familial collectivism, Chinese employees consciously treat the job and the organization as a whole. This might be why results of this research found high correlations between psychological ownership of the job and of the organization. In contrast, for the most part, Westerners are trained in a scientific way of thinking which is linear. When dealing with things, they would break them down into different parts (Gallo, 2011).

Overall, the results indicate that supervisor-subordinate *guanxi* is positively and significantly related to psychological ownership of the job and of the organization in short-term within the Chinese work context. The results also indicate that supervisor-subordinate *guanxi* can function as a route to producing a feeling of ownership for the job and the organization within the Chinese work context. At the same time, under the influence of Confucianism, Chinese employees psychologically treated the relation between the job and the organization as a whole. The following section discusses findings for Model C.

8.3.3 Model C: Supervisor-subordinate *guanxi*- psychological ownership-criterion variables relationships

The direct relationships between supervisor-subordinate *guanxi* and psychological ownership of the job and of the organization have been discussed under Model B. Four issues are discussed in this section: main effects of psychological ownership of the job on job satisfaction and psychological withdrawal; main effects of psychological ownership of the organization on affective organizational commitment and psychological withdrawal; mediating effects of psychological ownership the job between supervisor-subordinate *guanxi* and criterion variables; mediating effects of psychological ownership of the organization between supervisor-subordinate *guanxi* and criterion variables.

Main effects of psychological ownership of the job

A summary of cross-sectional and longitudinal relationships between psychological ownership (of the job and of the organization) and criterion variables (job satisfaction, affective organizational commitment and psychological withdrawal) is presented in Table 8.6. The relationships between psychological ownership and criterion variables were consistently in the expected direction.

Table 8.6. Direct effects of psychological ownership on criterion variables

Psychological ownership	Criterion variables			
		Time 1	Time 2	Longitudinal
Psychological ownership of the job →	Job satisfaction	√	√	√
Psychological ownership of the job →	Psychological withdrawal	√	√	√
Psychological ownership of the organization →	Affective organizational commitment	√	√	√
Psychological ownership of the organization →	Psychological withdrawal	√	√	√

Note. √ Significant hypothesized relationship

As far as has been ascertained, this is the first study to examine both psychological ownership of the job and psychological ownership of the organization in the Chinese work context. Although three previous studies (Cao, Cao, & Long, 2009; Chiu et al., 2007; Han et al., 2010) examined psychological ownership in the Chinese mainland or Taiwan, they focused on psychological ownership of the organization rather than employees' felt ownership of the job. The cross-sectional results show high correlations between psychological ownership of the job and job satisfaction. The longitudinal results show a significant correlation between Time 1 psychological ownership of the job and Time 2 job satisfaction. These results support previous findings (Dunford, Schleicher, & Zhu, 2009; Mayhew et al., 2007) that psychological ownership

of the job has positive direct effects on job satisfaction. The results also consistently show that psychological ownership of the job was negatively related to psychological withdrawal. The results indicate Chinese employees avoid psychological withdrawal at work when they have strong feelings of possession toward their job. This supports Li's (2008) findings, reporting a significant negative relationship between psychological ownership of the job and psychological withdrawal in a New Zealand sample.

Main effects of psychological ownership of the organization

This study confirms that psychological ownership of the organization had significant positive effects on affective organizational commitment. The results indicate that Chinese employees desired to remain in the organization, had feelings of belongingness and accepted the organization's values and goals when they felt ownership of the organization. The results confirm previous research such as O'Driscoll et al. (2006) who reported a high correlation ($r = .72, p < .01$) between psychological ownership of the organization and commitment in a New Zealand sample. Mayhew et al. (2007) also reported a significant correlation ($r = .43, p < .05$) in an Australian sample. The study also provides similar results with two Taiwanese studies. Han et al. (2010) reported a significant positive relationship ($r = .45, p < .01$) between psychological ownership of the organization and organizational commitment. Hou, Hsu and Wu (2009) reported a significant relationship ($r = .32, p < .01$) between psychological ownership and organizational commitment. In addition, one Chinese study (Cao et al., 2009) reported a correlation ($r = .54, p < .01$) between psychological ownership of the organization and organizational commitment.

The cross-sectional results show significant negative correlations between psychological ownership of the organization and psychological withdrawal. There is a significant longitudinal correlation between Time 1 psychological ownership of the organization and Time 2 psychological withdrawal. This study examined the relationship between psychological

ownership of the organization and psychological withdrawal. The results indicate Chinese employees avoided psychological withdrawal at work, in order to maintain emotional attachment to work when they have strong feelings of ownership toward their organization.

Mediating effects of psychological ownership of the job

The mediating effects of psychological ownership of the job are presented in Table 8.7. Psychological ownership of the job partially mediated the relations between supervisor-subordinate *guanxi* and criterion variables. In detail, the cross-sectional and longitudinal results show that psychological ownership of the job consistently had partial mediation effects between affective attachment to supervisor and both outcome variables (job satisfaction and psychological withdrawal).

Table 8.7. Summary of results for the mediating effects of psychological ownership of the job and of the organization

Predictors		Mediator		Outcomes			
					Time 1	Time 2	Longitudinal
AA	→	POJ	→	JS	√	√	√
PI	→	POJ	→	JS		√	
DS	→	POJ	→	JS	√		
AA	→	POJ	→	PW	√	√	√
PI	→	POJ	→	PW		√	
DS	→	POJ	→	PW	√		
AA	→	POO	→	AC	√	√	√
PI	→	POO	→	AC		√	
DS	→	POO	→	AC	√		
AA	→	POO	→	PW		√	√
PI	→	POO	→	PW		√	
DS	→	POO	→	PW			

Note. √ Significant hypothesized relationship. AA= affective attachment, PI=personal-life inclusion, DS=deference to supervisor, POJ=psychological ownership of the job, POO=psychological ownership of the organization, JS= job satisfaction, AC=affective organizational commitment, PW=psychological withdrawal

A plausible reason for these results might be that affective attachment to supervisor functioned as a route to produce feelings of ownership for the job more than personal-life inclusion and

deference to supervisor did. Chinese workers follow the benevolence-righteousness propriety ethical standards when Chinese supervisor and subordinate work with each other as ‘family members’. The ethical standards are based on five fundamental relationships, and *guanxi* extends kinship to supervisor and subordinate who are not kin.

Guanxi significantly affects feelings between supervisor and subordinate, which is characterized as *renqing* (human feelings) in a Confucian society (Yang, 1994). *Renqing* refers to a “bond of reciprocity and mutual aid between two people, based on emotional attachment or the sense of obligation and indebtedness” (Yang, 1994, p.68). As mentioned in Chapter 2, familization is a cultural characteristic in the Chinese work context. However, it is very difficult for a stranger to become a family member (Hwang, 2012). Sharing the supervisor’s private life and deference to supervisor at work might be two effective methods to improve human feelings (*renqing*) with the supervisor, and to shorten the social distance between supervisor and subordinate. Utilitarianism requires that the supervisor looks after his/her subordinates at work in return.

Another plausible reason is that only affective attachment to the supervisor helped subordinates to identify themselves at work, and produce feelings of ownership for their job. This might be why subordinates affectively attach to their supervisor, so they would have feelings of ownership toward their job, in order to improve job satisfaction and to reduce psychological withdrawal at work in the Chinese work context.

Mediating effects of psychological ownership the organization

The mediating effects of psychological ownership of the organization are also presented in Table 8.7. Psychological ownership of the job partially mediated the relations between supervisor-subordinate *guanxi* and criterion variables. Specifically, the cross-sectional and longitudinal results show that psychological ownership of the organization consistently had partial mediation effects between affective attachment to supervisor and affective organizational commitment.

Psychological ownership of the organization only had longitudinal mediation effects between affective attachment to supervisor and psychological withdrawal.

The results show psychological ownership of the organization yielded similar mediation effects as those of psychological ownership of the job. These results indicate that sharing the supervisor's private life and deference to supervisor at work are two practical methods to improve relationships (*renqing*) with the supervisor. Subordinates' emotional attachment to their supervisor would be stronger as *renqing* gets deeper, and the social distance between supervisor and subordinate also would be shorter. As mentioned, Chinese culture is strongly collectivist oriented (Hofstede & Hofstede, 2005) and Chinese employees would treat the job and the organization as a whole. When subordinates affectively attach to their supervisor, they would have feelings of ownership for the job as well as toward the organization. This might be the reason why only psychological ownership of the organization had short-term and long-term mediation effects between affective attachment to supervisor and criterion variables.

Overall, the results consistently show psychological ownership of the job had direct effects on job satisfaction, psychological ownership of the organization positively related to affective organizational commitment, and both dimensions negatively related to psychological withdrawal in the Chinese work context. At the same time, psychological ownership of the job and psychological ownership of the organization only consistently showed mediating effects between affective attachment to supervisor and the criterion variables.

8.4. Theoretical Significance

The first aim of the present research was to explore the relationships between leadership, perceived control and psychological ownership in the Chinese work context. The second aim was to extend the theoretical model to include supervisor-subordinate *guanxi*, to examine how supervisor-subordinate *guanxi* affects workers' feelings of ownership in Chinese workplaces,

and to discover whether control at work promotes personal *guanxi* between supervisors and subordinates.

The first implication of the findings is that Western transformational leadership was significantly related to Chinese employees' perceived control at work, while a significant relationship between Chinese paternalistic leadership and perceived control was also found. Results of the present study showed that both leadership styles had similar correlations with perceived control in the cross-sectional and longitudinal analyses, which indicated that paternalistic leadership was not over and above transformational leadership. This result does not correspond with previous arguments (Cheng et al., 2004; Cheng et al., 2002; Farh et al., 2008) that compared Western transformational leadership with Chinese paternalistic leadership, suggesting that paternalistic leadership can explain changes in subordinate outcomes better than transformational leadership in the Chinese work context.

The second implication concerns the specification of paternalistic leadership. This study investigated outcomes of paternalistic leadership, in particular, differences among different paternalistic leadership styles (authoritarianism, benevolence and morality). Pellegrini and Scandura's (2008) question whether benevolence is more strongly related to performance than authoritarian behaviour. The present results show that authoritarianism was not associated with perceived control at work. As a consequence, control at work did not relate to *guanxi* between supervisors and subordinates. In contrast, control at work was perceived by Chinese subordinates when supervisors demonstrated benevolence for subordinates' personal and familial well-beings. This could improve personal *guanxi* between supervisors and subordinates. Therefore, the benevolent form of paternalistic leadership was over and above the authoritarian form of paternalistic leadership.

The third implication concerns the work control variable. As far as I know, this is the first study to use Dwyer and Ganster's (1991) instrument to measure perceived control in Chinese

work contexts. This measure provided good model fit statistics and good reliability indices. Perceived control had stronger mediation effects between Chinese paternalistic leadership and supervisor-subordinate *guanxi* than between Western transformational leadership and supervisor-subordinate *guanxi*, which highlights the main effects of perceived control in the Chinese work context. Cross-sectional and longitudinal results indicate that these Chinese workers had good personal *guanxi* with their supervisor when they perceived a high level of work control. Thus my research suggests that measures of perceived control developed from Western beliefs (mainly in USA and New Zealand) are generalizable to the present Chinese samples and perceived control could be a determinant of supervisor-subordinate *guanxi* in the Chinese work context.

The fourth theoretical implication is that the study used Chen et al.'s (2009) measures of supervisor-subordinate *guanxi*, which has the advantage of including both work and non-work relationships, to longitudinally test supervisor-subordinate *guanxi* quality. Results show that supervisor-subordinate *guanxi* had significant positive effects on psychological ownership of the job and psychological ownership of the organization. The utilitarian type of *guanxi* might be the main type of *guanxi* between supervisors and subordinates because supervisor-subordinate *guanxi* had short-term mediation effects between perceived control and psychological ownership of the job and of the organization rather than long-term mediation effects in the Chinese samples. These findings contribute new knowledge about the effect of *guanxi* at the individual level, illustrating how the characteristics of different types of *guanxi* affect the processes and outcomes of *guanxi* practices between supervisors and subordinates.

Another theoretical implication concerns the role of psychological ownership of the job and of the organization in the Chinese work context. My research suggests that measures of psychological ownership of the job and of the organization from Western cultures are generalizable to the present Chinese samples. An important contribution is that supervisor-

subordinate *guanxi* can function as a fourth route to produce feelings of ownership for the job and the organization in the Chinese work context. The results differed to previous studies from the Chinese mainland and Taiwan (Cao et al., 2009; Han et al., 2010; Hou et al., 2009), which focused on psychological ownership of the organization rather than psychological ownership of the job. The results of the present study show high correlations between psychological ownership of the job and of the organization. This may illustrate that Chinese employees consciously treat the job and the organization as a whole. This is somewhat different to findings from previous Western studies, which reported small-medium correlations between psychological ownership of the job and the organization among Western samples (Bernhard & O'Driscoll, 2011; Mayhew et al., 2007; O'Driscoll et al., 2006).

The present study was able to verify that the relationship of perceived work control-personal *guanxi*-psychological ownership was an important causal relationship in the Chinese work context. the present results support Yang's (2006) argument that personal interactions between supervisor and subordinate can be characterized as a familization process at the Chinese work place, which is based on the five fundamental relationships in Confucianism. *Guanxi* extends kin-relationship between supervisors and subordinates who are not kin. My research is consistent with Chen et al.'s (2009) study that examined the impact of the familization process. Supervisor-subordinate *guanxi* is an important route to achieve familization and is a motive to increase Chinese workers' feelings of ownership toward the job and the organization. This research also contributes to the debate on whether *guanxi* is still important in the modern Chinese work context (Chen et al., 2009). For instance, the development of social systems in China will decrease the importance of *guanxi* in a work place (Guthrie, 1998), whereas *guanxi* is a cultural characteristic and it will continually transform and shape new social structures (Yang, 2002). Results of the present study support Yang's (2002) argument that *guanxi* still plays an important role between supervisors and subordinates in today's Chinese work settings.

8.5. Practical Implications

The present study has several practical implications for researchers, Chinese management practitioners and organizations. As mentioned in Chapter 1, China is the second largest economy of the world and it is attracting more foreign investment than other countries (Huang & Bond, 2012). Those foreign companies are dealing with cultural differences and challenges from different leadership styles in the China work context. Although there were attempts to eliminate Confucianism in China during the Chinese Cultural Revolution, they were never fully successful (Gallo, 2011). Today, Chinese society is still strongly shaped by Confucianism, which emphasizes that family is the core unit and the whole Chinese society and state are considered as a ‘superfamily’ (Redding, 1990). Nevertheless, there is great interest in the use of Western organizational psychology to better understand Chinese employees when blending Western practices with Chinese traditional philosophies in the Chinese work context.

The first implication is that managers/supervisors need to integrate Western transformational leadership with indigenous culture in the Chinese work context. Although the results confirm that both Western transformational leadership and Chinese paternalistic leadership were applicable and significantly related to Chinese employees’ perceived control at work, perceived control did not show short-term or long-term mediation effects between transformational leadership and supervisor-subordinate *guanxi*, whereas perceived control had stronger mediation effects between Chinese paternalistic leadership and supervisor-subordinate *guanxi*.

Transformational leadership is based on charismatic leadership, which is rooted in individualism. As Campbell (1991, p. 239) mentioned “the best part of Western tradition has included a recognition of and respect for the individual as a living entity. The function of the society is to cultivate the individual. It is not the function of the individual to support society”. Conversely, Chinese society is family-oriented and it is based on collectivism. Chinese workers prefer humility, they prefer managers can keep a low profile at work, and do not show their

personalities to others (Gallo, 2011). For example, one of the characteristics of transformational leadership is to develop a challenging vision together with the employees (Yukl, 1999). However, Chinese employees would think their supervisor challenges them because he/she does not trust them (Gallo, 2011). Transformational leadership also emphasize translating the challenging vision into actions through a manager/supervisor's personal charisma. Chinese employees would think the manager/supervisor indulges in empty talk and shows off his/her leading abilities if the transformational leader was not able to achieve the vision. Therefore, applying transformational leadership without concern for Chinese employees' thoughts cannot help managers/supervisors to build up good personal *guanxi* with their subordinates.

Secondly, Chinese paternalistic leadership needs to be improved. Chinese workers have not only been shaped by traditional Confucianism, they are also affected by non-traditional individualism (Yan, 2009). Yan argued that Chinese individuals no longer believe that they have a duty to work for the sake of preserving tradition. As an alternative, Chinese workers use selected traditions to work for their own purposes. Hence, an absolute authoritarian form of paternalistic leadership could damage employees' ability to exert control at work and it does not help to build up or maintain good personal *guanxi* either.

The study also found that perceived control longitudinally mediated the relations between the moral form of paternalistic leadership and three dimensions (affective attachment to supervisor, personal-life inclusion and deference to supervisor) of supervisor-subordinate *guanxi*. This indicates that subordinates like to get close to the supervisor who can improve his/her own morality. The moral form of paternalistic leadership could indirectly strengthen personal *guanxi* between supervisor and subordinate in the long-term. Therefore, Chinese managers/supervisors need to develop their capability of self-awareness, self-control and self-development. They need to be self-confident but not aggressive at work. They should be benevolent to their subordinates. They also need to be fair and be empathic to everyone at work (Wang & Chee, 2011).

Thirdly, results of this study may help Chinese managers/supervisors understand that giving a high level control of work to subordinates can strengthen supervisor-subordinate *guanxi*. In consequence, good personal *guanxi* with the supervisor helps to produce feelings of ownership for subordinates' of their job and organization. The study also found that subordinates' job satisfaction had positive relations with psychological ownership of the job and that affective commitment was positively related to psychological ownership of the organization, whereas psychological withdrawal had negative relations with psychological ownership of the job and the organization. Therefore, subordinates who perceived control at work would maintain good *guanxi* with the supervisor, and good supervisor-subordinate *guanxi* would provide feelings of ownership for subordinates' of their job and organization, in order to improve subordinates' job satisfaction and affective commitment and reduce their psychological withdrawal behaviours.

Although familization is a cultural characteristic in the Chinese work context, it is very difficult for a stranger to become a familial. This is a slow and complex process to build up, maintain and strengthen personal *guanxi* between supervisors and subordinates. Chinese managers/supervisors need to understand that subordinates like to share managers/supervisors' private life after work or be deferential to them within and beyond working hours, indicating that these subordinates try to maintain personal *guanxi* with their managers/supervisors, in order to affectively attach to them. Results also show that psychological ownership of the job and of the organization have mediation effects between affective attachment to the supervisor and criterion variables (job satisfaction, organizational commitment and psychological withdrawal). Managers/supervisors might reasonably allow subordinates to share their personal lives after work, which would improve subordinates' emotional attachment to their supervisor and make them have feelings of ownership for the job and the organization.

8.6. Research Strengths and Limitations

The study provided information about the mediation effects of perceived control, supervisor-subordinate *guanxi*, psychological ownership of the job, and psychological ownership of the organization. Most importantly, this longitudinal study measured mediation variables at more than one time, enabling the examination of the mediating role of each mediator over time. As the sample was randomly selected from multiple sectors in China, sampling errors were reduced and gender and age bias were avoided. It is thus possible to generalise the findings and apply them to other organisations in China.

Although the data were self-reported, hence subject to bias, research (e.g. Alper, Tjosvold, & Law, 1998; Spector, 1994) suggests that self-reported data are not as limited as was previously believed and that people often perceive their social environment accurately. The study may be limited by its longitudinal design. Longitudinal analyses were applied through a two-wave panel design to overcome the limitations of cross-sectional analyses, but it was a half-longitudinal design (Cole & Maxwell, 2003). A three-wave data collection would have been an improvement, but was impractical in this research. Hence, the present findings cannot be interpreted as definitive evidence of causal relationships between the variables studied here.

Different time intervals cause different effect sizes. In this longitudinal design, a six-month interval was adopted to test causal relationships between the variables. Previous research does not provide any theoretical and empirical suggestion about the appropriate time lag for the effects of particular predictors on criterion variables. According to Zapf et al. (1996), short time lags may produce no causal effects, whereas long time lags may lead to an underestimation of the true causal impact. Therefore, it is recommended for future longitudinal research that the time lag should be methodically planned and should be determined by comparisons of different time lag models. Based on the findings of this study, predictors (e.g. supervisor-subordinate

guanxi) had more short-term effects than long-term on criterion variables. Thus a shorter time lag, such as a 3-month time frame, is suggested in future study.

Most of the survey items were taken from Western studies. Although an appropriate back-translation method was conducted in this study, the accuracy of translation could still influence the quality of the questionnaire. Further, the longitudinal results may be limited by the attrition that occurred between data collection at Time 1 and Time 2. While 62.7 per cent of the Chinese workers invited to participate in the study responded at Time 1, only 25.1 per cent of these participants matched the employees who responded at Time 2. This limitation especially may affect the results when the correlations were marginally below the significance threshold.

8.7. Recommendations for Future Research

With the rise of China in the global economy, organizational psychologists and management practitioners from outside China increasingly recognize the importance of understanding the thoughts and views of Chinese employees and their managers. The present findings suggest that the Chinese work context is strongly shaped by Confucianism and that paternalistic leadership has stronger effects than transformational leadership. However, as one of the oldest civilizations in the world, and with the largest population, Chinese leadership styles are not only related to Confucianism, but also to other Chinese wisdoms. Future research could blend Western management practices with other Chinese philosophies (e.g. Daoism and Buddhism) to further explore leadership in the Chinese work context.

Although the theoretical model of relationships among leadership styles, perceived control, and psychological ownership was extended to include supervisor-subordinate *guanxi*, this study only emphasized personal *guanxi* between supervisor and subordinate at the individual level. Future studies could explore how *guanxi* practices affect team effectiveness and performance in the Chinese work context. Supervisor-subordinate *guanxi* characteristics and practices are like double-edged swords in bringing both positive and negative effects (Chen et al., 2013). Positive

effects of personal *guanxi* between supervisor and subordinates were emphasized. Future research could provide a more balanced understanding of the function and consequences of supervisor-subordinate *guanxi* in the Chinese work context, including both positive and negative implications.

Psychological ownership was examined at the individual level, in terms of personal feelings of ownership toward the job and the organization in the Chinese work context. Pierce and Jussila (2011) argued that feelings of ownership can also be seen as a group-level mind-set. Pierce and Jussila developed the concept of collective psychological ownership, which can be seen as an extension of personal feelings of ownership. A group of individuals come to a ‘collective mind-set’ that a particular target of ownership is ‘ours’ jointly. As Chinese society is collectivist-oriented, collective psychological ownership could be associated with team *guanxi* in a future study to further explore the relationship between psychological ownership and personal *guanxi* in the Chinese work context.

Conclusion

This research was conducted to examine the cross-sectional and longitudinal relationships between leadership styles, control at work, supervisor-subordinate *guanxi*, psychological ownership, and work attitudes among a group of Chinese employees in China. Four types of mediating effects (perceived control, supervisor-subordinate *guanxi*, psychological ownership of the job and psychological ownership of the organization) were explored, confirming that Western transformational leadership was applicable and significantly related to Chinese employees’ perceived control at work, while a significant relationship between Chinese paternalistic leadership and perceived control was also found.

Relationships between supervisor-subordinate *guanxi*, perceived control and psychological ownership were integrated to assess the impact of supervisor-subordinate *guanxi* on feelings of psychological ownership among Chinese employees. This study confirmed that Chinese workers

would have good personal *guanxi* with their supervisor when they positively perceived work control, and provided a new concept in relation to *guanxi*. Supervisor-subordinate *guanxi* had positive significant effects on psychological ownership of the job and psychological ownership of the organization in the Chinese work context. High correlations between psychological ownership of the job and of the organization were found. This is somewhat different to previous Western studies. On the other hand, consequences of psychological ownership of the job and of the organization were similar to findings from previous Western studies.

The research contributed an understanding of how different manager/supervisor behaviours influenced employees' work attitudes in Chinese organizations, and suggested that giving a high level of control of work to subordinates can strengthen personal *guanxi* at the work place. Good personal *guanxi* between supervisor and subordinate could help to produce feelings of possession toward their job and organization.

To conclude, the research provides new knowledge about the impact of perceived control, supervisor-subordinate *guanxi* and psychological ownership in the Chinese work context. The research helps organizational psychologists to understand the psychological processes within Chinese employees when blending Western practices with Chinese traditional philosophies in the Chinese work context. Also, the initial research questions in Chapter 1 have been answered:

1. Supervisor-subordinate *guanxi* was related to psychological ownership of the job and of the organization in the Chinese work context.
2. Perceived control did not consistently mediate the relation between transformational leadership and supervisor-subordinate *guanxi*. In contrast, perceived control partially mediates the relation between paternalistic leadership and supervisor-subordinate *guanxi*.

3. Supervisor-subordinate *guanxi* had short-term, rather than the long-term, mediation effects between perceived control and psychological ownership of the job and psychological ownership of the organization.
4. Psychological ownership of the job and of the organization partially mediated the relations between supervisor-subordinate *guanxi* and criterion variables.

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APPENDICES

Appendix A: Contact Letter to Organizations

Mr Tian Li

The School of Psychology

The University of Waikato

Hamilton

New Zealand

Telephone: 006421518833

Email: tl33@waikato.ac.nz

Dates

Name of Organization

Contact address

Dear Mr/Mrs.....

I am gathering research information about Chinese employees' working attitudes and experiences to complete a PhD thesis in Psychology supervised by Professor Michael O' Driscoll and Dr. Donald Cable at the University of Waikato, New Zealand.

I would like to invite your organization to participate in a study which aims to investigate the possible outcomes from employees' feelings for job and organization. Findings of this research will help you understand how leadership styles influence employees' feelings for the job and the organization; to understand why a personal connection between staff members is important in your organization.

This research will be carried out in two stages. This survey will take only approximately 10-15 minutes to complete. The follow-up questionnaire will be distributed to you six months later. A summary report will be available on completion of the project. If desired, a seminar of the findings also could be provided.

If you are interested to discuss this project, I will be pleased to meet with you, and to provide further information on the methodology and logistics of this research. I will call you in a few days to further discuss the possibility of carrying out my research in your organization.

Thank you for your involvement in this research, which will help to make the findings important and meaningful.

Sincerely Yours,

Tian Li

Appendix B: Contact letter to organizations (in Chinese)

尊敬的 XX:

您好!

本人, 李田, 现在于新西兰怀卡托大学心理学院从事管理心理学博士课题研究。我的课题题目是: “不同形式的领导力对中国企业员工人际关系和心理所有权的影响”。我的博士课题集中研究企业不同管理层次(例如, 高层, 中层和基层)主管对不同领导方式(例如, 家长式领导力和变革型领导力)的执行, 从而对主管与员工之间的人际关系的直接影响, 和员工对企业和本职工作的心理所有权程度的间接影响。

以往西方研究表明, 主管与员工之间的人际关系对员工心理健康构建起着重要作用。其次, 员工对所在企业和本职工作的心理所有权程度对企业的发展也起着相当总要的作用。但是缺乏对国内企业员工在这些方面的实证研究, 所以本课题将在您的帮助与参与下填补专项学术空白。我相信, 我的课题研究会让您对自己企业员工的心理健康程度有一个充分的了解。从而更好的提高您企业的内部和谐度, 为您企业的良性发展保驾护航。

我诚挚地邀请您和您的企业参与我的纵向研究问卷调查。本次调查将分为两个时段, 时段 1 和时段 2 的间隔为半年。在每次时段中, 每位员工将被要请填写一份问卷, 填写过程大约耗时 15 分钟。所有填写后的问卷都将受到严密的隐私保护。当本次课题研究结束后, 一份总结报告将会送交于您。与此同时, 如果您有进一步要求, 总结报告也会提供到位。

非常感谢您对本人课题研究的关注。

此致

敬礼

李田

Appendix C: Questionnaire (English version)

Dear Colleague,

I am gathering research information about Chinese employees' working attitudes and experiences to complete a PhD thesis in Psychology supervised by Professor Michael O' Driscoll and Dr. Donald Cable at the University of Waikato, New Zealand.

This study aims to survey supervisors' leadership styles in your organization, your feelings of current supervisor-subordinate relationship, and feelings of your current job and organization. Findings of this research will help top management at your organization understand how leadership styles influence your feelings for the job and the organization; to understand why a personal connection between staff members is important in your organization.

This research has been approved by the Research and Ethics Committee of the School of Psychology, University of Waikato, New Zealand. You are assured that the principles of ethical conduct will be upheld in all respects. Your individual responses will be kept in absolute confidential, and will never be disclosed to anyone. You are free to withdraw from this research anytime without any penalty.

This research will be carried out in two stages. This survey will take only approximately 10-15 minutes to complete. The follow-up questionnaire will be distributed to you six months later. *I would appreciate you answering all the questions and place it in to the envelope provided, seal and return to me.*

In return for your help, a brief summary of the overall findings will be sent to your HR manager when the project is completed. Your HR manager will distribute a copy of the findings to you. If you have future inquiry, please do not hesitate to contact me via the email address tl33@waikato.ac.nz

Thank you for your involvement in this research.

Sincerely yours,

Tian Li

Thoughts about your job and organization

Confidential survey 2010

In order to match Time 1 and Time 2 surveys, you will need to create your own code word and use it in the second survey.

How to make your code word

The initial of your name, e.g. if your name is **Li (Surname) Tian (Given name)** = **LT**

Date of birth, e.g. if you were born on **4th=04**, if you were born on **15th= 15**

Month of birth, e.g. if you were born in **August= 08**, if you were born in **November=11**

Place of birth, e.g. if you were born in Nanning, Guangxi, then write down **Nanning Guangxi**

Then the code word would be **LT/04/08/Nanning Guangxi**

Create your Code word _____/_____/_____/_____
The initials of your name Date of birth Month of birth Place of birth

In case you may change your name in six months later, please use your original name in the second survey.

This survey is to find some important factors that might relate to your thinking of your current job and organization. This survey has nine sections and relates to areas of your job, organization, work attitudes and behaviours. Please complete all the following items as carefully as possible using the rating scales provided.

Section 1: In this section, I ask you about your supervisor's management styles. Please indicate the extent to which the following statements are true of you supervisor by circling the appropriate number. For each item, please indicate the degree to which you **disagree** or **agree** with the statement.

1	2	3	4	5	6	7
Strongly disagree	Moderately disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Moderately agree	Strongly agree

1. My supervisor is like a family member when he/she gets along with us.	1	2	3	4	5	6	7
2. My supervisor devotes all his/her energy to taking care of me.	1	2	3	4	5	6	7
3. Beyond work relations, my supervisor expresses concern about my daily life.	1	2	3	4	5	6	7
4. My supervisor ordinarily shows a kind concern for my comfort.	1	2	3	4	5	6	7
5. My supervisor will help me when I'm in an emergency.	1	2	3	4	5	6	7
6. My supervisor takes very thoughtful care of subordinates who have spent a long time with him/her.	1	2	3	4	5	6	7
7. My supervisor meets my needs according to my personal requests.	1	2	3	4	5	6	7
8. My supervisor encourages me when I encounter arduous problem.	1	2	3	4	5	6	7
9. My supervisor takes good care of my family members as well.	1	2	3	4	5	6	7
10. My supervisor tries to understand what the cause is when I don't perform well.	1	2	3	4	5	6	7
11. My supervisor handles what is difficult to do or manage in everyday life for me.	1	2	3	4	5	6	7
12. My supervisor never avenges a personal wrong in the name of public interest when he/she is offended.	1	2	3	4	5	6	7

1	2	3	4	5	6	7
Strongly disagree	Moderately disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Moderately agree	Strongly agree

13. My supervisor employs people according to their virtues and does not envy others' abilities and virtues.	1	2	3	4	5	6	7
14. My supervisor uses his/her authority to seek special privileges for himself/herself.	1	2	3	4	5	6	7
15. My supervisor doesn't take the credit for my achievements and contributions for himself/herself.	1	2	3	4	5	6	7
16. My supervisor does not take advantage of me for personal gain.	1	2	3	4	5	6	7
17. My supervisor does not use guanxi or back-door practices to obtain illicit personal gains.	1	2	3	4	5	6	7
18. My supervisor asks me to obey his/her instruction completely.	1	2	3	4	5	6	7
19. My supervisor determined all decisions in the organization whether they are important or not.	1	2	3	4	5	6	7
20. My supervisor always has the last say in the meeting.	1	2	3	4	5	6	7
21. My supervisor always behaves in a commanding fashion in front of employees.	1	2	3	4	5	6	7
22. I feel pressured when working with him/her.	1	2	3	4	5	6	7
23. My supervisor exercises strict discipline over subordinates.	1	2	3	4	5	6	7
24. My supervisor scolds us when we can't accomplish our tasks.	1	2	3	4	5	6	7
25. My supervisor emphasizes that our group must have the best performance of all the units in the organization.	1	2	3	4	5	6	7
26. We have to follow his/her rules to get things done. If not, he/she punishes us severely.	1	2	3	4	5	6	7
27. My supervisor provides a good model for me to follow	1	2	3	4	5	6	7
28. My supervisor leads by example	1	2	3	4	5	6	7
29. My supervisor leads by "doing", rather than simply by "telling"	1	2	3	4	5	6	7

1	2	3	4	5	6	7
Strongly disagree	Moderately disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Moderately agree	Strongly agree

30. My supervisor has a clear understanding of where we are going	1	2	3	4	5	6	7
31. My supervisor paints an interesting picture of the future for our group.	1	2	3	4	5	6	7
32. My supervisor has stimulated me to rethink the way I do things.	1	2	3	4	5	6	7
33. My supervisor challenges me to think about old problems in new ways.	1	2	3	4	5	6	7
34. My supervisor has ideas that have challenged me re-examine some of my basic assumptions about my work.	1	2	3	4	5	6	7
35. My supervisor shows respect for my personal feelings.	1	2	3	4	5	6	7
36. My supervisor behaves in a manner thoughtful my personal needs.	1	2	3	4	5	6	7
37. My supervisor treats me without considering my personal feelings.	1	2	3	4	5	6	7
38. My supervisor frequently acknowledges my good performance.	1	2	3	4	5	6	7
39. My supervisor personally compliments me when I do outstanding work.	1	2	3	4	5	6	7
40. My supervisor always gives me positive feedback when I perform well.	1	2	3	4	5	6	7
41. My supervisor often focuses on my mistakes.	1	2	3	4	5	6	7
42. My supervisor always tracks my mistakes to make sure there are no errors.	1	2	3	4	5	6	7
43. My supervisor concentrates on my failures instead of my successes.	1	2	3	4	5	6	7
44. My supervisor reacts to problem only when they are serious.	1	2	3	4	5	6	7
45. My supervisor reacts to problems only when are chronic.	1	2	3	4	5	6	7

Section 2: In this section, I ask how much personal control you have in your job. Please circle the appropriate number.

1	2	3	4	5
Very little	Little	A moderate amount	Much	Very much

46. How much control do you have over the variety of methods you use in completing your work?	1	2	3	4	5
47. How much can you choose among a variety of tasks or projects to do?	1	2	3	4	5
48. How much control do you have over the variety of methods you use in completing your work?	1	2	3	4	5
49. How much can you generally predict the amount of work you will have to do on any given day?	1	2	3	4	5
50. How much control do you have personally over how much work you get done?	1	2	3	4	5
51. How much control do you have over how quickly or slowly you have to work?	1	2	3	4	5
52. How much control do you have over the scheduling and duration of your rest breaks?	1	2	3	4	5
53. How much control do you have over when you come to work and leave?	1	2	3	4	5
54. How much control do you have over when you take vacations or days off?	1	2	3	4	5
55. How much are you able to predict what the results of decisions you make on the job will be?	1	2	3	4	5
56. How much are you able to decorate, rearrange, or personalize your work area?	1	2	3	4	5
57. How much can you control the physical conditions of your work station (lighting, temperature)?	1	2	3	4	5
58. How much control do you have over how you do your work?	1	2	3	4	5
59. How much can you control when and how much you interact with others at work?	1	2	3	4	5
60. How much influence do you have over the policies and procedures in your work unit?	1	2	3	4	5
61. How much control do you have over the sources of information you need to do your job?	1	2	3	4	5

1	2	3	4	5
Very little	Little	A moderate amount	Much	Very much

62. How much are things that affect you at work predictable, even if you can't directly control them?	1	2	3	4	5
63. How much control do you have over the amount of resources (tools, material) you get?	1	2	3	4	5
64. How much can you control the number of times you are interrupted while you work?	1	2	3	4	5
65. How much control do you have over the amount you earn at your job?	1	2	3	4	5
66. How much control do you have over how your work is evaluated?	1	2	3	4	5
67. In general, how much overall control do you have over work and work-related matters?	1	2	3	4	5

Section 3: The following items ask you to indicate how happy you are with your current job. For each item, please indicate the degree to which you **disagree** or **agree** with the statement, and circle the appropriate number.

1	2	3	4	5	6	7
Strongly disagree	Moderately disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Moderately agree	Strongly agree

68. All in all, I am satisfied with my job.	1	2	3	4	5	6	7
69. In general, I don't like my job	1	2	3	4	5	6	7
70. I am generally satisfied with the kind of work I do	1	2	3	4	5	6	7

Section 4: In this section, I ask how you feel about the personal relationship between you and your direct supervisor. For each item, please indicate the degree to which you **disagree** or **agree** with the statement, and circle the appropriate number.

1	2	3	4	5	6	7
Strongly disagree	Moderately disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Moderately agree	Strongly agree

71. My supervisor and I always share thoughts, opinions, and feelings toward work and life.	1	2	3	4	5	6	7
72. I feel easy and comfortable when I communicate with my supervisor.	1	2	3	4	5	6	7
73. I would feel sorry and upset if my supervisor decided to work for another company.	1	2	3	4	5	6	7
74. If my supervisor has problems with his/her personal life, I will do my best to help him/her out.	1	2	3	4	5	6	7
75. My supervisor would ask me to help him/her deal with some family errands.	1	2	3	4	5	6	7
76. During holidays, my supervisor and I would call each other or visit each other.	1	2	3	4	5	6	7
77. After office hours, I have social activities together with my supervisor, such as having dinner together or having entertainment together, which go beyond work duties.	1	2	3	4	5	6	7
78. I am familiar with the family members of my supervisor and have personal contact with these members.	1	2	3	4	5	6	7
79. I am willing to obey my supervisor unconditionally.	1	2	3	4	5	6	7
80. While I disagree with my supervisor, I would still support his/her decisions.	1	2	3	4	5	6	7
81. I am willing to give up my goals in order to fulfil my supervisor's goals.	1	2	3	4	5	6	7
82. I am willing to sacrifice my interests in order to fulfil my supervisor's interest.	1	2	3	4	5	6	7

Section 5: This section asks you how you feel about your current job and organization. For each item, please indicate the degree to which you **disagree** or **agree** with the statement, and circle the appropriate number.

1	2	3	4	5	6	7
Strongly disagree	Moderately disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Moderately agree	Strongly agree

83. I feel a very high degree of personal ownership for this organization.	1	2	3	4	5	6	7
84. This is MY organization.	1	2	3	4	5	6	7
85. This is MY work.	1	2	3	4	5	6	7
86. I feel a very high degree of personal ownership for the work I do.	1	2	3	4	5	6	7
87. I feel a very high degree of personal ownership for MY job.	1	2	3	4	5	6	7
88. This is MY job.	1	2	3	4	5	6	7

Section 6: Items in this section deal with your feeling about your organization in which you are working. For each item, please indicate the degree to which you **disagree** or **agree** with the statement, and circle the appropriate number.

1	2	3	4	5	6	7
Strongly disagree	Moderately disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Moderately agree	Strongly agree

89. I do not feel a strong sense of belonging to my organization.	1	2	3	4	5	6	7
90. This organization has a great deal of personal meaning for me.	1	2	3	4	5	6	7
91. I do not feel “emotionally attached” to this organization.	1	2	3	4	5	6	7

1	2	3	4	5	6	7
Strongly disagree	Moderately disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Moderately agree	Strongly agree

92. I really feel as if this organization’s problems are my own.	1	2	3	4	5	6	7
93. I would be very happy to spend the rest of my career with this organization.	1	2	3	4	5	6	7
94. I enjoy discussing my organization with people outside it.	1	2	3	4	5	6	7
95. I do not feel “part of the family” in this organization.	1	2	3	4	5	6	7
96. I think I could easily become as attached to another organization as I am to this one.	1	2	3	4	5	6	7

Section 7: How often have you carried out each of the following in the past **six** months? For each item, please indicate the frequency to which statement reflects **your** behaviour, and circle the appropriate number.

1	2	3	4	5	6	7
Never	Very rarely	Rarely	Sometimes	Often	Very often	Always

97.	Helped others who have been absent	1	2	3	4	5	6	7
98.	Willingly gave your time to help others who have work-related problems	1	2	3	4	5	6	7
99.	Adjusted your work schedule to accommodate other employees' requests for time off	1	2	3	4	5	6	7
100.	Went out of the way to make newer employees feel welcome in the work group	1	2	3	4	5	6	7
101.	Showed genuine concern and courtesy toward co-workers, even under the most trying business or personal situations	1	2	3	4	5	6	7
102.	Gave up time to help others who have work or non-work problems	1	2	3	4	5	6	7
103.	Assisted others with their duties	1	2	3	4	5	6	7
104.	Shared personal property with others to help their work	1	2	3	4	5	6	7
105.	Attended functions that are not required but that help the organizational image	1	2	3	4	5	6	7
106.	Kept up with developments in the organization	1	2	3	4	5	6	7
107.	Defended the organization when other employees criticize it	1	2	3	4	5	6	7
108.	Showed pride when representing the organization in public	1	2	3	4	5	6	7
109.	Offered ideas to improve the functioning of the organization	1	2	3	4	5	6	7
110.	Expressed loyalty toward the organization	1	2	3	4	5	6	7

111. Took action to protect the organization from potential problems	1	2	3	4	5	6	7
112. Demonstrated concern about the image of the organization	1	2	3	4	5	6	7

Section 8: How often have you done each of the following in the past **six** months? Please circle one response for each statement.

1	2	3	4	5	6	7
Never	Very rarely	Rarely	Sometimes	Often	Very often	Always

113. Thought of being absent.	1	2	3	4	5	6	7
114. Chatted with co-workers about non work topics.	1	2	3	4	5	6	7
115. Left work situation for unnecessary reasons.	1	2	3	4	5	6	7
116. Day dreamed.	1	2	3	4	5	6	7
117. Spent work time on personal matters.	1	2	3	4	5	6	7
118. Put less effort into the job than should have.	1	2	3	4	5	6	7
119. Thought of leaving current job.	1	2	3	4	5	6	7
120. Let others do your work.	1	2	3	4	5	6	7

Section 9: Background information

In this final part of the survey, I would like to get a few details about yourself and your job. Again, this information will be used only for this research and your individual details will not be identified in any report of the research results.

121. **How old are you?** _____ (Year)

122. **What is your gender?** (Circle one)

Male	Female
------	--------

123. **What industry do you work in?** (Please tick✓)

Finance	
Real estate	
Insurance	
Wholesale or retail trade	
Transportation	
Education	
Health and medical service	
Government	
Environmental	
Manufacturing	
Technical service	
Information Technology	
Human resources services	
Agriculture	
Mining	
Construction	
Others (Please clarify)	

124. **Which of the following best describes your current position?** (Circle one)

Executive/senior manager	Middle level manager	First line supervisor	Not a manager or supervisor
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125. **How long have you been in your present job?**

____years ____months

126. **How long have you been working for this organization?**

____years ____months

127. **How many hours do you normally work each week?**_____ Hours

128. **What is your highest completed level of education?** (Circle one)

Junior High School	High School	Diploma	Bachelor	Post- Graduated Diploma	Masters	PhD
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This is the end of the questionnaire. Please place it in to the envelope provided, seal and return to me. Thank you for your participation again.

Appendix D: Questionnaire (Chinese version)

亲爱的同事,

我正在收集关于中国员工工作态度和经验的数据,以完成由新西兰怀卡托大学 Michael O'Driscoll 教授和 Donald Cable 博士指导的心理学博士论文。我被.....授权,向这个单位中的自愿者发放调查问卷,完成这个问卷调查大概只需要您 10—15 分钟的时间。完成及交回这份问卷意味着您同意自愿参与这次调查。

这次问卷调查的主要目的是探求本单位各级主管的领导方式,以及您个人对主管-下属人际关系的理解。这次问卷调查的结果将帮助您所在单位管理层更好的理解领导方式是如何影响您对工作企业的态度,让管理层进一步了解主管与下属的个人关系在企业运作中的重要性。

本次调研已通过新西兰怀卡托大学心理学院研究与道德委员会的道德审批。您对本问卷每一个问题的回答都是**完全、绝对**保密的。您的回答将不会透露给本研究小组之外任何人,也不会透露给这个单位中的任何人。您的个人资料也将不会出现在任何跟这次调查有关的报告当中。这次调查结果报告中只包括基于全部问卷调查结果的概要。这次调查包括两部分,每次将耗费您 10-15 分钟来完成问卷。6 个月后您将收到另一份与这次的问题相同的调查表。*当您完成问卷后,请将其放入提供给你的信封中,密封好并直接交换给我。*

这次问卷所提问的问题是关于我们对您现在所从事的工作的看法。这些问题的回答没有“对”或“错”,相反,每个问题要求您表达**您**的个人意见、经验、以及感觉。为了感谢您对这次调查所给予的协助,我将在研究项目完成时提供给您人力资源经理一份关于这次数据收集结果的简单概要。人力资源经理将会把这份概要转告给您。您如果有进一步的疑问请通过我的电子邮箱来联系我: tl33@waikato.ac.nz

此致

敬礼

李田

关于您对自己工作及单位的想法

保密调查 2010

为了能匹配第一次与第二次问卷调查结果，我需要您创建个人代码并在第二次调查问卷中也使用这个代码。

如何生成您自己的代码

您名字的简写，比如：我的名字拼音为 **Li Tian**，简写为：**LT**

生日日期，比如：如果您出生日期是 4 号，代码为 **04**；如果出生日期是 15 号，代码为 **15**。

出生月份的简写，比如：如果您出生在八月，代码为 **08**；如果出生在 11 月，代码为 **11**。

出生地点，比如：如果您出生在广西南宁，就写为广西南宁。

由此代码将为：**LT/04/11/广西南宁**

生成您自己的代码 _____/_____/_____/_____

您名字的拼音简写 出生日期 出生月份 出生地点

这次问卷调查试图找出可能与员工对现在所从事的工作和单位的看法有关的几个重要因素。本项调查包含 9 个部分，涉及到您的工作、单位、工作态度、和工作方式。请使用所提供的评价量表尽可能认真地完成以下所有项目。

第一部分：这一部分我提问的问题关于您的经理或主管的管理方式。请指出以下的陈述在何种程度上对您单位的主管是真实的。对于每一个项目，请注明您对所陈述内容**反对**或者**赞同**的程度。请在适当的量度上**画圈**。

1	2	3	4	5	6	7
非常反对	比较反对	稍微反对	既不同意也不反对	稍微同意	比较同意	非常同意

1. 我的主管和我们相处时，我感觉他就像家人一样。	1	2	3	4	5	6	7
2. 我的主管尽全力地照顾我。	1	2	3	4	5	6	7
3. 除了工作关系，我的主管也表示出对我日常生活的关心。	1	2	3	4	5	6	7
4. 我的主管通常会对我是否舒心表现出亲切的关心。	1	2	3	4	5	6	7
5. 当我遇到紧急的事情，我的主管会帮助我。	1	2	3	4	5	6	7
6. 我的主管会非常关心照顾那些跟了他很长时间的下属。	1	2	3	4	5	6	7
7. 我的主管会根据我的个人情况而满足我的需求。	1	2	3	4	5	6	7
8. 当我在工作上遇到难题时，我的主管会鼓励我。	1	2	3	4	5	6	7
9. 我的主管也会很好照顾我的家人。	1	2	3	4	5	6	7
10. 当我在工作上表现不佳时，我的主管试图去理解造成我表现不佳的原因。	1	2	3	4	5	6	7
11. 在日常生活中，我的主管为我处理难办难管的事情。	1	2	3	4	5	6	7
12. 我的主管受到冒犯时从来不会公报私仇。	1	2	3	4	5	6	7
13. 我的主管是根据人的品行用人，他不嫉妒其他人的能力和品行。	1	2	3	4	5	6	7

1	2	3	4	5	6	7
非常反对	比较反对	稍微反对	既不同意 也不反对	稍微同意	比较同意	非常同意

14. 我的主管利用自己手中的权力为自己谋私利。	1	2	3	4	5	6	7
15. 我的主管不挪用我的工作成绩和贡献来为他自己的工作表现加分。	1	2	3	4	5	6	7
16. 我的主管不会为了自己的私利来占我的便宜。	1	2	3	4	5	6	7
17. 我的主管不会通过关系或者走后门来捞取不正当的利益。	1	2	3	4	5	6	7
18. 我的主管要求我完全服从他的指示。	1	2	3	4	5	6	7
19. 在工作中，我的主管决定所有的事情，不过它们重要与否。	1	2	3	4	5	6	7
20. 每次开会，我的主管总是有最后的发言权。	1	2	3	4	5	6	7
21. 我的主管在下属面前总是表现出居高临下的样子。	1	2	3	4	5	6	7
22. 和我主管工作的时候，我感觉有压力。	1	2	3	4	5	6	7
23. 我的主管对下属执行严格的工作纪律。	1	2	3	4	5	6	7
24. 我们无法完成既定任务时，我的主管会来责骂我们。	1	2	3	4	5	6	7
25. 我的主管强调我们团队的表现必须是单位里所有团队中表现最突出的。	1	2	3	4	5	6	7
26. 我们必须按他的规则办事，否则我们会受到他的严厉惩罚。	1	2	3	4	5	6	7
27. 我的主管是我学习的好榜样。	1	2	3	4	5	6	7
28. 我的主管在工作中以身作则。	1	2	3	4	5	6	7
29. 在工作中，我的主管会“做”给我们看，而不是简单地“讲”。	1	2	3	4	5	6	7

1	2	3	4	5	6	7
非常反对	比较反对	稍微反对	既不同意 也不反对	稍微同意	比较同意	非常同意

30. 我的主管很清楚我们的工作目标。	1	2	3	4	5	6	7
31. 我的主管会为我们团队的未来描绘一幅有趣的画图。	1	2	3	4	5	6	7
32. 我的主管激发了我重新思考我的做事方式。	1	2	3	4	5	6	7
33. 我的主管会激发我用新的方式解决老的问题。	1	2	3	4	5	6	7
34. 我主管的想法已经让我重新审视我对工作的一些基本假设。	1	2	3	4	5	6	7
35. 我的主管表现出尊重我的个人感情。	1	2	3	4	5	6	7
36. 我的主管的行为方式照顾我个人需求。	1	2	3	4	5	6	7
37. 我的主管不顾及我的个人感情。	1	2	3	4	5	6	7
38. 我的主管会经常夸奖我出色的表现。	1	2	3	4	5	6	7
39. 当我工作表现突出的时候，我的主管会私下赞扬我。	1	2	3	4	5	6	7
40. 当我表现好时，我的主管给我正面的反馈。	1	2	3	4	5	6	7
41. 我的主管经常盯着我的错误。	1	2	3	4	5	6	7
42. 工作时，我的主管总是查询我的错误，以确保没有错误。	1	2	3	4	5	6	7
43. 我的主管集中注意力在我的失败上而不是在我的成功上。	1	2	3	4	5	6	7
44. 只有对严重的问题我的主管才会做出反应	1	2	3	4	5	6	7
45. 只有对长期的问题我的主管才会做出反应。	1	2	3	4	5	6	7

第二部分：这一部分我想了解工作时有多少是您个人能掌控的。请仔细阅读每一项陈述，并指出哪一个量度准确说明了您工作的状况。请在适当的量度上**画圈**。

1	2	3	4	5
很少	少	中等适量	多	很多

46. 对于用来完成您工作的各种方法，有多少您可以掌控？	1	2	3	4	5
47. 在各种要完成的任务和项目中，有多少您能选择？	1	2	3	4	5
48. 对于自己的工作质量，有多少您可以掌控？	1	2	3	4	5
49. 对于在任何一个给定的工作日中您要做的工，一般有多少您能预测？	1	2	3	4	5
50. 对于自己做多少工作，有多少您可以掌控？	1	2	3	4	5
51. 对于工作进度快慢，有多少您可以掌控？	1	2	3	4	5
52. 对于休息时间的安排和长短，有多少您可以掌控？	1	2	3	4	5
53. 对于上下班时间安排，有多少您可以掌控？	1	2	3	4	5
54. 对于休假的时间安排，有多少您可以掌控？	1	2	3	4	5
55. 对于工作中您所做出的决定会带来什么结果，有多少您能预测？	1	2	3	4	5
56. 多大程度上您可以自由装饰、重新布置、和个性化您的工作空间？	1	2	3	4	5
57. 对于岗位上的硬件配置（例如：光亮，温度），有多少您可以掌控？	1	2	3	4	5
58. 多大程度上您可以选择如何去完成工作？	1	2	3	4	5
59. 在与同事相互协作的时间和工作量分配上，有多少您可以掌控	1	2	3	4	5
60. 对于团队的工作守则和程序，您有多少影响力？	1	2	3	4	5

1	2	3	4	5
很少	少	中等适量	多	很多

61. 对于完成工作所需的信息来源，有多少您可以掌控？	1	2	3	4	5
62. 即使您不能直接控制这些事情的发生，有多少在工作中影响您的事情是可以预测的？	1	2	3	4	5
63. 对于您获得的资源数量（例如：活动经费，交通工具等），有多少您可以掌控？	1	2	3	4	5
64. 对于您工作时被打扰的次数，有多少您可以掌控？	1	2	3	4	5
65. 对于工作收入，有多少您可以掌控？	1	2	3	4	5
66. 对于您的工作如何被评估，有多少您可以掌控？	1	2	3	4	5
67. 一般来讲，对于您自己的工作与与工作相关的事情，总共有多少您可以掌控？	1	2	3	4	5

第三部分：以下项目请您指出您对目前的工作感觉如何。对于每一个项目，请注明您对所陈述内容**反对**或者**赞同**的程度。请在适当的量度上**画圈**。

1	2	3	4	5	6	7
完全不同 意	比较不同 意	稍微不同 意	既不同意 也不反对	稍微同意	比较同意	完全同意

68. 总体来说，我对我的工作感到满意。	1	2	3	4	5	6	7
69. 一般来讲，我不喜欢我的工作。	1	2	3	4	5	6	7
70. 一般来讲，我满意我现在所从事的工作。	1	2	3	4	5	6	7

第四部分：这一部分我提问的问题关于您对您和您的直接主管的个人关系的感受如何。对于每一项目，请注明您对以下的陈述**反对**或者**赞同**的程度。请在适当的量度上**画圈**。

1	2	3	4	5	6	7
完全不同意	比较不同意	稍微不同意	既不同意也不反对	稍微同意	比较同意	完全同意

71. 我的主管总会和我分享对工作和生活的想法、意见、和感受。	1	2	3	4	5	6	7
72. 当我与主管沟通时，我感到轻松自在。	1	2	3	4	5	6	7
73. 如果主管决定跳槽，我会感到遗憾和惋惜。	1	2	3	4	5	6	7
74. 如果我的主管在日常生活上遇到了问题，我会尽全力帮助他。	1	2	3	4	5	6	7
75. 我的主管会要求我去帮助他处理家庭杂务。	1	2	3	4	5	6	7
76. 即使放假了，我和主管也会相互电话对方或者拜访对方。	1	2	3	4	5	6	7
77. 下班后，我会自愿和主管一起参加社交活动。比如一起吃饭，一起娱乐这些工作之外的活动。	1	2	3	4	5	6	7
78. 我和主管的家人都很熟悉，和他们有私人联系。	1	2	3	4	5	6	7
79. 我愿意无条件地服从我的主管。	1	2	3	4	5	6	7
80. 虽然我不同意主管的意见，但是我还是会支持他的决定。	1	2	3	4	5	6	7
81. 我愿意放弃我的目标以便实现主管的目标。	1	2	3	4	5	6	7
82. 我愿意牺牲我的利益以便满足主管的利益。	1	2	3	4	5	6	7

第五部分：这一部分我询问您对现在的工作和单位感觉如何。对于每一个项目，请注明您对所陈述内容**反对**或者**赞同**的程度。请注明您**反对**或者**赞同**的程度。请在适当的量度上**画圈**。

1	2	3	4	5	6	7
完全不同意	比较不同意	稍微不同意	既不同意也不反对	稍微同意	比较同意	完全同意

83. 我对现在所在的单位有很强烈的个人归属感。	1	2	3	4	5	6	7
84. 这是 我的 单位。	1	2	3	4	5	6	7
85. 这是 我的 工作。	1	2	3	4	5	6	7
86. 我对我现在正在从事的工作有很强烈的个人归属感。	1	2	3	4	5	6	7
87. 我对 我的 工作岗位有很强烈的个人归属感。	1	2	3	4	5	6	7
88. 这是 我的 工作岗位。	1	2	3	4	5	6	7

第六部分：这部分的项目关于目前您感觉对您所在的单位的归属感。对于每一个项目，请注明您对所陈述内容**反对**或者**赞同**的程度。请注明您**反对**或者**赞同**的程度。请在适当的量度上**画圈**

1	2	3	4	5	6	7
完全不同意	比较不同意	稍微不同意	既不同意也不反对	稍微同意	比较同意	完全同意

89. 对我的单位我没有强烈的归属感。	1	2	3	4	5	6	7
90. 这个单位对我个人来说有很大的意义。	1	2	3	4	5	6	7

1	2	3	4	5	6	7
完全不同 意	比较不同 意	稍微不同 意	既不同意 也不反对	稍微同意	比较同意	完全同意

91. 对现在这个单位，我没有感情上的依附。	1	2	3	4	5	6	7
92. 我真的感觉单位的问题就是我的问题。	1	2	3	4	5	6	7
93. 我很乐意将我以后的职业生涯留给这个单位。	1	2	3	4	5	6	7
94. 我喜欢和单位外的人讨论单位里发生的事情。	1	2	3	4	5	6	7
95. 在这个单位我感觉不到我是“这个家的一部分”。	1	2	3	4	5	6	7
96. 我想我会很容易对另一家单位产生与这家单位同样的 依恋。	1	2	3	4	5	6	7

第七部分：这一部分我想询问在过去的**6个月**中，您在工作中有如下所述行为的频率。对于每一项陈述，请注明最能反映您个人行为的频率。请在适当的量度上**画圈**。

1	2	3	4	5	6	7
从不	极少	很少	偶尔	常常	频繁	总是

97. 帮助曾经缺勤的同事。	1	2	3	4	5	6	7
98. 心甘情愿地腾出您的时间去帮助有工作困难的同事。	1	2	3	4	5	6	7
99. 调整您自己的工作时间，以适应其他同事的休假要求。	1	2	3	4	5	6	7
100. 不怕麻烦努力使新同事感觉到在团队受欢迎。	1	2	3	4	5	6	7

1	2	3	4	5	6	7
从不	极少	很少	偶尔	常常	频繁	总是

101. 对同事显示真正的关心与礼貌，即使在工作或自己最困难的情况下。	1	2	3	4	5	6	7
102. 放弃自己的时间去帮助同事处理工作或非工作上的问题。	1	2	3	4	5	6	7
103. 帮助其他同事完成他们的工作任务。	1	2	3	4	5	6	7
104. 与同事分享自己的资源，以帮助他们的工作。	1	2	3	4	5	6	7
105. 参加不是个人必须的，但有助于单位形象的活动。	1	2	3	4	5	6	7
106. 跟上单位的发展。	1	2	3	4	5	6	7
107. 当听到其他员工抱怨单位的时候，为单位辩护。	1	2	3	4	5	6	7
108. 代表单位出席公共场合时，感到很自豪。	1	2	3	4	5	6	7
109. 为提高单位的运作提供意见。	1	2	3	4	5	6	7
110. 表达自己对单位的忠诚。	1	2	3	4	5	6	7

1	2	3	4	5	6	7
从不	极少	很少	偶尔	常常	频繁	总是

111. 采取行动以免单位出现潜在的问题。	1	2	3	4	5	6	7
112. 表现出对单位形象的担忧。	1	2	3	4	5	6	7

第八部分：这部分的以下项目请您指出在过去的**6**个月中您如下所述行为的频率。请**画圈**选择。每项选择一个答案。

1	2	3	4	5	6	7
从不	极少	很少	偶尔	常常	频繁	总是

113. 想矿工。	1	2	3	4	5	6	7
114. 上班时与同事聊非工作内容。	1	2	3	4	5	6	7
115. 因为不必要的原因离开工作岗位。	1	2	3	4	5	6	7
116. 做白日梦。	1	2	3	4	5	6	7
117. 用工作时间做私人的事情。	1	2	3	4	5	6	7
118. 没有达到工作应有的精神投入。	1	2	3	4	5	6	7
119. 有离职的念头。	1	2	3	4	5	6	7
120. 让别人做自己的工作。	1	2	3	4	5	6	7

第九部分: 背景信息

在这份问卷的最后的部份, 我想获得一些关于您和您工作的详细情况。此部份信息将只用于内部研究, 您个人详情不会出现在未来的研究报告中。

121. 您的年龄? _____ (请您填写岁数)

122. 您的性别是? (请打 ✓)

男	女
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123. 您从事什么类型的工作? (请打 ✓)

金融业	
房地产	
保险业	
批发、或零售	
交通运输	
教育	
健康和医疗	
政府部门	
环保	
制造	
技术服务	
计算机	
人力资源服务	
农业	
矿业	
建筑业	
其他 (请说明)	

124. 以下哪项最能描述您现在的职位？（请打√）

行政/高级管理人员	中层管理人员	基层管理人员	非管理人员
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125. 您从事现在这份工作多久了？

____年____月

126. 您在现在这个单位工作多久了？

____年 ____月

127. 您一周一般工作多少个小时？_____（小时）

128. 您完成的最高学历是？（请打√）

初中	高中	大专	本科	研究生毕业	硕士	博士
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问卷到此结束，请将填好的问卷放入提供给您的信封中，并直接交还给我。再次感谢您的帮助！

Appendix E: Hypotheses

Hypothesis		Supported		
		T1	T2	Lon
Hypothesis 1	There will be a significant positive relationship between transformational leadership and perceived control within Chinese work context.	Y	Y	
H1a	Idealized influence attributes and behaviours will be positively related to perceived control.	Y	Y	
H1b	Inspirational motivation will be positively related to perceived control at both.	Y	Y	
H1c	Intellectual stimulation will be positively related to perceived control at both.	Y	Y	
H1d	Individualized consideration will be positively related to perceived control at both.	Y	Y	
Hypothesis 2	There will be a significant positive relationship between transformational leadership and perceived control within Chinese work context over time.			Y
H2a	Idealized influence attributes and behaviours at Time 1 will be positively related to perceived control at Time 2.			Y
H2b	Inspirational motivation at Time 1 will be positively related to perceived control at Time 2.			Y
H2c	Intellectual stimulation at Time 1 will be positively related to perceived control at Time 2.			Y
H2d	Individualized consideration at Time 1 will be positively related to perceived control at Time 2.			Y
Hypothesis 3	There will be a significant relationship between paternalistic leadership and perceived control within the Chinese work context.			
H3a	An authoritarian form of paternalistic leadership will be negatively related to perceived control.	Y	Y	
H3b	A benevolent form of paternalistic leadership will be positively related to perceived control.	Y	Y	
H3c	A moral form of paternalistic leadership will be positively related to perceived control at both Time1 and Time 2.	Y	Y	
Hypothesis 4	There will be a significant relationship between paternalistic leadership and perceived control within Chinese work context over time.			
H4a	An authoritarian form of paternalistic leadership at Time 1 will be negatively related to perceived control at Time 2.			Y
H4b	A benevolent form of paternalistic leadership at Time 1 will be positively related to perceived control at Time 2.			Y

Note: T1=time 1, T2=time 2, Lon=longitudinal, Y=yes

Hypothesis		Supported		
		T1	T2	Lon
H4c	A moral form of paternalistic leadership at Time 1 will be positively related to perceived control at Time 2.			
Hypothesis 5	There will be a significant positive relationship between perceived control and supervisor-subordinate guanxi within the Chinese work context.	Y	Y	
H5a	Perceived control will be positively related to affective attachment to the supervisor.	Y	Y	
H5b	Perceived control will be positively related to personal-life inclusion.	Y	Y	
H5c	Perceived control will be positively related to deference to supervisor.	Y	Y	
Hypothesis 6	There will be a significant and positive relationship between perceived control and supervisor-subordinate guanxi within the Chinese work context over time.			Y
H6a	Perceived control at Time 1 will be positively related to affective attachment to the supervisor at Time 2.			Y
H6b	Perceived control at Time 1 will be positively related to personal-life inclusion at Time 2.			Y
H6c	Perceived control at Time 1 will be positively related to deference to supervisor at Time 2.			Y
Hypothesis 7	There will be a significant positive relationship between supervisor-subordinate guanxi and psychological ownership of the job within the Chinese work context.	Y	Y	
H7a	Affective attachment to supervisor will be positively related to psychological ownership of the job.	Y	Y	
H7b	Personal-life inclusion will be positively related to psychological ownership of the job.	Y	Y	
H7c	Deference to supervisor will be positively related to psychological ownership of the job.	Y	Y	
Hypothesis 8	There will be a significant and positive relationship between supervisor-subordinate guanxi and psychological ownership of the organization within the Chinese work context.	Y	Y	
H8a	Affective attachment to supervisor will be positively related to psychological ownership of the organization.	Y	Y	
H8b	Personal-life inclusion will be positively related to psychological ownership of the organization.	Y	Y	
H8c	Deference to supervisor will be positively related to psychological ownership of the organization.	Y	Y	

Note: T1=time 1, T2=time 2, Lon=longitudinal, Y=yes

Hypothesis		Supported		
		T1	T 2	Lon
Hypothesis 9	There will be a significant positive relationship between supervisor-subordinate guanxi and psychological ownership of the job within the Chinese work context over time.			Y
H9a	Affective attachment to supervisor at Time 1 will be positively related to psychological ownership of the job at Time 2.			Y
H9b	Personal-life inclusion at Time 1 will be positively related to psychological ownership of the job at Time 2.			Y
H9c	Deference to supervisor at Time 1 will be positively related to psychological ownership of the job at Time 2.			Y
Hypothesis 10	There will be a significant positive relationship between supervisor-subordinate guanxi and psychological ownership of the organization within the Chinese work context over time.			Y
H10a	Affective attachment to supervisor at Time 1 will be positively related to psychological ownership of the organization at Time 2.			Y
H10b	Personal-life inclusion at Time 1 will be positively related to psychological ownership of the organization at Time 2.			Y
H10c	Deference to supervisor at Time 1 will be positively related to psychological ownership of the organization at Time 2.			Y
Hypothesis 11	There will be a significant positive relationship between psychological ownership of the job and job satisfaction within the Chinese work context.	Y	Y	
Hypothesis 12	There will be a significant positive relationship between psychological ownership of the job at Time 1 and job satisfaction at Time 2 within the Chinese work context.			Y
Hypothesis 13	There will be significant positive relationship between psychological ownership of the organization and affective organizational commitment within the Chinese work context.	Y	Y	
Hypothesis 14	There will be significant positive relationship between psychological ownership of the organization at Time 1 and affective organizational commitment at Time 2 within the Chinese work context.			Y
Hypothesis 15	There will be a significant and negative relationship between psychological ownership of the job and psychological withdrawal within the Chinese work context.	Y	Y	
Hypothesis 16	There will be a significant and negative relationship between psychological ownership of the organization and psychological withdrawal within the Chinese work context at both Time 1 and Time 2.	Y	Y	

Note: T1=time 1, T2=time 2, Lon=longitudinal, Y=yes

Hypothesis		Supported		
		T 1	T 2	Lon
Hypothesis 17	There will be a significant and negative relationship between psychological ownership of the job at Time 1 and psychological withdrawal at Time 2 within the Chinese work context.			Y
Hypothesis 18	There will be a significant and negative relationship between psychological ownership of the organization at Time 1 and psychological withdrawal at Time 2 within the Chinese work context.			Y
Hypothesis 19	Perceived control will mediate the relationship between transformational leadership and supervisor-subordinate guanxi within the Chinese work context.			
H19a (1)	Perceived control will mediate the relationship between idealized influence attributes /behaviours and affective attachment to supervisor.			
H19a (2)	Perceived control will mediate the relationship between inspirational motivation and affective attachment to supervisor.	Y		
H19a (3)	Perceived control will mediate the relationship between intellectual stimulation and affective attachment to supervisor.	Y		
H19a (4)	Perceived control will mediate the relationship between individualized consideration and affective attachment to supervisor.	Y		
H19b (1)	Perceived control will mediate the relationship between idealized influence attributes /behaviours and personal-life inclusion.			
H19b (2)	Perceived control will mediate the relationship between inspirational motivation and personal-life inclusion.	Y		
H19b (3)	Perceived control will mediate the relationship between intellectual stimulation and personal-life inclusion.	Y		
H19b (4)	Perceived control will mediate the relationship between individualized consideration and personal-life inclusion.	Y		
H19c (1)	Perceived control will mediate the relationship between idealized influence attributes /behaviours and deference to supervisor.			
H19c (2)	Perceived control will mediate the relationship between inspirational motivation and deference to supervisor.	Y		
H19c (3)	Perceived control will mediate the relationship between intellectual stimulation and deference to supervisor.	Y		
H19c (4)	Perceived control will mediate the relationship between individualized consideration and deference to supervisor.	Y		

Note: T1=time 1, T2=time 2, Lon=longitudinal, Y=yes

Hypothesis		Supported		
		T 1	T 2	Lon
Hypothesis 20	Perceived control will mediate the relationship between paternalistic leadership and supervisor-subordinate <i>guanxi</i> within the Chinese work context.			
H20a (1)	Perceived control will mediate the relationship between an authoritarian form of paternalistic leadership and affective attachment to supervisor.	Y		
H20a (2)	Perceived control will mediate the relationship between a benevolent form of paternalistic leadership and affective attachment to supervisor.	Y	Y	
H20a (3)	Perceived control will mediate the relationship between a moral form of paternalistic leadership and affective attachment to supervisor.			
H20b (1)	Perceived control will mediate the relationship between an authoritarian form of paternalistic leadership and personal-life inclusion.	Y		
H20b (2)	Perceived control will mediate the relationship between a benevolent form of paternalistic leadership and personal-life inclusion.	Y	Y	
H20b (3)	Perceived control will mediate the relationship between a moral form of paternalistic leadership and personal-life inclusion.			
H20c (1)	Perceived control will mediate the relationship between an authoritarian form of paternalistic leadership and deference to supervisor.	Y		
H20c (2)	Perceived control will mediate the relationship between a benevolent form of paternalistic leadership and deference to supervisor.	Y		
H20c (3)	Perceived control will mediate the relationship between a moral form of paternalistic leadership and deference to supervisor.			
Hypothesis 21	Perceived control will mediate the relationships between transformational leadership and supervisor-subordinate <i>guanxi</i> within the Chinese work context over time.			
H21a (1)	Perceived control at Time 2 will mediate the relationships between idealized influence attributes /behaviours at Time 1 and affective attachment to supervisor at Time 2.			
H21a (2)	Perceived control at Time 2 will mediate the relationships between inspirational motivation at Time 1 and affective attachment to supervisor at Time 2.			
H21a (3)	Perceived control at Time 2 will mediate the relationships between intellectual stimulation at Time 1 and affective attachment to supervisor at Time 2.			
H21a (4)	Perceived control at Time 2 will mediate the relationships between individualized consideration at Time 1 and affective attachment to supervisor at Time 2.			

Note: T1=time 1, T2=time 2, Lon=longitudinal, Y=yes

Hypothesis		Supported		
		T 1	T 2	Lon
H21b (1)	Perceived control at Time 2 will mediate the relationships between idealized influence attributes /behaviours at Time 1 and personal-life inclusion at Time 2.			
H21b (2)	Perceived control at Time 2 will mediate the relationships between inspirational motivation at Time 1 and personal-life inclusion at Time 2.			
H21b (3)	Perceived control at Time 2 will mediate the relationships between intellectual stimulation at Time 1 and personal-life inclusion at Time 2.			
H21b (4)	Perceived control at Time 2 will mediate the relationships between individualized consideration at Time 1 and personal-life inclusion at Time 2.			
H21c (1)	Perceived control at Time 2 will mediate the relationships between idealized influence attributes /behaviours at Time 1 and deference to supervisor at Time 2.			
H21c (2)	Perceived control at Time 2 will mediate the relationships between inspirational motivation at Time 1 and deference to supervisor at Time 2.			
H21c (3)	Perceived control at Time 2 will mediate the relationships between intellectual stimulation at Time 1 and deference to supervisor at Time 2.			
H 21c (4)	Perceived control at Time 2 will mediate the relationships between individualized consideration at Time 1 and deference to supervisor at Time 2.			
Hypothesis 22	Perceived control will mediate the relationship between paternalistic leadership and supervisor-subordinate guanxi within the Chinese work context over time.			
H22a (1)	Perceived control at Time 2 will mediate the relationship between an authoritarian form of paternalistic leadership at Time 1 and affective attachment to supervisor at Time 2.			
H22a (2)	Perceived control at Time 2 will mediate the relationship between a benevolent form of paternalistic leadership at Time 1 and affective attachment to supervisor at Time 2.			
H22a (3)	Perceived control at Time 2 will mediate the relationship between a moral form of paternalistic leadership at Time 1 and affective attachment to supervisor at Time 2.			Y
H22b (1)	Perceived control at Time 2 will mediate the relationship between an authoritarian form of paternalistic leadership at Time 1 and personal-life inclusion at Time 2.			

Note: T1=time 1, T2=time 2, Lon=longitudinal, Y=yes

Hypothesis		Supported		
		T1	T 2	Lon
H22b (2)	Perceived control at Time 2 will mediate the relationship between a benevolent form of paternalistic leadership at Time 1 and personal-life inclusion at Time 2.			
H22b (3)	Perceived control at Time 2 will mediate the relationship between a moral form of paternalistic leadership at Time 1 and personal-life inclusion at Time 2.			Y
H22c (1)	Perceived control at Time 2 will mediate the relationship between an authoritarian form of paternalistic leadership at Time 1 and deference to supervisor at Time 2.			
H22c (2)	Perceived control at Time 2 will mediate the relationship between a benevolent form of paternalistic leadership at Time 1 and deference to supervisor at Time 2.			
H22c (3)	Perceived control at Time 2 will mediate the relationship between a moral form of paternalistic leadership at Time 1 and deference to supervisor at Time 2.			Y
Hypothesis 23	Supervisor-subordinate guanxi will mediate the relationship between perceived control and psychological ownership of the job within the Chinese work context.	Y		
H23a	Affective attachment to supervisor will mediate the relationship between perceived control and psychological ownership of the job within the Chinese work context.	Y	Y	
H23b	Personal-life inclusion will mediate the relationship between perceived control and psychological ownership of the job within the Chinese work context.	Y	Y	
H23c	Deference to supervisor will mediate the relationship between perceived control and psychological ownership of the job within the Chinese work context.	Y		
Hypothesis 24	Supervisor-subordinate guanxi will mediate the relationship between perceived control and psychological ownership of the organization within the Chinese work context.	Y		
H24a	Affective attachment to supervisor will mediate the relationship between perceived control and psychological ownership of the organization within the Chinese work context.	Y	Y	
H24b	Personal-life inclusion will mediate the relationship between perceived control and psychological ownership of the organization within the Chinese work context.	Y	Y	
H24c	Deference to supervisor will mediate the relationship between perceived control and psychological ownership of the organization within the Chinese work context.	Y		

Note: T1=time 1, T2=time 2, Lon=longitudinal, Y=yes

Hypothesis		Supported		
		T 1	T 2	Lon
Hypothesis 25	Supervisor-subordinate guanxi will mediate the relationship between perceived control and psychological ownership of the job within the Chinese work context over time.			
H25a	Affective attachment to supervisor at Time 2 will mediate the relationships between perceived control at Time 1 and psychological ownership of the job at Time 2.			
H25b	Personal-life inclusion at Time 2 will mediate the relationships between perceived control at Time 1 and psychological ownership of the job at Time 2.			
H25c	Deference to supervisor at Time 2 will mediate the relationships between perceived control at Time 1 and psychological ownership of the job at Time 2.			
Hypothesis 26	Supervisor-subordinate guanxi will mediate the relationship between perceived control and psychological ownership of the organization within the Chinese work context over time.			
H26a	Affective attachment to supervisor at Time 2 will mediate the relationships between perceived control at Time 1 and psychological ownership of the organization at Time 2.			
H26b	Personal-life inclusion at Time 2 will mediate the relationships between perceived control at Time 1 and psychological ownership of the organization at Time 2.			
H26c	Deference to supervisor at Time 2 will mediate the relationships between perceived control at Time 1 and psychological ownership of the organization at Time 2.			
Hypothesis 27	Psychological ownership of the organization will mediate the relationships between supervisor-subordinate guanxi and affective organizational commitment within the Chinese work context.			
H27a	Psychological ownership of the organization will mediate the relationships between affective attachment to supervisor and affective organizational commitment within the Chinese work context.	Y	Y	
H27b	Psychological ownership of the organization will mediate the relationships between personal-life inclusion and affective organizational commitment within the Chinese work context.		Y	
H27c	Psychological ownership of the organization will mediate the relationships between deference to supervisor and affective organizational commitment within the Chinese work context.	Y		
Hypothesis 28	Psychological ownership of the organization will mediate the relationships between supervisor-subordinate guanxi and psychological withdrawal within the Chinese work context.			
H28a	Psychological ownership of the organization will mediate the relationships between affective attachment to supervisor and psychological withdrawal within the Chinese work context.		Y	

Note: T1=time 1, T2=time 2, Lon=longitudinal, Y=yes

Hypothesis		Supported		
		T1	T2	Lon
H28b	Psychological ownership of the organization will mediate the relationships between personal-life inclusion and psychological withdrawal within the Chinese work context.		Y	
H28c	Psychological ownership of the organization will mediate the relationships between deference to supervisor and psychological withdrawal within the Chinese work context.			
Hypothesis 29	Psychological ownership of the job will mediate the relationships between supervisor-subordinate guanxi and job satisfaction within the Chinese work context.			
H29a	Psychological ownership of the job will mediate the relationships between affective attachment to supervisor and job satisfaction within the Chinese work context.	Y	Y	
H29b	Psychological ownership of the job will mediate the relationships between personal-life inclusion and job satisfaction within the Chinese work context.		Y	
H29c	Psychological ownership of the job will mediate the relationships between deference to supervisor and job satisfaction within the Chinese work context.	Y		
Hypothesis 30	Psychological ownership of the job will mediate the relationships between supervisor-subordinate guanxi and psychological withdrawal within the Chinese work context.			
H30a	Psychological ownership of the job will mediate the relationships between affective attachment to supervisor and psychological withdrawal within the Chinese work context.	Y	Y	
H30b	Psychological ownership of the job will mediate the relationships between personal-life inclusion and psychological withdrawal within the Chinese work context.		Y	
H30c	Psychological ownership of the job will mediate the relationships between deference to supervisor and psychological withdrawal within the Chinese work context.	Y		
Hypothesis 31	Psychological ownership of the organization at Time 2 will mediate the relationships between supervisor-subordinate guanxi at Time 1 and affective organizational commitment at Time 2 within the Chinese work context.			
H31a	Psychological ownership of the organization at Time 2 will mediate the relationships between affective attachment to supervisor at Time 1 and affective organizational commitment at Time 2.			Y
H31b	Psychological ownership of the organization at Time 2 will mediate the relationships between personal-life inclusion at Time 1 and affective organizational commitment at Time 2.			

Note: T1=time 1, T2=time 2, Lon=longitudinal, Y=yes

Hypothesis		Supported		
		T1	T2	Lon
H31c	Psychological ownership of the organization at Time 2 will mediate the relationships between deference to supervisor at Time 1 and affective organizational commitment at Time 2.			
Hypothesis 32	Psychological ownership of the organization at Time 2 will mediate the relationships between supervisor-subordinate guanxi at Time 1 and psychological withdrawal at Time 2 within the Chinese work context.			
H32a	Psychological ownership of the organization at Time 2 will mediate the relationships between affective attachment to supervisor at Time 1 and psychological withdrawal at Time 2.			Y
H32b	Psychological ownership of the organization at Time 2 will mediate the relationships between personal-life inclusion at Time 1 and psychological withdrawal at Time 2.			
H32c	Psychological ownership of the organization at Time 2 will mediate the relationships between deference to supervisor at Time 1 and psychological withdrawal at Time 2.			
Hypothesis 33	Psychological ownership of the job at Time 2 will mediate the relationships between supervisor-subordinate guanxi at Time 1 and job satisfaction at Time 2 within the Chinese work context.			
H33a	Psychological ownership of the job at Time 2 will mediate the relationships between affective attachment to supervisor at Time 1 and job satisfaction at Time 2.			Y
H33b	Psychological ownership of the organization at Time 2 will mediate the relationships between personal-life inclusion at Time 1 and job satisfaction at Time 2.			
H33c	Psychological ownership of the organization at Time 2 will mediate the relationships between deference to supervisor at Time 1 and job satisfaction at Time 2.			
Hypothesis 34	Psychological ownership of the job at Time 2 will mediate the relationships between supervisor-subordinate guanxi at Time 1 and psychological withdrawal at Time 2 within the Chinese work context.			
H34a	Psychological ownership of the job at Time 2 will mediate the relationships between affective attachment to supervisor at Time 1 and psychological withdrawal at Time 2.			Y
H34b	Psychological ownership of the job at Time 2 will mediate the relationships between personal-life inclusion at Time 1 and psychological withdrawal at Time 2.			
H34c	Psychological ownership of the job at Time 2 will mediate the relationships between deference to supervisor at Time 1 and psychological withdrawal at Time 2.			

Note: T1=time 1, T2=time 2, Lon=longitudinal, Y=yes